NAVAL WAR COLLEGE REVIEW

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FOREWORD

The *Naval War College Review* was established in 1948 by the Chief of Naval Personnel in order that officers of the Navy and Marine Corps might receive some of the educational benefits available to the resident students at the Naval War College. The forthright and candid views of the authors are presented for the professional education of the readers. Articles published are related to the academic and professional activities of the Naval War College. They are drawn from a wide variety of sources in order to inform, to stimulate and challenge the readers, and to serve as a catalyst for new ideas. Articles are selected primarily on the basis of their intellectual and literary merits, usefulness and interest to servicewide readership and timeliness. Reproduction of articles in the *Review* requires the specific approval of the Editor, *Naval War College Review* and the respective author. Reproduction of articles published in the *Review* is subject to the Copyright Act of 1976 and treaties of the United States, to the extent that they are applicable. Caution should be exercised in the case of those articles protected by copyright, as may be indicated by a copyright notice at the beginning of such articles. *Review* content is open to citation and other reference, in accordance with accepted academic research methods. The thoughts and opinions expressed in this publication are those of the authors and are not necessarily those of the Navy Department or the Naval War College.

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PRESIDENT'S NOTES

In assuming the helm of the Naval War College from Vice Admiral Jim Stockdale, I have done so with a great sense of privilege and a great awareness of the responsibilities I have undertaken. It is my earnest hope that my stewardship will measure up to the high standards my predecessors have established and maintained over the long history of this fine institution.

Vice Admiral Stockdale's retirement marked the end of the active naval career of a truly remarkable officer whose contributions will be remembered for a very long time. Jim Stockdale, the man, should give us all food for thought, and his teachings and example are a legacy to all of us in the Navy, the nation, and the world about us. All of us at the Naval War College wish him great success in his important position as President of the Citadel.

During my short period at Newport, I have been greatly impressed with the quality of the War College faculty and staff, the student body, and the physical plant. The curriculum makes sense. The seas of debate that attended changes in the past have subsided and those changes have resulted in a sound, naval-oriented education. I intend to keep the Naval War College pointed toward the fleet, and I look to a good interaction with operator and policymaker, defense analyst and scholar alike. Such a dialogue is essential if Newport is to continue and improve as the nexus for naval strategic thought.

It seems that a corollary to this effort must be an enlargement of our knowledge here at Newport on Soviet naval strategy and doctrine. A great deal has already been done in this area; a great deal more can be done for the Navy and the student body. An important part of this undertaking will be a careful integration of intelligence factors into the education scheme.

The curriculum and our associated work here will continue to evolve as the dynamics of our profession demand. As many of you know, our war gaming facility is being updated to cope with these dynamics. The advance of technology will induce further refinements and changes in the courses. We will continue to seek to produce graduates with an effective blend of intellectual perspective and technological awareness and skills—with the former never surrendering primacy to the latter.

The *Naval War College Review* has earned its place high up on the rolls of professional journals. I urge that each of you, our readers, provide us with comments whenever your urge so dictates. The editor reminds me that all individual subscriptions expire with this issue and that to ensure continued receipt of the *Review* the card at the back should be returned as soon as possible.

I look forward to my tour as President of the Naval War College and I am happy to be aboard.

EDWARD F. WELCH, JR.
Rear Admiral, U.S. Navy
President, Naval War College

The Admiral Richard G. Colbert Memorial Prize is awarded each year to the Naval War College student author of the best of the professionally worthy essays submitted in competition for the prize. The 1979 winner here analyzes the consequences of the present high costs of nuclear attack submarines and suggests some steps to lessen the severity of those consequences.

PRICING OURSELVES
OUT OF THE MARKET:
THE ATTACK SUBMARINE PROGRAM

by

Captain Linton F. Brooks, U.S. Navy

The U.S. Navy's nuclear attack submarine program represents a major and potent element of national power. As the Secretary of the Navy recently stated, "The qualitative edge we hold . . . in both equipment and personnel is awesome."[1] One of the many challenges the Navy faces as it enters the 1980s is that of determining the future of this exceedingly capable—and exceedingly expensive—force. In deciding where to go from here we need to face four realities: (1) We are on the verge of pricing ourselves out of the attack submarine business; (2) We should be worried about that because the attack submarine can make a major contribution under a wide variety of assumptions about the nature of a future war; (3) If we don't act soon we will face, in the late 1980s, a choice between accepting several years of degraded force

levels, conducting a huge and costly crash program, or both; (4) Most of the things we can do have some drawbacks, making the selection of what course to follow more difficult but no less urgent.

The following more or less typical comments illustrate the widespread agreement on the importance of present-day nuclear attack submarines (SSNs). From a U.S. Senator: "The submarine is perhaps the best antisubmarine weapon in our current force structure, and there is no reason to think its utility in this role will lessen."[2] From a defense commentator: " . . . the life or death of our planet may be in the hands of a few hundred young submarine officers."[3] From the Soviet Navy's Commander in Chief: "[in future warfare] to an ever greater degree combat operations will move into the subsurface."[4] These and a host

of similar statements attest to the high regard in which serious students of defense hold modern attack submarines. While many are concerned over the high cost of these ships, few deny their exceptional effectiveness as fighting machines.*

Those who share such views of the importance of submarines find recent trends in submarine procurement disconcerting. Faced with increasing sophistication—and its consequent increasing cost—and ever greater fiscal constraints, the attack submarine program is being slowly but inexorably squeezed out of the market. Consider the following:

1. The final major buy of the *Sturgeon* (SSN 637) class submarine cost an average of $68.2 million in 1967 dollars. In fiscal year 1979 terms this equates to $170.5 million. In contrast the single *Los Angeles* (SSN 688) class ship in the fiscal 1979 budget was priced at $433 million.[5]

2. In fiscal year 1967, 19 percent of

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*Dissenters do exist. For one of the most forceful see Worth H. Bagley, *Sea Power and Western Security*, Adelphi Paper 119 (London: International Institute for Strategic Studies, 1977), pp. 22-5 and 39. Bagley, a retired Vice Chief of Naval Operations, holds that the attack submarine's utility in ASW is a myth fostered by the U.S. tendency to view the Soviets as mirror images of ourselves while ignoring differences in tactics. In his view attack submarines are inferior to mines in countering transiting submarines and are ineffective against Soviet Navy joint surface/subsurface coordinated operations. U.S. SSNs should therefore be relegated to an antishipping role while halting submarine construction for "at least five years [while] evaluating technological advancements that affect submarine usefulness." While Admiral Bagley's warning against "mirror-imaging" is well taken, his conclusions are at variance with those of most other analysts. Obviously if he is correct there is little to fear from future drops in American submarine force levels. It is the contention and the underlying assumption of this paper that Admiral Bagley is in error and that the common perception that attack submarines are effective and important in war at sea is accurate.

the total shipbuilding budget enabled us to procure five attack submarines. Buying five submarines in fiscal 1979 would have taken over 43 percent of the shipbuilding budget.[6] This disparity reflects both the increasing cost of submarines and the decreasing size of the shipbuilding budget.

3. Largely as a result of cost increases the SSN building program has been reduced steadily over the past 3 years. In March 1976 the approved 5-year program included eleven attack submarines (two per year plus a third in fiscal 1977). In January 1977 the Ford administration submitted a plan for building three SSNs every 2 years. One month later the incoming Carter administration deleted one of the two proposed fiscal year 1978 ships, in the words of the Secretary of Defense "simply because there is already a large backlog of SSN orders."[7] Although in announcing this decision in 1977 Secretary Brown stated that future procurement would be at a rate of two SSNs annually, by March 1978 the approved program had dropped to one ship a year where it remains.

These cutbacks have had a drastic effect on the Navy's ability to reach its long-held goal of a stable force level of 90 attack submarines. Maintaining such a force level requires annual procurement of an average of 3.6 ships, assuming a 25-year service life. Because of the impending mid-1990s retirement of a large number of attack submarines of the *Sturgeon* class delivered between 1967 and 1972, temporary increases above this building rate will be required in the late 1980s to maintain even the current force level of 72 SSNs, let alone to reach 90 ships. Present Defense Department thinking makes an expanded building program unlikely. Last year, for example, Secretary Brown testified that the 90 SSN force level "will be very hard to reach so long as we are spending over $400 million apiece on individual SSNs."[8] Figure 1 shows
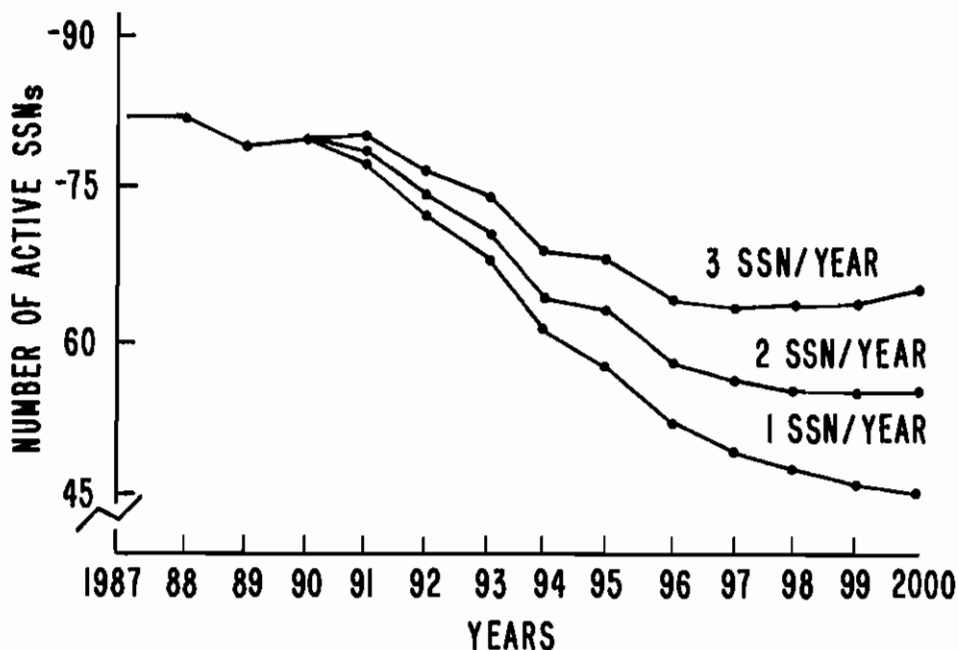
Fig. 1—Number of Attack Submarines on Active Service at Year's End as a Function
of Varying Annual Construction Rates After Fiscal Year 1985[a]

[a]Assuming 25-year active lifetime and 6 years from authorization to commissioning.
End-of-life based on commissioning dates given in *Jane's Fighting Ships 1978-1979* (New York:
Franklin Watts, 1978).

the effect on submarine force levels of
continuing the present building rate
indefinitely as well as of increasing to
either two or three ships per year at the
end of the current five-year plan (i.e., in
fiscal 1985). As can be seen, in all of
these cases force levels will drop below
those of today in the early 1990s.
Ultimately, of course, one or two ships
a year and a 25-year lifetime would lead
to a stable force of 25-50 SSNs on
active service.

This paper examines the effect of
these projected reductions in attack
submarine strength and considers some
mitigating alternatives. The approach
will be to examine the role of sub-
marines in various possible wars, to
consider what capabilities might be lost
if force levels were to be reduced and
how this loss of capability might be
minimized and, finally, to suggest

alternatives to simply acquiescing in this
degradation of effectiveness.

Force Planning Dilemmas. The prob-
lem of planning the future submarine
force is complicated by growing concern
for the accelerating rate of technological
development. One need only recall that
at the time the *Los Angeles*-class sub-
marine was conceived land-attack cruise
missiles, if discussed at all, were rele-
gated to "pie-in-the-sky" studies. By the
time the first ship of the class was
commissioned the potential employ-
ment of such missiles as *Tomahawk* in a
strategic role was of sufficient impor-
tance to be a major issue in SALT II
negotiations. One recent prize-winning
essay suggested that the pace of techno-
logical change is becoming so rapid that
the Navy should shift to "throw-away"
ships, "smaller high-technology ships

designed for an extremely short (5years?) lifespan."[9] It is true that recent rapid advances in technology have done little to reduce the value of the submarine or to alter radically its method of employment. There has been no change in undersea warfare, for example, comparable to the changes wrought in surface warfare by the cruise missile. Still, in an era of serious arguments for 5-year ship lifespans it is, at a minimum, thought provoking to realize that attack submarines now take 6 years from authorization to commissioning or to see the Navy give serious consideration to extending the 25 year old U.S.S. *Nautilus* (SSN 571) on active service to help maintain adequate force levels.*

The Navy is faced with a difficult dilemma. On the one hand the imperatives of technology and of change suggest sophisticated ships with relatively short lives. On the other hand the imperatives of fiscal reality demand less expensive (and hence less sophisticated) ships with longer service lives. Before we can intelligently discuss possible solutions to this dilemma we must consider the roles of attack submarines in a future war. The utility of *any* weapons system in *any* war is a function both of the capabilities and limitations of the weapons system and of the nature of the war. The relevant capabilities of present U.S. attack submarines include: *covertness* (the ability to operate in areas where the surface of the sea is under the control of the enemy); *endurance* (the ability to operate without external support of any kind for up to 3 months, subject only to the depletion of weapons onboard); *reliability* (not inherent in submarines *per se*, but a significant strongpoint of the present

U.S. submarine force); *mobility* (the ability to shift operating theaters rapidly; this too is not inherent in all submarines but only in those, either American or foreign, that are nuclear-powered); *antisubmarine warfare effectiveness* (a primary consideration in the design of U.S. submarines; specifically, existing U.S. submarines enjoy significant acoustic advantages when compared to other antisubmarine platforms); *antishipping capabilities* (overshadowed by the ASW role in recent years, but now revitalized with the advent of the *Harpoon* antiship missile); and *land attack potential* (a currently nonexistent capability that could be gained by the deployment of a long-range cruise missile such as *Tomahawk* with a nuclear warhead). Other specialized submarine capabilities such as reconnaissance, mining, and covert swimmer delivery, while useful in certain cases, are less directly applicable to modern war at sea or are of a sufficiently infrequent nature to have little affect on required force levels.

These capabilities, taken in the aggregate, relate to the sea control function and, to a lesser extent (through protection of carrier strike forces or use of land-attack missiles) to the function of power projection. At first glance attack submarines have little to contribute to strategic deterrence or peacetime presence—the remaining two of the four functions in terms of which much recent analysis of naval forces has been conducted. The unseen nature of submarines at sea, their unimpressive appearance in port, and the large number of states that do not welcome visits of nuclear-powered ships all combine to limit the usefulness of attack submarines in a peacetime presence role. The contribution of such submarines to deterrence is complex and difficult to assess. There is a growing tendency on the part of many to stress the inherent linkage between strategic and general-purpose forces in the deterrence of war.

*Submarines are, of course, not unique in facing these problems. The present service life extension program for aircraft carriers will result in extending carrier lifetimes to 45 years. This is equivalent in time, if not in technology, to having used U.S.S. *Langley* (CV 1) on *Yankee* station.

Indeed, recent posture statements by the Chief of Naval Operations have listed only sea control and power projection as roles of naval forces, tying deterrence to overall military readiness. In addition, many argue that a land-attack cruise missile would contribute to deterrence, even under its more limited strategic definition, by complicating the Soviet defense picture. But air-launched cruise missiles already provide this complication or will do so shortly. Barring radical changes in submarine operating patterns, few cruise missile equipped submarines can be maintained routinely on station year in and year out. Yet the principal value of the sea-based deterrent lies in the invulnerability that results from keeping a large fraction of the force constantly at sea. To the extent that central strategic systems (as opposed to total military capability) deter war, deterrence might be enhanced in time of crisis by rapid deployment of submarines equipped with land-attack cruise missiles. Because in the face of a serious threat of imminent war we would put all available submarines to sea in any case (both for survivability and for readiness) and because most of these submarines would be required for other missions, the potential contribution of attack submarines to classic strategic deterrence should not form a primary basis for force planning. It appears, therefore, that attack submarine capabilities for sea control and, less directly, power projection are the appropriate determinants of force levels. It is next necessary to turn to the second half of the equation, the estimation of the nature of a possible future war.

Character of Future War. Categorizing submarine capabilities is relatively straightforward; predicting the future—especially the shape of a future war—is more challenging. At the outset it must be assumed that for the foreseeable future "war" means war with the Soviet Union. No other nation has the ability to threaten seriously the dominance of the United States *at sea.* A war involving massive projection of power ashore (such as Vietnam) is possible but it is difficult to see submarines being any more relevant to this type of warfare in the future than they were in the past. Thus submarine force levels should be (and are) determined solely on the basis of a possible war with the U.S.S.R. There is substantial disagreement over the most probable form of such a war; most projections, however, fall into one of the following four general types:

1. A war that, however it starts, rapidly escalates into an all-out strategic nuclear exchange in which both nations are effectively destroyed as functioning societies. This is the type war basic countervalue deterrence is designed to prevent. In such a war, winning is seen as a meaningless term and general-purpose forces, including submarines, as irrelevant.

2. A large-scale war fought primarily in Europe away from the territory of both the United States and the Soviet Union. Such a war might follow a Soviet "land grab" in Europe or might result from escalation following some incident in time of crisis. Tactical nuclear weapons might or might not be used. The existence of strategic deterrent forces would inhibit any attacks on the home territory of the major combatants (although some argue that limited attacks against active military bases could occur, especially in coastal areas). This is the war on which present U.S. general-purpose force planning is based.

3. A limited nuclear war involving counterforce attacks on the territories of both major opponents. What distinguishes this from the previous case is not the use of nuclear weapons but the removal of most inhibitions against attacks on U.S. and Soviet territory. One version of this war involves a disarming first strike by the Soviet Union after which victory would be

determined by the relative fighting ability of the surviving forces.[10]

4. A geographically limited conventional war remote from Europe, possibly resulting from each side intervening in a war between two client states. Such a war would differ from Korea or Vietnam in that U.S. forces would be in direct conflict with the Soviets rather than fighting presumed surrogates. As a result, the danger of escalation would be greater and American mastery of the seas could not be taken for granted. The Middle East is one possible scene of such a conflict. A special case of this form of war might be the so-called "war at sea." This could involve a relatively large-scale conflict between the United States and the Soviet Union either as a result, for example, of Soviet attempts to cut off oil supplies from the Persian Gulf or of both sides attempting to prevent reinforcement of client states engaged in war. In this special case the geographic limitation would be sea vs. shore but actual hostilities might take place at widely scattered locations.

At first glance this smorgasbord of possible future wars appears to require either accurate prediction of the one most likely war or construction of forces capable of meeting any future threat. While this is generally true—and is part of the dilemma facing the Navy today in planning future forces—the situation with regard to submarines is somewhat simpler. First, if the model of an all-out, spastic nuclear war is correct, neither Soviet nor American naval forces (except ballistic missile submarines) are relevant. In either the large-scale European war or the limited nuclear war the Soviet Navy would have essentially the same missions (although the relative emphasis among these Soviet missions might vary). Such missions would include blunting U.S. power projection capabilities through anticarrier warfare, interrupting the flow of reinforcements and supplies to Europe, supporting the forward move-

ment of the Red army, defending Soviet ballistic missile submarines, and attempting to locate and destroy American SSBNs. The chief difference between the two wars would be the number of U.S. forces destroyed in U.S. ports by a Soviet disarming strike. Such destruction would obviously be a function of warning time; if some period of tension preceded actual hostilities, a substantial fraction of the fleet might be at sea. A second difference would be the vastly increased logistics problems involved if continental U.S. ports were destroyed. These problems may well limit the amount of time that the forces at sea will be able to fight. But in either war Soviet and U.S. tasks at sea would be roughly similar, with the Soviets attempting to carry out the missions enumerated above and the United States and its allies attempting to counter these Soviet efforts, to project power ashore, and to resupply Europe. Especially if, as many believe, the large-scale European war entailed use of nuclear weapons both within Europe and at sea, even if the home territories of the two superpowers were not attacked, the two models tend to merge for the forces surviving the initial strike. This merger is particularly valid for submarines that are not directly concerned with land-based forces and that would thus have similar missions under either model. Similarly, the use or nonuse of nuclear weapons at sea has less effect on submarine warfare than on other forms of naval combat. Surface ships have some ability to absorb hits from conventional weapons attacks and still survive. Shifting to a nuclear war at sea changes the surface ship survival picture as no leakage of incoming weapons past defenses can now be tolerated. In contrast, submarines depend for survival on not being attacked or, more exactly, on attacking first. They are therefore less sensitive to the introduction of high-yield weapons as they survive primarily by not being located.

In a geographically limited war the Soviet Navy might play no role, might attempt to blunt U.S. power projection in the general area of the conflict without widening the war (for example by using cruise missile firing submarines against U.S. carriers in a hypothetical future Vietnam or *Backfire* bombers in the same role in a Persian Gulf conflict), or might attempt to interrupt the flow of supplies either to the war zone or (in the special case of oil) to the United States. In very broad terms these tasks can be viewed as subsets of the missions the Soviets would have in a conventional European war. If the United States can prevail in the one case it can prevail in the other. For example, if power can be projected ashore in Europe in the face of Soviet opposition then it can be projected ashore in areas (such as Korea) that are remote from the main sources of Soviet power in the western U.S.S.R. More specifically, U.S. submarine employment in such a geographically limited war would consist of countering any Soviet attempt to use submarines either against carriers or in attempts to sever the sealanes. But if the Soviet submarine threat can be overcome in the Atlantic, close to Soviet submarine operating bases in an all-out war, it can almost certainly be overcome in locations more remote from the U.S.S.R. in a less-than-all-out conflict. This is particularly true given the present lack of Soviet forward bases for submarine operations outside the Mediterranean. Even if the Soviets were to establish a submarine operating base in, for example, Vietnam, the United States has equal or better capabilities to provide submarine support in forward areas and would be at no more of a disadvantage from the purely submarine standpoint than in a North Atlantic conflict. Thus although geographically limited war is possible, we may set it

aside in designing submarine force levels because those forces adequate for a NATO war will be capable of handling a limited war as well.*

This analysis suggests that the course of a future war at sea, at least from the standpoint of the submarine force, may be somewhat less scenario-dependent than first appears. The relevance of the struggle at sea to the ultimate outcome of the war obviously would vary with the nature of the war. So would the forces available for that struggle. But in a broad sense the missions of the two navies will be the same in any type of war (excluding the total, spastic strategic nuclear exchange). Regardless of whether the war is limited to a third country, is fought primarily in Europe, or involves attacks on each other's territory and regardless of the use or nonuse of nuclear weapons at sea, the United States will be seeking to cross the oceans to support and resupply ground forces while the

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*This is not to say that such a war has no significance for U.S. planning. For example, if a major war in Europe were preceded by a war in Korea, U.S. forces would be far from the scene of the primary battle during the opening days or even weeks of the war, a period believed by many to be decisive in a short, high-intensity war. This is the reason that U.S. forces are sized for a war in Europe *and* a simultaneous contingency elsewhere. But for submarines a war in Korea would be irrelevant unless there were Soviet attempts to counter U.S. power projection. In this case *both* U.S. and Soviet forces would be remote from the Atlantic/European area. The point here is that because submarines primarily fight opposing navies (unlike surface ships, especially carriers, which can project power ashore) a third-nation war cannot tie up U.S. submarine forces without also tying up Soviet forces. Thus the degrees to which we must be able to fight simultaneously a big war in Europe and handle a minor (or not so minor) contingency elsewhere, an issue of great significance in planning force levels for carriers, the Marine Corps and tactical air forces generally, need not be considered in determining submarine force levels.

Soviet Union seeks to prevent such a crossing. If this analysis is correct we must discuss submarine requirements not in terms of the fundamental nature of a future war but in terms of Soviet missions that must be countered regardless of the type of war we find ourselves fighting.

Capabilities vs. Missions. The combination of Soviet naval missions and American submarine capabilities has the following implications for submarine employment in any type of war:

1. Soviet antipower projection (anticarrier) missions would entail shore-based naval air attacks plus cruise missile attacks from surface ships and submarines. U.S. submarines can assist in defending carriers against both the surface and subsurface threats. Two or three submarines might be included in each battle group to provide this defense.* Because of the nature of carrier operations, the high-speed *Los Angeles* class is uniquely suited to this role.

2. The task of interrupting the flow of men and material to Europe would fall to Soviet submarines and (perhaps) naval aviation. Unless the Soviets employ a sea-based air platform, U.S. submarines can do nothing to counter the air threat. In contrast, countering the submarine threat would involve barrier operations, area sanitization, and direct support of particularly important convoys, all tasks well suited to U.S. submarines. The importance of this particular mission is directly related to the duration of the war; because a very short war probably means a U.S. defeat, it is necessary to plan on the war lasting long enough for reinforcement of Europe to be meaningful.

3. Soviet efforts to protect their own ballistic missile submarines would take the form of attacking U.S. antisubmarine warfare forces and of attempting to exclude American forces from the Barents Sea. Attack submarines' covert ability to operate in a hostile environment coupled with their ASW capabilities make them suitable for the counter-SSBN role should the United States elect to undertake such a task.* This is another way of saying that the Soviet Navy, strong on cruise missiles and weak on ASW, could less easily exclude attack submarines than other forces. Given present estimates of Soviet abilities to conduct antisubmarine warfare, no U.S. action, submarine or otherwise, is required to safeguard U.S. SSBNs; these ships will continue to depend on their inherent invulnerability from detection for their survival.

4. Soviet efforts to support the Red army would probably be limited to amphibious operations in the Baltic or the Black Sea. Because the shallow nature of the Baltic makes it ill-suited to the employment of U.S. high-speed, deep-diving submarines they could play little role in opposing such operations; opposition by allied submarines might be valuable. Submarine penetration into the Black Sea would probably be impossible.

5. If a nuclear-armed, land-attack cruise missile were deployed, U.S. submarines could supplement other forces in limited attacks on Soviet bases. This would be most valuable under conditions of limited nuclear war when carrier assets might be reduced and inhibitions against attacking Soviet territory

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*Battle groups are the basic fighting units of the U.S. Fleet. Their composition varies but typically includes one carrier, four to six escorts to provide both antiair and antisubmarine defense and two or three attack submarines. Escort and submarine numbers vary with availability of forces.

*Some argue that in a war in which neither side's home territory had been attacked there would be an incentive to refrain from attacks on SSBNs for fear of sending a false signal of impending escalation. This has an aura of unreality for many professional officers. In any case *if* such attacks are undertaken SSNs are a suitable, even ideal, vehicle.

would have vanished. The feasibility of such employment of attack submarines obviously is dependent on the extent to which development and deployment of a submarine land-attack cruise missile is affected in future years by SALT limitations.

Three observations should be made concerning the foregoing analysis. First, the arguments reinforce the premise that from the standpoint of submarine warfare (excluding the possibility of land-attack mission) fundamental Soviet missions are more important than specific war scenarios in assessing future requirements. Second, it is the antisubmarine capability of the SSN that is most significant in most cases. Finally the reader should note the deliberate absence of any discussion of commerce destruction on the scale of World War II as an important mission for either Navy. The dependence of the United States on seaborne commerce is well known and one writer suggests a similar dependence for Asian Russia.[11] But economic strangulation takes time and a fundamental assumption in present American planning is that a future major war will be relatively short, months rather than years. If this assumption is in error it affects far more than the role of one particular weapons system; if it is correct there is insufficient time for either side to attempt such strangulation. Two possible exceptions exist: Persian Gulf oil and resupply of the Hawaiian Islands. But in a general war the Soviets would almost certainly attempt to cut off oil at the source rather than on the high seas, while supplying the Hawaiian Islands is simply the Pacific analogue on a smaller scale of the resupply of Europe. Thus the oft-cited comparison of the present Soviet submarine force with the far smaller number of German U-boats in 1939 is misleading, not because it is untrue but because it compares a force attempting long-term economic attrition in the face of overwhelming control of the surface of the sea by the Allies with a Soviet force seeking to challenge that control in a far shorter war.

How Much is Enough? The discussion to this point has suggested various roles—chiefly antisubmarine warfare ones—for U.S. attack submarines in a future war and has further suggested that these roles are more or less independent of the nature of that future war, arising instead from the interaction of Soviet naval missions and American submarine capabilities. Moving beyond the general discussion to address the specific question of how many submarines are required presents several challenges. Derivation of exact force levels is analytically difficult, requires access to a large amount of data, much of it classified, and is heavily dependent on judgment. The announced Navy goal of 90 SSNs is at least partly influenced by estimates of what is attainable; the Chief of Naval Operations recently indicated that the "real" goal was 144 attack submarines.[12] Space, data availability, and security classification preclude any attempt in this paper to derive exact force levels. It is possible, however, to examine one hypothetical way of employing 90 SSNs in order to show that such a force level is at least reasonable. The Chief of Naval Operations in his annual report to Congress estimates that 85 percent of the total fleet could deploy in time of crisis.[13] With 12 carriers and 90 attack submarines one might expect 10 carrier battle groups and about 75 submarines to be available early in the war. Allowing two to three SSNs for direct support of each carrier battle group accounts for 20-30 submarines. Five SSNs are routinely deployed to the Mediterranean and would continue to operate there after the outbreak of hostilities. Most commentators assume that other attack submarines will form barriers off such bases as the Kola Inlet (Soviet Northern Fleet) and Petropavlosk (Soviet Pacific

Fleet), as well as in such chokepoints as the two exits from the Sea of Japan, the Strait of Gibraltar and the gap between Iceland and the United Kingdom. Assuming three to five SSNs in each of these barriers would require another twenty-odd ships. But to be effective barriers must be maintained continuously. Allowing for transit and reload and resupply time it might require an average of two submarines to keep one barrier station constantly occupied (the actual number would vary with the distance from the resupply site to the barrier). Thus we account for an additional 20 SSNs. This leaves fewer than 10 ships for direct support or protection of any high-value formation other than carrier battle groups, for operations against deployed Soviet SSBNs, for land attack missions or reconnaissance, for area ASW off ports of embarkation and debarkation, for reinforcement of the Mediterranean or for replacement of losses. It should be stressed that this simplistic approach is not intended to describe actual U.S. planning, either in method or results. Neither is it intended to represent a rigorous derivation of submarine requirements. It is intended to show that a force goal of 90 attack submarines is plausible and that higher levels would not be excessive. If this approach—and the Navy's goal—is even approximately correct the anticipated mid-1990s force level of 45-65 submarines will be inadequate to carry out all of the probable submarine missions.

Alternatives. There are at least three possible approaches to this mismatch between requirements and assets. First, the Navy might drop lower priority missions or missions in theaters of secondary importance. Second, the Navy might attempt to devise more efficient employment methods so that fewer submarines could carry out the same tasks presently envisioned for 90 SSNs. Finally, of course, we could build more submarines. The first alternative is

the least palatable. It is also the alternative we will be forced to adopt if we continue on our present course. It is therefore useful to consider how a significantly reduced submarine force might best be applied. One approach is to reexamine the present split between the Atlantic and the Pacific Fleets and shift a greater percentage of submarine assets to the Atlantic where the main Soviet Fleet is and where NATO support is most direct. This approach risks allowing Soviet Pacific submarines to close the sealanes to Hawaii and/or Japan. A second alternative might be to limit submarines to an ASW role, foregoing any opportunity for land attack and, except incidentally, for antisurface warfare. This approach simply recognizes that when assets are limited they must be employed where they are most effective. Because, as was seen above, most submarine missions are related to antisubmarine warfare, this limitation would have only a slight effect on required force levels. It might, however, have fiscal benefits as it suggests that the current fascination of many submariners with long-range cruise missiles may be misplaced, not because such weapons are ineffective but because the submarine platforms will be required for ASW. Finally the United States might be forced to choose between blunting the Soviet submarine threat to the sea lines of communication and defending the carrier power projection forces as a role for the submarine force.

Neither abandoning the Pacific nor eliminating the submarine contribution to protection of carrier battle groups are attractive responses to the problems arising from future reductions in numbers of submarines. Some combination of improved effectiveness and increased construction is therefore needed to counter the potential adverse results of smaller force levels. It would be pleasant to solve the problem by increasing production of the highly capable *Los Angeles*-class submarines. But as noted

at the outset these are expensive ships and any significant increase in construction will take money—indeed a great deal of money. It is not likely that total Navy budgets will be increased to allow such an increase in production. One need only recall the intense controversy surrounding the proposed $2.3 billion increase (in real terms) in the *entire* fiscal year 1980 defense budget in order to meet a formal commitment to NATO to evaluate the chances—or lack thereof—of finding the $1.8 billion annually needed to go from a building rate of one ship per year to a rate of five ships per year.[14] Increasing SSN construction by reallocation of funds within existing limited Navy shipbuilding budgets also appears improbable. On a sustained basis a significant increase in SSN construction would require either the virtual elimination of the construction of escort ships or the actual elimination of the *Trident* program. But escort ship levels in the Navy are already low and choosing SSNs in preference to them simply transfers the problem. Similarly, unless the nation is prepared to either (a) extend *Poseidon* lifetimes well beyond 25 years (the technical feasibility of which has not yet been demonstrated), or (b) accept an even more drastic reduction in sea-based strategic platforms and weapons than is now foreseen, some strategic submarine construction is essential in the coming decade.

If building more of the present ships is unlikely, perhaps greater operational availability can be gained from the existing force. For example, a *Sturgeon*-class SSN may spend as much as 3 years out of 10 in overhaul during which time it is unavailable for wartime service. If this could be improved to the 20 months out of 10 1/2 years now projected for *Poseidon* submarines (which have similar power plants and auxilary systems) there would be a significant increase in the number of deployable submarines.[15] Some

improvements in this area are now being undertaken; they should be continued. Simple mathematics, however, will show that the 85 percent availability figure requires an improved overhaul schedule and the attainment of extended operating cycles. Another possibility would be to increase the service life of existing and future submarines from 25 to 30 years. There is technical risk in this, both in terms of cost and of obsolescence as most existing ships were designed for a 20-year lifetime. Costs for service-life extension might range up to $50-60 million per ship based on similar costs for extending the life of *Poseidon* submarines.[16] In the long run a 30-year life would reduce the required steady-state building rate to three ships annually; in the short run a 5 year extension of *Sturgeon*-class lifetimes would delay the drastic reduction in force levels from the mid to the late 1990s. It should be noted that the Navy, with no fanfare, has already extended the lifetime of existing SSNs from 20 years to 25 years (based on comparison of current and past congressional testimony).[17] The Navy also recently gave serious consideration to extending the life of U.S.S. *Nautilus* (SSN 571), the nation's oldest nuclear submarine beyond 25 years.[18]

A different approach to reducing SSN shortages through increased efficiency is to seek other ways of performing the missions now assigned to submarines. For example the addition of towed array sonars to *Knox* (FF 1052) class frigates has resulted in highly capable passive ASW platforms. Continued improvements in this technology and expanded procurement of towed sensors may allow frigates to replace, partially or totally, direct support submarines in defending carrier battle groups. Such a replacement would reduce total submarine requirements and should be pursued. Replacement of barrier submarines is less likely, at least in the early phases of the war, in that

the air and sea surface above the logical chokepoints may be contested and no other ASW platform has the submarine's ability to operate securely in such an environment.

Design to Reduce Cost and Capability. Shifting submarine missions to other platforms, increasing submarine lifetimes, and improving operational availability all serve to lessen requirements and to buy time in which to solve the problem of declining force levels. All are important in the continuing attempt to make the most effective use of scarce assets. Ultimately, however, the Navy must either accept the reduction in force levels, with at least some reduction in capability, in the 1990s or must buy more—and cheaper— submarines. It is important to recognize that less expensive means less capable; if we knew how to build existing submarines for less we would be doing so. Admiral Rickover has often observed that he was "constantly bombarded with requests to develop a small, light, cheap nuclear power plant" but that neither he nor anyone else knew how to do so.[19] The question thus becomes the manner in which submarines are to be made less capable. Broadly speaking one can reduce either platform capabilities such as depth, speed and endurance, or sensor and weapons system capabilities such as detection range or fire control sophistication. Reducing capability by simplifying sensor and fire control performance has found few advocates. The reasons are straightforward: in time of war the side making the initial detection of the enemy gains a huge advantage as it alone has the option of joining or refusing battle and, often, the advantage of the first shot at an unalerted opponent. Thus the most logical cost reduction approach is a reduction in platform capabilities.

Less capable platforms almost certainly mean slower and less mobile ones. (Costs of the platform could also be cut by reducing the efforts applied to quieting; this is equivalent to reducing sensor performance and is equally unattractive.) Reduced speed can be obtained through construction of a new class of diesel-electric submarines (which might also offer acoustic improvements during battery operations) or through construction of nuclear submarines with less powerful (and thus presumably less expensive) nuclear power plants. Many, both inside and outside the Navy, argue for the diesel alternative. For example, Senator Gary Hart alleges that diesel submarines in "missions such as barrier ASW, antisurface warfare, and mine laying . . . could be a useful alternative to nuclear powered submarines."[20] There are, unfortunately, serious flaws in this argument. As we have seen, antisurface roles for submarines are primarily associated with the defense of carrier battle groups, a role demanding high speed and thus unsuitable for diesel submarines. Mining is an appropriate submarine mission only where the surface of the sea is controlled by the enemy; otherwise other platforms can lay more mines faster. But minelaying in hostile waters implies covert penetration for long distances, a task far better performed by nuclear attack submarines. In general, the effectiveness of a diesel submarine is highest when it is serving as an intelligent mine of limited mobility but great lethality and lowest when it faces long transits in the face of ASW defenses. We are thus left with the ASW barrier role. Here a new problem arises. Many will agree that diesel submarines might equal SSNs in some barrier operations but in wartime other forms of ASW may be required, particularly if Soviet submarines have been deployed in advance of hostilities. History is sufficiently rich in detail that it can "teach" us whatever we want it to. However, history does at least suggest that wars often do not develop the way they were expected to and that single-scenario weapons

systems must therefore be viewed somewhat skeptically. As an example, in the late 1930s the Italian Army developed the L3 tank. Because their scenario assumed an invasion through the narrow mountain passes of the Alps, the tank was designed with a nonrotating turret. But when war came tank battles were fought not on narrow Alpine roads but in open Libyan desert. The point is not that a bad tank was designed; the L3 was a good mountain tank just as a diesel submarine with forward basing would be a good barrier ASW platform. The point is that weapons optimized for one narrow scenario often are at a severe disadvantage if reality fails to follow the script.

More promising than construction of single-purpose diesel submarines is procurement of a less expensive nuclear submarine, essentially similar to the existing *Sturgeon* class in cost and capabilities. This would provide basically the same sonar and fire control system as later submarines but with reduced speed (both reduced maximum speed and reduced search speed). When all attack submarines in the current 5-year shipbuilding program have been delivered the United States will have 38 high speed *Los Angeles*-class SSNs. This will provide three submarine escorts for each of the projected 12 carrier battle groups, assuming roughly the same operational availability for attack submarines and carriers. Because it is in support of high speed carrier operations that speed is most essential, the mid-1980s may be the appropriate time to shift to production of a cheaper, slower submarine. Such a shift, coupled with some reduction in escort building rates, might allow procurement of three SSNs a year. While this will not allow maintaining the desired 90-ship inventory in the 1990s, it represents a far less unsatisfactory outcome than that which will result from continuation of the current program. It is important to note that in light of the nearly 6 years from

authorization to delivery experienced recently, such an expanded building program must begin in fiscal year 1985 or shortly thereafter to preclude at least temporary sharp reductions in force levels. This in turn means that design of the proposed new SSN must start soon. It is also important to note that this course is not risk free. Earlier it was alleged that the escalated cost of a *Sturgeon* was about half the cost of a *Los Angeles.* Such statements are suspect. The nuclear shipbuilding industry is in many ways unique and it is possible that much of the cost of the *Los Angeles* class represents not its increased speed and complexity but escalation within this specialized industry at a rate significantly in excess of that being experienced by the shipbuilding industry generally. We must not blind ourselves to the danger that without taking great care we may end up with less ship for the same or greater cost by attempting to introduce a new submarine design. Recently released results of a Navy study that examined the feasibility and costs associated with a variety of possible attack submarine designs show a 20 percent savings from shifting to procurement of a new, smaller submarine.[21] While details are not yet available the study appears to postulate a totally new design, resulting in a ship with capabilities somewhere between those of the existing *Sturgeon* and *Los Angeles* classes. It may yet be possible to achieve greater savings by simply reopening the *Sturgeon* production line; if, however, the 20 percent reduction in cost determined by the Navy study is the best that can be obtained, then even shifting to this less costly ship is unlikely to allow substantial increases in attack submarine construction.

A second risk involved in construction of a reduced cost SSN, especially one that is only a minimal redesign of the *Sturgeon* class, is that such a ship is a technological step backwards and flies in the face of the implications of the

accelerating tempo of technological change. There is no totally satisfactory resolution of this problem. One approach might be the application of the so-called SEAMOD concept now employed for new surface ships. In this design approach electronics and other sophisticated equipment is deliberately designed to facilitate future modular replacement with improved equipment.[22] Such a design approach is particularly worthwhile if (as it should be) a design objective of any new SSN is to increase drastically the time between overhauls, ideally to the point of requiring only a single midlife refueling overhaul. However, modular design has its limits. The greater the redesign from the existing basic *Sturgeon* platform, the more likely costs are to increase. Even if the modular concept can be fully implemented for "black boxes" at acceptable cost, it probably cannot be applied to the basic propulsion plant or auxiliary systems. Thus a redesigned submarine of the *Sturgeon* class represents a gamble that present U.S. propulsion capabilities will be adequate into the 21st century. There is a substantial risk here, but it is less than the risks involved in facing the Soviet Navy of the 1990s with a drastically smaller submarine force.

Conclusions. The fundamental argument of this paper can be stated as a series of assertions: Submarines are important under most future war scenarios. They are also expensive; as a result we will soon have fewer of them. Things aren't going to get better. There is no single solution. Nonetheless we must do something and do it soon. The exact steps we take may be less important than that we do *something*, for ships, especially submarines, take time to build and we will fight with what we have on hand when the war starts.

This analysis of alternatives suggests that there is no single answer to the problem of declining submarine force levels in the 1990s and that a combina-

tion of approaches is required. Specifically the analysis indicates that the Navy should: (1) plan on procurement of a less capable but less costly attack submarine starting in the mid-1980s, the aim to be a building rate of three per year; (2) employ the high-speed *Los Angeles*-class ships for the protection of carrier battle groups from both surface and submerged threats; (3) limit other SSNs to primarily a pure ASW role; (4) retain some *Sturgeon*-class submarines in service beyond 25 years to smooth out force levels; (5) continue efforts to improve submarine operational availability and to improve the ASW effectiveness of alternate platforms; and (6) study in detail how best to fight if we are forced to do so with a force of 50 attack submarines in the 1990s; the undesirability of this condition should not blind us to the fact that it may come to pass. One need not accept any or all of these specific alternatives, of course. But the need for some action and for decision soon cannot be escaped.

In reflecting on their lifelong study of human history, Will and Ariel Durant noted that

> War is one of the constants of history . . . . In the last 3,421 years of recorded history only

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BIOGRAPHIC SUMMARY

Captain Linton Brooks, a nuclear submariner, was educated at Duke University and the University of Maryland. He has served in several nuclear submarines and in the Polaris Poseidon Plans and Programs office of OPNAV, commanded U.S.S. *Whale* (SSN 638), and was a student in the College of Naval Warfare, Naval War College in 1978-79. He is now serving in the office of the Secretary of Defense (AE).

268 have seen no war .... Peace is an unstable equilibrium which can be preserved only by acknowledged supremacy or equal power.[23]

The catastrophic, even apocalyptic, nature of a major war with the Soviet Union needs no elaboration. All rational men hope such a war does not take place. Yet the stark fact remains that war may come; the wise man in time of peace prepares for battle, hoping as he does so that the very act of preparation will make war itself less likely. This paper has suggested some considerations and some approaches to such prepara-tion in the field of submarine warfare. What we must seek is not the attainment of optimum forces but the minimization of shortcomings. Distasteful as it may be, such an approach is inevitable in a world of limited resources. Regardless of our professional preference, a major building program of sophisticated and capable submarines is not likely in the near future. Some action—now—to face up to our projected shortages and soften their consequences is essential if the Navy of the 1990s is to be able to meet the challenge of deterring, or if necessary defeating, the Soviet Union.

NOTES

1. W. Graham Claytor quoted in "Navy Chief Says U.S. Has Best Submarines," *The New York Times,* 25 May 1978, p. 7:1.

2. Robert Taft, Jr., *White Paper on Defense: A Modern Military Strategy for the United States* (Washington: n.p., 1976); Naval War College undated reprint, p. G-1.

3. Drew Middleton, *Submarine, The Ultimate Naval Weapon* (Chicago: Playboy Press, 1976), p. vi.

4. Sergei G. Gorshkov, *The Sea Power of the State* (Moscow: Military Publishing House, 1976; Naval Intelligence Support Center undated abridged translation), p. 268.

5. 1967 costs from U.S. Congress, House, Committee on Appropriations, Defense Subcommittee, *Department of Defense Appropriations for 1967,* Hearings (Washington: U.S. Govt. Print. Off., 1966), p. 257. 1979 costs from James L. Holloway, *CNO Report* (1979 Posture Statement) (Washington: U.S. Govt. Print. Off., 1978), p. 93. Escalation factors from 1967 to 1979 furnished by Paul Fisher, Naval War College.

6. *Ibid.*

7. Harold Brown in testimony on 24 February 1977. U.S. Congress, Senate, Committee on Armed Services, *FY 1978 Authorization for Military Procurement, Research and Development, and Active Duty, Selected Reserve and Civilian Personnel Strength,* Hearings, pt. 1 (Washington: U.S. Govt. Print. Off., 1977), p. 605.

8. In testimony 11 April 1978, U.S. Congress, Senate, Committee on Armed Services, *Department of Defense Authorization for Appropriations for Fiscal Year 1979,* Hearings (Washington: U.S. Govt. Print. Off., 1978), p. 4304.

9. W.F. Fahey, "Technology and Warship Design: Capturing the Benefits," *Naval War College Review,* Winter 1979, p. 46.

10. See for example Henry Young, "Nuclear Deterrence: The Evolving Role of Naval Forces," Unpublished Thesis, Center for Advanced Research, Naval War College, Newport, R.I.: 1978, *passim.*

11. J.H. Stevens, "Undersea Power in Maritime Strategy," Unpublished Research Paper, U.S. Naval War College, Newport, R.I.: 1964, p. 21.

12. "Future Budget Worries CNO, SECNAV," *Navy Times,* 19 February 1979, pp. 4, 20.

13. Holloway, p. 12.

14. Cost figures for "3% real growth" from Lawrence J. Korb, "Press Briefing on the FY 1978 Defense Budget and the FY 1980-84 Defense Program," Unpublished Handout, American Enterprise Institute (Naval War College Reprint): 1979, Table 3.

15. *Sturgeon*-class figures based on personal experience in U.S.S. *Whale* (SSN 638). *Poseidon* figures based on testimony of J.H. Doyle in U.S. Congress, House, Committee on Appropriations, Defense Subcommittee, *Department of Defense Appropriations for FY 1979,* Hearings, pt. 6 (Washington: U.S. Govt. Print. Off., 1978), p. 619.

16. U.S. Congress, Senate, committee on Armed Services, *FY 1978 Authorization,* Hearings, p. 3428. Data for the record provided by the CNO estimated $580 million to extend 31 *Poseidon*

SSBNs from 20-25 years and $2029 million to extend them from 20 to 30 years. Limiting components are propulsion and auxiliary systems which are similar to those in *Sturgeon*-class SSNs.

17. Compare the statements on 11 March 1977 (*ibid.*, p. 3442), which show *Sturgeon*-class retirements in 1992-2000 (a 25-year life) with J.H. Doyle testimony of 3 March 1976 showing the *Sturgeon*-class overage in 1982-1993 (20-year life). Doyle testimony in U.S. Congress, Senate, Committee on Armed Services, *Fiscal Year 1977 Authorization for Military Procurement, Research and Development and Active Duty, Selected Reserve and Civilian Personnel Strength,* Hearings (Washington: U.S. Govt. Print. Off., 1976), p. 2559.

18. "Sub's Future in Air," *New London* (Conn.) *Day*, 29 January 1979, p. 17.

19. Hyman G. Rickover testifying before Congress on 27 April 1977. U.S. Congress, House, Committee on Armed Services, Subcommittee on Intelligence and Military Application of Nuclear Energy, *Naval Nuclear Propulsion Program,* Hearings (Washington: U.S. Govt. Print. Off., 1977), p. 20.

20. Gary Hart, "The U.S. Senate and the Future of the Navy," *International Security,* Spring 1978, p. 181. See also A.R. VanSaun, "Tactical ASW: Let's Fight Fire with Fire," U.S. Naval Institute *Proceedings,* December 1976, p. 99ff.

21. Fred S. Hoffman, "Navy Study Supports Smaller Subs," *New London* (Conn.) *Day*, 5 May 1979, p. 20. See also comments by the Chief of Naval Operations on this study earlier as reported in Dan Stets, "New Submarine Design Studies," *New London* (Conn.) *Day*, 13 February 1979, p. 15.

22. See U.S. Congress, Senate, Committee on Armed Services, *Department of Defense Authorizations for Appropriations for Fiscal Year 1979,* pp. 4254, 4356.

23. Will Durant and Ariel Durant, *The Lessons of History* (New York: Simon and Schuster, 1968), p. 81

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The Soviet Union's efforts to build a powerful fleet, its interest in a naval station to serve its Mediterranean squadron, its feelers through Persia to a warm water port, and its special development programs to meet operational requirements have antecedents in 'tsarist times. The goals of that earlier flexing of muscle were confounded by technology and politics. An earlier version of this paper, "Russische Seemachtbestregungen in der Epoche des Navalismus," appeared in Marinerundschau No. 2, 1978.

RUSSIA'S STRUGGLE FOR MARITIME PRESTIGE

DURING THE ERA OF NAVALISM

by

Commander Dieter Matthei, Federal German Navy

The Era of Navalism. The growing exchange of goods prompted by the rapid development of technology in the 1890s brought about a search for more and more new markets, resources and raw materials. The interest of those concerned concentrated on overseas areas not yet taken by economical and political consolidation. The relationship between state powers was determined by a kind of foreign policy that incorporated into its concept the vastness of the oceans. "Without direct access to the sea, without participation in the use of the global surface of water," a modern nation would appear not to be able to exist any longer.[1] The man-of-war (which had met with a fundamental change in significance ever since advanced technology had made its entry into naval affairs) grew into the role of the representative and the holder of a nation's power. Technical innovations such as steel shipbuilding and the introduction of steam power had created new dependencies that became manifest in demands for more effective naval stations and legally established ship acquisition programs.

The approaching new era, for which the American historian William L. Langer coined the term "The New Navalism" in *The Diplomacy of Imperialism*,[2] was characterized by a systematic buildup of oceangoing fleets as "a prominent image of a nation's power."[3] The close connection between politics and technology was very clearly exemplified by a policy setting in at that time and aimed at the establishment of overseas bases. This new display of maritime power received its decisive impetus from the teachings of the American naval officer, Alfred T. Mahan, who pointed at the interdependencies between geographic factors, national character, trade and overseas expansion as the determinant factors of a seapower. He pointed out that it wasn't a nation's capability for cruiser

warfare that made it a seapower, but the existence of a strong oceangoing fleet of battleships.[4] Thus, the term seapower may be used with two different connotations, one being the maritime means that enable a nation to exert maritime power, and the other being the nation herself capable of including the seas in her overall political concept.

Basic Prerequisites for the Buildup of Russian Seapower. Even though Russia had coastal borders twice as long as those of the United States, unfavorable climatic conditions and a location away from the centers of the world's trade and commerce stood against her development of power at sea or overseas. In addition, there was the economic backwardness of a predominantly agrarian state most clearly evidenced by an almost chronic lack of funds. Only the Black Sea harbors remained ice-free throughout the year, but the access to them was under the control of a foreign power. St. Petersburg on the Baltic Sea as well as Archangel on the White Sea were cut off by ice for almost 5 months of the year. Similar conditions were found at Petropavlovsk and Nikolayevsk on the Pacific. It was not until Russia had acquired the Maritime Territory that she came into an almost ice-free harbor, Vladivostok, situated in the bay named after Peter the Great.[5] It took, however, until 1901 before this port could be linked to the industrial centers of the European part of Russia by way of the Trans-Siberian Railroad, the efficiency of which at that time left a lot to be desired. Moderate flourishing of overseas trading was discernible only in the Black Sea where better climatic conditions and a more favorable economic structure, indispensable prerequisites, prevailed. Ships of the Volunteer Fleet, a government-owned shipping company, with Odessa as their base, maintained connection with the Far East. However, they were not able to turn this connection into regular sea

trading as most of the time there was very little freight, if any, on the return trip. Even though the share of Russia's own flags in maritime traffic rose by 20 percent during this period, and the departures to Eastern Asia tripled,[6] development of external trade strategies incorporating the high sea into its concept still lay in the future.

Until the midnineties, general politics were oriented on continental objectives, just like politics in the field of economics and trade, and were marked by the expansion into Turkestan and Transcaspia and by the desire to take possession of the Dardanelles. The entry of a British squadron into the Marmara Sea had clearly demonstrated the impressive potential of this strategic waterway to threaten Russian Balkan politics. The Dardanelles problem to Russia was not only of military significance and prestige, but also was a matter of economic policy, as Russia's finances had become dependent on grain exports shipped mainly via the Black Sea harbors.[7]

The Function of Maritime Power in the Political Concept of Czar Alexander III. A forcible solution of the Dardanelles problem was out of the question because of Russia's insufficient maritime power[8] and Britain's predominant maritime position in the Mediterranean. Russian policy could only aim for such limited objectives as, e.g., the opening of the Dardanelles passageway for Russian warships and the closing of the Black Sea to nonneighboring countries. If these objectives could have been realized, Russia would have been spared the necessity of building up two naval potentials; at the same time, however, Britain's position in the Mediterranean would have been gravely shaken. The situation set the Russian Naval Staff several tasks. First it was necessary to protect the coastline in the St. Petersburg area, with its concentration of industrial capacity, against a potential enemy threat. The buildup of numerous

flotillas of torpedo boats and the ordering of 50 submarines give evidence of such considerations.[9]

For the Black Sea, the construction of a potent fleet with a nucleus of ironclads and the establishment of a coastal defense organization were planned.[10] Insuperable difficulties because of a lack of her own naval stations curbed Russia's ability to put pressure on the Dardanelles from the West by way of permanent presence in the Mediterranean. Any Russian force in the Mediterranean remained dependent on friendly states bordering the Mediterranean as far as coal supply was concerned. Because of ice in the Baltic Sea, it was even impossible to maintain a year-round connection with the home base in St. Petersburg.

In the event of a military contest with Britain, Russia's naval strategy would aim at a disruption of British sea trading.[11] Yet the necessary prerequisites to achieve this goal, such as coaling stations and a sufficient number of suitable ships, still could not be met. The idea of commerce raiding warfare with cruisers was reflected also in plans to employ the merchant vessels of the Volunteer Fleet as auxiliary cruisers. In 1885, despite Russia's desolate financial situation necessitating considerable cuts into the military budget,[12] a fleet construction plan submitted in 1882 by the Minister of Naval Affairs, I.A. Shestakov, became effective. This plan visualized the construction of 15 ironclads, 10 cruisers and 11 gunboats over a 20-year period. Its extension to 20 ironclads and 24 cruisers, ordered only a little later, points out the significance beginning to be attached to a strong maritime component of future armament. Within the overall schedule individual portions of the plan, upon pertinent appropriation, were passed at 5-year intervals.[13]

There was no intention to draw level with the British Navy but rather to form a fleet which, with allied navies, was capable of coping with British naval forces, particularly in the Mediterranean. Even though planning as a whole still followed the concept of cruiser warfare, the ironclad gained in importance. From the early nineties on, Russia began to put more emphasis on bringing the oceans into her overall political concept. Both the journey of the tsarevitch to Eastern Asia on board the cruiser *Pamjat Azova* in 1891 and the dispatch of a squadron of the cruisers *General Admiral*, *Admiral Nakhimov*, and *Rynda* under the command of Admiral Kasnakov to New York's Columbus Celebration in 1892 served the purpose of presenting the Russian flag more intensively on the seven seas than before.

These activities culminated in the attempt to gain a footing in the Mediterranean by taking advantage of discord between Britain and France over the occupation of Egypt and Tunisia, respectively. Since 1886 Russia had sent more and more vessels into the Mediterranean but had not been able to maintain a permanent presence there. In the fall of 1893 a Russian force commanded by Rear Admiral Avellan went to Toulon in order to repay the French visit to Kronshtadt in 1891. The cruisers *Admiral Nakhimov* and *Rynda*, returning from the United States, joined the ironclad *Imperator Nikolai I*, coming from the Baltic Sea, and the cruiser *Pamjat Azova* off Cadiz. The gunboat *Terets*, stationed in the Mediterranean, later joined the other vessels. Strength and composition of this force signalled the political quality of this visit. France was looking for an ally against the powers of the Triple Alliance while Russia was striving for a naval station to serve a future Mediterranean squadron. Such a station would be the *conditio sine qua non* for any further advance of Russian naval forces into the Mediterranean. France, as it were, could only favor a permanent stationing of Russian warships in the Mediterranean, as her

own position against Britain would have been considerably improved this way. The press of those days consequently spoke not only of an imminent cession of naval stations in Bastia, Ajaccio or in Tripolitania, but also of a possible union of portions of the Russian Fleet with the French Mediterranean Fleet.[14]

The balance of power in the Mediterranean verged on being upset by these endangering Russian intentions, as even then French naval forces were on a par at least with the British forces and France, in case of mobilization, after 3 days would have gained "supremacy at sea" if the British Mediterranean Fleet were not reinforced by units from Britain or if a coalition of several Mediterranean powers were not accomplished.[15] Russia, however, shrank from too close an engagement with France as she feared an entanglement with Germany and Italy for which she was not in the least prepared.

The laying of the foundation stone for a naval port at Libau, in timely coincidence with the above mentioned events, as well as its urgent completion, showed that Russia had recognized the weakness of her position. In spite of the conclusion of a Franco-Russian treaty of alliance in 1894, no naval stations were ceded.

When the Toulon visit ended, the force sailed into the eastern Mediterranean in order to exert pressure on Greece and Turkey and to coax one of these nations into ceding a naval station to the Russians. Because of its proximity to the Dardanelles, a station in the Aegean Sea would have been much more valuable than one in the western part of the Mediterranean. For almost 3 months the force lay at anchor in the port of Piraeus, but negotiations for the installation of a coaling station on the island of Poros (where Russia for some time had owned 7-1/2 acres of land built up with some houses) did not yield any result.[16] The firm position of the British Government, who warned of

the serious complications liable to spring from the cession of an island in the eastern Mediterranean, not only served to back up Greece's position but also kept Turkey from joining the negotiating parties.

By the spring of 1894 Russian efforts to improve her maritime strategic position in the Mediterranean had definitely failed. The outbreak of the Sino-Japanese War finally induced Russia to shift the emphasis on her maritime interests to Eastern Asia. Consequently, the Russian ships, except *Terets,* sailed to Vladivostok.

During that time, however, Russia had not neglected her interests in the extreme northern latitudes. There, the installation of a port on the ice-free Murman and the Norwegian coasts offered the possibility of unrestrained access to the free ocean. Pretending to build up a base from which to pursue more efficiently her interests in fishing, Russia started careful exploration of the Murman Coast with respect to its suitability for the construction of a naval base. By supporting Norwegian autarkic tendencies and by exerting pressure on Sweden, Russia even tried to get hold of the Varanger Fjord and Port Victoria at the Ofoten Fjord (today's Narvik).[17] These plans, reaching far ahead of their time, not only failed because of the political situation and the geographic problems to be expected, but also because of the opposition of leading navy officials.[18]

The Beginning of the Construction of a Modern Navy. The nonexistence of an efficient dockyard and engineering industry, a well-established, reliable civil service and a sufficient stock of skilled labor proved to be a drag on the systematic buildup of the fleet. The requirement to build every hull in a home yard was easily met, but engineering raised problems so that foreign help in that area had to be enlisted. The British firms Messrs. Maudsley, Sons and

Field, Messrs. Humphreys and Tennant, as well as Messrs. Hawthorn and Leslie were predominant in the design and construction of propulsion plants, whereas since 1890 the French firm Belleville maintained an unchallenged position in the area of water tube boilers. The development of ships' armament and armor plate production were also strongly influenced by French firms, but Russia succeeded in presenting noteworthy domestic developments (12" gun built by Obukov and distribution of gun mounts on the ironclads of the *Sinop* class). Technological novelties were regarded with responsiveness as was proved by experiments with submarines conducted by the engineer Drzeviecki and the installation of oil furnaces on the battleship *Rostislav.* The design and construction of ironclads and cruisers even then showed traits of independent development whereas the design of destroyers was oriented on the *Posadnik* and the *Kapitan Kazarki*, both built at Schichau's. The new ironclads laid down between 1886 and 1894, with the exception of the three units of the *Sinop* class, represented six different designs with respect to the distribution of gun mounts and to their operational characteristics, exemplifying the search for the best suited type of battleship. With the following units of the *Poltava* and *Peresvet* classes, the Russians finally adopted the technique of building warships by classes. The design of every Russian cruiser of that time corresponded to the then valid concept of cruiser warfare. This development was initiated by the construction of the *Admiral Kornilov*, designed by French engineers, and it also influenced the construction of armored cruisers. Even the giant armored cruisers *Rjurik*, *Rossija* and *Gromoboi* still combined the operating profile of a commerce raider with that of an armored cruiser.[19] As was proved later on, these units were a failure because of over-emphasis on offensive capability (high speed, great range of action, high caliber armament) over defensive needs (insufficient armor).

To meet operational requirements Russia did not shrink from special development programs, either, so she built a number of landing craft in Odessa for limited amphibious operations and took measures for mine warfare in the Black Sea. Disregarding the regulations relative to the Straits, Russia transferred two minelayers ordered at a Swedish dockyard in Göteborg to Sevastopol, camouflaged as passenger liners.[20]

Owing to the energetic promotion of the Russian Navy by Czar Alexander III, Russia took third place behind Britain and France by 1893.[21] As the progress in the development shows, a realization of the 1882 naval acquisition program seemed possible, even in spite of the still existing shortcomings in naval administration and in the yards.[22] The decisive obstacle proved to be the lack of any private competition and the lack of funds which, except in rare cases, prevented placing orders abroad.[23] Efficiency of fleet personnel was indeed brought up but compared to international standards it still lagged behind with respect to practical and tactical skills because the lack of ice-free harbors prevented continuous sea training and year-round operation of ships.

The Employment of Maritime Power in Pursuit of Overseas Interests at the Turn of the Century. In the midnineties, the Russians fully realized the significance of a presence on the high seas for their nation's welfare. The naval officer Klado picked up Mahan's ideas and by numerous publications on the subject brought them to the attention of the public. He succeeded in convincing the reigning house that Russia, in order to be able to engage in world politics, had to have an oceangoing fleet.[24] Such considerations, of course, had their impact on Russian politics, which were

aimed more and more at the political and economic penetration of Northern China and Korea. The reinforcement of the naval forces stationed in the Far East, and the setting up of a force called the "Naval Forces of the Far East" under the command of Vice Admiral Tyrtov in 1895, were designed to help establish and secure the expansion. The situation of Vladivostok with respect to this objective proved most unfavorable, so that the acquisition of a naval station in the Yellow Sea area was considered. By the insistence of Muraviev, then Minister of Foreign Affairs, Russia succeeded in taking possession of the Liaotung Peninsula in 1898. The ice-free ports of Port Arthur (Luschun), which was supposed to be turned into a naval base, and Dairen (Luta), which was to be built up as a port for merchant shipping,[25] however, did not satisfy the naval staff, which instead wanted to gain a footing on the southeast coast of Korea. It is true that the Russian Pacific Squadron no longer had to pass the winter off Nagasaki but, as a glance at the map will show, acquisition of Port Arthur by no means had changed fundamentally the strategic situation. An attempt made a year later to achieve the objective at Masampo, in spite of the employment of naval forces off Chemulpo (Inchon), failed because of Japanese resistance.[26] The Russian naval staff, however, not only clung to the demands made so far, but also began to adjust to future opposition from Japan. The Japanese regarded Russian plans as a threat to their own predominance in the Eastern Asian area, gained only recently at a heavy cost.[27]

Russia succeeded in building up within a comparatively short period of time an impressive naval presence in Eastern Asia, but at the cost of a total absence on other oceans. From 1900 on, Russia had at her disposal the strongest fleet of battleships of all the European powers in Eastern Asia, next in strength and size only to the Japanese.

If in the beginning it had looked as if the concentration of naval forces had been caused by the Boxer uprising, it soon became evident that Russia pursued more portentous goals. Hence, conclusion of an Anglo-Japanese alliance aiming at putting a stop to Russia's expansionism was a logical consequence. It soon became obvious that the Russian Government was unable to bring forth conditions favorable to the realization of Russian imperialism. All planning work suffered from overassessment of her own capabilities[28] and lacked a clear concept. In particular, there was little understanding of the requirements an expanding technology held in store for those striving to be a modern naval power.

Russia's efforts to boost her own sea trade[29] were made to the disadvantage of the naval forces in Eastern Asia, as was proved by the forced buildup of the commercial port of Dalniy and the neglect of Port Arthur. Port Arthur as a naval station remained rather insignificant as long as adequate maintenance and docking facilities were not available, and as long as the bar across the port entrance prevented large ships from putting to sea except at high water.

Another playground of Russian expansionism was Persia. The demands made by influential Russian circles to advance to the Indian Ocean in order to take possession of a warm-water port in the Persian Gulf were more than just an attempt at acquiring a coaling station on the way to Eastern Asia. Because it was to be expected that Britain would not remain inactive over such activities, Russian naval experts flatly denied the acquisition of a port like Bandar Abbas, which could not be defended anyway.[30] The necessity inherent in Russian politics of having to operate in three distant theaters, Eastern Asia, Persia and the Dardanelles, at the same time proved a serious disadvantage, especially to the Russian Navy, as Russia neither succeeded in solving the

problem of naval stations in the Mediterranean[31] nor in securing maritime communication to Eastern Asia by the acquisition of coaling stations. The Russian Black Sea Fleet remained locked up in the Black Sea and to a great extent dropped out as a political factor in overseas expansion.

Russian Warship Construction. Under the influence of Mahan's ideas the Russians also turned away from concepts of coastal defense and commerce raiding and went to work on the construction of an oceangoing fleet of battleships which to them seemed best suited to make their national interests triumph. The 1882 program, which had not yet been completed, was replaced by a new naval acquisition program in 1898. At a cost of 396 million marks and within a 5-year period, this program was intended to increase Russian naval forces by 8 battleships, 6 large and 10 small cruisers as well as 36 torpedo boats. As Russia had decided to build an instrument of power that would enable her to exert pressure everywhere and at any time, but above all in Eastern Asia, a recourse only to the Black Sea shipbuilding capacity was out of the question.[32] Therefore, every unit either had to be built in Baltic shipyards or had to be procured abroad.[33] While the battleship *Cesarevich*, built by Forges Chantiers at Toulon, became the prototype of Russian battleships of the *Borodino* class, the battleship *Retvizan*, ordered at Messrs. Cramp in Philadelphia, remained a solitary one. Whether this was caused by the trying experience undergone with the Niclaussee boilers or whether economic reasons played their part remains obscured.

As other navies did, the Russian Navy, too, turned away from the giant cruiser type and, instead, started to develop a protected cruiser of average displacement and high speed. Only the *Pallada* class, conceived by Russian designers before 1898, still made allowance for the cruiser warfare concept, as was proved by the ammunition and coal capacities of these ships.

The change in concept that had set in in the meantime, however, became manifest in those ships ordered abroad. The cruisers *Bogatyr* built by the Vulkan Shipyards at Stettin, and *Novik*, built at Schichau's, served as samples for 4 and 3 further units, respectively. The destroyers *Sokol* and *Som* were built at Yarrow's and at Laird's, respectively, for Russia's account. Both ships were later copied by the Ishora and Creyton Shipyard. Another 5 and 4 destroyers, respectively, were ordered at Schichau and Normand's. In spite of great efforts, Russia did not succeed in finishing the ship acquisition program by 1903 as planned. Russian shipbuilding, however, even though still afflicted with serious shortcomings in certain areas, showed considerable ability. A survey of the battleships and large cruisers[34] under construction in June of 1900 demonstrates the effort made by Russia to maintain her position as a major power, even under changed conditions.

	Battleships	Cruisers above 5,000 Tons	Total Tonnage
Britain	15	21	431,319
France	5	15	213,392
Russia	11	8	196,592
United States	8	9	224,700
Germany	8	3	123,100

Russian shipbuilding, however, also suffered from the concentration of its entire capacity in the two major areas of St. Petersburg/Kronshtadt and Nikolayev/Sevastopol as well as from lack of private shipyards and armament industries.[35]

Climatic conditions such as the untimely ice cover of the Kronshtadt sea canal and the low-water level of the Bug River necessitated separating construction into a building site and an outfitting site. More and more, Kronshtadt turned out to be a maintenance and outfitting center while St.

Petersburg became the site of the government-operated weapons and engineering industry (Ishora, Obukov, Baltic Works) and ship construction yards. Conditions at Nikolayev were very much the same, as in addition to government-operated yards, a private firm, The Black Sea Company, specializing in boilers and engineering plants, had been established there. The installations at Libau and Vladivostok were exclusively used for repair operations; no new construction was possible there. Despite all difficulties, Russia finally succeeded in shaking off existing dependencies on foreign shipbuilders. The dominating position of British firms in the area of engineering was lost, and Russia eventually became independent even in the areas of armor plate production and boiler construction, making optimum use of German and French licenses (Krupp and Belleville).[36] A regulation, published in 1900, that construction orders would only be given to Russian shipyards and only domestic materials would be used, gives evidence of this development. The striving for autarky in shipbuilding not only was a matter of national prestige (or, perhaps, an indication of a lack of funds), it also underlined the desire to promote general industrialization. Disregarding a few exceptions,[37] it must be admitted that Russian shipbuilding in terms of production time and quality still lagged behind international standards, the reasons being not so much the unfavorable climatic conditions[38] or lack of technical equipment and skilled personnel but rather the cumbersome bureaucracy and red tape of upper navy command levels and naval administration.[39]

Problems of Russian Interpretations of Seapower. As the Russo-Japanese war soon proved, the Russian Government had not been able to meet the exigencies raised by the new era of navalism. There was still very little understanding of the significance of oceans in modern

major power politics and of the consequences of technological progress, a fact which accounts for the incredible attempt of Witte and Kuropatkin to talk the czar into curtailing funds for the navy and the Far East shortly before the outbreak of the war.[40]

The true value of a modern seapower was recognized by only a few, in spite of impressive naval acquisition programs. One of those few was Vice Adm. S.O. Makarov who urged the Russians to grow sea legs. One of his great objectives was the opening of the North East Passage in order to achieve, at least during the summer months, a rapid exchange of elements of the fleet between the Baltic Sea and Eastern Asian waters. But this plan, as well as the plans to turn the port of Aleksandrovsk, founded in the Catherine Bay in 1898, into a naval port failed, the reason being, once again, the narrowmindedness of the naval staff and government.

The basic weakness of the Russian Navy was in its organization and its personnel.[41] Even though some progress had been made in the training of personnel, naval thinking was still narrowed too much by the strict rule of coefficients of action and had severely neglected practical sea and squadron

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BIOGRAPHIC SUMMARY

Commander Dieter Matthei entered the Navy of the Federal German Republic in 1962 and has served in engineering billets in FPB *Luchs*, the frigate *Emden*, and the destroyer *Schleswig-Holstein*, and as a staff officer in a minelaying squadron. He is now head of a subsection in the *Materialamt der Bundeswehr*. He is educated in history, political science, and international law and is continuing his studies at the University of Bonn. He is the author of the prize essay "Der Begriff der deutschen Nation in der Verfassung und Publizistik der DDR."

training. The concentration of enlisted personnel in equipages and their billeting ashore during the winter months (with the exception of the Pacific squadron) were bound to have a paralyzing effect with regard to combat readiness and mobilization of the fleet. It still had not penetrated the minds of the people at major command levels that modern technology would take an inexorable toll and would make much higher demands on the training of personnel and the maintenance of material than was known before. However, as long as intellectual dullness and lack of initiative and responsibility prevailed on the supreme leadership levels, the handful of farsighted men was not capable of turning the tide.

In the end, Russia failed to attain her goal because she had failed to undo the intricate entanglement of technology and politics. Thus, the strength of the Russian Navy as depicted in the navy rosters was deceptive and did not stand up against the hard facts of reality.

NOTES

1. Walther Hubatsch, "Navalismus and Technik im 19. und 20. Jahrhundert," *Marinerundschau*, January 1977, p. 52.

2. *Ibid.* Hubatsch regards navalism as "die Summe der politischen, technischen und zivilisatorischen Errungenschaften, die an der Wende zum 20. Jahrhundert . . . gezielt eingesetzt werden, um Herrschaftsausdehnung auf oder über See zu erreichen zwecks sicheren Warenverkehrs, Erschliessen von Rohstoffquellen, Verbreitung bestimmter Kulturauffassungen."

3. Otto Hauser, *Deutschland und der englisch-russische Gegensatz 1900-1914* (Göttingen, 1958), p. 11.

4. Philip H. Colomb (*Naval Warfare, Its Ruling Principles and Practice Historically Treated* (London: W.H. Allen, 1891)) came to conclusions similar to those of Alfred T. Mahan (*Influence of Sea Power upon History* (Boston: Little, Brown, 1890)), whereas the champions of the *"jeune école"* in France (cf. the essays of Admiral Aube in the *Revue des Deux Mondes*) considered cruiser warfare capability the decisive element.

5. John A. Morrison ("Russia and Warm Water: A Fallacious Generalization and Its Consequences," U.S. Naval Institute *Proceedings*, November 1952, p. 1175) considers the bay as "one of the finest natural harbors in the Far East and open for nearly 11 months in the year." Frederick T. Jane, *(The Imperial Russian Navy: Its Past, Present and Future*, 2nd ed., (London: Thacker, 1904)) had earlier opposed the view that Vladivostok "is frozen up the greater part of the year . . . . Small and by no means powerful ice-breakers (NADERNJA, 1,500 ts) keep a channel fully open all the year round."

6. "Prozentualer Anteil der einzelnen Flaggen am eingehenden Seehandelsverkehr verschiedener Staaten," *Jahrbuch für Deutschlands Seeinteressen* (Nauticus 14, 1912) p. 660, and "Die Russische Freiwillige Flotte 1878-1924," *Atlantische Welt*, 7, 1968, No. 2, p. 21.

7. Dietrich Geyer, *Der russische Imperialismus. Studien über den Zusammenhang von innerer und auswärtiger Politik 1860-1914* (Göttingen, 1977), p. 84.

8. Russia had only 3 ironclads and 30 cruisers in 1883. Cf. "Stärkevergleich der wichtigen Kriegsmarinen," *Jahrbuch für Deutschlands Seeinteressen*, 1, 1899, p. 355ff.

9. Cf. Jürgen Rohwer and Walther Hubatsch, "Die Entwicklung der Marinen im späten 19. Jahrhundert," *Seemacht. Eine Seekriegsgeschichte von der Antike bis zur Gegenwart* (Munich: Bernard & Graefe, 1974), pp. 244, 246. Rumors spread in the nineties concerning the construction of a fleet of 300 submarines were just a myth. Cf. David Woodward, *The Russians at Sea* (London: W. Kimber, 1965), p. 119.

10. Donald W. Mitchell reports these in his *A History of Russian and Soviet Sea Power* (New York: Macmillan, 1974), p. 196.

11. Such ideas resulted in many publications, e.g., the chapter "Russia's Hope" in Woodward, p. 118 and Jane, p. 244.

12. While expenditures for the army fell, expenditures for the navy jumped from 30 million in 1881 to 51 million rubles in 1893. Geyer, p. 109.

13. The diverging statements of Woodward, p. 117 and Mitchell, p. 192, are owing to the fact that Mitchell included the ships (*Sinop* class) already under construction at that time. Cf. Jürgen Rohwer, "Kriegsschiffbau and Flottengesetze um die Jahrhundertwende," *Marine und*

Marinepolitik im Kaiserlichen Deutschland (Düsseldorf: Militärgeschichtliches Forschungsamt, Herbert Schottelius and Wilhelm Deist, 1972), p. 222.

14. *The Standard*, 24 July 1893 (permanent presence of a Russian Squadron in the Mediterranean), *Populo Romano*, 13 September 1893 (Bastia) and *Daily News*, 4 November 1893 (Ajaccio Tripolitania).

15. According to a report by the Reichsmarineamt dated 5 January 1893, Britain had at her disposal 13 ironclads, 5 cruisers and 16 torpedo boats; for France, the corresponding figures were 22, 13 and 80 and for Italy 16, 8 and 140 (Political Archive of *Auswärtiges Amt*, File Russia 72 b, Vol. 7). It should be noted that the combat value of the Italian units was estimated as being relatively low.

16. A note of the *Aüswartiges Amt* dated 25 February 1900 on the "Berechtigung Russlands zur Kohlenniederlage a) in Villafranca bei Nizza, b) auf der Insel Poros" does not contain an indication of the veracity of the following quotation of the Russian Mediterranean Squadron "based on Villafrance -sur Mer-, near Nice, a port which France had permitted to use in the past," Mitchell, p. 191. Rights to use the port had been granted to Russia in 1859 by the Kingdom of Piedmont-Sardinia to which this area belonged (Political Archive of *Auswärtiges Amt*, File Russia 72 c).

17. Walther Hubatsch, "Die russische Marine im deutschen Urteil 1890-1914," *Das Bild der russischen und sowjetischen Marine*, Supplement Nos. 7/8 of *Die Marinerundschau* (Berlin and Frankfurt; Main, 1962), p. 22.

18. The German Ambassador in St. Petersburg, von Tschirschky, reported to the *Auswärtiges Amt* on 23 April 1895 that "die Errichtung eines Kriegshafens . . . aber noch längere Zeit auf sich warten lassen (dürfte), besonders weil der Widerstand, dem dieser Plan in russischen Marine-kreisen begegnet—die eine Stationierung in jenen entlegenen Gegenden fürchten· erst zu überwinden sein wird," Political Archive of *Auswärtiges Amt*, File Russia No. 45, Vol. 2.

19. Doubts about the value of these ships are most clearly expressed by remarks made by Russian naval officers on the *Rossija:* "She can fight for five minutes, at the end of that time she will have won or . . . ."; Jane, p. 264.

20. The German Ambassador in Turkey, Radolin, on 23 November 1892 reported that by the end of January or beginning of February two ships, each capable of carrying 400 mines, had arrived at Sevastopol and were incorporated into the Black Sea Fleet as transport vessels under the names of *Bug* and *Donau*, Political Archive of *Auswärtiges Amt*, File Russia 72 b, Vol. 7.

21. "In terms of first class battleships, England then held a comfortable lead with 35 ships while France was in second place with 16 and Russia third with 11. The numbers of armored cruisers were 18, 13 and 10, respectively, protected cruisers of the first and second class numbered 67, 27 and 3," Mitchell, p. 197.

22. In spite of long construction times for ironclads (ranging from 6 to 7 years) 14 ironclads and cruisers each had been finished or were laid down by 1898.

23. Even the conclusion of the Franco-Russian alliance only resulted in the contracting of the small cruiser *Svetlana.*

24. Czar Nicolai II, known as a "naval enthusiast" (Mitchell, p. 198), lent a particularly willing ear to Klado and so did the Grand Dukes Alexander Michailovitch and Alexei Alexandrovitch who had close ties with the czar and held important positions in the navy. They also engaged in writing on naval topics, following the line of Klado, Jane, p. 704.

25. Morrison rightly writes: "To say that Russia needed Dairen as an "outlet to the sea" is a complete misreading of geography as well as history . . . . Dairen is not the natural port for the Russian Far East, (it is) the natural port for Southern Manchuria," p. 1175.

26. Donald Macintyre, *Sea Power in the Pacific; A History from the Sixteenth Century to the Present Day* (Trowbridge, 1972), p. 126f.

27. In a letter to the Russian Minister of Foreign Affairs, Muraviev, the acting Navy Minister, Admiral Tyrtov, on 26 February 1900 (*Krasnyj Archive*, 1926, Vol. XVIII, p. 20ff) not only demanded the acquisition of Masampo with the Kargoto Island, but also requested the appropriation of special credits, in order to bring up the strength of the Russian Fleet in the Far East to a standard of 30 percent above that of the Japanese Fleet. Cf. B.H. Summer, "Der russische Imperialismus in Ostasien und im Mittleren Osten 1880-1894," in Hans Ulrich Wehler, ed., *Zur Geschichte des modernen Imperialismus* (Berlin, 1970), p. 326.

28. By the end of 1903 the Pacific Squadron was scheduled to have 9 battleships and 21 cruisers at its disposal, but when war started in 1904, only 7 and 11, respectively, of the scheduled number of units had arrived in Eastern Asia. "Die Fortschritte fremder Kriegsmari-nen," *Jahrbuch für Deutschlands Seeinteressen*, 6, 1903, p. 46.

29. Between the years 1890 and 1900 the Russian merchant fleet grew by 70 percent. *Taschenbuch der Kriegsflotten* (Bruno Weyer, 1905), p. 538.

30. Summer, p. 332f.

31. During the Cretan disorder, the Minister of Foreign Affairs Muraviev, in 1897, tried to acquire Souda Bay as a naval station. He failed because of the resistance of the Minister of Finance, Witte, who gave preference to Russian expansion in Eastern Asia. (William L. Langer, *The Diplomacy of Imperialism* (New York: Knopf, 1929), p. 362) whereas the Minister of War, Kuropatkin, had an eye on the Dardanelles.

32. "Die Fortschritte fremder Kriegsmarinen," *Jahrbuch für Deutschlands Seeinteressen*, 3, 1901, p. 62. Only 2 cruisers and 9 torpedo boats were designated for the Black Sea.

33. Orders for the construction of the following large protected cruisers were placed abroad: *Bajan* at La Seyne's, *Varjag* at Cramp's, *Askold* at the Germania Shipyards and a small type cruiser *(Bojarin)* in Denmark.

34. "Die Fortschritte fremder Kriegsmarinen," *Jahrbuch für Deutschlands Seeinteressen*, 3, 1901, p. 41.

35. The negative consequences resulting thereof ("the absence of competition" which leads "to comparatively high prices that the Admiralty has to pay for the construction of ships and engines") were recognized even at that time by sensible Russian naval officers. Cf. A. Stroumillo, "The Russian Navy from T.A. Brassey, *The Naval Annual 1898* (Portsmouth: Griffin, 1898), p. 100.

36. In Russia, four firms operating with foreign capital (i.e., Chantiers de la Baltic, S.A. Franco-Russo-Kronshtadt, Chantiers Navale Nikolayev) were engaged in the construction of Belleville boilers. These boilers had become the standard boiler type. Jane, p. 410.

37. The designs of the ice-breaker *Yermak* (built by Armstrong/Elswik) and of a minelayer type drafted by the Russian Vice Adm. S.O. Makarov were far ahead of their time, Mitchell, p. 202. The same applied to the 12" gun of the *Borodino* class, developed by the Obukov Works, which in 1917 proved superior in range to the guns of modern German battleships having the same caliber. Hans J. Brennecke and Herbert Hader, *Panzerschiffe und Linienschiffe 1860-1910* (Herford: Koehler, 1977), p. 128.

38. Even the hulls of the big battleships were constructed in large roofed-in sheds. Jane, pp. 342, 352.

39. In his diary, the Russian naval officer, Wladimir Ssemenov (Berlin: Rassplata, 1908), points out the desolate state of affairs in the Technical Committee and in the Board of Construction and Supply. In Sevastopol in one year alone, 40 officers were found guilty of bribery. Mitchell, p. 199.

40. Cf. Kuropatkin's entry in his diary quoted by Sergej Gorshkov, *Morskaja moschtsch gosudarstva* (Moscow, 1976), p. 149 of the German translation.

41. The German naval attache in a report to the Reichsmarineamt (Political Archive *Auswärtiges Amt,* File Russia 72 b, Vol. 8) dated 1 April 1893, not only criticized the lack of a "seaminded population" and the "low state of public education," but also relentlessly uncovered the deeply rooted weakness in the body of officers. The "beginnings of a promising development" which he noted did not, however, culminate in the (expected) success as the ensuing events clearly demonstrated. *(Der Krieg zwischen Russland und Japan 1904-1905.* Prepared by the Admiral Staff of the Navy, Restricted, Vol. 3, Berlin, 1909, p. 161.

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Territorial and ideological disputes are not new phenomena in the relations of China and the U.S.S.R. nor of China and Russia. Cultural differences and personality conflicts also have made their negative contribution. Now new economic and political realities are bound to aggravate the disputes and differences.

SINO-SOVIET RELATIONS

SINCE THE DEATH OF MAO ZEDONG

by

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Introduction. The death of Mao Zedong (Mao-Tse-tung) on 9 September 1976, at the age of 82, raised many questions about the future of Sino-Soviet relationships, and the effect of those relationships on world peace. This paper examines the nature of the direct competition between these two countries from the time of Mao's death to the present. The preponderance of evidence will reflect the polemics and activity of the Chinese side for obvious reasons. First, the most dramatic change in leadership during the period covered occurred in China. Mao Zedong was absolute ruler of the People's Republic of China (PRC) for the first 27 years of its existence, while leadership in the Union of Soviet Socialist Republics (U.S.S.R.) is in its fourth generation, having in more recent times passed relatively peacefully from one leader to the next. Second, the Soviet Union is an acknowledged superpower, industrially and militarily, with remarkably consistent foreign and domestic policies.

China, on the other hand, is a bona fide enigma, having experienced major foreign and domestic policy changes both before and after Mao's death, but within the usual cloak of secrecy that generally shrouds such activities. Finally, as a modern superpower with extensive worldwide interests and concerns, the Soviet Union focuses relatively less media attention on China than does China on the Soviet Union, at least in the sense of the direct competition between them. Therefore, Sino-Soviet relationships during the period are best viewed in the context of China's internal political activities and external initiatives.

Background. The Sino-Soviet split that ultimately destroyed Western perceptions of monolithic communism began in 1956 when Mao challenged Moscow's preeminence in world communism in the wake of de-Stalinization.[1] The origins of this great schism can be traced to a combination of

cultural, territorial, nationalistic, ideological, and even personality factors, some of them centuries old.

China, with its spiritual heritage of Confucianism and Buddhism, general indifference to the fate of others, and lack of a Messianic tradition, is a purely Asian country not easily adaptable to communism over the short run.[2] Russia, to the contrary, is predominantly European in outlook, passionately and sacrificially Christian in heritage, and psychologically inclined to the Messianic, brotherly concern and supreme power concepts so akin to communism's secular doctrine of salvation.[3] The result of this cultural difference between East and West is manifested in the ability to understand the other's motives and aspirations when such emotional issues as territorial disputes, nationalism, and personality factors are introduced.

The territorial dispute, born of nationalism and ethnocentrism, is at the heart of the Sino-Soviet conflict. The first known confrontation between Russian and Chinese troops occurred in the Amur River valley during the period 1680 to 1689.[4] Between 1858 and 1860 the Russians took advantage of Chinese weakness to impose territorial cessions involving areas north of the Amur River, east of the Ussuri River, and significant portions of the Ili region of Chinese Turkestan, some 600,000 square miles in all.[5] In 1911, with Russian assistance, Outer Mongolia (now the Mongolian People's Republic) declared itself autonomous, becoming by 1921 a de facto satellite of the Soviet Union.[6] It may be said that Russia's historic aim has been to break China into separate autonomous parts, facilitating the quest for a warm-water port on the Pacific Ocean, and ensuring its own security through the proliferation of relatively weak states along its border. Similarly, the historic Chinese aim has been to keep nationalist/geographic segments of the Greater Russian State separated, with the ancient Duchy of Moscovy as small as possible.[7] To a large extent then, the lineage of modern territorial military confrontation, diplomatic maneuver, and invective can be traced back into almost three centuries of Chinese-Russian history.

If territorial disagreement is truly the heart of the Sino-Soviet split, ideology is the lifeblood of the dispute. Although the great tomes and millions of words written and spoken in the name of one interpretation of ideological correctness or another cannot be easily distilled, opposing Soviet and Chinese positions are necessary to understanding the polemics of their differences. Soviet ideology is essentially Leninist. More precisely, it is an adaptation of Marxism to the Russian social, economic, and political setting—pragmatism as a reflection of ideologically conscious policy, coupled with centralism in relationship to other country communist parties.[8] Chinese Communist political concepts reflect Mao's considerably more dogmatic interpretation of Marxism-Leninism. Specifically, the Chinese position calls for undeviating support of all who struggle for revolutionary change in the strict Marxist-Leninist-Maoist sense, and acceptance of nationalistic communism, the very antithesis of centralism.[9] In practical terms the ideological Sino-Soviet dispute is a fight for leadership of international communism and for influence among Third World nations.

Conflicts of personality, on top of cultural differences, territorial disputes, and ideological disagreement, have certainly exacerbated the situation. The contempt of Stalin and Khrushchev for Mao, and of Mao for Khrushchev and Brezhnev, are fairly well documented. But the degree to which such feelings contributed to hostility, or at the very least prevented rapprochement, is neither insignificant nor susceptible to quantification. Suffice it to say that the personality factor did, in fact, adversely affect Sino-Soviet relations.

The factors just discussed, and specific incidents ranging from disagreement over tactics in the Chinese Civil War to the nature of Soviet military aid to the PRC, led to withdrawal of Soviet advisers from China in 1960. After 1960 there occurred frequent exchanges of harsh polemics, and few political, economic, and cultural contacts. Interspersed were behavioral extremes ranging from grudging cooperation in support of North Vietnam against South Vietnam and the United States to serious clashes along the Sino-Soviet border. From 1969 until Mao's death in 1976, party-to-party invective continued unabated, while state-to-state relationships attained a degree of normalization through border negotiations and a very modest resumption of trade. Globally, furious competition for support from and influence upon national communist parties ensued.[10]

On the eve of Mao Zedong's death, the disputatious atmosphere permeating Sino-Soviet relations was expressed by the domestic PRC press as follows:

Chairman Mao Zedong points out: "the soviet union |sic| today is under the dictatorship of the bourgeoisie, . . . a dictatorship of the hitler type . . . khrushchev, brezhnev |sic| and company have grown from counterrevolutionary revisionists into social-imperialists . . . the soviet bureaucrat-monopoly bourgeoisie is a decaying, declining, parasitic and moribund capitalist class . . ."[11]

And by the foreign PRC press:

To oppress the non-Russian nationalities at home and contend for world domination, the Soviet revisionist renegade clique is feverishly preaching big-Russian chauvinism . . . all national chauvinists take "racial superiority" as their theoretical basis. Hitler's great Germanism was based on the allegation that the Germanic race was superior to all others. This is also the case with Brezhnev and company.[12]

During this same period, the domestic press in the U.S.S.R. commented on Chinese unrest following the spring 1976 purge of Deng Xiaoping (Teng Hsiao-ping), Vice Chairman of the PRC Communist Party following the death of Zhou Enlai (Chou En-lai):

It is safe to say that Mao has persecuted no fewer communists than the Kuomintang and the Japanese occupation forces combined. He removes not only those he sees as real or imagined rivals but even rank-and-file members of the organization suspected of less than blind loyalty to Maoism . . .[13]

And in a foreign broadcast:

The present stage of Maoist subversive activity in the world communist movement is characterized by continued attempts from the Chinese leaders to make Maoism an international trend and to weaken the international solidarity of the brother parties . . . . Pro-Maoist elements hide behind tolerance of the ideology of the Chinese leaders in order to wedge views, that are alien to Marxism-Leninism, into the midst of the communists.[14]

But despite the harsh words and the competition in ideological spheres of influence, solid contacts between the PRC and the U.S.S.R. continued in other areas. For example, the 1976 Soviet-China trade agreement called for a 40 percent increase in exchange of goods over that of 1975, and protocols were signed for continued trade in 1977.[15] Significantly, the 1950 Sino-Soviet Treaty of Friendship, Alliance, and Mutual Assistance, though moribund since 1966, remained in effect until China announced in April 1979 that it would allow the pact to expire one year hence.[16] And finally, diplomatic relations between China and the

Soviet Union, at the ambassadorial level, remain intact despite minimal contact.

Against this background of bitter utterances, border skirmishes, intense competition abroad, and continued trade and diplomatic liaison, Sino-Soviet relationships since the death of Mao Zedong may now be explored.

Post-Mao Sino-Soviet Relations. *Diplomacy.* Immediately following Mao's death on 9 September 1976, the PRC Communist Party Central Committee announced its decision not to invite foreign governments, fraternal parties, or friendly personages to send delegations or representatives to take part in the mourning in China.[17] This may have been a ploy to avoid embarrassment in the presence of foreign diplomats and media representatives should a power struggle or popular unrest publicly manifest themselves. Or the decision may have reflected a combination of factors ranging from ethnic chauvinism to practical concerns for the ability to lodge, feed, and transport visiting diplomats.

In a rather transparent attempt to place the attitude of the U.S.S.R. toward Mao in proper perspective, and perhaps even to set the stage for future relationships with his successor, the Soviet Union significantly downplayed Mao's death. Only brief articles announcing Mao's death appeared in the Soviet domestic press on 10 September 1976. Just four lines appeared on page two of *Pravda* and page three of *Izvestia*. On the same day, five-line articles expressing condolences from the Communist Party Central Committee of the U.S.S.R. to the Communist Party Central Committee of the PRC appeared on page two of both *Pravda* and *Izvestia*. On 14 September 1976, page four of *Pravda* reported visits by Soviet Minister of Foreign Affairs A.A. Gromyko and a host of lesser lights to the Chinese Embassy in Moscow to sign the book of condolences on the occasion of Mao's death. If faint praise is damning, Mao Zedong was ignominiously buried by the Soviet leadership and press. A further slight may have been perpetrated by the Kremlin. Prominent press attention was given by the Chinese to those governments that provided wreaths and had their diplomats in China attend the mourning ceremony for Mao. As reported by the *Peking Review*, wreaths were sent by Albania, Yugoslavia, and most other nations of the world including the United States and its allies, but no mention is made of wreaths, if sent, by the U.S.S.R. or members of the Warsaw Pact. Similarly, embassy officials of the U.S.S.R. and the Warsaw Pact countries either did not send diplomatic representatives to the special mourning ceremony held for Mao, or their attendance was ignored in the Chinese press.[18] That inferences can be inaccurately drawn, given the Soviet press reports of a condolence message, and the absence of the U.S.S.R. from the long list of countries sending such messages that appeared in the Chinese foreign and domestic press, is readily apparent. For according to the latter, only Albania, Yugoslavia, and significantly, Rumania, of the East European and Soviet bloc countries, sent condolence messages.[19]

Noteworthy diplomatic exchanges outside those associated with propaganda initiatives and negotiation of the border dispute have been desultory since Mao's death. On 27 October 1976, *Pravda* and *Izvestia* reported on page one that Moscow sent Peking a friendly message commemorating the 27th Anniversary of the People's Republic of China, and calling for normalization of relations between the PRC and the U.S.S.R. The Chinese press, characteristically, did not acknowledge receipt of such a message. On 27 August 1977, *Pravda* carried a very brief article on page five concerning presentation of credentials by the new Chinese Ambassador to the U.S.S.R., Wang Yu-ping.

His departure from Peking was broadcast by the New China News Agency on 24 August 1977.[20] In July 1978 a new Soviet Ambassador to the PRC, I.S. Shcherbakov, was named,[21] apparently without announcement in the Chinese press. On page one of the 11 October 1977 edition of *Izvestia*, a 10 October 1977 meeting of Chairman of the U.S.S.R. Council of Ministers A. Kosygin, with the new Chinese Ambassador Wang Yu-ping, was announced, but no results of the talk were printed. In any event, little has been reported in either the Soviet or Chinese press concerning the activities of these ambassadors or their respective embassies.

In sum, diplomatic contact between the U.S.S.R. and the PRC immediately following Mao's death was minimally correct on the part of the former, virtually unreported by the latter, and almost nonexistent outside border negotiations and exchanges of propaganda-oriented messages in the name of diplomacy.

Propaganda. The war of words between the PRC and the U.S.S.R. is undoubtedly the salient feature of Sino-Soviet relations since Mao's death. Anti-Chinese propaganda is reasonably well balanced between the foreign and domestic press in the U.S.S.R., and the content of each is similar, if not identical. The balance of anti-Soviet propaganda in the foreign and domestic Chinese press is more difficult to assess as much of the domestic material is available only through *New China News Agency* English broadcasts of previously published commentaries. But a definite disparity exists between the content of anti-Soviet propaganda published by the Chinese for foreign consumption, and that generated for domestic audiences.

Mao's death brought about a hiatus in Soviet anti-Chinese propaganda, both foreign and domestic, that lasted until late spring 1977. The pejorative terms, "maoism" and "maoist," disappeared from the journalistic lexicon during this period, first reappearing on page three of a *Pravda* article of 25 April 1977 concerning China's economic difficulties. In the interim, most of the Chinese-oriented Soviet propaganda focused on calls to the new PRC leadership for improved relations. The various articles and speeches generally adhered to a format expressing Soviet bewilderment about Chinese behavior, followed by disclaimers of Soviet blame, recitation of the many initiatives taken by the U.S.S.R. to normalize relations, and a call for talks without any preconditions (referring to the territorial dispute). Some articles written in this vein first discuss the history of the formation of the PRC and the friendship and help provided by the Soviet people early on. All are friendly and supportive in tone. The first of these articles, and a fairly representative example of subsequent commentary, appeared on page four of *Pravda* on 1 October 1976. Entitled "Twenty-Seven Years of the CPR" it was written by I. Aleksandrov, long the pseudonym for a high-ranking state spokesman with an important message. After a long review of PRC history and association with the U.S.S.R., Aleksandrov says:

> Through no fault of the Soviet side, in the early 1960s relations between our countries and parties began to deteriorate. The Soviet Union and the CPSU did everything in their power to stave off this process . . . .

The article goes on to cite all the initiatives taken by the U.S.S.R. to resolve issues between them, including a draft nonaggression treaty proposed in 1973, before continuing:

> Our country is prepared to conduct businesslike and concrete talks . . . we are prepared to normalize relations with China on the principles of peaceful coexistence . . . there are no problems in the relations between our states

that cannot be solved if there is a mutual desire to do so in a spirit of good neighborliness, mutual advantage and consideration for each other's interests.

Soviet patience with this unreciprocated conciliatory propaganda thrust finally wore thin in an article written by M. Georgiyev and published on page five of *Pravda* on 19 March 1977. The text scored Chinese media attempts to link the recently purged "gang of four" with the Soviet Union, and criticized continued anti-Soviet propaganda emanating from China. Although the term "maoism" was not used, the tone of the piece indicated Soviet realization that China's policy was not likely to change, despite new leadership. By mid-1977, the Soviet media had renewed its "no holds barred" propaganda campaign against the PRC, accusing the Chinese of war hysteria in its attitude toward the U.S.S.R.,[22] preparing for war against the U.S.S.R.,[23] involvement in all sorts of human rights violations,[24] and development of chemical and biological warfare capabilities.[25] Not surprisingly, though, the domestic and foreign Soviet press continue to intersperse their anti-PRC commentaries with periodic calls for normalization of relations in the apparent hope of ameliorating a tense situation. Such an appeal most recently appeared in a Moscow to China broadcast in Mandarin on 25 January 1979.[26]

Anti-Soviet propaganda abroad continued unabated by the PRC despite Mao's passing. On 13 September 1976 the following was written for foreign consumption, using the appropriate code words (in my italics), in reference to the U.S.S.R.:

... he [Mao] initiated ... the great struggle to criticize *modern revisionism* with the Soviet *revisionist renegade clique* at the core ... promoted the ... cause of the people of all countries against imperialism and *hegemonism*, and pushed the history

of mankind forward .... We must carry the struggle against imperialism, *social-imperialism* and *modern revisionism* through to the end. We will never seek *hegemony* and will never be *superpower*.[27]

Domestically, the Chinese were so preoccupied with mourning the death of Mao, paying him tribute, and attempting to avoid a messy power struggle, that little anti-Soviet material appeared in the local press until late October 1976. Then it was business as usual, as exemplified by these comments appearing in the *People's Daily* and broadcast in Mandarin on 28 October 1976:

... The programme reflects the foreign economic and trade policy of Soviet social-imperialism and is an important part of the Soviet revisionists' counterrevolutionary global strategy for world domination .... Everything must be subordinated to the Soviet revisionists' need, everything must be at the dictate of the new tsars .... By pushing hegemonism the Soviet social-imperialists are only accelerating their own destruction.[28]

By late 1976, the anti-Soviet Chinese line focused on internal problems of the U.S.S.R., oppression of the Russian people by their leaders, eventual collapse of Soviet society, etc., etc. In 1977 the thrust of Chinese propaganda ranged from references to the U.S.S.R. as "taking on Hitler's manners"[29] to articles such as the one entitled, "Soviet Social-Imperialism—Most Dangerous Source of World War."[30] In late 1977 Soviet Communist Party Secretary L. Brezhnev was identified in the 5 December edition of *Red Flag* as a "fascist." On 3 March 1978, an article in *Peking Review* accused the U.S.S.R. of stepping up research and development efforts in biological and chemical warfare, despite signing the 1965 international con-

vention banning the use, production, and possession of biological weapons. Another piece in mid-1978 identified the U.S.S.R. as China's "number one" enemy,[31] raising the vehement pitch of anti-Soviet propaganda another notch. The crescendo to date was reached in a 1 November 1978 article in *Red Flag*, that said:

> ... Soviet social-imperialism ... is also energetically trying to encircle Japan and China ... following in Hitler's footsteps. It has a great hunger for power.... It is intensifying its expansionist offensive everywhere and thus putting its head in the noose everywhere.... The plotter of a siege will find himself besieged and ultimately defeated. This is the inevitable fate of Soviet social-imperialism.[32]

Clearly, from the preceding samples of propaganda exchanges between the U.S.S.R. and the PRC, the latter's pronouncements are considerably more trenchant and pejorative than those of the former. There also appears to be an increasing stridency in the Chinese propaganda efforts toward the Soviet Union, that makes it difficult to accurately evaluate in terms of seriousness and meaning. In terms of propaganda exchanges, the Sino-Soviet split appears quite real, deep, a threat to world peace, and not very susceptible to quick-fix or short-term cure.

Leadership. Perhaps the most interesting facet of Sino-Soviet relations, immediate past, present, and future, involves the leadership of both parties and their respective governments. On the Soviet side, the very top leadership has remained intact for a number of years. But because it is a bona fide gerontocracy, there is much speculation in the Western press about the identification of Brezhnev's and Kosygin's successors, their attitudes, and the effects of a potentially tumultuous change in

Soviet leadership on internal stability, East-West relations, and Sino-Soviet tension.

Chinese leadership has undulated and shifted fascinatingly for years, but perhaps never more so than after the death of Premier Zhou Enlai in January 1976. There are many indications in Soviet and Western writings that the Russian leadership preferred the more pragmatic Zhou Enlai to Mao Zedong and, in fact, fully expected Zhou to survive Mao and assume leadership of a potentially more rational, if not tractable, Chinese Government. While this may only have been a propaganda ploy by the Soviet media to defame Mao, it nevertheless helped to focus attention on the power struggle that ensued. The jockeying for position that occurred in China following Zhou's death and the increasing infirmity of Mao, involved four main actors: Deng Xiaoping, Hua Guofeng, (Hua Kuofeng), Chiang Ching, and Mao himself.

Deng Xiaoping, now a wily 74-year old veteran of Chinese politics, has risen to prominence three times since 1966, and has been purged twice, though significantly, never expelled from the Communist Party in China. After Zhou Enlai's death, Deng was the odds-on favorite to succeed him as premier of the PRC, but was himself supplanted by the less well-known Hua Guofeng, now 57 years old. Shortly thereafter, Deng was purged again from his leadership positions following a series of violent incidents in Peking's Tien An Men Square during a wreath laying in honor of Zhou Enlai in early April 1976. Deng's political demise, and Hua Guofeng's appointment as premier to succeed Zhou Enlai, was seen by Soviet sinologists as a power struggle in which the radical wing of the Chinese Communist Party, led by Mao's wife Chiang Ching, emerged triumphant over the pragmatic wing of the Party, led by Deng Xiaoping.

After his fall from power, the foreign and domestic Chinese media was

absolutely dominated by the vilification of Deng who was blamed for everything wrong in China from the economy to correct political thought to the fact that certain trains didn't run on time! Following Mao's death, Hua Guofeng was elevated to the position of Chairman of the Central Committee of the PRC Communist Party, succeeding Mao. Meanwhile, criticism of Deng Xiaoping remained furiously indignant, particularly in the domestic press. All these events were followed in the Soviet media, though in a very low key, cursory fashion.

On 14 October 1976, a page five article in *Pravda* reported the arrest of the Chinese "gang of four" or "Shanghai group," who were identified as: Chiang Ching (Mao's wife), Wang Hungwen, Chang Chun-chiao, and Yao Wenyuan, on charges of attempt to overthrow the state. Some 40 other middle-level officials including Mao's nephew, and high-level employees of the paper *Jenmin Jihpao* and the state radio network, were also arrested. The Chinese domestic press reported seizure of the "gang of four" via the *New China News Agency* in an English broadcast of 21 October 1976 and in a *Jenmin Jihpao* article in Peking on 24 October 1976.[33]

From this point on things moved quickly in the Chinese power struggle. A *Peking Review* article of 5 November 1976 called for readers to "continue to criticize Deng Xiaoping and repulse the right deviationist attempt to reverse correct decisions."[34] Although criticism of Deng continued to appear regularly, it began to soften noticeably not long thereafter. In fact, as early as 19 November 1976 an editorial in the newspaper *Jiefangjun Bao* reportedly stated:

During the struggle to criticize Teng Hsiao-ping ... Chairman Mao fully affirmed and approved the plan and policies formulated by Comrade Hua Kuo-feng in accordance with Chairman Mao's

consistent thoughts, which were *diametrically opposed to the "Gang of Fours" practice of ferreting out Teng's agents at every level.*[35] (author's italics).

This was the first step in the ultimate rehabilitation of the irrepressible Deng Xiaoping.

By January 1977 the "gang of four" was said to have "acted on their own in criticizing Deng Xiaoping in an attempt to overthrow ... the government."[36] Deng's name then virtually disappeared from the Chinese press until a Communique of the Third Plenary Session of the Tenth Central Committee of the Communist Party of China, adopted on 21 July 1977, identified him as Vice Chairman of the Central Committee of the Chinese Communist Party, among other titles.[37] In a related move, the "gang of four" were expelled from the party, and from all posts in or out of the party.

Interestingly, a page five article in the 15 January 1977 edition of *Pravda* mentions large crowds gathering near Tien An Men Square demanding the rehabilitation of Deng 6 months before it became a reality. As might be expected, there was no mention of the incident in the Chinese foreign or domestic media. The *Peking Review* of 29 July 1977 did report on page five, after the fact, that the formal decision to politically revive Deng was the result of a suggestion made by Chairman Hua Guofeng in March 1977.

The saga of Deng Xiaoping continues to fascinate observers. During the period 15-30 November 1978 a remarkable display of Chinese-style "freedom" occurred in Peking. Rallies and wall posters first demanded exoneration of the hundreds of thousands of Chinese driven from the party and public life since 1957 by Mao Zedong's "campaign against right wing elements."[38] Then attacks on Mao and, by implication, on his successor Hua Guofeng occurred, in conjunction with a public demand for

Deng Xiaoping to replace Hua. The criticism continued to escalate into late November, as more charges were leveled against Mao and Hua. Demands for "democracy" and "freedom" were heard, and Deng was praised as China's strongest leader.[39]

Deng successfully appealed for a formal reversal of the resolution dismissing him after the Tien An Men Square incident in 1976, and his return to ascendancy seemed complete.[40] Yet indications of a continuing power struggle persist. Orders were issued in late November 1978 to halt the rallies and anti-Mao, anti-Hua poster displays forthwith, thus dampening public enthusiasm for human rights activism on a large scale.[41] However, small rallies were still tolerated, and posters critical of the government's crackdown on China's democratic movement continued to appear[42] amid press reports of high-level Communist Party meetings during April 1979 to "reassess" the liberalization drive.[43] The on again, off again criticism of Mao was officially off again, as the leadership attempted to define his proper historical niche once and for all.[44] As late as 11 March 1979 a front-page article in *People's Daily* blamed all of China's political and economic troubles on the disastrous "Great Leap Forward" of 1958-59, though Mao's name was not specifically mentioned.[45] Interestingly, the names of China's current "whipping boys," Lin Piao and the "Gang of Four" were also conspicuously absent from the article, leaving no doubt that Mao was to blame. To date, Mao's official historical status is still uncertain. His mausoleum, closed to the public in December 1978 for "repairs" (it had been completed in September 1977), was reopened on 3 May 1979, indicating a reprieve for Mao, but without a return to his godlike status.[46]

Six months after the great Peking freedom rallies, many questions remain about who really wields power in the People's Republic of China and what the political tenor of the government will be. Prominent leaders such as Korean war hero Marshal Peng Dehuai (Peng Te-huai), purged by Mao, are being politically restored,[42] while others, who were proteges of Mao, have been stripped of their posts or detained.[48] Critical posters continue to appear on "freedom wall" in Beijing (Peking), but political activists and dissidents are being openly arrested.[49] These events are a clear indication of the presence of at least two power blocs of nearly equal strength pulling and tugging at the fabric of China's post-Mao political realities, in a bid for supremacy.

Deng Xiaoping's disclaimers that at 74 he is too old to carry the primary leadership role for the long term are probably true. However, for the time being, he appears to be China's strongest leader in fact if not in titled position. For it is Deng's economic program that China has apparently adopted. And it is Deng who is sufficiently confident of his political position to travel extensively abroad. Media reports, conversations with Western journalists, and announcements of new economic initiatives are further indications of Deng's ascendancy. Perhaps the most compelling evidence of his predominance in Chinese affairs was his trip to the United States following establishment of diplomatic relations on 1 January 1979, leaving little doubt that he was the initiator of this sudden rapprochement. On the other hand, Hua Guofeng has previously demonstrated the ability to pick the winning side, and he does in fact command the traditionally all-powerful position of Chairman of the Chinese Communist Party Central Committee. And he did appear to consolidate his influence in that position before initiating, or at least acquiescing in, Deng's political revival. So it may be that Deng and Hua need each other, and that while Deng is

currently in charge, Hua is the designated heir apparent, charged with carrying Deng's pragmatic policies on over the long term. It is also possible that Hua lacks the political power to override Deng, and must carefully protect his position while waiting for the latter to misstep.

For the Soviet Union, leadership of the PRC could be crucial in this time of great tension along the Sino-Soviet border and competition throughout the world. The Soviet leadership would perhaps prefer a continuing power struggle to ensure continued Chinese weakness. However, they must also look for openings that might spell the opportunity for some degree of rapprochement with a more pragmatic Chinese leadership, while preparing for a more hostile and threatening posture signaled by Chinese overtures to the West.

Military Confrontation. The element of Sino-Soviet relations with the greatest potential for open warfare between the two is the dispute along their 4,500-mile border. The implications of this quite serious disagreement relative to a possible world war were of sufficient import to stimulate a day-long nuclear war conference on 7 December 1978 in Washington, D.C. that specifically focused on the threat of a Sino-Soviet nuclear exchange along their border.[50]

The border dispute revolves around the PRC territorial claims discussed earlier and there are, in fact, meetings in progress to attempt to resolve the issue. The U.S.S.R. has a delegation headed by a deputy minister of foreign affairs that has been periodically meeting in Beijing to discuss the problem.[51] On a lower level there is a "Mixed Soviet-Chinese Commission on Navigation" working to adopt new rules for control of shipping on border sections of rivers.[52] Unfortunately, little progress has been made on the border issue because neither party is willing to budge from its respective positions.

Press reports from both sides lay the blame for poor relations squarely on the recalcitrance of the other. The U.S.S.R. position declares that relations should be based on principles of "peaceful coexistence," which basically means maintenance of the status quo with no preconditions for agreement to discuss "minor adjustments" acceptable to the Soviet Union.[53] The PRC position requires that improved relations be based on preconditions calling for:

1. A signed agreement maintaining the status quo on the borders (as a prelude to negotiation only).

2. Averting armed clashes and disengaging forces on both sides of the disputed border areas.

3. Formal negotiations on resolving the border question.

4. Withdrawal of Soviet forces from the Mongolian People's Republic and from all Sino-Soviet borders.[54]

Since neither party will bend, the military buildup on each side of the border continues apace. For the present at least, invective instead of ammunition is being hurled back and forth, keeping the pot stirred and boiling without overturning it.

In terms of military preparedness, the supremacy of the U.S.S.R. in virtually every respect save manpower is widely recognized.

Though comparatively little is known of the details of Soviet forces on the border, it is considered likely that most of the Soviet formations are concentrated in the Far Eastern Military District opposite Manchuria, the heartland of Chinese industrial capacity.[55] There are thought to be 44 Soviet divisions guarding the entire 7,500-mile border, including three divisions in the Mongolian People's Republic. Six of the

divisions are armored, and five of those are in readiness category I (substantially ready).[56] Of the 38 mechanized infantry divisions on the border, 19 are category I, 10 are category II (marginally ready), and nine are category III (not ready). The number of KGB border troops deployed opposite China is unknown. Approximately 10,000 tanks and 10,000 armored personnel carriers are available for service on the border, although large numbers are probably stockpiled in depots, rather than in an operational status. More than 2,000 combat aircraft of all types are dispersed on airfields within striking distance of the border. The standard complement of artillery, mobile missiles, antiaircraft weapons, and nuclear/chemical munitions are available in support. Certain ICBMs, IRBMs, and MRBMs are more than likely targeted for use against China, but the numbers so deployed are not available from unclassified sources. The Soviet Pacific Fleet, generally consisting of some 70 submarines (excluding strategic SLBM subs) and 65 major surface combatants, is capable of operating in virtually all Chinese coastal waters.

Across the border, China can counter with the People's Liberation Army (PLA), a formidable adversary. The size of the PLA, though a well kept secret, is variously estimated at between 3.9 and 4.2 million men.[57] Approximately 3.5 million men are concentrated in the ground forces because of China's poor strategic and tactical mobility assets.[58] Undoubtedly the largest land army in the world, it is backed by paramilitary forces consisting of a 7-million man Armed Militia; an Urban Militia of several million; the 4-million man Civilian Production and Construction Corps; and the basically trained, but generally unarmed Ordinary and Basic Militia of 75-100 million persons.[59] The ground forces are organized as follows:[60]

Main Forces

121	infantry divisions
11	armored divisions
3	airborne divisions
150	independent regiments
40	artillery divisions including anti-aircraft units
15	railway and construction divisions

Local Forces

70	infantry divisions
130	independent regiments

Weapons, though somewhat outdated, include 10,000 Soviet and Chinese-made tanks; 3,500 armored personnel carriers; 18,000 artillery pieces; and 20,000 assorted mortars, recoilless rifles, rocket launchers, attack guns, and antiaircraft weapons.[61] The PLA Air Force has some 4,500 fighter aircraft of MIG-15-MIG-19 vintage, about 1,000 bombers and transports, and approximately 350 helicopters. All are obsolete.[62] The Chinese Navy possesses 23 major surface combatants, one nuclear-powered submarine, 74 fleet submarines and 1,200 assorted destroyers, missile patrol boats, landing craft and small coastal defense vessels. In addition, the navy owns 700 shore-based aircraft consisting of bombers, fighters and a few helicopters.[63]

Deployment of Chinese forces along the Sino-Soviet border is thought to be heaviest in the north and northeast, with some 55 Main Force and 25 Local Force divisions concentrated to protect Manchuria and Beijing.[64] Farther west are another 15 Main Force divisions and eight Local Force divisions. Fully half of the PLA aircraft assets are dispersed to defend against any Soviet ground-air assault, particularly in the northeast.[65]

Behind these conventional forces lies the menace of China's increasing nuclear strength. By mid-1978 China had conducted 23 nuclear tests, and possessed a stockpile of several hundred atomic warheads with yields ranging from 20

kilotons to three megatons.[66] There is much speculation about China's delivery systems, but most authors seem to agree on the data in Table I.[67] Uncorroborated reports variously describe tests of an 8,000-mile range ICBM, SLBMs for China's one nuclear submarine, 10-25 missiles in the 4,000-6,000-mile range, 400 guns of 203mm with five KT warheads, and 700 guns of 152mm with one KT warhead.[68]

Lacking sufficient strength to challenge seriously the Soviet Union, China has resorted to invective, accusation, bluff, and overtures to the West in an attempt to buy time while redressing her precarious military balance. Domestic Chinese propaganda features such articles as the one entitled, "Heighten Vigilance, Be Ready to Fight," that identifies the U.S.S.R. as the number one enemy, discusses Soviet aggression and expansionism, and laments the inevitability of war.[69] Similar reports appear in the foreign Chinese media. For example, a commentary entitled, "Heighten Our Vigilance and Get Prepared to Fight a War," admitted that the Russians were better armed but predicted the Chinese people would prevail.[70] The article continued to say that China must prepare for a surprise attack from Russia, but that the PRC would "never attack first."

On the Soviet side, a published article accused the PRC of preparing for war, launching an arms race with the U.S.S.R., and opposing disarmament.[71] Another piece reported an attack on China for expansionism and endangering

peace that emanated from a Crimean meeting of the Secretaries of the Communist Party Central Committees of the Warsaw Pact countries.[72]

Very often, particularly in the Chinese press, a sort of code is used to discuss the danger of war between the PRC and the U.S.S.R. Specifically, the jargon refers to the inevitability of a war between the United States and the U.S.S.R. into which the Chinese will be irresistibly drawn, ostensibly against the Soviet Union. The latter, in pursuit of a peace-loving image, becomes visibly irritated by such attacks, and regularly publishes material to refute them.

The most recently reported armed border clash between the U.S.S.R. and the PRC occurred on 11 May 1978 along the Amur River in China's Heilongjiang (Heilungkiang) Province. The PRC, in a diplomatic protest, claimed a Soviet helicopter and 18 boats purposely crossed the river, wounding several Chinese before being driven off.[73] The U.S.S.R. replied to the PRC protest with a note expressing regret for what the Soviets called an accidental incursion that resulted in harm to no one.[71]

On the question of armaments, the state of affairs can best be described as deteriorating. Soviet perceptions grow more and more pessimistic as China pursues arms assistance from the West and hints at seeking possible alliances that would tend to isolate the Soviet Union. Arms sales negotiations between Great Britain, France, and Italy on one side, and the PRC on the other have

TABLE I

System		Range	
80	TU-16 bombers	2,000	miles
30-40	MRBMs	600-700	miles
30-40	IRBMs	1,500-1,750	miles
?	ICBMs	3,000-3,500	miles

been underway since early November 1978 with antitank weapons, antiaircraft missiles, AV-8 Harrier VSTOL aircraft (100), naval diesel engines for coastal patrol craft, and military helicopters prominently mentioned.[75]

Soviet fears of a progressively more modern Chinese military capability and its ultimate purposes are reflected in this recent Moscow broadcast in English:

> Some Western newspapers . . . say there is nothing wrong with a sovereign country wishing to purchase arms . . . . It is really irresponsible, to say the least, to sell advanced weapons to a country which has a record of aggression and whose leaders say openly that they prepare for a world war which they think is inevitable . . . . There is really no telling when, or where, will Peking use its legions when they are equipped with modern arms. The entire adult population of China is now working 12 to 14 hours a day . . . to support the program of China's militarization and . . . hegemonistic adventures . . . . This is also the ultimate goal of China's attempts to secure advanced arms and military technology from the NATO countries.[76]

According to *Pravda*, the Chinese are openly threatening the Soviet Union with war when PRC Minister of Defense Xu Xiangqian calls for an international united front against the U.S.S.R. while promising, "China will help all who wage a resolute struggle against the USSR."[77]

The result of all this may be Soviet agitation in other parts of the world to offset Western arms sales to the PRC. No doubt there will be considerable diplomatic pressure applied by the U.S.S.R. to limit or forestall such sales. Of more concern is the possibility of a Soviet preemptive strike against the PRC, if the U.S.S.R. perceives Chinese military modernization initiatives as changing the balance of power along the border. From any point of view, Chinese rearmament with modern weapons creates greater risks of Sino-Soviet confrontation as well as increased chances of general East-West conflagration.

Economic Activity. On 31 July 1977 an article by Vladimir Bolshakov, on page four of *Pravda*, announced the rehabilitation of Deng Xiaoping, and revival of his "economic program." The article went on to provide a pessimistic analysis of Deng's political revival as a clear signal to the West that Beijing was prepared to develop extensive ties, and would continue its anti-Soviet course, thus aggravating international tension. Although some months passed before Bolshakov's analysis could be corroborated in Chinese media sources, he was obviously correct for on 24 March 1978, in a speech at the National Science Conference in Beijing, Hua Guofeng admitted China's backwardness and called for learning from foreign countries.[78] Previously, all China's economic woes were blamed on the "gang of four." An article did appear in mid-1977 in the foreign Chinese press that declared the necessity for making "foreign things serve China." But the thrust of this and subsequent articles was to extol the virtues of self-reliance, while accusing the "gang of four" and other enemies of the state of sabotaging economic and technical growth and exchange with other countries.[79]

It would appear that from the time of Deng Xiaoping's return to political power in July 1977 until early November 1978, the ground was being carefully prepared in China for a rather startling departure from a longstanding PRC tradition of autarky. Given the power struggle in China in the years before and after Mao Zedong's death, and the incredibly detailed vilification of Deng and his ilk as "capitalist-

roaders, modern revisionists, and right-wing deviationists" for their views on bringing economic progress to China, it is not surprising that considerable time was required. Literally millions of words had been written and spoken throughout the PRC to "educate" the Chinese people about the dangers of anything remotely smacking of free enterprise, or capitalism, or assistance from another country. A full year was apparently required to reverse direction, reeducate the masses (and most of their leaders), prepare a course of action, and weed out the recalcitrants (such as the radical "gang of four clique"), before the dramatic overtures to "open windows to the West" for technology and economic assistance could be initiated.

Western press reports began to appear in early November 1978 that the Chinese were thinking of introducing a limited market economy, and entering into negotiations with a large number of foreign multinational corporations to help the PRC develop natural resources, open joint-venture factories, and build hotels.[80] For several months daily announcements relative to Chinese economic initiatives were made as Deng and his allies launched the "four modernizations": farming, industry, science and technology, and the military. The blueprint for this economic miracle was to take place in three phases:

1. Within two years, mechanize agriculture nationwide, and consolidate and restructure all existing industry.

2. During the next five years, achieve a quantum improvement in factory and agricultural production. During this phase, seen as the most important of the three, China would either build or import as many as 120 new plants.

3. In the final stage, from 1985 to the year 2000, expand production to include more sophisticated consumer goods and such high technology items as advanced electronics and computers.[81]

Euphoria was rampant in the industrialized nations at the prospect of a Chinese market of one billion people. Japan rushed in with announcements of a 50 percent trade increase with China, construction of a billion dollar steel mill, and an exchange of businessmen and offices in Tokyo and Beijing.[82] France negotiated a trade pact calling for development of commodity/technology transfers ranging from atomic industry to hotel management to sugar production.[83] Not to be outdone, U.S. business and government representatives offered coal mine development, design of an atom smasher, a dam on the Yangtze River, offshore oil drilling assistance, and introduction of Coca Cola and McDonald's franchises, to name just a few.[84]

As the stampede for economic advantage in the Chinese marketplace proceeded, there arose a number of unanswered questions. The most important question addressed payment for and the effect of modernization and increased contact with Western nations and Japan on the political stability of China.

Some of the answers were not long in coming. Early in March 1979 Beijing announced that 30 contracts previously signed to buy $2 million worth of heavy machinery from Japan would be renegotiated, and pending U.S. deals put on hold.[85] Clearly, the Chinese were worried about how to pay for the required technology and how to absorb it into an agrarian economy with a low-skill labor base. On 6 May 1979 China's Minister of Foreign Trade announced a shift of emphasis from heavy industrial projects to development of agriculture and light industry. The code word "readjustment" is now being used to describe the prudent reappraisal of China's financial, technological, and managerial capabilities to successfully

pursue the "four modernizations."[86] Readjustment of economic goals may also reflect a conservative reaction to the prospect of excessive social strain and political dissent that could result from rapid industrialization of a developing country.

Modernization of China will be a long, involved, and perhaps unsuccessful process. The goal of the PRC to "surpass the world's advanced levels by the year 2000" is probably unrealistic. However, the Chinese people are capable of tremendous sacrifice and great technological achievement when unfettered by programs such as the "Great Leap Forward" and the "Cultural Revolution." The ability of China to become a nuclear power and to launch and recover satellites is adequate testimony to PRC capabilities in particular areas of concentration. But carryover to achievement of 20th-century levels of technical and industrial maturity may not be possible owing to the magnitude of the task. Whatever the prospects for reaching established goals, one must consider the potential military capability of a modern, industrialized China before rejoicing.

The Soviet Union is already a modern, industrialized nation, though with an economy heavily oriented toward production of military hardware and heavy industrial goods rather than consumer products. But the U.S.S.R. is deficient in the technology associated with computers and their application to industry, the military, and weapons systems; and in other areas such as offshore and arctic oil drilling operations. As in the case of China, the U.S.S.R. must look to the West and Japan for relief.

Conclusion. The period between the death of Mao Zedong in September 1976 and the present must be viewed as a time of restabilization and course setting for China. The death of the architect of Chinese communism produced the inevitable power struggle associated with the passing of the dominant leader of a totalitarian state. As the leadership begins to settle on new directions for China, the implications for future Sino-Soviet relations are unclear but worthy of consideration.

Diplomacy. Prospects for any sort of diplomatic rapprochement between China and the Soviet Union depend heavily on settlement of the territorial question. Given traditional Soviet sensitivity to the sanctity of purposely accrued border areas for defense of the motherland, little help can be expected from the U.S.S.R. China is perhaps even less likely to yield on territorial claims considering the pervasiveness of historic "middle kingdom" ethnocentrism.

Of almost equal importance to improved relations is amelioration of the ideological quarrel. China appears determined to carve out an exclusive sphere of influence among Third World countries, particularly in Asia. Soviet attempts for Third World hegemony and insistence on Marxist centralism are very much resented by China, and must be viewed as major stumbling blocks to improved Sino-Soviet relations.

There are indications that high-level talks between the U.S.S.R. and the PRC will soon occur. On 17 April 1979 the Soviet Foreign Ministry delivered a note to the Chinese Ambassador proposing talks aimed at a general easing of tension between the two countries.[87] On 10 May 1979 China announced tentative acceptance of the Soviet proposal.[88] However, unless substantive progress is made on the disputed territorial and ideological issues, the practical result will be maintenance of diplomatically correct but relatively poor relations for the foreseeable future.

Propaganda. As long as there is substantial disagreement between rival border states, there will exist massive efforts to propagandize one's own point

of view at the expense of the other side. In the case of China and the Soviet Union, propaganda has been the major weapon in their confrontation, and can be expected to continue with little change in intensity. Compared to the alternatives, the Sino-Soviet propaganda war is a healthy outlet for the frustrations of power politics.

Leadership. The effect of leadership changes on Sino-Soviet relations will probably be indirect. The Chinese leadership, despite signs of an internal power struggle, is apparently in agreement about its foreign policy towards the Soviet Union. No change in policy is likely to occur when Deng Xiaoping passes from the scene. Leonid Brezhnev's age and questionable health indicate the likelihood of a change in Kremlin leadership in the near term as well. But again, the transfer of power, however messy, will probably have little effect on relations with China, except temporarily to focus attention on domestic matters to the exclusion of foreign policy.

Military Confrontation. Sino-Soviet recognition of a prevailing balance of power along their common border appears to be a reality. The most compelling evidence was Soviet military restraint during the spring 1979 Chinese punitive expedition against Vietnam. It may be forcefully argued that the reason for Soviet restraint was a combination of uncertainty about U.S. support for China, interest in concluding a SALT agreement with the United States, and the continuing relative weakness of Chinese military strength along the Soviet border. Whatever the case, current prospects for other than low-level conflict along the Sino-Soviet frontier seem remote. However, chances of serious conflict may increase significantly as China attempts to modernize the PLA. The key to future military confrontation may well be the extent to which the Soviet Union feels threatened by a more capable and better armed PLA.

Economic Activity. Except as previously noted, there is relatively little direct economic exchange between the U.S.S.R. and the PRC. Though some increase is possible, the dispute between them will probably preclude significant economic ties compared to those sought with the West and Japan. And while China and the Soviet Union do not need each other as trading partners, they may compete extensively for Western technology and agricultural production.

Based on past performance, the Soviet Union can be expected to resolve the potentially difficult manpower and energy shortages predicted for the next 20 years and maintain an impressive economic advantage over China. But the dramatic expansion plans of the PRC, however modified by economic reality and political expediency, are no doubt viewed in the Kremlin with great concern. For through economic development comes modernization, and a modern, industrialized China could pose many future problems for the U.S.S.R. Of equal concern are the contacts that might be developed through economic cooperation, which under certain circumstances could serve to isolate the U.S.S.R. and further exacerbate Sino-Soviet relations.

BIOGRAPHIC SUMMARY

Lieutenant Colonel Landes, who was educated at Graceland College, Washburn University, and The George Washington University, entered the Marine Corps in 1960. He has served in various line and staff billets in the United States and overseas, was an associate professor at the U.S. Naval Academy, graduated with highest distinction from the Naval War College in 1979, and is now serving on the staff of CINCUSNAVEUR.

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Communications and navigation facilities, tenders, missile transport and storage facilities, supply ships, fixed acoustic arrays, cargo handling facilities, and the like are more susceptible to destruction than the weapons systems to whose support they are dedicated. Evidence of Soviet attention to this weakest link is presented in this adaptation of an analysis prepared for the <u>Naval Intelligence Quarterly</u> (Vol. II, No. 1).

ATTACKING THE WEAKEST LINK:

THE ANTI-SUPPORT ROLE OF SOVIET NAVAL FORCES

by

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Soviet literature available to the naval analyst contains a great deal of valuable information intermingled with the chaff of Leninist polemic. Such publications as *Morskoy Sbornik*, *Voyennaya Mysl'* and *Voyennoistoricheskiy Zhurnal* are designed to be read by Soviet professional military personnel and consequently contain relatively substantive concepts, once the obligatory deference to Marxism-Leninism is paid. Consistent reading of these periodicals eventually yields an appreciation of significant Soviet concerns and an understanding of the factors that make up the Soviet military perspective.

A primary Soviet concern is the overall correlation of forces, particularly nuclear forces. This concern is not just limited to gross number counts, however; every aspect of nuclear capability is a factor in Soviet calculations. In fact, the clear impression given by many Soviet authors is that in many instances the most vulnerable element of a national nuclear capability is perceived by them to be not the weapon system itself but all the support without which that system cannot function. The Soviets therefore include this support element in all their correlation calculations and place a great deal of emphasis on the destruction of enemy support elements (for both nuclear and conventional systems) in time of war. An examination of this antisupport concept is the purpose of this paper.

The NATO Naval Threat. The Soviets visualize several NATO naval threats, both to their homeland and to their military forces. To avoid the debate over the prioritization of those threats, they are listed here without regard to priority: the NATO SSBN threat to the Soviet homeland, the carrier threat to the homeland and to Soviet naval and continental forces, the NATO

antisubmarine warfare (ASW) threat to Soviet naval strike forces (SSNs as well as SSBNs), the threat of NATO resupply of the European theater and the NATO amphibious threat to the Soviet flanks. Each of these threats involves primary systems and a supporting structure, all of which can be subjected to coordinated Soviet attacks. The various elements of that support structure are frequently identified in Soviet literature and their value assessed by a variety of Soviet authors.

Anti-SSBN Support Structure. Soviet emphasis on targeting support elements of the American Polaris/Poseidon submarine-launched ballistic missile (SLBM) system grew over the years as the complexities of the antisubmarine problem became more appreciated. Whereas Marshal Sokolovskiy in the first two editions of his book *Military Strategy* (1962 and 1963) talked about destroying the ballistic missile submarines (SSBN) themselves,[1] Admiral of the Fleet of the Soviet Union Sergei Gorshkov in 1977 discussed instead the disruption or blunting of SSBN attacks "to the maximum possible degree."[2] This may at first glance appear to be only a subtle difference in semantics, but it actually reflects what appears to have been a steadily increasing Soviet recognition that their ASW capabilities may not even be able to catch up, much less keep pace, with the increasing ranges of American ballistic missiles. Consequently, the importance of destroying elements of the weapon system other than the weapon platforms themselves has increased markedly in Soviet priorities.

This is not to say that from the first deployment of the Polaris A-1 missile boats the Soviets were not planning to attack the system's supporting elements. In fact, in a 1964 article, Colonel V.P. Zhukov enumerated the following anti-SSBN missions for Soviet aerial reconnaissance:

... searching for submarines at advanced positions and home bases; searching for floating rocket submarine bases (submarine tenders) and directing naval strike forces to them; searching for transports carrying special weapons needed by rocket submarines and directing naval strike forces to them; determining the location and identity of navigation and communication facilities needed by submarine rocket carriers.[3]

Zhukov was not the first, nor the last, to stress the importance of locating and destroying the support elements of SSBN forces: submarine tenders, reload missile transports, navigation and communication facilities. Captain 1st Rank K. Titov in 1972 echoed and expanded upon Zhukov's words:

Strategic underwater nuclear missile systems (e.g., Polaris-Poseidon) represent a complex of interdependent elements whose normal functioning ensures a high combat readiness for the system. These elements are: the FBM submarines; command posts and staffs implementing control of these submarines; transmitting and receiving radar centers supporting communications with them; various navigational systems permitting the determination of the coordinates of the submarines and other data essential for launching missiles; bases and mobile logistical means; missile arsenals and test ranges for storing and preparing the missiles; and training centers for training submarine crews . . . .[4]

Two different types of supporting elements for SSBNs are thus discussed by Soviet authors. One is the type of support that services the weapon platform after it has returned from performing a mission: the submarine tenders and other bases, transports

carrying reload missiles, training centers and missile storage areas. While these are important targets, their destruction cannot, in Gorshkov's words, "disrupt or blunt" the initial SSBN attack. On the other hand, destruction of communications facilities, navigation aids or command and control elements could have just that effect. Captain 1st Rank Pirumov and others addressed the importance of communications in this way:

the U.S. Navy's nuclear-powered submarines armed with Polaris ballistic missiles with a nuclear payload are constantly ready to launch on 15 minutes notice in their patrol areas. It is believed that a delay in transmitting a signal to them on the start of a war could have, if not a decisive effect, at least a very considerable effect on the outcome of the combat operations.[5]

And Captain 1st Rank B. Makeyev discussed navigational systems in his 1977 article:

High precision of navigational computations is ... the foundation which permits maneuvering of the submarine and application of the weapons it carries. As an example, even a slight error in determining the location of the submarine at the moment a ballistic missile is launched would result in a significant deviation of the latter from the target and could cause failure of the combat mission.[6]

Therefore, while the American Poseidon and Trident missile-carrying submarine force may be relatively secure from direct attack by Soviet naval forces, it is obvious that the Soviets are trying to find the weakest links in the overall fleet ballistic missile system, and they appear to have seized upon the support elements for the SSBN fleet as just those weak links. Communications and navigation facilities are thus priority

Soviet targets at the outbreak of any general war, and other elements of the SSBN support structure such as tenders, bases, missile transports and storage facilities can be expected to come under early attack.

Antisurface Force Support Structure. Although centralized communications and navigation aids are not as vital to the operations of carrier attack groups and other surface forces as they are to the SSBN force, destruction of them, especially navigation systems, will also, in the Soviet view, have a detrimental effect on surface operations. But more central to the war against the carrier threat in particular, as well as other surface forces in general, is the destruction of the replenishment ships that keep the combatants supplied with fuel, aviation fuel and ammunition. Engineer-Captain 2nd Rank V. Yeliseyev discussed this vulnerability as it relates to carriers in a 1973 article:

Conventional steam turbine plants are installed in 15 out of 16 aircraft carriers of the U.S. Navy. The endurance of an attack carrier is 90 days. However, the experience of participation of the attack aircraft carrier MIDWAY in combat exercises against the people of Southeast Asia showed that 8,500 tons of ammunition, about 60,000 tons of ship fuel, 30,000 tons of aviation fuel, and also 1,200 tons of other cargo must be delivered to the carrier every 4 to 5 days. Replenishment at sea is a lengthy process. This makes the ship dependent on the operating efficiency of rear forces and makes it very vulnerable to enemy action.[7]

He went on to say:

Moreover, the ships of the combat nucleus of an attack carrier group are largely dependent on replenishment at sea. Destruction or disabling of the service ships may

result in disruption of the combat operations of aircraft carriers.[8]

Soviet interest in the battle against the supporting elements of the carrier task force is less intense than the concern devoted to attacking SSBN support, but it is nevertheless a topic that is discussed by Soviet naval officers as supportive of their anticarrier mission. Therefore, it must be anticipated that if the Soviets feel they cannot muster the means necessary to strike directly at a task force, they will use the resources available to strike at a "softer" target such as lightly escorted supply ships.

Another Soviet concern that falls into the category of support targeting is the destruction of bases and, concurrently, the ships within them. This applies equally to all types of ships: carrier task groups, SSBNs, amphibious forces, etc. Several articles over the years have expounded at length on the success of antibase operations during World War II and have implied that these operations have a valid, modern counterpart.[9] Rear Admiral Filinov introduced his 1973 work by saying, "In analyzing the operations it is not difficult to note that all of them were characterized by certain principles of planning and organizing the combat operations and methods of utilizing forces and employing weapons which have not lost their significance even in our day." In order to emphasize this point, he continued later in the article:

> According to foreign naval experts, operations for destroying enemy naval forces in their bases can find broad application in today's context too. This is due to technical progress and in particular to the presence of nuclear-missile weaponry in the inventories of the navies of the main powers.[10]

The shipbuilding industry was also cited by Captain 1st Rank Mamayev as another very worthwhile target to prevent the replacement of ship losses:

> During a modern war, strikes directed at shipbuilding firms and at other industrial enterprises which cooperate with commercial and military shipbuilding, would render it impossible to restore losses either in merchant ships or in naval warships. This applies equally well to escort vessels which, during an ocean transit, protect the convoys from strikes by aviation, submarines and other naval forces. Thus the forces which protect navigation could be increased only by placing previously built ships, those kept in moth-balls, in operation.[11]

It is interesting to note that while professional military literature in the United States addresses the escalatory implications of attacking targets such as bases and shipyards located within the homeland of the Soviet Union, such factors are never addressed by Soviet military authors in the literature available to the West. Therefore, it can not be automatically assumed that the American penchant for calculating the escalatory implications of strikes against Soviet territory is reciprocated by the Soviets. The military advantages of even conventional strikes against bases and shipyards on U.S. territory may, in Soviet thinking, outweigh the potential damage to the complex escalation calculations of American strategic planners. The Soviets certainly perceive their own bases and shipyards to be in jeopardy and have conducted military exercises accordingly.

Anti-ASW Support Structure. Unlike submariners in the U.S. Navy, the Soviets have little confidence in stealth as the primary protection for their submarine forces; instead, they require active defenses for their ballistic missile, guided missile, and torpedo submarines. Carrier task forces are considered a

primary ASW threat, especially since the initiation of the multipurpose CV/CVN concept with embarked S-3 and SH-3 aircraft. But in addition to carrier groups, which have already been discussed, the Soviets perceive major ASW threats from NATO maritime patrol aircraft (MPA), ASW submarines, surface ASW forces, and fixed acoustic arrays. The antisupport discussions pertaining to surface forces includes those with ASW roles as these destroyers and frigates are almost as vulnerable to supply ship interdiction and base and shipyard strikes as aircraft carriers. ASW submarines are also as vulnerable to the destruction of their tenders as SSBNs, perhaps even more so because the ASW submarine may expend its weapons in either conventional or nuclear war phases whereas the SSBN's weapons are employed only in nuclear conflict.

In order to reduce the NATO MPA threat, Soviet naval planners have for some time planned to attack and destroy the airfields from which these aircraft operate.[12] Soviet Naval Aviation (SNA) and Long Range Aviation (LRA) medium bombers using either conventional or nuclear weaponry are particularly suited to this type of operation, and the resultant rewards from successful attacks are potentially great. Colonel F. Shesterin wrote in 1969, "In all probability, aerial combat in the future will become less effective and primary importance in the battle against enemy aviation will shift to actions against airfields, enterprises of the aviation industry, fuel sources and training centers of flight personnel."[13] While the last three targets mentioned would eventually take a toll of aircraft and crews in combat, the effect of striking airfields would be felt in the battle area immediately.

The Soviets believe that NATO military forces are aware of this threat and have responded accordingly. According to Colonels N.M. Lavrent'yev and L.I. Gorodenskiy,

Today the basing of ASW aviation is taking on tremendous importance. Military leaders in the NATO countries, for example, feel that it is desirable to disperse their bases. This procedure takes into consideration the threat of nuclear missile strikes against airfields, as well as the fact that ASW aviation assigned to such bases will conduct combat operations in small tactical groups and by single aircraft. This type of basing, it is assumed, will provide protection for forces against enemy strikes and will increase secrecy of take-offs by the aircraft (or by tactical groups) in areas in which submarine search goes on.[14]

Consequently, the Soviets perceive an urgency to reconnoiter and strike ASW airfields in order to diminish and make manageable a very significant threat as soon as possible.

Another ASW system about which Soviet authors have expressed considerable concern is the system of fixed acoustic arrays identified in Soviet literature by such names as "SOSUS," "Sea Spider," "Artemis" and "Caesar."[15] They claim that this overall network is responsible in many cases for the initial detection and tracking of most submarine contacts localized by NATO naval forces,[16] and that, therefore, it is an extraordinary threat to submarine forces.[17] It is unthinkable that the Soviets would permit such a system to remain in existence at the outbreak of hostilities, or even for any length of time after NATO begins mobilization. The covert elimination of such an acoustic detection network would probably provide, in the Soviet calculus, a far greater gain than risk, even long before the commencement of open hostilities, and could be accomplished with comparative ease once the locations of the devices themselves were established. Elements of the extensive Soviet fishing fleet could be tasked to

tear up the offending cables from areas of particular concern to the Soviets before significant submarine deployments were ordered. Later, upon commencement of hostilities, shore-based terminals and processing centers within range of Soviet naval aviation could be brought under attack.

Anti-SLOC Support Structure. The Soviets have for some time attached great importance to the disruption of the air and sea lines of communication (SLOC) between North America and Europe. They recognize that the majority of NATO's strategic reserves of manpower and weaponry are separated from the primary theater of military operations by 3,000 miles of ocean, a medium that cannot be occupied and denied to the enemy like territory on the European continent. Consequently, they perceive in this geographical circumstance an opportunity to delay NATO's plans for what may be a decisive period. Major General Dzhelaukhov wrote in 1964:

> Under these conditions the proper selection of the objectives of strikes—in other words, the waging of an effective battle against reserves with the smallest expenditures of forces and means—will be of great importance. If the main strategic mission in a theater can be carried out in several days, then obviously, delaying the approach of the enemy reserves for that period of time will ensure the completion of the operation.[18]

He goes on to contend that SLOCs and air lines of communication are vital:

> But combating reserves in continental TVDs (Theaters of Military operations) is only a part of the overall battle against strategic reserves, since reserves can be brought in by sea and air transports. Thus, battle on ocean and air communications routes is a no

less important part of combating strategic reserves.[19]

According to Dzhelaukhov, convoys of ships carrying troops and weapons should therefore be destroyed either as they approach the theater of military operations, or in the ports themselves.[20]

Dzhelaukhov was both preceded and followed by many other authors who advocated the destruction of enemy SLOCs by means of strikes against the loading and unloading facilities that support them. Captain 1st Rank Stepanov wrote earlier in 1964:

> The contemporary level of development of naval technology permits the execution of missions to disrupt sea and ocean lines of communication by various techniques such as action against shipping (missile and torpedo attacks by submarines and aircraft on ships at sea and in the ports and mine barriers across the shipping lanes) and against the loading and unloading points and the sources of supplies (nuclear missile strikes by submarines, aircraft, and coastal units on ports, warehouses, and industrial centers).[21]

Captain 1st Rank Marinin followed with a 1967 *Morskoy Sbornik* article:

> Whereas merchant ships located in ports beyond the range of enemy aircraft were considered safe in past wars, today, with the development of nuclear weapons, they will be more vulnerable than will merchant ships at sea.[22]

And Captain 1st Rank Mamayev continued the discourse in December 1968:

> The warring parties now have the potential to influence all elements of communications, particularly the large ports of any continent. In addition to the loading and unloading ports, the centers of the shipbuilding industry will also be subject to attack.[23]

In his 1977 book on the Soviet Navy, Admiral Gorshkov himself emphasizes the importance of the disruption of enemy ocean and sea communications to the implementation of the main wartime mission of his navy.[24] His words are echoed by Captain 1st Rank Gontarenko and Captain 3rd Rank Khomenskiy in two separate articles in the February 1978 issue of *Zarubezhnoye Voyennoye Obozreniye*, and by Captain 1st Rank Ammon in the May 1978 issue of *Morskoy Sbornik*.[25] While none of these articles discusses the methodology for disrupting NATO's SLOCs, they all describe their importance to the NATO war effort and their place in NATO planning.

The antisupport tactic of destroying loading and unloading facilities, as discussed in the 1960s, would seem to be a viable supplement to direct SLOC interdiction in the present day as well, particularly when one considers the West's reliance on containerized cargo. While expediting peacetime shipments of a wide variety of cargo over land and sea, containerization requires a large capital outlay in specialized handling facilities in ports and railroad yards. Without these facilities, the normally rapid handling of containerized cargo would grind to a halt. In contrast, the Soviets have invested in Roll-On, Roll-Off (RO-RO) cargo ships that require virtually no support susceptible to attack other than a deep-water pier. RO-RO type ships provide an additional bonus in that they are eminently suited for amphibious warfare, particularly into ports.

Conclusion. For each NATO naval threat perceived by the Soviets there is a supporting structure they identify in their writings. For the ballistic missile submarine threat it is composed of communications and navigation facilities, submarine tenders, missile transport and storage facilities and training bases. For surface ships, and particularly for aircraft carrier groups, the Soviets identify supply ships as the primary supporting element, for ASW forces they specify MPA airfields and fixed acoustic arrays, and for SLOCs they pinpoint handling facilities in ports. Each of these elements is vital to the proper functioning of the system it supports, and in most cases each is also more susceptible to destruction. The Soviets realize this, and they write about it; they undoubtedly also consider it in their correlation of forces calculations and assign antisupport missions to their naval units. U.S. and NATO planners would be well-advised to consider seriously the effect of this role of Soviet naval forces.

BIOGRAPHIC SUMMARY

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Ψ

The military and political uses of Soviet seapower receive frequent comment and some see it growing beyond all legitimate bounds. This paper considers those uses, includes the major (but often overlooked) economic and commercial requirements of a maritime state, discusses its weaknesses and constraints, and assesses the threat it poses to the United States.

ASSESSING THE SOVIET NAVY

by

Steven E. Miller

Naval power is known to be a useful instrument of national policy and has frequently been employed since World War II to support the interests of the United States.[1] Navies can also be a source of conflict; thus, it is sometimes suggested that armed conflict between the United States and the Soviet Union is more likely to begin at sea—for example, in the Mediterranean—than in Central Europe.[2] Despite the rather readily apparent importance of and dangers associated with seapower, however, naval issues are not widely followed. Unlike the more familiar concerns about the strategic nuclear balance and the conventional balance in Europe, the U.S.-Soviet naval balance has not been the object of widespread and intense public scrutiny. As a result, both the facts and the implications of the Soviet naval buildup are less well advertised; the areas of debate in interpreting the Soviet buildup are less apparent.

The broad purpose of this essay is to provide a survey of the Soviet Navy that will be useful in assessing the growing controversy on the Soviet-American naval balance. It will do so by presenting brief answers to three basic questions. First, what are the Soviet Union's maritime interests? Second, how has the Soviet Navy grown? And third, what are the limits of and constraints on the Soviet Navy? In answering these questions one hopes that a balanced picture of the naval threat posed by the U.S.S.R. will emerge.

What are the Soviet Maritime Interests? There is no question that the Soviet Navy is now much more formidable than it was a decade or two ago. What is the subject of debate is why the Soviet Union invests significantly in naval power (that is, what interests does it seek to promote in doing so?) and the extent to which the

improvement in Soviet naval capability poses a serious threat to the American Navy.

It is commonly noted in connection with the growth of the Soviet Navy that the Soviet Union is a "continental" or a "land" power, the implication being that it has no real business—apart from messing about with Western interests—making large investments in naval power. As then Chief of Naval Operations Elmo Zumwalt, Jr. put it in a 1971 interview, there is a "dramatic difference between what the Soviets need—as basically a land power—and what we need—as basically a maritime power . . . they only can aspire to have a Navy larger than ours for purposes of interfering with our vital interests."[3] Capt. John Moore, editor of *Jane's Fighting Ships,* made essentially the same point in a somewhat different way when he concluded in 1975 that "the ever growing Soviet navy has outrun the legitimate requirements of national defense."[4] Such views presume a fairly narrow base of maritime interests to be defended by naval power. But, in fact, the U.S.S.R. has several practical maritime interests to be served; the extent to which its navy is still inadequate, merely adequate, or "illegitimately" oversized relative to its maritime interests is largely a matter of interpretation. (On such judgments, however, hinge conclusions about Soviet intentions.)

Certainly, some of the tasks demanded of the Soviet Navy are arduous ones, for the Soviet Union's first, and most important, maritime interest is the U.S. Navy. At the strategic level, American submarines armed with SLBMs pose a severe threat to the Soviet homeland. For this reason, as Admiral Gorshkov (for more than 20 years the Commander in Chief of the Soviet Navy) wrote in *Sea Power and the State,* "the most important task of our navy in this struggle (against enemy navies) will be to use our naval

power against the enemy's strategic nuclear systems in order to prevent, or to weaken as far as possible, their striking power against our own land targets."[5] (If strategic antisubmarine warfare (ASW) is the primary mission of the Soviet Navy, then it is difficult to argue that the U.S.S.R. is possessed of a surfeit of naval power, as the U.S. sea-based strategic forces are considered the most invulnerable component of the Triad.) At the same time, U.S. strategic ASW capabilities threaten that portion of the Soviet strategic nuclear force that is at sea. The U.S.S.R. has a need, therefore, to acquire naval power to protect its sea-borne deterrent forces from America's far from insignificant ASW capability. This is affirmed in the writing of Gorshkov who predicts that in the event of war

> the ocean spaces will become the arena of savage warfare between navies fighting to secure the maximum utilization of their naval power for the solution of crucial strategic tasks . . . . Surface ships . . . remain the essential—and often the only—combat weapon for securing the deployment of the chief striking force of our navy: its submarine fleet.[6]

In short, the Soviet Union has an interest in defending its territory from nuclear attack and in protecting a portion of its deterrent forces through the use of naval power.

At the conventional level the U.S. Navy has the capability to obstruct Soviet political and military interests around the globe. By investing in naval power, the U.S.S.R. can raise the costs and risks of American intervention with naval power in the Third World crises, even if it cannot always pose a credible military challenge. This idea of denying the United States a "cost-free" intervention is evident in an article on the Soviet naval presence in the Mediterranean by Vice Admiral Smirnov.

"Already," he wrote in 1968, "the very presence of Soviet ships in the Mediterranean' does not allow the American Sixth Fleet to carry out the aggressive ideas of the Pentagon with impunity. They cannot throw their weight around so ceremoniously as before."[7] The other side of this point is that through naval power the U.S.S.R. can as well promote their own interests, whether by "presence" or "power-projection."[8]

Another military use to which Soviet naval power could be put—although it is not clear that it is intended to be used in this way—is to disrupt NATO shipping in the event of a protracted conventional war in Europe. It would seem prudent to prepare the capabilities to undermine an adversary's strategy; NATO's calls for large-scale reinforcement by sea.

In sum, it should not be surprising that the U.S.S.R. seeks to defend itself against the military threat posed by the U.S. Navy and to neutralize and counter its political threat. The Soviets may not be able to achieve either of these large goals, but it certainly is in their interest to try to do so. These political-military considerations add up to a rather compelling rationale for the Soviet Navy.

But the Soviet impulse toward the sea has economic and commercial as well as political and military dimensions. The Soviet Union has become a major factor in the world shipping market; indeed, it possesses the largest cargo liner fleet in the world.[9] Not only does this fleet service most of Soviet seaborne trade, but it has also captured a significant share (roughly 20 percent) of established trade routes, and has become a substantial source of hard-currency income.[10] The Soviet Union possesses as well the largest and most modern fishing fleet in the world. It provides approximately "one-third of the annual total of animal protein consumed in the Soviet Union."[11] For the last 20 years the Soviet Union has been one of the three largest fishing nations in terms of catch. Clearly, the U.S.S.R. has economic as well as military interests in the oceans.

That these economic considerations have a place in Soviet thinking about naval power is evidenced once again in the writing of Gorshkov. "Naval power constitutes one of the most important factors ensuring the strengthening of (the) national economy." Stressing the interaction of the military and the economic aspects of Soviet interest in the oceans, he argued that "the totality of the means used for exploiting the riches of the World Ocean and the means used for defending the interests of the state, when rationally combined, constitute the sea power of the state and determine a country's ability to use the military-economic potentialities of the oceans to its advantage."[12] While the economic factor is clearly not foremost among the reasons why the U.S.S.R. is interested in naval power, it is yet another reason why it must seem sensible to acquire a powerful navy.

None of this makes the Soviet Union a maritime power in the same sense that the United States is a maritime power. It does not possess a great naval tradition; it is not thought of as having historically been a maritime power. It is not a huge trading power reliant on seaborne cargoes for its international commerce. Neither it nor its allies depends on imported oil brought in great quantities by sea. The Soviet Union need not ply the oceans in order to support its allies in the event of major wars.

Nevertheless, the Soviet Union is a state whose shores are washed by four seas, and whose interests are substantially affected by what transpires over, on, and under those seas. Explanations of the Soviet naval buildup need not assume malevolent intentions; the Soviet Union has more at stake than simply politically motivated disruption

of Western maritime interests. However, the problem remains that in pursuit of its own maritime interests—however defined and weighted—the Soviet Union jeopardizes Western maritime interests and places at risk Western naval power. The question of "why?" is, in the end, less important than the question "How great is the jeopardy?"

How Has the Soviet Navy Grown? This leads us to examine the improvements in the Soviet Navy that have caused it to seem so much more threatening to so many observers. Before turning to this examination, it is necessary to note the enormous difficulties associated with evaluations of naval power. Simply stated, there is no satisfactory measure of naval power that has much meaning outside a fairly complicated context.[13] Naval warfare is probably the most complicated form of armed conflict, combining as it does air, surface, and subsurface weapons systems in overlapping missions. Sizing up navies requires integration of a number of indicators of naval power, no one of which can really stand alone. Numbers of vessels, types of vessels, the nature of their firepower, their technological quality, their logistical support, their air support, are all vital variables. In turn, these have meaning only in terms of the missions they were designed to perform and the strategy they were meant to fulfill. Even then there remain such factors as geography, concentrations of force, and imponderables such as the weather that would influence the outcome of any particular naval engagement. Straightforward conclusions about the Soviet-American naval balance are, obviously, not possible.

That said, what do we mean when we write about the "growth" of the Soviet Navy? Part of what we mean is that the U.S. Navy has shrunk. Between 1968 and 1974 the overall size of the American Fleet declined from nearly 1,000 to well under 500.[14] In the mid-1970s it was smaller than it had been at any time since 1940.[15] The reason for this decline was the block obsolescence of World War II vessels whose existence had inflated the numbers of the U.S. Navy throughout the postwar period. But regardless of how legitimate the explanation and regardless of how unimportant simple accounting is in the naval scheme of things, this decline in numbers has affected perceptions of the Soviet-American naval balance. It has led to the impression that, as one journal put it, "the U.S. Navy has been dwindling while the Soviet Navy has been expanding...."[16] Moreover, there has been concern that, quite apart from the relative size of the U.S. Navy vis-à-vis the Soviet Navy, the American Fleet has become too small to perform all of its missions adequately, that it possesses too few ships to be a bona fide "two-ocean" navy. This is implied, for example, in former Secretary of Defense Rumsfeld's final annual report, in which he claimed as one of the accomplishments of the Ford administration the "steps toward restoration of the Navy's capability for two-ocean sea control and projection of power."[17] In short, the context in which the Soviet Navy has improved has been one in which the American Navy has—in one crude but highly visible indicator—declined; this has colored our reactions to increases in Soviet naval capability.

This leads to a second related point about what we do not mean by the growth in the Soviet Navy. In our imprecision we often use the term in such a way as to imply substantial augmentations in the size of the Soviet Navy. But in fact there has been no spectacular increase in the size of the Soviet Navy. In the category of major surface combatants, for example, Soviet numbers have been essentially constant (with a slight upward trend) over the last decade (see figure 1). The number of Soviet attack submarines has actually declined by nearly 200, from 430 in

1964 to 231 in 1976 (see figure 1).[18] Of course, these broad numbers mask substantial increases in particular types of systems: Soviet *nuclear-powered* attack submarines have increased in number from 20 in 1963 to 85 in 1978, while Soviet strategic submarines have increased from 30 in 1963 to 90 in 1978. But, in general, the "growth" of the Soviet Navy does not manifest itself in larger numbers. The most dramatic changes in the naval "numbers" balance are a result of American declines rather than Soviet increases.

Nor is it really trends in shipbuilding that are the source of concern. The relative decline in American numbers is more the result of the pace at which it has phased out obsolete and obsolescing vessels than of a worrisome lag in shipbuilding highlighted by current cutbacks in U.S. Navy ship procurement. (The problem of widespread obsolescence is one the Soviet Navy is only beginning to face.)[19] In the decade between 1966 and 1976, for example, the Soviet Union produced many more ships than the United States, but well over half of them (480 out of 766) were minor combatants under 1,000 tons, while the United States outproduced the U.S.S.R. in terms of tonnage and built many more (30 to 3) major combatants of 10,000 tons or more (see figure 2).[20] Overall, the pattern in shipbuilding is a mixed one, with notable differences in style (in particular, the constancy of the Soviet effort as opposed to the more cyclical nature of the American program) and emphasis (with the Soviets focusing on submarines, the United States more on surface ships).[21] But there is nothing here that would lead one to conclude that there had been, in the words of one observer, a "rather spectacular" rise in Soviet naval strength,[22] or that the trends are moving against the United States. Secretary of Defense Brown noted as much in last year's hearings, stating boldly that "there is no great adverse trend there in

terms of ships."[23] (And Michael MccGwire has argued that the Soviet Union suffers from a shortage of naval surface shipbuilding capacity relative to its ambitious naval agenda.)[24] Nevertheless, there have been areas of real growth in the Soviet Navy and there are certain trends that, if continued, could prove troubling.

This leaves us still with the question of what we do mean in referring to the growth of the Soviet Navy. The answer lies largely in two areas: quality and deployment.

The quality of the Soviet Navy has improved dramatically over the past 20 years. This improvement is manifest in several different ways. First, the Soviet Union has introduced new *types* of ships into its navy. The primary examples are the *Moskva*-class ASW helicopter carrier that entered service in 1967, and the 40,000-ton *Kiev*-class aircraft carrier that carries both helicopters and vertical/short take-off and landing (V/STOL) aircraft; *Kiev* entered the fleet in 1976.[25] Second, the Soviet Union has substantially modernized its fleet, introducing many new *classes* of existing types of ships. Thus Michael Klare could write in 1975 that "[B]etween 1967 and 1973, the Soviet Union introduced nearly a dozen major new classes of warships . . . ."[26] The Soviets have also modernized their land-based naval aviation with the introduction of the *Backfire*, which significantly extends the reach of land-based airpower in performing naval missions.[27]

Finally, the Soviet Union has exploited new *technologies* in pursuing its naval modernization program. This is evident in their sustained investment in nuclear-powered submarines, in their utilization of V/STOL technology with their small carriers, and especially in their acquisition of naval cruise missiles. The extent to which naval cruise missiles have or will revolutionize naval warfare is the subject of considerable debate, but there is no question that
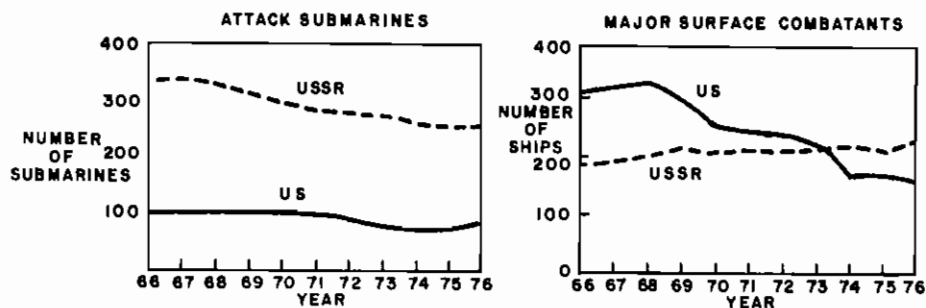
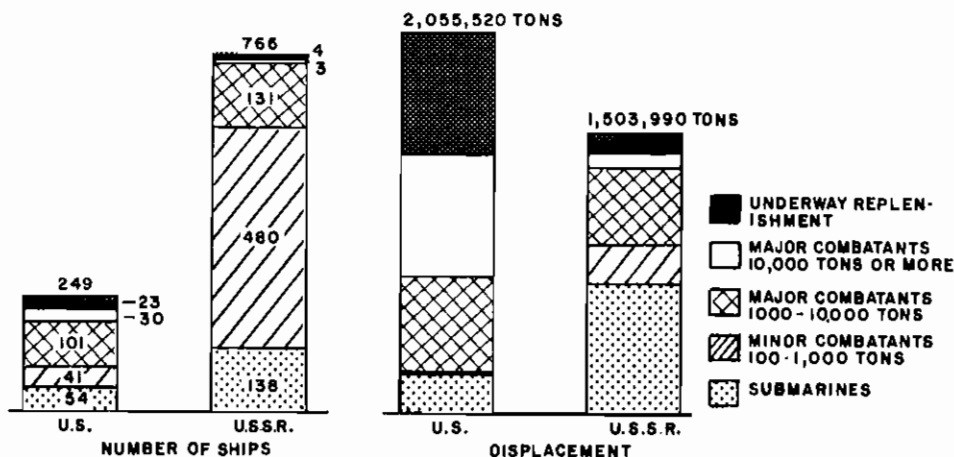Fig. 1—Changes in Naval Force Levels—U.S./U.S.S.R. (1966-1976)

Fig. 2—U.S./U.S.S.R. Combatant Ship Deliveries[1] (1966-1976)

[1] Support ships other than those capable of underway replenishment are not included.

Source: DoD, Annual Posture Statement, FY78.

they pose a quite potent threat that is, at the least, difficult to counter and at most, puts surface combatants in a situation of great vulnerability. The U.S.S.R. has deployed cruise missiles on everything from fast patrol boats to nuclear submarines. Many of the newer classes of Soviet surface combatants are known as guided-missile destroyers and cruisers. And while the Soviet Union is introducing its sixth naval surface-to-surface missile, the United States is just beginning to deploy its first. If one believes, as one expert put it, that the cruise missile "has altered the naval equation beyond recognition," then there is indeed cause for concern.[28] The official American view is more moderate, but the U.S. Navy is spending billions to develop and provide surface platforms for the Aegis air defense system designed to counter the combined air/cruise missile threat.

In sum, the modernization of the Soviet Navy has been quite impressive, and has transformed it into a much more formidable fleet. This is one of the ways in which the Soviet Navy has "grown."

The second development at the center of what we mean by the growth of the Soviet Navy has been the appearance of the Soviet Navy throughout the globe. Forward deployment began with the stationing of a Soviet squadron in the Mediterranean in 1964. This squadron was augmented during the 1967 war, and was followed in 1969 with the establishment of a small but permanent naval presence in the Indian Ocean. By the mid-1970s Soviet naval activity included numerous visits to the Caribbean, patrols off West Africa, and expanded activities in the Pacific.[29] The global nature of Soviet naval prowess has been demonstrated in two extensive and worldwide exercises, Okean 70 and Okean 75.[30] And recent history is replete with examples of the Soviet use of their now farflung navy for political purposes in distant areas.[31]

The Soviets gain several benefits from forward deployment of their Navy, ranging from the political advantages associated with mere "presence" to the possibility of militarily deterring or at least interfering with American intervention in Third World crises. While the Soviet Navy does not possess great power projection capability, it does provide, in its present guise, another instrument of national policy with which the Soviet leadership can pursue its interests.

Accompanying the forward deployment of the Soviet Navy have been changes in the character of Soviet naval doctrine and alterations in the missions it performs. Gorshkov has placed great emphasis on the peacetime political utility of the navy.[32] And whereas in the past Soviet naval behavior was explainable almost completely in terms of seaborne strategic capabilities (i.e., Soviet naval policy was formed essentially in reaction to the strategic threat posed by American ballistic missile submarines), now it was evident that "they are also responding to events in the international political arena that have no bearing whatsoever on the strategic balance—and their actions are not only responsive but initiatory as well."[33] Thus, the articulation of a more political and aggressive naval doctrine has emerged in a period in which detectable changes have occurred in the behavior of the Soviet Navy. For many in the West, this fact has reinforced the effect of Soviet forward deployment in shaping the image of a growing Soviet Navy.

There remains a large debate over whether the assertive political aspects of Soviet forward deployment ought to be seen as a secondary and somewhat incidental task or as the embodiment of an expansionist Soviet foreign policy. Some distinguished analysts hold the former view. Robert Weinland, for example, argues that "Soviet naval policy and practice are in fact predominantly

reactive in character and defensive in orientation."[34] But for others the link between the expanding horizons of the Soviet Navy and the outward thrust of Soviet foreign policy is a clear one. For example, former Secretary of Defense Rumsfeld has described Soviet naval expansion as part of a broader effort to achieve military superiority and international dominance, and suggests that "[S]uch maritime expansion clearly is a central element in the Soviets' effort to develop the capability to project power worldwide, to increase both their military capabilities and their political reach in areas far from their shores."[35] Or, as then Director of Naval Intelligence Adm. Bobby Inman explained in 1975:

Russia—whether under czars or commissars—has historically desired to play a larger role in the shaping of world events. A number of elements have conspired in the past to prevent Russia from exercising this role and one of the elements has been the *lack* of a *sea-going navy* to project Russian influence overseas . . . that weakness has been *dramatically reversed* . . . .[36] (Emphasis added.)

Whether viewed as still primarily defensive or as part of the Soviet will to power, forward deployment of the Soviet Navy has shattered its former image as a coastal force and raised it to a new prominence in Western political and military thinking.

In conclusion, the U.S.S.R. is putting more capable ships in more places for more purposes than ever before. New capabilities, new deployments, new missions, new doctrine and, perhaps, expansive Soviet foreign policy: this is what we mean by the growth of the Soviet Navy.

Limits and Constraints? But there is another side to this story, for there are limits and weaknesses as well as areas of growth in Soviet naval capability. The most obvious limit on Soviet naval power is geographical.[37] Geography constrains the Soviet Navy in several different ways. The vastness of the U.S.S.R. makes it difficult to implement an integrated and efficient naval supply system. The Soviet Union is required by geography to maintain four separate fleets that must be configured to operate independently; reinforcement between fleets is difficult. The northerly location of the U.S.S.R. means that it has a problem of climate, in particular in connection with the maintenance of ice-free ports; only one (at Murmansk) exists among their major bases in the Pacific, Baltic, and Barents Seas. Its northerly position also means that its navy must travel long distances to approach major oceans and shipping lanes. The Soviet Northern Fleet, for example, is based at least 2,500 miles from the main sea lines of communication between the United States and Europe. Finally, the Soviet Navy has a problem of access to the oceans because all of its egress routes are interdictable. This makes Soviet naval operations easier to monitor and easier to disrupt than is the case for the American Navy. The sum of these geographical problems constitutes a significant handicap for the Soviet Navy. As one observer has written, "a naval fleet and the national geography from which it must project its naval power are two parts of an inseparable system. Like the Germans [in the World Wars], the Soviets can have a great navy, but not necessarily be a great naval power."[38]

A second limit on the Soviet Navy is its inadequate logistics capability. Because of its geographic problems, its supply lines are vulnerable. It, unlike the U.S. Navy, has not developed a capability for underway replenishment. Compared to the United States, the U.S.S.R. invests relatively little in its naval logistics capability (see figure 2). As a result, Soviet naval forces are extremely limited in endurance and are hampered by the fact that "[M]ost

Soviet replenishment operations are conducted with small craft, at slow speeds, in protected anchorages, and in fair weather." In short, "the logistics capability of the Soviet Navy must be considered its weakest link . . . . In no way can the Soviets deploy and sustain a fleet for long periods of time."[39]

Of course, the establishment of overseas bases could help to compensate for logistic difficulties.[40] But try as it might, Soviet diplomacy has largely failed to obtain for the Soviet Navy anything like the still extensive—though diminished—network of American bases. To be sure, there have been a few, mostly minor, sometimes short-lived, successes but the Soviet Navy does not have access to such facilities as the full-service U.S. bases at Subic Bay in the Philippines or Rota, Spain. Indeed, it has few enough small overseas bases, and is forced to rely extensively on anchorages.

The extent to which the effectiveness of the Soviet Navy is enhanced or degraded by access or loss of access to overseas basing facilities is illustrated by the fate of the Soviet squadron in the Mediterranean. When the U.S.S.R. obtained bases in Egypt, the capability of that squadron was considerably augmented. When President Sadat deprived the U.S.S.R. of those bases, the Soviet naval presence in the Mediterranean suffered.[41]

No doubt Soviet diplomacy will continue to seek overseas bases for the Soviet Navy, and no doubt there will be future successes (and setbacks), but overall it seems highly unlikely that the U.S.S.R. will be able to establish a chain of significant bases in the foreseeable future. Moreover, the fact that Soviet foreign policy must be attuned to the needs of the Soviet Navy draws attention to the fact that the Soviet Navy can be a determinant as well as an instrument of Soviet foreign policy. As Ken Booth has said in connection with the Soviet involvement in the Mediter-

ranean, "To a degree, the naval tail has wagged the foreign policy dog for the Soviet Union . . . ."[42] This leads to the further observation that in its new role the Soviet Navy can be a burden as well as an asset, for there can be political (and economic) costs of overseas deployment. (And the political costs are not only associated with the need for bases, but also from the simple demands of involvement. Curt Gasteyger has written that "A stronger and wider presence brings with it not only advantages but, sooner or later, new responsibilities and unforeseen or unwelcome burdens for the power involved. The Soviet Union will be as unable to escape this as any previous imperial power.")[43] Thus the Soviet Union has an obvious interest in (and need for) overseas bases, and because it has thus far had only limited success in obtaining them, its naval power is constrained.

Another weakness, indicated by the Soviet inability to develop sufficient supply and basing networks, has been the pace of change. The Soviet Navy has come to its global pretensions rather quickly and has in some respects outrun the ability of the U.S.S.R. to accommodate its changed orientation. This is clearly the case in the areas of logistics and overseas basing. But a particular problem in this regard is that dramatic increases in the operations of the Soviet Navy have been accompanied by only incremental changes in its naval force posture. This has led to a situation in which the Soviet Navy has been "severely overstretched" operationally.[44] As a result, overseas deployments are overly long, smaller vessels are sent out on the high seas, ships are used for unintended purposes, etc. The rapid "growth" of the Soviet Navy has stretched it thin.

One way to rectify this problem is to accelerate shipbuilding in response to the new demands placed on the Soviet Navy. This the U.S.S.R. has failed to do. Rather, constant resource allocation has

been a hallmark of the Soviet naval program. Over the long run, of course, this can lead to significant cumulative increases in naval forces. But in the near term, it makes it difficult to respond flexibly to a more demanding mission structure, particularly as ships now coming into service are the product of designs and decisions of as much as a decade in the past. Moreover, Soviet shipbuilding capacity is not unlimited, and its shipbuilding program has not left a lot of slack. Therefore accelerating shipbuilding would first require purchasing new shipbuilding facilities. MccGwire has argued that to meet the requirements of the Navy Admiral Gorshkov would like to have (and feels he needs) "would entail a substantial increase in naval surface shipbuilding capacity."[45] This has not occurred, and therefore the Soviet Navy works within the framework of "long-term physical constraints."[46] This is another limit on Soviet naval power.

That the Soviet Navy has, for the most part, failed in its effort to obtain a larger allocation of resources suggests its internal political weakness. It inevitably competes for resources with the other branches of the Soviet armed services, two branches of which—the Army and the Strategic Rocket Forces—have been more favored by the Soviet leadership than the Soviet Navy. The navy is not directly represented on the highest defense decisionmaking bodies, the Politburo and the Defense Council, and "[T]here is good evidence that the Defense Ministry and the General Staff have at times exerted more influence than the Navy on naval policy decisions."[47] A common interpretation of Gorshkov's "Navies in War and Peace" series is that he was seeking to defend the Soviet Navy's interests from internal attack by illustrating in great detail the importance and usefulness of the navy. There is little doubt that in the early 1970s a debate occurred over whether the Soviet Navy is really a cost-effective

instrument of Soviet foreign policy, and Gorshkov's articles appear to be a public salvo aimed at providing a rationale for a stronger navy. What weakens the navy's position in this internal fight is that the U.S.S.R. reaps the political gains of forward deployment at present levels of resource allocation while acquiring the capability to pose a credible military threat in, say, the Indian Ocean, would cost a lot more money. Thus far it appears that the navy has lost its battle for more resources (while avoiding cuts). As a bureaucratic actor, the Soviet Navy has its problems.

In addition to these broad constraints on Soviet naval power, there are some specific operational "flaws" in the Soviet naval posture that limit its military capability. The most important of these is the almost complete lack of sea-based airpower. The Soviets have attempted to compensate for this problem by improving land-based naval aviation (e.g., *Backfire*), emphasizing cruise missiles for some air missions, and by building the *Kiev*-class V/STOL carriers. None of this really compensates for the lack of true attack carriers with aircraft as capable as the American F-14. (V/STOL carriers are an improvement over no fleet air, but large penalties in aircraft performance are paid in order to achieve the V/STOL capability.) What this means is that Soviet naval capability is highly sensitive to the availability of land-based airpower. Even with *Backfire*, this would represent a sizable constraint in any naval engagement.

A second operational limit on the Soviet Navy is that it is configured primarily for antisubmarine warfare. As a result, it does not possess a powerful power projection capability. A related point is that, partly as a result of its ASW orientation, the Soviet Navy heavily emphasizes submarines, which are quite useful for that purpose but less useful in the "presence" or "crisis management" mode.

A final point that deserves mention is that the relative strength of the Soviet Navy is diminished by the fact that American allies are not insignificant naval powers, whereas the Soviet Union's allies have quite minor navies.

In sum, while the Soviet Navy has shown impressive growth in several areas, it is limited by problems in others. Geography inhibits Soviet naval power, logistic and basing inadequacies limit its endurance and effective reach, its overall effectiveness has been diminished by a pace of change that has overtaxed its naval force posture, its ASW configuration and lack of major seaborne airpower limit its military potency, while its relatively weak bureaucratic position and relatively fixed shipbuilding capacity prevent it from moving to reduce as much as it would like those of its weaknesses which can be remedied.

Conclusion. Given our propensity to disagree among ourselves about the magnitude of Soviet military power, the difficulty of evaluating naval power, and this mixed picture of Soviet naval strengths and weaknesses, it is inevitable that there would be a broad range of views about the nature of the Soviet naval challenge. In seeking some reasonable general conclusion about Soviet naval capability we will find no clear answer in Western opinion, for there is no consensus on this issue.

At one extreme are those who feel that the United States has already been surpassed as a naval power by the Soviet Union. "Everybody knows by now," it was reported recently in *The New Republic*, "that it is not we but the Russians who rule the seas, the relevant seas at least."[48] Whatever that comment may mean, it is representative of the not infrequently expressed general impression that the United States is lagging behind in the naval race. Thus Senator Jake Garn at last year's hearings on the defense budget: "I don't think there is anybody who doubts—even school age children know—that our Navy is dropping behind versus the Soviet Union's; it is rather general knowledge."[49] Thus Rear Adm. Ernest Eller who wrote in 1973 that Soviet advances in naval capability "make the U.S.S.R. the number one sea power in the world."[50]

A variation on this "alarmist" theme is advanced by those who argue that while the present naval balance is satisfactory to safeguard U.S. interests, the trends are against us and therefore the future bodes ill for the American Navy unless remedial action is taken. This attitude is reflected in the 1971 comment by then Chief of Naval Operations Elmo Zumwalt: "If the U.S. continues to reduce and the Soviet Union continues to increase, it's got to be inevitable that the day will come when the result will go against the U.S."[51] In this analysis the answer is, of course, for the United States to buy more naval capability in order to reverse the unpleasant trends.

This perception of the Soviet-American naval balance is not so far from that which is in evidence in official U.S. Navy thought. The United States, so the argument goes, maintains a "slim margin of superiority" in the naval balance, but has lost its "margin of confidence." In order to ensure that we

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BIOGRAPHIC SUMMARY

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can be confident of the adequacy of our Navy in the future we should spend more money on it.[52]

On the other side are those who are less worried about the Soviet Navy. Ken Booth, for example, describes the Soviet Navy as "an irritation rather than a deterrent," and concludes that "the Soviet Navy need not hinder [U.S.] intervention."[53] Similarly, MccGwire argues that while the expanded presence of the Soviet Navy has complicated U.S. naval policy, there is not "much evidence that it has inhibited the use of naval forces by the United States."[54] How one falls in this range of views depends on how one weights and ranks the gains and weaknesses of the Soviet Navy. Those who emphasize the gains are concerned about the severity of the naval threat they see; those who feel the limits outweigh the gains are more sanguine about the challenge posed by the Soviet Navy.

This is a difficult debate to disentangle because there are facts that fit both interpretations of Soviet naval might. On balance, it seems fair to say that as a *military* threat the Soviet Navy is an uneven opponent. In those regions —the Northern Seas, the Eastern Mediterranean, the Northwest Pacific—in which the Soviets have a large concentration of forces and the support of land-based naval aviation, the Soviet Navy is a highly potent force; those are "high-risk" areas of operation for the U.S. Navy. On the other hand, in many other areas—the South Pacific, the Indian Ocean, the South Atlantic—the military potential of the Soviet Navy is marginal or insignificant.

As for Soviet naval capabilities, they too are uneven. Certain capabilities—in particular the *Backfire* aircraft and the nuclear submarines—represent a serious military threat and are quite worrisome. But others—the surface fleet, the ASW capability—seem much less of a challenge. As Vice Adm. G.E. Miller has written, the Soviet surface-ship threat

"warrants attention and respect, but it can be defeated rather easily under most conditions."[55]

The sum of the total military threat posed by the Soviet Navy is, on the whole, substantially less impressive than the most impressive of its parts. The military power of the Soviet Navy is diminished by its large functional and regional areas of weakness.

It is, if possible, even more difficult to assess the Soviet Navy as a *political* threat. The "presence" of the Soviet Navy in forward deployment areas has perhaps brought the U.S.S.R. some political advantage, though to what degree and to what good is difficult to measure. No doubt forward deployment has reinforced the perception of the U.S.S.R. as a superpower. There was probably advantage to the U.S.S.R. in offsetting (in a political sense) the forward deployment of the U.S. Navy.

In terms of crisis management, the expansion of the Soviet Navy has certainly altered the political calculation of the risk of U.S. intervention, while at the same time providing some (limited) capability for Soviet intervention. However, the military weakness of the Soviet Navy in most forward deployment areas reduces its political value. Moreover, naval power itself has limits as a political instrument. MccGwire has written that "[S]uccessful intervention overseas now requires a favourable balance of political forces in the host country, as well as sufficient weight of sustained involvement."[56] Navies cannot guarantee the former condition, and are not the best means of ensuring the latter.

It is sometimes argued that the Soviet Navy is more a political than a military threat. There are two observations that should be made about that possibility. First, there is nothing short of war or arms control (equally bad in some views; equally unlikely in any case) that the United States could have done to deny the U.S.S.R. the political gains that have accrued as a result of the

expanded presence of the Soviet Navy. Second, to the extent that the Soviet naval threat is primarily political, it is susceptible to being countered by political and economic as well as military means.

NOTES

1. A recent Brookings study reports that naval units participated in 80 percent of the more than 200 instances in which the United States employed force for political purposes, and concludes that "the Navy clearly has been the foremost instrument for the United States political uses of the armed forces: at all times, in all places, and regardless of the specifics of the situation." Barry Blechman and Stephen Kaplan, *Force Without War: U.S. Armed Forces as a Political Instrument* (Washington: Brookings Institution, 1978), pp. 38-39.

2. For example, see Barry Blechman, *The Control of Naval Armaments* (Washington: Brookings Institution, 1975), for discussion on the dangers of Soviet-American confrontation at sea.

3. "Where the Russian Threat Keeps Growing," *U.S. News & World Report*, 13 September 1971, p. 73.

4. Quoted in Michael Klare, "Superpower Rivalry at Sea," *Foreign Policy*, Winter 1975-1976, p. 86.

5. From excerpts in S.G. Gorshkov, "The Sea Power of the State," *Survival*, January/February 1977, p. 29.

6. *Ibid.*, pp. 26, 27. See also, Gary Charbonneau, "The Soviet Navy and Forward Deployment," U.S. Naval Institute *Proceedings*, March 1979, pp. 38-39.

7. Vice Admiral N.I. Smirnov, "Soviet Navy in the Mediterranean," *Survival*, February 1969, p. 66.

8. While the question of whether the Soviet Navy is presently capable of—or even seeking to achieve—power projection is arguable; however, it is certainly high on the list of concerns of those most alarmed by the growth in Soviet naval power.

9. "Red Flag," *The Economist*, 17 June 1978, pp. 89-90.

10. On the economics of the Soviet merchant marine, see Philip Hanson, "The Soviet Merchant Marine," *Survival*, May 1970, pp. 169-172; and Richard Ackerly, "The Soviet Merchant Fleet," U.S. Naval Institute *Proceedings*, February 1976, pp. 27-37.

11. Richard Ackerly, "The Fishing Fleet and Soviet Strategy," U.S. Naval Institute *Proceedings*, July 1975, p. 31.

12. Gorshkov, pp. 24, 25.

13. For a fuller discussion of this problem, see Stansfield Turner, "The Naval Balance: Not Just a Numbers Game," *Foreign Affairs*, January 1977, pp. 339-354. Also, "The East-West Balance at Sea," in *The Military Balance, 1978-1979* (London: International Institute for Strategic Studies, 1978), pp. 114-118 and David Kassing, "General Purpose Forces: Navy and Marine Corps," in Francis Hoeber and William Schneider, Jr., eds., *Arms, Men, and Military Budgets: Issues for Fiscal Year 1978* (New York: Crane, Russak, 1977), pp. 75-78.

14. See *The Military Balance* for the appropriate years. According to former Secretary of the Navy J. William Middendorf II, the Navy peaked during the Vietnam years in June 1968 at 976 ships. See his "American Maritime Strategy and Soviet Naval Expansion," *Strategic Review*, Winter 1976.

15. Middendorf.

16. *Ibid.*, Editors introduction.

17. Donald Rumsfeld, *Annual Defense Department Report, FY 1978* (Washington: U.S. Govt. Print. Off., 1977), p. 2 (emphasis added). For Rumsfeld's earlier, quite bleak assessment of the naval balance, see the *Annual Defense Department Report FY 1977* (Washington: U.S. Govt. Print. Off., 1976), in which he argues that "because of a shortage of surface combatants, [the Pacific fleet] would have difficulty in protecting our lines of communication into the Western Pacific." p. v (emphasis added).

18. The figures are from *The Military Balance*, 1964-1965 and 1976-1977.

19. See George Wilson, "U.S. Navy Gains, Soviet Slips, Hill Told," *Washington Post*, 24 February 1978.

20. For similar charts comparing NATO and the Warsaw Pact, see Harold Brown, *Annual Defense Department Report, FY 1980* (Washington: U.S. Govt. Print. Off., 1979), p. 91.

21. For more detail, see the work of Michael MccGwire, most recently "Western and Soviet Naval Building Programmes 1965-1976," *Survival*, September/October 1976, pp. 204-209. For earlier analyses, consult MccGwire's contributions to the three encyclopedic volumes on the

Soviet Navy: M. MccGwire, ed., *Soviet Naval Developments: Capability and Context* (New York: Praeger, 1973); M. MccGwire, et al., eds., *Soviet Naval Policy: Objectives and Constraints* (New York: Praeger, 1975); and M. MccGwire and J. McDonnell, *Soviet Naval Influence: Domestic and Foreign Dimensions* (New York: Praeger, 1977).

22. Cora Bell, "Strategic Problems of the Atlantic," *Survival*, March 1970, p. 100.

23. U.S. Congress, Senate, Committee on Armed Services, *FY 1979 Defense Budget*, Hearing (Washington: U.S. Govt. Print. Off., 1978), pt. 5, p. 4272.

24. Michael MccGwire, "Soviet Naval Programmes," *Survival*, September/October 1973, p. 226.

25. See John Lawton, "Aircraft Carrier Joins Soviet Fleet," *Washington Post*, 19 July 1976. The second *Kiev*-class ship (the *Minsk*) has only recently entered the fleet. See "Soviet Carrier Leaves Black Sea," *The New York Times*, 26 February 1979. A third carrier is under construction.

26. Michael Klare, "Superpower Rivalry at Sea," *Foreign Policy*, Winter 1975-1976, p. 88. For a listing of classes of major Soviet naval surface combatants (including year first in service) see *The Military Balance, 1975-1976*, p. 82; for Soviet attack submarines see *The Military Balance, 1976-1977*, p. 84; for Soviet ballistic missile submarines, see John Moore, *The Soviet Navy Today* (New York: Stein and Day, 1975), pp. 73-78.

27. See William O'Neil, "Backfire: Long Shadow on the Sea Lanes," U.S. Naval Institute *Proceedings*, March 1977. For background on Soviet naval aviation, see Peter Rasmussen, "The Soviet Naval Air Force: Development, Organization, and Capabilities," *International Defense Review*, May 1978.

28. John Moore quoted in Michael Krepon, "A Navy to Match National Purposes," *Foreign Affairs*, January 1977, p. 360. For a brief discussion of advances in naval technology, see "New Naval Weapons Technologies," in *Strategic Survey 1975*, pp. 21-26.

29. For a survey of the Soviet Navy's regional activities, see Robert Kilmarx, *Soviet-United States Naval Balance* (Washington: Georgetown University, Center for Strategic and International Studies, 1 April 1975).

30. See Donald Daniel, "Trends and Patterns in Major Soviet Naval Exercises," *Naval War College Review*, Spring 1978, pp. 34-41.

31. See Part VII of MccGwire and McDonnell, eds., and especially Bradford Dismukes, "Soviet Employment of Naval Power for Political Purposes, 1967-1975," pp. 438-509.

32. See R. Weinland, et al., "Admiral Gorshkov's 'Navies in War and Peace,'" *Survival*, March/April 1975, p. 56.

33. Robert Weinland, "The Changing Mission of the Soviet Navy," *Survival*, May/June 1972, pp. 129-130; see also M. MccGwire, "The Evolution of Soviet Naval Policy: 1960-1974," in MccGwire, et al., especially pp. 522-531.

34. Weinland, "The Changing Mission of the Soviet Navy."

35. Donald Rumsfeld, "Which Five-Year Shipbuilding Program?" U.S. Naval Institute *Proceedings*, February 1977, p. 21.

36. U.S. Congress, Senate, Committee on Armed Services, *FY 1976 Defense Budget*, Hearing (Washington: U.S. Govt. Print. Off., 1975), pt. 3, p. 3004.

37. The discussion that follows relies upon Clyde Smith, "Constraints of Naval Geography on Soviet Naval Power," *Naval War College Review*, September/October 1974, pp. 46-57.

38. *Ibid.*, p. 48.

39. G.E. Miller, "An Evaluation of the Soviet Navy," in Grayson Kirk and Nils Wessell, eds., *The Soviet Threat: Myths and Realities* (New York: Proceedings of the Academy of Political Science, 1978), pp. 52, 53.

40. See Barry Blechman and Robert Weinland, "Why Coaling Stations Are Necessary in the Nuclear Age," *International Security*, Summer 1977, pp. 88-99.

41. See Robert Weinland, "Land Support for Naval Forces: Egypt and the Soviet Escadra 1962-1976," *Survival*, March/April 1978.

42. Ken Booth, "U.S. Naval Strategy: Problems of Survivability, Usability, and Credibility," *Naval War College Review*, Summer 1978, p. 21.

43. Curt Gasteyger, "World Politics on the Seven Seas," *Survival*, March 1970, p. 97.

44. The phrase is Michael MccGwire's, from a description of the Soviet Navy in the 1968-1971 period, in "The Evolution of Soviet Naval Policy: 1960-1974," *Soviet Naval Policy*, pp. 530-531.

45. MccGwire, "Soviet Naval Programmes," p. 226. 226.

46. See MccGwire's "Western and Soviet Naval Building Programmes 1965-1976," *Survival*, September/October 1976, p. 205.

47. James Barry, Jr., "Soviet Naval Policy: The Institutional Setting," in *Soviet Naval Influence*, p. 112.

48. *The New Republic*, 3 February 1979, p. 42.

49. *Hearings on FY 1979*, pt. 5, p. 4197.

50. Quoted in Klare, p. 86.

51. Elmo Zumwalt interview in "Where the Russian Threat Keeps Growing," *U.S. News & World Report*, 13 September 1971, p. 72.

52. See Chief of Naval Operations Holloway's testimony in *Hearings on FY 1979*, pt. 5, pp. 4206-4210.

53. Booth, p. 19.

54. Michael MccGwire, "Maritime Strategy and the Superpowers," in *Power at Sea II: Superpowers and Navies*, Adelphi paper, no. 123 (London: International Institute for Strategic Studies, 1976), p. 18.

55. Miller, p. 50.

56. MccGwire in *Power at Sea*, p. 17.

Ψ

Wellington's armies defeated Napoleon on the Iberian Peninsula but sea power exercised by the Royal Navy was required to install those land forces and to maintain them.

THE ROLE OF THE ROYAL NAVY

IN THE NAPOLEONIC WARS

AFTER TRAFALGAR, 1805-1814

by

David Syrett

The Royal Navy has a tradition of victory that reaches back into history at least as far as the reign of the Tudors.[1] The strength of this tradition is evident in the unbroken series of victories achieved by the Royal Navy during the French Revolutionary and Napoleonic Wars, a series in which the Glorious First of June, Cape St. Vincent, Camperdown, the Nile, Copenhagen, and Trafalgar are only the high points. How did the British achieve victory after victory in the "Age of Fighting Sail"? The answer to this question, particularly during the period of the French Revolutionary and Napoleonic Wars, lies in part with the makeup of the officer corps of the Royal Navy.

When the guns stopped firing off Cape Trafalgar in the late afternoon of 21 October 1805, for most of the officer corps of the Royal Navy it was the end of another battle among many in years of conducting war at sea. Most flag officers, and even a few senior post captains, were on their third war; and for the majority of officers and ratings, it was their second war. By 1805, the officers of the Royal Navy had spent years at sea and collectively they had fought hundreds of victorious actions. There was, however, more to an officer of the Royal Navy than his vast experience at naval warfare: he was part of a tradition of victory. The post captains of the Royal Navy during the Napoleonic Wars had learned their profession under such officers as St. Vincent, Cornwallis, Nelson, and Collingwood; and the flag officers had served under men like Howe, Rodney, and Hood, who in turn had served under Pocock, Hawke, and Anson. This tradition of service and victory was the professional heritage of the officers and men of the Royal Navy during the Napoleonic Wars.

During this period the officer corps of the Royal Navy believed to a man that it had a special mission; for the British Navy was the only force that constantly had protected not only

Britain but the entire world from the ravages of the French Revolution and Bonapartism. The Seven Years War had been a war of the *ancien régime* and as such had been fought over such things as colonies and commercial advantages. The American War started as a civil war within the British Empire and deeply divided the British. But the French Revolutionary and Napoleonic Wars drove the ruling classes of Britain together to oppose what they saw as not only a danger to the "Rights of Englishmen" but also a threat to European civilization. To the rulers of Britain, the French Revolution was opening up the seams of society and producing an outpouring of strife, anarchy, and atheism while Napoleon's rule of France conjured up all their traditional fears of continental despotism and militarism. Britain believed that the excesses of the French Revolution and of Napoleon must be fought to the bitter end.

The Royal Navy fought on year after year with dogged determination as French armies won victory after victory. As long as the British Navy stood as a barrier between France and the British Isles, no matter how many victories French armies won on the Continent, the war would continue unresolved until Britain and the true values of European civilization were finally victorious. The officers of the Royal Navy fought with great skill, determination, and ruthlessness in the belief, especially when Britain was the only nation actively fighting the French, that their efforts alone would save Britain and European civilization. England not only expected victory from the Royal Navy but required it for survival.

In the Royal Navy of George III's reign an officer needed "interest" as well as ability in order to have a successful career. Skill and luck alone were not enough to enable a young officer to reach the rank of post captain and obtain further employment. The Royal Navy was full of aged lieutenants who through lack of "interest" could not advance to the rank of commander and then to post captain. To have "interest" was to have the support of a person who had access to the high and mighty and who could intercede to insure that a young officer received the commands and appointments necessary for his advancement up through the ranks of the officer corps.[2] Nelson's protector or interest, for example, was his uncle Maurice Suckling, the Comptroller of the Navy.[3] By interest alone an officer might gain the rank of post captain, but without skill and luck he would remain a post captain on half pay for the rest of his life. In 1780, Adm. George Rodney promoted his 15-year old son, John, who had been at sea less than 2 years, from lieutenant to post captain in 10 days.[4] But John Rodney spent most of his life on the beach as an unemployed post captain.

It took skill, ability, and unremitting attention to master such subjects as gunnery, seamanship, navigation, and especially the difficult arts of administration, strategy, tactics, and diplomacy. The training of an officer in George III's Navy began at a young age and took place at sea. Nelson first went to sea at the age of 12 and Cornwallis and Collingwood at 11.[5] The early career of George Keith Elphinstone, who as Admiral Lord Keith commanded the Channel Fleet from 1812 to 1814 and during the Hundred Days in 1815, illustrates how a young man was educated to become an officer in the Royal Navy. Elphinstone was born near Stirling in 1746 and at the age of 15 entered the navy as an able seaman in H.M.S. *Royal Sovereign.* Elphinstone was rated as a midshipman and he served for the next few years in a number of different ships that were commanded for the most part by kinsmen. At his own request, Elphinstone was discharged from the navy in 1766 and he signed on the East Indiaman *Tryton* as third mate for a voyage to

India. Upon his return to Britain from the East Indies, Elphinstone reentered the navy, and in 1769 he was made acting Lieutenant in H.M.S. *Stag.* After being commissioned a lieutenant, Elphinstone rose slowly but steadily up through the commissioned ranks of the Royal Navy. Although he never took part in a major fleet action during the American and French Revolutionary Wars, he became an acknowledged expert on the conduct of blockades and amphibious operations. He reached the pinnacle of his career in 1812 when he was appointed to command the Channel Fleet; Elphinstone was 66 and had earned this appointment through hard work and long service.[6]

Elphinstone never would have been appointed to this command if, during the course of his career, he had permitted "too huge and obvious a blot to soil his naval escutcheon. If he did, he ran the risk of being 'broken'—dismissed from the Service." At the beginning of the Seven Years War, Admiral Byng was executed for an error in judgment, and over the years a number of officers had been dismissed from the service for failing to do their duty. However, the usual method by which the Admiralty dealt with an unfit officer was simply not to employ him, leaving him to sit out his life ashore on half pay.[7] The sanction of being dismissed from the service or, more often, not being employed, hastened the development of professionalism among the officer corps because it weeded out unfit officers.

During the last quarter of the 18th century and the first decade of the 19th century, the Royal Navy was a weapon of war being constantly improved. Some of its greatest advances, however, had nothing to do with arms and seamanship but concerned the health of seamen. The long blockades of French ports carried out during the French Revolutionary and Napoleonic Wars were made possible by a vast improvement in naval medicine. The efforts of the Royal Navy, led by such men as Dr. James Lind, Sir Gilbert Blane, M.D., and Dr. Thomas Trotter to prevent or at least control or mitigate such diseases as smallpox, scurvy, and typhus is one of the first, largest, and most successful programs of preventive medicine in history.[8] The campaign to save seamen in the Royal Navy from death from disease was difficult and drawn out owing in part to a general lack of medical knowledge during the late 18th and early 19th centuries. Compounding the problem was the inability of flag officers, captains, naval administrators, and even naval surgeons and doctors to learn from experience—Cook's voyages, for instance. Even though a number of naval officers and doctors saw the connection between the consumption of fresh fruit and the indices of scurvy, it was not until St. Vincent's close blockade of Brest in 1799 that the Admiralty ordered lemons and oranges to be issued on a regular basis. Scurvy could be and was for the most part eliminated by the regular use of citrus juice. Jenner's discovery of cowpox vaccine did much to control smallpox by the end of the 18th century. No cure was found for fevers such as typhus, but by the last decade of the 18th century a number of naval officers and doctors were beginning to see that there was a connection between personal and public hygiene and the rate of typhus on a warship. Numerous efforts were undertaken to improve shipboard hygiene in the Royal Navy by various enlightened captains, doctors, surgeons, and flag officers; and although a large number of these medical and hygienic measures were done on an *ad hoc* basis, they did much to reduce the ravages of disease. In 1778, for example, out of a total strength of 60,000 seamen and marines authorized by Parliament, some 15,978 were sent ashore sick. In 1780 the situation had not improved, for out of an authorized total of 85,000 men, 32,121 were sick. By 1805 there was a dramatic improve-

ment, with only 8,083 sick out of a total of 120,000. In 1806, out of the same number, only 7,662 were sent ashore sick.[9] The ability to end, control, or at least reduce the indices of disease among the men of the Royal Navy during that period enabled the ships of the Royal Navy to stay at sea almost continuously. Strategies of constant close blockade and campaigns such as Trafalgar would have been impossible without the advances in preventive medicine made by the Royal Navy.

In the last quarter of the 18th century the Royal Navy introduced a number of innovations in naval gunnery designed to increase the firepower of a warship. As early as the autumn of 1779, Rodney requested that the cannon of his ships be fitted with locks,[10] mechanisms similar to those used to fire muskets; and by 1782 all the guns of Rodney's ships had been so fitted.[11] The use of locks instead of matches not only increased the rate of fire for each weapon but also, when combined with changes in the way in which gunpowder was handled on board warships, greatly reduced the number of accidents.[12] About the time locks were introduced, springs and other methods to reduce recoil were fitted. Methods also were devised to enable a gun mounted on the side of a ship to fire at a 45-degree angle forward or abaft the beam, a great improvement over a fixed gun. Also, a new type cannon—the carronade—was introduced. Carronades were lightweight guns that could be mounted on places such as the poop, quarterdeck, and forecastle of a ship. They were capable of throwing a very heavy shot with great smashing power at short ranges. The hitting power of the carronade at short range fitted perfectly into the Royal Navy's doctrine of engaging the enemy gun port to gun port.[13] Another weapon developed and deployed at the beginning of the 19th century was the Congreve rocket. These missiles were 3 feet 6 inches long, 4 inches in diameter,

weighed 32 pounds, and had a range of about 3,000 yards. They were designed primarily for shore bombardment and were described by their inventor as "ammunition without ordnance, the soul of artillery without the body; and has for the first principle of its flight a decided advantage for the conveniency of use over the spherical carcass." Congreve's rockets were used with varying degrees of success at Copenhagen in 1807, Aix Roads in 1809, Fort McHenry in 1814, and in support of Wellington's army along the north coast of Spain.[14]

During the American War the Royal Navy began a reformation of fleet tactics that culminated in the Battle of Trafalgar. Led by men like Howe, Kempenfelt, and Rodney, British officers began to realize that there was more to fighting a naval battle than having two lines of ships sailing parallel to each other while exchanging broadsides. British commanders began to think in terms of breaking the enemy's line of battle, of overpowering part of an enemy force by bringing the whole weight of their force to bear on a particular section of an enemy squadron, or of forcing upon an enemy a melee in which superior British gunnery would decide the issue. They reformed fleet tactics by rewriting various sets of fighting and additional instructions and adopting a numerical system of signals, but these changes evolved slowly and not very rationally. Throughout the American and French Revolutionary Wars, the commanders of different squadrons and fleets who were interested in fleet tactics, fighting instructions, and signals experimented with various types. They wanted to stop slavishly following, article by article, the old standing instructions and to work out new systems that would give a squadron commander freedom to employ his ships as tactical circumstances demanded. Tactics employed by the Royal Navy in battle grew increasingly sophisticated and effective,

culminating in the effort by Nelson at Trafalgar. After Trafalgar and the death of Nelson, however, Royal Navy tactics ceased to evolve because, as Corbett noted, "when there was practically no higher instruction in the theory of tactics, it was easy for officers to forget how much prolonged and patient study had enabled Nelson to handle his fleets with the freedom he did; and the tendency was to believe that his successes could be indefinitely repeated by mere daring and vehemence of attack." Tactics after Trafalgar tended to follow the doctrine of "Never mind manoeuvres: always go at them." But the years 1776 through 1805 were ones in which the Royal Navy's fleet tactics were perfected to a point that was not surpassed during the age of sail.[15]

The Royal Navy's ships-of-the-line were the heart of British naval power during the Napoleonic Wars. It was British strategy to use squadrons of ships-of-the-line to blockade enemy naval forces in European ports. Because of this policy, most of the Royal Navy's capital units were deployed in European waters. In September 1805, for example, Lord Barham, the First Lord of the Admiralty, calculated that the Royal Navy had 103 ships-of-the-line. Eleven were being refitted in British ports and 72 were deployed in European waters.[16] British squadrons of ships-of-the-line stationed in the western approaches of the English Channel, the North Sea, the Gulf of Cadiz, and the Gulf of Lions prevented major enemy naval units from putting to sea by keeping them under blockade, often for years.

The ability to maintain blockades that kept enemy capital ships in port gave smaller warships of the Royal Navy the opportunity to exploit the advantages of "command of the sea." According to Barham's figures for September 1805, the Royal Navy had 120 frigates and 420-odd sloops-of-war and other small warships.[17] These small warships

carried out such duties as escorting convoys, supporting minor coastal raids, hunting down enemy cruisers, and attacking enemy shipping on the high seas and in European coastal waters.

One of the major advantages of the British strategy of close blockade was that it allowed them, with certain exceptions, to use fewer ships as escorts for convoys. According to one authority, the convoy system in this period "was essentially a secondary line of protection. The escorts provided by the navy were sufficient to ward off privateers and even the odd man-of-war. They were not sufficient to ward off raiding squadrons."[18] Even with all the twists and turns of British military and political fortunes, the Royal Navy did not need to provide enormous escorts to protect British seaborne trade. This was in marked contrast to the American Revolutionary War when, after 1778, the Royal Navy had to use squadrons of ships-of-the-line to escort British convoys and defend them from major enemy squadrons.[19]

Squadrons of ships of the Royal Navy were stationed at chokepoints of maritime trade—the western approaches of the English Channel, the Strait of Gibraltar, and the Skagerrak—while scores of small British warships operated against enemy coastal trade. Year after year the small warships of the Royal Navy roamed the coastal waters of Napoleon's Europe attacking coastal shipping, undertaking cutting out operations, and making small-scale raids on enemy shore positions. This was very dirty and dangerous duty, but it affected Napoleon's strategy and also the economy of regions under his control. The Royal Navy's operations in European coastal waters denied the enemy, to varying degrees, the use of water transport, which in the age before mechanical means of transport was not only less expensive than land transport but also often the only means of moving certain types of goods. The movement

of small coastal craft could not be stopped completely, but defense against operations of the Royal Navy in European coastal waters cost Napoleon dearly in material and manpower. For example, the French were forced to build a system of lookout posts and telegraph stations along entire coastlines they controlled to give warning of the approach of British cruisers. By 1810, in order to protect anchorages and harbors against British raiders, Napoleon had to deploy more than 3,600 cannons in some 900 batteries manned by 13,000 artillerymen. He still was unable to protect coastal shipping from British cruisers.[20]

Napoleon's answer to British naval power was to wage commercial war by attempting to close the entire continent of Europe to British ships and goods. On 21 November 1806 Napoleon proclaimed, by means of the Berlin Decree, a paper blockade of the British Isles. He prohibited all trade with Britain or in British goods in those areas of Europe under his control. This effort was known as the Continental System. It became French policy to wage "remorseless war against English merchandise." The British met Napoleon's commercial warfare head-on with a series of Orders in Council that placed under blockade all areas closed to British goods and then used the Royal Navy to enforce the blockade and to aid the entry of British goods into Europe. Ironically, the neutral United States was hurt just as much by British and French commercial warfare as were the two European powers. Between November 1807 and July 1812, the British seized 389 American merchant ships; and during the same period the French, their allies and satellites seized 468 American ships. The number of American merchant ships seized by both sides shows that there were huge gaps in the French Continental System. As John Quincy Adams observed, the Continental System was similar to "an attempt to exclude the air from a bottle, by sealing up hermetically the mouth, while there is a great hole in the side."[21]

The British had two main advantages in this armed commercial war with Napoleon, and both were owing to the Royal Navy. With naval blockades, Britain could prevent regions under Napoleon's control from exporting goods by sea, and she could also prevent, to a large degree, these regions from obtaining goods, such as sugar and cotton, produced outside Europe.

The British Government and British merchants used every conceivable method to break the Continental System. With the active support of the British Government, smuggling was undertaken on a huge scale. British goods seeped in from the Baltic to the Balkans. From strategically located depots, the Isle of Wight, Malta, Gibraltar, and Helgoland, smuggling flourished. Helgoland, an island of about 150 acres known as "Little London" to the British, was fortified and used as a base for moving goods into northwest Germany. In only 3½ months during 1808, some 120 ships unloaded cargoes at Helgoland. Hand in hand with large-scale smuggling—a major occupation on the Continent—went official corruption. This in turn produced a huge drop in customs duties. French customs receipts, amounting to some 60,600,000 francs during 1807, had declined in 1808 to 18,600,000 francs, and by 1809 had dropped to 11,600,000 francs. The situation got so out of hand in France that the head of the customs service seriously suggested that the government take up smuggling as a way of undercutting private smugglers. The British Government further increased the difficulties Napoleon's officials had enforcing the Continental System when it issued a large number of licenses and fake ships' papers designed to prove to various continental authorities that ships and goods were of non-British origin. Some idea of the scale of this

operation can be seen in the fact that in 1810 alone the British Government issued about 18,000 licenses.[22]

In the years 1808 to 1813, British trade in the Baltic was carried on by means of fake papers, licenses, and with the armed protection of the Royal Navy. Ships proceeding to the Baltic would travel under convoy from various British ports to Vinga Sound near Gothenburg. Baltic convoys were protected by naval escorts as they crossed the North Sea; and they received further protection by passing through an area heavily patrolled by British warships. These warships operated in the Skagerrak and off the Naze of Norway hunting down enemy cruisers and cutting communications between Denmark and Norway. At Vinga Sound the ships were formed into one large convoy for passage, either through the Sound or the Great Belt, into the Baltic. The two passages are very difficult to navigate and were open to attack by Danish gunboats. When a convoy was to pass through the Great Belt or the Sound into or out of the Baltic, six ships-of-the-line were deployed along the passage to act as floating gunboat bases for protection. These tactics were very successful; in 1809, for example, 2,210 merchant ships were escorted through the Great Belt without loss. Once into the Baltic, the Royal Navy would escort the merchant ships some 50 leagues and then the convoy would disperse so that the merchant ships would not be seen under protection. Protection against enemy cruisers in the Baltic was maintained by blockading ports from which the cruisers operated.

Each merchant ship traveling to the Baltic, British or not, had a set of false papers showing that she was complying with Napoleon's regulations and a license issued by the British Government to undertake a specific voyage; as long as a merchant ship stayed within the limits set forth in the license, she would not be subject to capture by British cruisers. The Baltic powers wanted British goods and also to sell naval stores, and the British needed all the naval stores they could get. Thus, false documentation enabled officials of various Baltic states to appear to follow Napoleon's regulations; the licenses the ships carried let them, and not the enemy, through the Royal Navy's tight grip, and Britain was able to obtain naval stores and pour masses of British goods into Europe.[23] The Baltic was not the only hole in the Continental System, however. All along the coast of Europe, the British used similar methods to break down the Continental System.

The Continental System at times hurt the British economically, but never to such an extent that they were forced to make fundamental changes in policy toward the French Empire.[24] One of the great weaknesses of the Continental System was that it failed to understand the strength of British economy. Industrialization gave Britain an advantage in the world market. Also, the British economy was flexible and had been able to adapt to all political and military changes brought about through years of almost continual war by finding new markets as old ones closed. In order to maintain the Continental System, Napoleon was forced to invade or attack any European country that traded with Britain, or even appeared to be trading with her. The demands of the Continental System forced Napoleon to undertake military operations against such countries as Portugal and Russia because they refused, or were unable, to exclude British ships and goods, and to send armies to occupy regions, such as Dalmatia, that were at best marginal to the Emperor's main political, economic, and strategic interests.

Victory at sea does not by itself win wars against mighty armies. After Trafalgar, the Royal Navy controlled the seas of the world with an iron hand. But destroying enemy trade on the high

seas, attacking the coastal trade of the enemy, blockading enemy warships in their bases, and punching holes in the Continental System was hitting for the most part at the extreme edge of Napoleon's power base. His strength was military control of the European mainland. Within days of Trafalgar and loss of the Franco-Spanish fleet, Napoleon moved to strengthen his control of Europe. On 2 December 1805, Napoleon's army defeated the combined Austrian and Russian armies at Austerlitz. In October 1806, the French smashed the Prussians at Jena and Auerstadt; and on 27 October 1806 Napoleon entered Berlin. Napoleon defeated the Russians on 14 June 1807 at the Battle of Friedland. Several weeks later he met the Emperor of Russia on a raft in the Niemen River at Tilsit. At this meeting Russia agreed to remove herself from European affairs, and Prussia was reduced to a minor power. After the famous meeting at Tilsit, Napoleon controlled all of Europe from the Franco-Spanish border in the west to the Niemen River in the east, and from the shores of the Baltic and North Seas to the Mediterranean. The Royal Navy could not prevent Napoleon from conquering any place that his armies could march to; conversely, Napoleon's armies were stopped at the coast by the Royal Navy. But how do a shark and a tiger do battle?

At least since the time of the Second Coalition, the British Government had pursued a policy aimed at forcing the French back to their pre-1789 borders and destroying the existing government in Paris. They had tried negotiating with various French Revolutionary governments but found that this was a meaningless effort; the French were not prepared to follow traditional methods of negotiation and diplomacy, nor were they prepared to abide by the terms of an agreement.[25] During the Peace of Amiens in 1802 the British attempted to negotiate again with Napoleon, but

without success. At the time it appeared to statesmen in London that Napoleon was forcing the European balance of power more and more in France's favor, and also was attempting to gain control of the Mediterranean and eventually to threaten British India. On 18 May 1803 the Peace of Amiens ended with a British declaration of war against France.[26]

If negotiation was impossible, only two courses were open: to put a British army on the Continent, with the objective of overthrowing the French government, or to retreat into maritime isolation. At any time since the beginning of the French Revolutionary Wars, Britain could have adopted the latter strategy and waged only a naval war against the French without supporting an army or allies. This strategy would have been popular, but it was a dead end. A naval war is defensive and in many respects passive. It would have given Napoleon time to organize the naval and economic power of the continent. Britain would lose political and strategic initiative and the Royal Navy would be paralyzed, the threat of invasion forcing its main strength to be deployed defending the British Isles. Napoleon knew that the mere existence of an invasion force would tie down a huge number of British warships. To adopt a strategy of maritime isolation would let the initiative fall by default to Napoleon.

As early as the Second Coalition, Lord Auckland told the House of Lords that "The security of Europe is essential to the security of the British Empire. We cannot separate them." At the time it seemed to most Englishmen that his lordship was stating the obvious.[27] Britain could not write off Europe. On the other hand, Britain could not count on her continental allies to assist in the fight against Napoleon. Ever since the beginning of the French Revolutionary Wars, the British had seen French military power smash British-led European coalitions and force continental allies

into hostility and even war against them. If allies could not be depended on and maritime isolation was strategically impossible, the only way that Britain could gain peace on acceptable terms was to use seapower to land and support a British army on the European continent. This line of reasoning allowed Lord Castlereagh, the Secretary of War, to argue successfully after evacuation of British forces from Corunna in 1809 that a British army must return to the Continent.[28] It took the British a long time to see that fighting Napoleon's armies on the Continent was the only workable strategy.

If victory over Napoleon's armies could be obtained only by landing a British army on the Continent and defeating the French in battle, the question of when and where remained. The Mediterranean had been a possible theater of operations since the breakdown of the Peace of Amiens. The British maintained military forces at various bases in the Mediterranean—in 1803, 9,380 troops, in July 1810, some 33,000—but for a number of reasons this force could never be brought to bear.[29] There were several other possibilities. In 1807 units of the Royal Navy and the British Army attacked Copenhagen and destroyed or carried away ships of the Danish Navy.[30] In the late spring, 1808, Lt. Gen. Sir John Moore was sent to Sweden with some 12,000 troops on an illogical, foolish mission to aid the King of Sweden against the Russians. After reconnoitering the Swedish situation, Moore saw that a British army in the Baltic did not make much sense, and he ordered it back to Britain.[31] It would be the British Government, Napoleon, and most of all the people of Spain and Portugal who would make the rugged terrain of the Iberian Peninsula the battleground where the British Army supported by the Royal Navy would confront the armies of Napoleon. In 6 years of ferocious warfare, French armies would

leave behind a quarter of a million dead and the sullied reputations of several marshals and numerous generals. The drain put on French resources by the Peninsular War and naval power was Britain's contribution to the overthrow of Napoleon in 1814.

Portugal was Britain's oldest continental ally, but after the meeting at Tilsit the Portuguese had been subjected to mounting French diplomatic pressure to adhere to the Continental System. Throughout the summer of 1807, under great pressure from Napoleon, Prince John, the Regent of Portugal, accepted every demand made by the Emperor of France except one. Prince John refused to confiscate and hand over to Napoleon all British property in Portugal. Using this act of defiance as an excuse, Napoleon ordered the invasion of Portugal. On 27 October 1807 Spain, who was France's ally, granted French forces transit rights across northern Spain and also the right to station troops there to protect the supply lines of the French Army in Portugal. But even before the Spanish had agreed to grant transit rights, some 20,000 French troops had moved into Spain and were marching on Portugal. By 12 November the French were at Salamanca. Eighteen days later 2,000 foot-sore French troops entered Lisbon. But the Royal Navy had frustrated Napoleon again for Prince John, the Portuguese Government, treasury, archives, and navy had sailed for Brazil under protection of a British squadron 2 days before the arrival of the French.

Napoleon next turned his attention to Spain. After a complex series of plots and maneuvers, the Spanish royal family abdicated, French troops occupied Madrid and most of northern Spain, and Joseph Bonaparte was proclaimed King of Spain. Napoleon, however, did not take into account the Spanish people. On 2 May 1808 there were large anti-French riots in Madrid, followed in a matter of days by a nationwide rebellion and the beginning of a protracted,

savage guerrilla war. The French position in Spain collapsed within weeks, and Napoleon's forces began to withdraw eastward to the Ebro River. In a battle at Bailen, the Spanish forced 18,000 French troops to surrender. The great naval base at Cadiz was taken over by Spanish rebels, the French squadron there was destroyed, and the port was garrisoned by British troops from Gibraltar.

The first effective British military effort on the Continent in years began early in August 1808, when a small British army under the command of Sir Arthur Wellesley, later known as the Duke of Wellington, landed at Mondego in northern Portugal. After being reinforced, Wellington began moving south towards Lisbon. Near Vimeiro the British defeated the French Army of Portugal, which suffered 2,000 casualties and the loss of 13 guns. On 22 August the French agreed, under the terms of the so-called Convention of Cintra, to evacuate Portugal. The speedy liberation of Portugal, the disaster at Bailen, and the defeat at Vimeiro showed that the French could be beaten. Landing a British army in Portugal was a change in strategy by the British Government from "small-scale, colony-grabbing raids" to fighting a full-scale continental war.[32]

After massively reinforcing his army along the Ebro River, Napoleon began a second campaign on 7 November 1808. Within a month the French had overrun most of northeast Spain; and on 4 December, they entered Madrid. It appeared that all that remained to complete conquest of the Iberian Peninsula was to mop up in the south and dispose of the small British Army in Portugal. As French forces were overrunning northeast Spain, however, the British Army in Portugal, only 25,000 strong and under the command of Lt. Gen. Sir John Moore, marched from Lisbon to Salamanca in Spain. Moore had decided that a retreat was the only course that

he could follow with his small force. Spanish forces lacked organization and were of poor quality, and they were cracking under an attack by some 250,000 French troops. At the time Moore did not know that the French had occupied Madrid, but he perceived that if the British moved very quickly north or northeast they would threaten Napoleon's lines of communication with Bayonne and expose an isolated French corps under Marshall Soult to surprise attack and possible destruction. Moore knew that Napoleon would be deflected from southern Spain and Portugal and that he would march north to counter the movements of the British Army. Therefore, on 11 December Moore's army began marching northward towards Soult's corps and Napoleon's supply lines with France.

Napoleon was in Madrid when he learned of Moore's movements. Within hours the first units of French troops began marching north to attempt to cut off and trap the British. Every possible French unit was ordered to drop everything and march north. Moore had been right in his belief that Napoleon could not withstand the temptation of an opportunity to crush a British army. On 23 December at Sahagun, south of Leon, Moore learned of a large movement of French troops toward his position. The British general immediately ordered a retreat over the Cantabrian Mountains to Corunna. What followed was one of the epic retreats in British military history. Moore's army encountered incredible hardships traveling across the mountains of northern Spain in the dead of winter. He barely managed to keep one step ahead of the French and reached the port of Corunna in the northwest corner of Spain on 13 January 1809. On 16 January the French attacked the British at Corunna in an attempt to prevent them from being evacuated from Spain by the Royal Navy. The British easily drove off the attackers, inflicting about 1,500

casualties. Near the end of the battle, however, Sir John Moore was hit by a cannonball and, like Nelson, died at the moment of victory. Moore's death had not been in vain, for he had forced Napoleon to give up the conquest of southern Spain and Portugal, and his victory at Corunna had enabled Britain's only army to be evacuated, making possible its later return.[33]

As war on the Peninsula continued, it became a "people's war." The French could not break the will of the Spanish people. Patriotism, religious fanaticism, and deep hatred for the French produced a ruthless guerrilla war that raged throughout Spain. Further, after Corunna, the British Government did not give up; it formed an army and sent more troops to Portugal. This army was commanded by Wellington, a soldier of great strategic, tactical, and administrative skill learned in the wilds of India. Supported by the Royal Navy, Spanish guerrillas and Wellington's army turned Spain into a running sore that made endless demands on Napoleon's military resources.[34]

The power of the Royal Navy enabled the British Army and Spanish guerrillas to wage war.[35] Blockades and other operations prevented the French from using seaborne transport and forced them to use roads under constant attack by Spanish guerrillas. In Spain, important roads hug the coastlines, making them vulnerable to naval attack. Lord Cochrane, for example, first made a name for himself when as a frigate captain he attacked coastal roads, batteries, enemy troops, and telegraph stations along the French and Spanish Mediterranean coasts.[36] Ships of the Channel Fleet ranged along the Spanish coast in the Bay of Biscay, bombarding cities, stopping French coastal shipping, and aiding Spanish guerrillas with gunfire and supplying them with money and weapons.[37]

One of the problems the Royal Navy encountered in the Bay of Biscay was that Wellington did not understand what types of operations the navy could or could not undertake. This led to friction between the army and the navy. Wellington, for instance, apparently did not understand the dangers of a lee shore for a ship-of-the-line operating in the extreme southeast corner of the Bay. Finally, Rear Adm. Sir Thomas Byam Martin was sent by the Admiralty to Wellington's headquarters to explain the abilities and limitations of the Royal Navy. Martin spoke with Wellington and his officers on 21 September 1813 and after their conversation cooperation between the army and the navy greatly improved.[38]

The greatest assistance rendered by the Royal Navy to Wellington's army during the Peninsula War was logistic. The French had to pass all their supplies down the Bayonne-Madrid road while fending off constant attacks by Spanish guerrillas. Wellington's army, however, was supplied by sea. From 1808 to 1813 hundreds of transports, storeships, and victuallers sailed from Britain across the Bay of Biscay to Lisbon and Oporto almost without incident. This could not have been done had not the Royal Navy provided escorts for army supply convoys and kept enemy warships in port by close blockade. One of the major strategic shortcomings of the Americans in the opening months of the War of 1812 was their having no units of the U.S. Navy to send to attack Wellington's seaborne supply lines.

Royal Navy control of the Bay of Biscay gave Wellington a very flexible logistic system. In 1813 Wellington forced the French to withdraw from most of Iberia when, with one skillful move, he changed his logistic base from Portuguese ports to Spanish ports on the Bay of Biscay. In May and June 1813, Wellington outsmarted the French Army by heading north into an area the French assumed to be impassable. He crossed the Douro River and marched into the wilderness of Tras

os Montes. Wellington then turned east, outflanking the French in western Spain, and moved along the north side of the Douro River to Toro. This put him in position to push the French before him down the road to Bayonne but instead, in an inspired move, he turned north and marched to the shore of the Bay of Biscay at Santander, thereby outflanking the line of the Ebro River and placing the British Army within hitting distance of the French border at Bayonne. On 17 June the French learned that Wellington had outflanked every possible defensive position on the Iberian Peninsula; they had no choice but to retreat down the Madrid-Bayonne Road to France. Wellington would not allow the French Army to slip away unscathed. On 21 June 1813 the British attacked the retreating French at Vitoria, inflicting 8,000 casualties and capturing 151 cannon and all baggage. Thus in only 2 months Wellington had forced the French from Spain and had dealt them a crippling blow at Vitoria. None of this would have been possible, however, without the logistic support of the Royal Navy. For example, it would have been impossible to supply Wellington's army in northeast Spain overland through Portuguese ports. As soon as Wellington reached Santander, army supply ships were rerouted from Portuguese ports to Spanish ports on the Bay of Biscay. By moving to northeast Spain, Wellington had shortened his supply lines.[39]

After Nelson's victory at Trafalgar in 1805 the Royal Navy controlled the seas of the world. Most enemy warships were successfully blockaded in port and those that managed to escape were relentlessly hunted down and either captured or destroyed. The story of the Royal Navy after Trafalgar is not one of great fleet actions, but rather one of endless blockade duty, escorting convoys, numerous fights between small warships, shore bombardment, cutting

out operations, tip-and-run raids by the thousand, and year after year of dangerous, difficult, and extremely taxing work. What other service had an officer like Collingwood, the commander of the British Mediterranean fleet, who in the 4 years after Trafalgar so dedicated himself to his duty as he saw it that he literally worked himself to death?[40] From the Baltic to the Eastern Mediterranean, the Royal Navy held the shore of Napoleon's Europe in an iron grip. Its strength can be seen in the fact that the French could not even pass an army across the Messina Strait.

The Peninsular War saw the ultimate exploitation of British seapower during the Napoleonic Wars. Although the Royal Navy could drive enemy merchant ships from the seas, open enemy colonies to attack, and punch holes in the Continental System, it could not strike a blow at the center of French power. Seapower alone could only hit at the edges of Napoleon's empire, but it was the strength of the Royal Navy that enabled the British Government to send and maintain a large army on the Iberian Peninsula. Towards the end of the war in the Peninsula, Wellington stated the importance of the role of the

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BIOGRAPHIC SUMMARY

David Syrett is a professor of history at Queens College, CUNY. He received his B.A. and M.A. degrees from Columbia University and his Ph.D. degree from the University of London. He is the author of *Shipping and the American War*, *The Siege and Capture of Havana, 1762*, and co-author of *The Lost War: Letters from British Officers during the American Revolution*. Professor Syrett also has written a number of articles on naval history that have appeared in British and American historical journals.

Royal Navy in his victory when he said, "If anyone wished to know the history of this war, I will tell them that it is our maritime superiority gives me the power of maintaining my army while the enemy are unable to do so."[41]

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5. Michael Lewis, *A Social History of the Navy, 1793-1815* (London: Allen, 1960), p. 162.

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16. Navy Records Society, *Barham Papers* (London: 1910), v. III, p. 119.

17. *Ibid.*

18. C. Dowling, "The Convoy System and the West India Trade, 1803-1815," Unpublished D.Phil. thesis, England, Oxford University Press, 1965, pp. 171-172.

19. Cf. David Syrett, "The Organization of British Trade Convoys during the American War, 1775-1783," *The Mariner's Mirror*, May 1976, pp. 169-181.

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33. *Ibid.*, pp. 620-660; Oman, pp. 523-620; Christopher Hibbert, *Corunna* (New York: Macmillan, 1961).

34. Cf. Chandler, pp. 658-660.

35. Donald D. Howard, "British Seapower and Its Influence upon the Peninsula War (1808-1814)," *Naval War College Review*, Fall 1978, pp. 54-67.

36. Mackesy, *War in the Mediterranean*, pp. 283-285, 295-296.

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39. For an account of naval operations conducted in support of the British Army in the Peninsula, see G.J. Marcus, *The Age of Nelson* (New York: Viking Press, 1971), pp. 331-360. For the Battle of Vitoria, see Elizabeth Longford, *Wellington: The Years of the Sword* (London: Weidenfeld & Nicolson, 1970), pp. 302-325.

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THE BAROMETER

The Review welcomes and encourages reader comment on its articles and book reviews. Comments of interest and value to our subscribers will be published here.

TECHNOLOGY AND WARSHIP DESIGN: COMMENT, OVERVIEW, AND BIBLIOGRAPHY OF THE ECONOMICS OF TRANSIENCE

by

Roger D. Little

"Technology and Warship Design: Capturing the Benefits," the essay by Capt. W.F. Fahey, USN, that won the 1978 Admiral Richard G. Colbert Memorial Prize, was earlier published in this *Review*.[1] Captain Fahey's essay is important because it stresses the benefits to the Navy that could be derived from both a broader understanding of technology and a more systematic approach to the exploitation of existing techniques. As the innovation cycle (invention-development-innovation-diffusion) becomes shorter, he emphasizes the need for better formal education in this area. Arguing that "At no military school is there to be found a course on pure technology and how to deal with it,"[2] Captain Fahey expresses the opinion that " . . . in our War College, Postgraduate School, and Naval Academy, we need courses that will teach what technology is and how to exploit it."[3] Over the past several years I have taught a course at the Naval Academy that may meet several of the objectives Captain Fahey has in mind. My course deals with the economics of technical change, and although I am not certain of the exact connotation of his

term "pure technology," I believe we would agree that economic factors play a role. There are strong strands of economics running through his article and at several points he alludes to the idea best summarized by: " . . . technology requires that the economics of permanence be replaced with the economics of transience."[4]

I am in general agreement with this thesis. Additionally, I am convinced that economics has a large role to play in the study of technology. This is an area where I sense, however, that interest is only now beginning to emerge. For these reasons I am anxious to describe my "Economics of Technology" course. Below, I provide a brief introduction to this subject and recommend in some detail topical readings, many of which are used in the course. In addition to describing the course and explaining the integration of several of the topics, I supply a fairly extensive bibliography. Because several appropriate readings are by British authors, bibliographic material frequently is not easily found. The materials recommended, however, do not require an extensive knowledge of economics and

treat the technology aspect in reasonably concrete ways. Finally I raise an issue concerning the "economics of transience" and the thesis presented by Captain Fahey as they relate to what I see as a change in the roles of men and weapons on the battlefield.

To quote Captain Fahey again, "The most important step in capturing the benefits that technology offers is to gain an understanding of what technology *is*, and what its economic implications are."[5] To understand technology better and assist in exploring its economic implications, some introductory ideas presented in my course are an appropriate starting point.

Much of the study of the pervasive influence of technological change emanates from papers written in the midfifties by Abramovitz[6] and Solow.[7] Using quite different approaches, both concluded that only a very small portion of the long-term growth in America's output could be explained by an increasing quantity of "real" inputs, specifically capital and labor. The difference between actual long-term output and that which could be "explained" by observable changes in production processes, became known as "the residual." Its size, often estimated at 40 to 50 percent of the total growth, to quote Abramovitz, is a "measure of our ignorance" about how the economy grows. Attempts to quantify factors that explained this residual took place during the sixties and culminated in Denison's *Accounting for United States Economic Growth, 1929-1969.*[8] Denison, in broad terms, studies five factors that might be responsible for economic growth in addition to obvious expansion of labor and capital inputs: (1) improvements in the quality of labor, (2) improvements in the quality of education, (3) improvements in capital, (4) improvements in resource allocation (e.g., movements off farms), and (5) economies of large-scale productions. After exhaustive study of these factors,

and others, he found that fully one third of our growth had not been explained. This remaining growth he attributed to the incorporation into our economy of advances in our technological, managerial and organizational knowledge.

This brief review stresses the importance of these intangible elements of change to the macroeconomic growth of our economy. The problems are then left primarily to microeconomists and economic historians who search for underlying causes of, and explanations for, the observed macroeconomic phenomenon. The microeconomic side of the economics of technology builds on the subject within economics known as industrial organization but carries the analysis of several aspects of that subject somewhat further. In microeconomics a firm sells an existing product. Theory is used to determine how the business establishes a price-quantity combination that maximizes its profit under various market structures. Industrial organization addresses rivalry among firms that is based on product differentiation as well as pricing behavior. The microeconomics of technology goes a step further. It attempts to analyze how the existing product, or newly differentiated product, came into being and how it became refined so as to meet market need and acceptance. Additionally, it explores changes in production processes and the effect of these changes on production costs.

Before discussing the research and development required to bring new products to the market, it is useful to discuss a few terms. First, we distinguish between science and technology. Science is directed toward increasing knowledge. Technology is directed toward *use*. It should be clear then why economists are more interested in technology than science: new ideas (or products) affect the economy only when they are put into use. Second, a technique is a way of doing something;

thus technology is the set of all known techniques. Should this set expand, technological change has occurred. Science, of course, may have an important role to play in expanding the number of ways of doing something, but more frequently it is not directly responsible. Technology builds on technology, in general, not on science. Most technological change results from incremental improvements, not dramatic ones often associated with scientific discovery. Thus it should be emphasized that technological change is evolutionary, not revolutionary.

Appropriately defined, technology has a broader meaning than is commonly recognized. It is best thought of as "tools in the general sense, including machines, but also including linguistics and intellectual tools and contemporary analytic and mathematical techniques. That is, . . . technology (is) the organization of knowledge for practical purposes . . . . Its pervasive influence on our very culture would be unintelligible if technology were understood as more than hardware."[9] Thus every discipline has its technologies. In economics, for example, these include the gross national product accounts, macroeconomic models of economic activity and the isoquants and indifference curves used in microeconomics. Technological change of an economic sort will occur, for example, if we should attempt to employ "tax-based incomes policies" to deal with inflation.

Much of the intellectual legacy in the microeconomic area goes back to Joseph Schumpeter. He was the first to raise fundamental questions about the economic role of invention (was it endogenous or exogenous to the economy?), innovation and the resulting structure of industry and competition in his paper "The Instability of Capitalism."[10] To Schumpeter, invention (discovery) and innovation (first use of an invention) were distinctly different activities and were carried out by

different individuals with different motives. In capitalism, the entrepreneur had the all important role of unleasing gales of "creative destruction" whereby innovation caused the new to replace the old and industrial fortunes to rise and fall. But this pure form of capitalism, according to Schumpeter, was disappearing as research and development became routine in large firms run by mere managers, not entrepreneurs or risk-takers. Managed firms and large oligopoly industries, Schumpeter held, were becoming necessary in order to carry out the increasingly complex and expensive research and development function required now that most of the simple, inexpensive inventions had been made. While this trend would make industry and thus the economy more stable, it would also make it less dynamic and less responsive to change than competitive capitalism.

Schumpeter's ideas were the intellectual springboard for economists to examine the economic role of invention, innovation and diffusion of new processes and products as well as the type of industrial structures most conducive to dynamic economic growth. These questions, if they can be satisfactorily addressed and the results of the inquiries implemented, bring us full cycle—back to the observed macroeconomic phenomenon of economic growth.

But, primarily, it is these microeconomic questions that provide the grist for my course. We begin by a historical look at the machine tool industry which more than any other provided, and still provides, the basic machine technology required for enhancing the output of the capital stock of the country. This is followed by a section on creativity and patents. Theories of invention are discussed. The incentives provided by patents and the limitations of various patenting schemes are explored.

The generation of new technologies is the next section. It is now assumed that the product or process is available,

albeit in crude form, and the concern is with the economic conditions—essentially demand related—that may speed the process by which refinements occur and the product or process becomes ready for diffusion into the economy. Assuming, now, that the product is in some sense "ready" to be used, the innovation step and subsequent diffusion are studied in more detail.

Before considering the effects of market structure, some attention is given to theoretical aspects of production within a firm. The relationships between technical change and engineering production functions, optimal scale of plant, and cost functions are explored. Following this examination at the level of the firm, some theoretical aspects and empirical evidence of the effect of market structure—perfect competition through monopoly—on research and development behavior are discussed.

With this background, the student is well prepared to study industrial research and development. Subjects are wide ranging and include determinants of R&D spending, characteristics of technologically progressive individuals and firms. R&D as a barrier to competition, R&D as a determinant of a firm's growth, offensive and defensive strategies for firms with different technology implementation objectives and factors related to the technical, marketing and economic success of new products. The section is completed by an introduction to the Navy's RDT&E Manual and an attempt to compare military and industrial research and development management procedures.

Two subjects bring the course to a close. The first deals with the effect of technology on use of the factors of production. Included are readings and discussions stressing first, the role of labor and labor organizations in the design of production facilities, and second, raw material shortages and innovative responses brought on by changing factor prices. Lastly the course deals

with a few international aspects of technological change. Comparisons are made between the level of U.S. technology and that of other countries and reasons are advanced for passing production capabilities to less developed nations over the course of a product's life cycle. Additionally, some evidence on planning and forecasting of technological change is presented.

While several of these topics may appear to have little relevance to the paper by Captain Fahey that initiated this exploration into the economics of transience, they are a package designed to get the student to thinking about the economics of change. Although the military may be rather inclined to think of the economic aspects of technological change as being primarily hardware related, there is a growing realization that change has an equally large influence on the services' manpower requirements and use. The recent book by Binkin and Kyriakopoulos, *Youth or Experience? Manning the Modern Military*[11] makes several pertinent arguments in favor of experience.

Experienced manpower, they hold, may be preferred in the future because of costs, demographic patterns and advances in technology that have transformed the occupational needs of the armed forces.[12] If they are right and if Captain Fahey is right (and I believe they are), we may be witnessing an important shift in the relative importance of men and their weapons on the battlefield. While it is a gross generalization, I would argue that in the history of warfare the survival of equipment often has taken priority over the survival of men. If our military manpower is becoming more costly, scarce and less expendable, our hardware is becoming relatively more expendable. This argues, I believe, for Captain Fahey's position with respect to our military hardware: "the economics of permanence must be replaced with the economics of transience."

In a review of *The Production and Application of New Industrial Technology* the reviewer states that the area of technological change is "a field all economists believe to be important, but which relatively few of them have explored."[13] It is my hope that the ideas and bibliographic material presented here will provide some insights and possibly some research ideas that noneconomists will feel are worthy of further study. In particular, those who have an appreciation of the economics of transience may wish to explore the changes in the relative importance of soldiers and their weapons in the art of warfare.

NOTES

1. W.F. Fahey, "Technology and Warship Design: Capturing the Benefits," *Naval War College Review*, Winter 1979, pp. 41-48.

2. *Ibid.*, p. 44.

3. *Ibid.*, p. 48.

4. *Ibid.*, p. 45.

5. *Ibid.*, p. 44.

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12. *Ibid.*, p. VII.

13. Paul B. Manchester, *Rev. of The Production and Application of New Industrial Technology*, by Edwin Mansfield, et al., *Journal of Economic Literature*, March 1979, pp. 131-133.

■

TOPICS AND SUGGESTED READINGS

Topics	Readings (from Bibliography)
1. Machine Tools	43
2. Invention	50; 4, Chap. 3
3. Patents	4, Chap. 11; 3, Chap. 3; 32
4. Technology Generation	44, 52; 29
5. Innovation and Diffusion	1, Chap. 4; 3, Chap. 6 and 7; 4, Chap. 4; 45
6. Technology of Production	39; 35; 41
7. Market Structure and Technical Advance	3, Chap. 5; 4, Chap. 2 and 5; 5, Chap. 5, 6 and 8; 31; 38
8. Industrial R&D	1, Chap. 3; 4, Chap. 6; 56; 55; 27; 51; 37; 28; 36
9. Labor and Factor Prices	2, Chap. 5; 40; 47; 48
10. International Aspects	4, Chap. 7; 26; 57; 54
11. Planning and Forecasting	33; 1, Chap. 7; 2, Chap. 6

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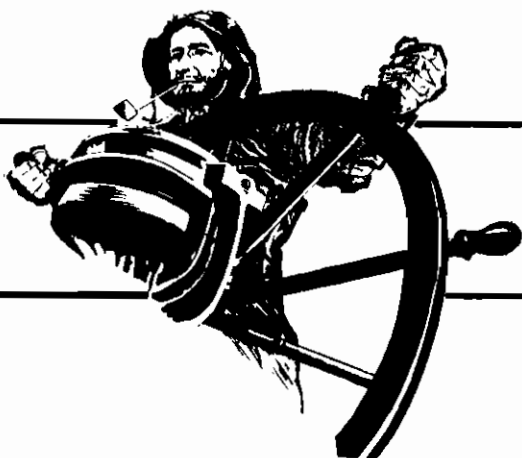
AID AND ASSISTANCE TO DEVELOPING NATIONS

by

George F. Brown, Jr.

Introduction. Discussions on relations between the United States and other nations frequently and naturally gravitate to a consideration of problems and prospects involving our major post-World War II allies and adversaries—the Soviet Union, the People's Republic of China, the members of the NATO alliance, and Japan. More difficult and perplexing issues arise, however, when relations with the nations of the developing world are considered. Nonetheless, these questions retain a fundamental significance to long-term U.S. interests. Secretary of Defense Harold Brown noted in the *Fiscal Year 1980 Department of Defense Annual Report* that

> Many of the most serious international crises of the postwar era have arisen, not from ... great global issues, but from regional threats and instabilities. Because the United States cannot escape worldwide involvement, our security and our defense needs are a function of these developments and of the success of our foreign policy in dealing with them.

In recent years questions relating to U.S. involvement in the developing world have been both illuminated and overshadowed by international events. The 1973 oil crisis focused attention on the essentiality of Third-World resources; the Panama Canal treaty debates displayed the complexity of the relationships between major and lesser powers; Soviet and Cuban intervention in Africa and elsewhere called attention to the growing ability of our adversaries to influence events in the developing world; the turmoil in Iran demonstrated the precarious stability of many developing nations. During the same period, however, other events (e.g., the dollar's decline and the U.S. balance of payments problems, increased perceptions of the threat to our interests in Western Europe, and national distaste for involvement in local conflicts stemming from our involvement in Vietnam) served to focus attention away from the problems of the developing nations. However, it remains clear that vital long-term U.S. economic, political, and security interests will be profoundly influenced by the evolution of U.S. relationships with them. In this paper, a

broad survey of the underlying issues is presented, and a range of policy options is examined and critiqued.

Background of the North-South Dialogue. While questions of economic development have traditionally occupied a place in international policy discussions, it is generally agreed that they moved to center stage around the time of the 1973 oil embargo. Among the far-reaching consequences of the embargo was its demonstration to the resource-rich nations of the South that they indeed had bargaining power with respect to the industrialized and resource dependent nations of the North. Several other events during this same time period magnified the impact of the embargo in focusing attention on questions of economic development. Problems of food shortages had come into international prominence. Population growth statistics caught the world's attention. Models such as those developed for the Club of Rome forecast general decay in the world's standard of living and suggested gloomy prospects for nations striving to match the standards of living in the industrialized nations. Disenchantment with international aid programs, similar to that which emerged in the United States regarding domestic poverty programs, emerged as statistics indicated that several decades of assistance had failed to solve the problem.

These various events led to the discussions of the Seventh Special Session of the General Assembly of the United Nations, which ended in September 1975. While U.N. discussions on similar topics had been held regularly in the past, the Seventh Special Session can be regarded as unique in two respects: it was the first instance in which principal officials from the developed world actively participated, and it was the first such session during which serious negotiations took place. While the resolution that resulted from the session can be viewed as a patchwork of negotiated and compromised issues, the fact that *any* resolution emerged from the group was itself significant.

U.S. attention to the problems of the developing nations continued to be given priority for several years following the Seventh Special Session. During the 1976 campaign, the candidates of both parties addressed aid, assistance, and North-South relations in major foreign policy statements, with the Republicans noting the progress that had been made in this area following the oil embargo and the Democrats assailing the Administration for insensitivity to American interests within the developing world.

Recently, however, the question "Whatever happened to the North-South dialogue?" can legitimately be asked. In terms of attention given it in policy discussions and in the media, the problems of the developing world again have been relegated to the sidelines, replaced by concerns about the balance of payments, the declining dollar, competition from other developed world suppliers, etc. Excluding those developing nations that either supply oil or are the scenes of current military confrontations involving Soviet-backed forces, it is difficult to identify any present attention being devoted to the developing world.

Why Should the U.S. Concern Itself with the Developing Nations? The existence of a rationale for U.S. (and other developed nations) concern over the problems of the developing nations has been hotly debated since the first official assistance programs were initiated following World War II. In addition to frequently cited humanitarian reasons for attacking poverty and misery worldwide as well as at home, three bases for assistance can be identified: national security, international politics, and economics and commerce.

The national security rationale is certainly the most pervasive of the three, with its roots easily traced to such early programs as Lend-Lease (1941), the Truman Doctrine (1947), the Marshall Plan (1948), and the Point IV Program (1949). The three postwar programs each explicitly had as an objective the halting of the spread of communism within the free world. Among the frequently cited security arguments for assistance programs are the linkages between economic assistance and military alliances, the use of aid to secure critical overseas bases or other essential strategic requirements, the role of development in thwarting insurrections born in poverty, the role of development in promoting governmental stability, and the role of economic growth in allowing a nation to assume the burden of its own military defense against internal and external foes.

The international political arguments for developmental assistance can be traced to the postwar struggle between the world's two major political/economic systems. Broadly, assistance has been advocated as a tool for enabling developing nations to join a community of nations whose political interests and perspectives are compatible with those of the United States and her key industrial allies. The argument often cited was that evolutionary progress stemming from assistance can enable a nation to avoid the revolutionary changes advocated by the Marxists. Furthermore, economic progress was frequently cited as a key measure of success in the comparisons among clients of the opposing political economic systems, providing further impetus to assistance programs.

The economic arguments for developmental assistance can be traced to the traditional incentives present within a free enterprise system. Development improves market conditions; a developing nation presents substantial opportunities for productive overseas investments; developed nations can evolve into low-cost sources of supply, not only for raw materials, but also for intermediate products and finished goods. Such nations as Japan, Korea, and Taiwan provide recent examples of the economic incentives offered by developing nations. Additionally, the economic essentiality of developing nations as raw materials suppliers must again be noted.

Debate concerning developmental assistance has not centered so much on the validity of U.S. security, political, or economic objectives such as have been described above as it has on the value of assistance in achieving them. Any study of previous recipients of economic and military assistance must conclude that the results have been quite mixed; in some cases, aid can be validly praised for its contributions in achieving the goals that have been discussed, while in other nations the programs appear to have failed dismally. Even these assessments of success and failure shift rapidly over time: India, Egypt, Ethiopia, Somalia, Iran, and other nations provide examples of this.

Viewing the present international situation, the following key conclusion emerges: U.S. security, political, and economic interests in the developing world are greater today than they have ever been. Recent years have seen the Soviet bloc aggressively entering into competition for resources, including food, raw materials, technology, oil, and strategic overseas allies. An entirely new dimension to their national interests—a dimension increasingly within their capabilities to influence—is thus suggested, one that leads many observers to suggest a reassessment of the traditional Third-World conflict scenarios. Severe strains have been placed on even the Atlantic/Japanese alliance as the result of resource dependencies and economic considerations involving the developing world. Shifts in regional power balances

as a result of successes and failures in development pose particularly delicate questions for each of the major powers. The vitality of the developed economies has been shown to be easily influenced by decisions of the developing nations. These and other factors that focus attention on the Third World show no signs of abating in the near future. A clear requirement for national debate regarding policies involving the developing world can be identified.

Assistance within the Larger Scheme. The importance of the developing world to the United States, however, in no way implies that policy choices will be easily arrived at or implemented. The mixed record alone of previous attempts at influencing the progress of economic development suggests the absence of easy answers. Several other factors critically affect policy choices.

First are the domestic economic situations within the United States and elsewhere in the industrialized world. A period of spotty economic growth, of rapid inflation, of budget cutting, and of unfunded domestic programs is hardly the ideal time to suggest new international initiatives. Virtually any program that can be contemplated has opportunity costs easily identified within the domestic economy—and pressure groups poised to suggest the implied trade-offs. It is clearly because of domestic economic considerations that few politicians have raised the existence of problems outside the borders.

Second among these factors is the continuing shifts among the developed economies themselves. In a very real sense, the U.S. balance of payments and foreign competition problems—as well as the dollar's reaction to them—can be considered the end product of an earlier developmental assistance program, namely the reconstruction of Western Europe and Japan. For the several decades following World War II, U.S.

policies towards Europe and Japan were beneficent in the extreme. The direct grants under the Marshall Plan pale in importance when compared to the indirect aid provided by the United States in the forms of an overvalued dollar, liberal tariff policies, and financial market support, all of which served to make the U.S. market attractive for foreign producers. The present currency realignment can be broadly considered the end to these assistance programs. Nonetheless, the adjustment problem thus created presents other real problems for the United States and her industrial allies. In that these economic linkages are critical to overall economic progress, they will continue to occupy our attention for some time.

Third is the recent entry of Eastern Europe, the Soviet Union, and, most recently, the People's Republic of China into the free-world economic structure. Until the 1970s, the centrally planned economies played virtually no part in the international economic system in which the United States and her allies participated. Their entry, to date only at a modest level but with significant growth potential, suggests another major adjustment with which international economic planners must contend. Because of the linkages between economic and political/military considerations, evolution of East-West economic relationships will also receive careful scrutiny.

These three factors suggest the possibility that problems of development will continue to rank low in the list of international economic priorities. In fact, it will take deliberate attention for them to escape from obscurity, given the competition.

What Do the Developing Nations Want? Bluntly, the developing nations want to develop; their leaders and people want to achieve standards of life similar to those they now regularly see portrayed in the industrialized nations

through the modern media. Towards this objective several mechanisms have emerged that tend to define the demands of the developing world. When separated from the rhetoric that typically accompanies such discussions, the shopping list can be reduced to five principal items:

• Financial resources. The developing nations clearly suggest the need for assistance, preferably without strings, in order to fund programs necessary for development.

• Removal of the burdens of the past. Primarily, this translates to the need to get out from the burden of interest and principal payments on debts previously accrued.

• Price supports for primary products. In that primary products have continued to be the mainstay of most developing economies and that prices of primary products have recently lagged behind those of agricultural, manufactured, and petroleum products, price rises and stability are seen as essential in ensuring the vitality of the existing economic bases within the Third World.

• Diversification and industrialization. Generally, this requirement is manifested in terms of demands that industrial relocation occur to bring manufacturing enterprises closer to the raw materials supplier. Technology transfer and manpower training issues are frequently described as prerequisites to this.

• Sovereignty over their own economic futures. This demand is linked frequently to former colonial relationships and to developed-nation multinational firms.

Within each of these five general categories, a wide variety of specific requests from the developing nations can be identified. Among the most familiar of these specific proposals are such items as institutionalizing developmental assistance from the industrialized nations at a level equal to 0.7 percent of gross national product,

creating special drawing rights for the developing nations within the International Monetary Fund as an automatic source of financial transfers, canceling certain longstanding debts of Third World nations, indexing primary product price levels to those of the products exported by the industrialized nations, creating commodity buffer stocks to ensure access and price stability, and preferential tariff and quota treatment for semifinished and manufactured products exported by the developing nations.

What Options Might be Pursued by the Developed Nations? Previous responses to demands such as those described in the previous section have varied widely over time and across the developing nations. The Swiss and Swedes, for example, have recently canceled certain debts of less developed nations, and many European nations provide aid at approximately the 0.7 percent level. Initiatives begun in 1975 were aimed at increasing the financial reserves of the U.N. based assistance agencies. Various agencies and institutes have been created in recent years to facilitate technology transfer and to dampen oscillations in primary product price levels. Emergency food assistance programs have been expanded recently. On the other hand, other proposals, such as those for price indexing, have been generally rejected by the developing nations, and the concept of trade preferences has been discussed only in terms of linkages with supply assurance. Overall, the problems of development have been addressed in at best a piecemeal fashion, with little in the way of a focused program emerging. While the problems of creating and gaining acceptance for any such program are difficult, the following policy options are among those that must be considered in blending a program within these problems.

• Do nothing. This option, which perhaps best reflects the current policy,

has both strengths and weaknesses. On the positive side, two factors are apparent. First is the likelihood that the developing nations will be unable to bring anything stronger than verbal harassment to bear upon the developed world; only the remote possibility that the developing nations will convince the OPEC nations to use their oil weapon militates against this assessment. Second is the fact that doing nothing is the cheapest policy, at least over the short term. The first argument against doing nothing is the strong possibility that a series of localized crises will emerge requiring response from the industrialized world; reacting in a noncrisis situation has certain advantages that might be worth preserving. Second is that inaction by the industrial democracies may invite further Soviet initiatives within the developing world. Finally, the absence of action may lead to initiatives on the part of developing nations themselves inimical to U.S. interests; nationalization and supply disruption come most readily to mind. Generally, the arguments against doing nothing revert back to the discussion of the objectives towards which assistance programs might be oriented; while many argue the tenuous connection between assistance and achievement of these objectives, the linkage is certainly clear when a policy of neglect is considered.

• Accede, at least to some degree, to the demands of the developing nations. While this option will clearly appear the favorite of the developing nations, three factors require analysis before any case can be made in its favor. First is that even a complete accession to their requests may not produce the desired results, at least within the near future. Development is at best a slow process, and recent examples have clearly demonstrated the difficulties inherent in attempts to speed it along. Second is that such a program will be expensive, measured in resource terms or in terms of opportunity costs to the developed

nations. Third, any attempts at restructuring the international economic system in order to speed the process of development in the Third World will add to the chaos already present in this system as a result of the first-world realignment and the entry of the centrally planned economies. These three factors suggest the need for careful scrutiny of any program proposals that might emerge from future discussions; at minimum, because such programs are likely to be both costly and disruptive, there is a need for analysis to determine the worth of the benefits that might accrue from them.

• Rely on the international business community. The concept of using existing commercial enterprises as the vehicle for the implementation of development has swung widely in world public opinion forums. U.S. policy itself has ranged from programs designed to encourage such actions on the part of its own multinationals to programs designed to stifle overseas investments. On the part of the developing nations, economic and political considerations collide when this option is raised. While virtually every study has concluded that host nations benefit economically from the presence of multinationals, at the same time virtually every less-developed nation has expressed the belief that these same multinationals have meddled in their internal affairs and made decisions contrary to the host country's national interests. Within the developed nations, the debate regarding this option closely parallels debates regarding domestic social programs; the underlying question about the proper roles of private enterprise and government becomes the central issue requiring resolution. The record of success in development enjoyed by the multinationals, along with the free enterprise philosophical underpinnings of the industrial democracies, provides a strong rationale for further consideration of options within this category.

• Transfer the responsibility for developmental assistance. For the United States, there are three possible candidates upon whom the burden of assistance might be foisted: the former colonial powers of Europe, the centrally planned economies, and the suddenly rich oil exporting nations. With respect to the first, questions of capability and of the inevitable indirect linkages to the United States emerge. With respect to the second group, which has largely operated outside international developmental assistance programs, the trade-off between security considerations and funding availability is obvious. The Soviets to date have carefully attempted to shun any responsibility for providing assistance on other than a *quid pro quo* basis. With respect to the third group, the question of incentives arises even for those nations whose oil reserves are not already tied to domestic development programs. Overall, this option appears to offer only limited regional possibilities. In the end it is likely that the principal burden for program initiation and funding will fall upon the United States; however, linkages with other nations may arise as vehicles for mitigating some of the costs and other effects of assistance programs.

• Expand the roles of international organizations involved with developmental assistance. There are numerous considerations to weigh in evaluating options that employ international, as opposed to bilateral, mechanisms. On the positive side, use of international organizations takes some of the burden from each individual participant, and simultaneously encourages broader participation in any programs initiated. Additionally, choices can be made that place part of the burden on the developing nations themselves, either in terms of management responsibility or of restrictions preconditioning the receipt of aid. Channeling aid through international organizations also might be viewed as a means of lessening the inevitable comparisons across recipient nations regarding donor nation concern. On the negative side, the linkages between aid and developing nation concessions (e.g., base rights, resource access) that have traditionally characterized assistance programs would be weakened by any movement towards international control. Choices among which nations deserve assistance would similarly be further removed from each donor nation's policy councils. Finally, there is the question of the effectiveness of international organizations in solving development problems. Studies of World Bank programs show the same mixed performance that characterizes any donor nation's individual programs.

• Encourage the development of regional alliances. The lesson of the European Economic Community might be drawn upon in formulating further assistance programs: regional economic alliances can be viewed as one mechanism for overcoming the problems inherent in smallness. In that many developing nations are too small in terms of population, market size, resource availability, and other measures to support many industries often linked to the industrialization process, the growth of regional confederations offers a possible solution. To date, however, such efforts have met with only the most limited successes, mainly because of political and cultural obstacles to cooperation. These types of constraints will likely persist and prove a challenge to any programs designed towards the end of encouraging regional cooperation. A near cousin of this category of policy options is the development of regional powers through concentrated assistance programs designed to allow one nation rapid and effective growth. This policy has been followed in an almost explicit fashion in recent years. There are two areas requiring further thought in this respect: how does the designated regional power positively influence development elsewhere in the region,

contributing to both growth and stability, and to what extent do such policies stifle, rather than encourage, competition and rivalry in the region, the factors which have basically limited the success of outright attempts at economic alliances. If the focus on regional powers is to achieve results more broadly based than within the single nation itself, these underlying questions require consideration as part of the policy decisions.

• Expand the opportunities for developing nations to export to U.S. markets. The U.S. consumer has historically been a critical stimulus to the growth of foreign economies: the reconstruction of Western Europe and Japan and the development of the Korean and Taiwanese economies have depended fundamentally on U.S. appetites for the products of those nations. A similar impetus to the growth of other developing nations could be provided by preferential tariff policies and other measures designed to widen the opportunities for such nations to compete in U.S. markets. Such considerations are certain to be high in the list of priorities of the developing nations during the current rounds of negotiations regarding international trade and tariff policy. Questions of preferential treatment for the products of developing nations are virtually certain to surface. Three difficulties exist with this proposal. First, such actions would certainly complicate already difficult U.S. balance of payments problems. Secondly, the domestic industries and labor groups likely to be harmed by increased foreign competition would intensify their lobbying for protection. Finally, similar lobbying on an international scale would likely occur from the other nations whose shares in the U.S. market would be adversely affected by such measures.

• Provide assistance in the form of security assurance. In that national security is itself one of the primary

objectives of assistance programs, security assistance programs (including direct support through alliances, grants and aid, technical and training support, and arms transfers) remain an important policy option that can affect not only security itself, but also broader political and economic goals. Certainly the primary successes of previous developmental efforts, including the reconstruction of Western Europe and Japan and the development of the Korean, Taiwanese, and Israeli economies, have been cases in which U.S. security assistance has played a major role. In each of these cases security assistance programs served not only to protect the nations involved from internal and external threats, but also freed their domestic resources from defense requirements and allowed them to be applied to other national purposes. Japan particularly stands as an example of the economic assistance provided by the U.S. military umbrella. On the other hand, however, equally numerous examples exist of nations for which the receipt of U.S. assistance failed to serve the long-term national interests for which it was designed; Vietnam and, and more recently, Iran serve as examples. While the need of developing nations to insure their own security and stability remains a fundamental prerequisite to growth and development, several problems must be addressed in considering policy options within this category. First, of course, is again the cost of security assistance; opportunity costs of defense itself, as well as costs outside defense, suggest the need for carefully weighing military assistance programs. Second is public concern with involvement in the military affairs of Third World nations; residual concerns stemming from the conflicts in Southeast Asia remain a major impediment to such involvement, even to the extent of providing advisors and weaponry. Third is the possibility that U.S. military involvement, either directly or indirectly, in the affairs of

developing nations may serve to focus dissident elements not only against the United States, but also against the host government. To the extent that this occurs, one of the primary security objectives is itself thwarted. A final factor that must be weighed, as recently demonstrated in Iran, is the need for a developing nation to carefully balance its military growth with other societal requirements. Funds spent on defense (and also scarce national resources such as trained personnel allocated to the armed forces) are withdrawn from the civilian sectors of the economy, and thus represent, at least in the short term, a detriment to overall economic progress.

Conclusions. The problems of economic development, after a short period of international attention, have returned to the too-hard-to-handle category. Domestic economic considerations and realignments within the international economic community have focused attention away from the developing nations except in a few isolated instances. At the same time, the importance of the Third World to the United States and its industrial allies has grown to unprecedented levels along economic, political, and security dimensions. Not only have superpower rivalries regarding the Third World intensified, but competition among traditional free world allies has emerged as a result of recent developments and from the recognition of the criticality of resource suppliers. All of these factors suggest the need for a renewed look at the issues underlying the North-South debate.

Decisions regarding economic assistance programs sponsored by the United States and other industrialized nations are complicated by many factors. The mixed record of previous programs leads to uncertainty regarding the effect of assistance on the achievement of national objectives. Competition from other programs, domestically and internationally, makes assistance a ready candidate for deferral. Each of the options that might be blended into an overall program has its individual strengths and weaknesses, many of which are only imperfectly understood. No obvious candidate program emerges in terms of either the predictability of its results or the likelihood of gaining national consensus on its worth.

Furthermore, the success of policy options pursued by the United States and other developed nations will depend fundamentally upon the parallel policies of the developing nations themselves: their success in controlling population growth and their ability to stimulate domestic investment, for example, will have dramatic effects on the results of policies implemented by the donor nations. Nonetheless, questions of aid and assistance such as have been raised in the previous sections of this paper are ones that should be advanced for further analysis and national debate. While there are no easy answers nor any rapid solution to the problems of underdevelopment, the option of ignoring them is one that has profound and disturbing long-term implications for the economic and political health, as well as the security, of the United States.

MILITARY ETHICS IN THE UNITED STATES:
CLOSING THE GAP BETWEEN CIVILIAN AND MILITARY

by

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and

Francis X. Winters, S.J.*

One dimension of professional ethics is frequently overlooked in the search for morally acceptable standards of conduct for the U.S. military profession. That is the need to overcome the separation between the military and civilian sectors of American society that inhibits and impairs public debate about national security policy. The military commander in the field earns his position because he has the mental strength and moral power to enable him to dominate the battlefield. Off the field that responsibility carries civic obligations as well.

The military professional in a democratic society has a significant moral obligation to participate in the debate on public policy in order to sharpen the discussion by adding a perspective of informed opinion and experience. The prevailing assumption, widely shared among military professionals themselves, holds that the U.S. Constitution requires silence from the military on crucial issues of foreign policy.[1] On the contrary, participation in foreign policy debate by the military officer is not only constitutionally acceptable but is morally obligatory. In developing and bringing his views to bear in debate on national security issues, the moral obligation of the officer in a democratic society differs little from that of the diplomat. One concentrates on ends of policy, the other on means; the responsibility for an effective national policy that supports the national ethic within available resources is the responsibility of both.

In order to counteract the dangerous assumption that the military should avoid participation in public discussions of foreign policy, we will examine: (1) the ethical responsibilities of U.S. officers; (2) the historic and constitutional case for military participation in public policy debate; and (3) some practical measures that officers might take—not without some risk to career advancement—to meet the ethical requirements proposed.

Ethics for U.S. Officers. Ethics is a prospective discipline, looking ahead rather than backward. It plans the future rather than laments the past. But it is important to study major political decisions of the past, such as the World War II decision to demand unconditional surrender and, subsequently, to drop the atomic bomb.[2] These are interesting historic questions and they point to stark failures of moral and political, and even military imagination (foresight) on the part of Allied leaders in planning for the postwar world. If, in fact, conduct of the war were not keyed to a specific vision of a postwar world, one may ask, what was sought by force of arms on the battlefield?

Ethics must begin with remembrance. But it cannot end there. As a

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prospective or planning discipline, it looks forward and asks questions such as, "What should we do if the U.S.S.R. initiates nuclear war?" The answer does not come readily.

Dealing with the future when we deal with ethics nonetheless ties us with the past, specifically with our political past as Americans. For we are discussing here not only a general question about ethics and the military profession but specifically the ethics of the U.S. military profession and ethical standards appropriate for it. We and our military services exist in a historical context that, to some extent, defines the nature of our ethical response. That is, our political responses must conform to the general outlines of the political philosophy prescribed in the U.S. Constitution and in such documents as *The Federalist* papers that further illuminate the political heritage. That heritage, though drawn from Western Europe and exhibiting similarities to political systems in Europe, is no less distinctly American in character. We must act as Americans, therefore, as a people imbued with a specific political heritage.

The Heritage of Military Participation in Public Policy Debate. The ethical guidelines enshrined in the Constitution constitute a system of shared power generally known as checks and balances. Our political heritage is based on the philosophy that power is enhanced and the danger of uncontrolled power mitigated by diffusion among a number of centers of initiative.[3] It rests on the need for popular participation in decision-making and it looks forward to the prospect of creative conflict among the competing factions, interests and opinions that are inevitable in society. Ours is a nation that prospers only if there is continuous public argument. Indeed, one observer has defined the free society as "men locked together in argument."[4]

Attention to the political context of ethics is crucial because there remains a widespread misconception, inherited from predemocratic societies, that military ethics is a matter of obeying (or, for the elites, of issuing) just commands. Unfortunately, most treatments of military professional ethics begin and end there—with an examination of mutual obligations of the various persons within the chain of command.[5] All of this analysis is very important and has been too widely neglected. Yet such an approach to professional obligations is deficient precisely because it ignores the contemporary political situation of the decisionmaker, namely, his citizenship in a democratic society. It ignores the fact that in this society the military commander is supposed to participate in the determination of what these commands should be. The soldier as citizen must do more than issue commands and oversee their execution. He must involve himself in the arduous process of determining the structure of U.S. strategy. Only on the basis of a sound strategic posture can the commander undertake the more immediate task of command.

Ethical responsibility for the American military commander is much more extensive than it was in the somewhat simpler era of monarchies. In the United States, the soldier as a citizen also is sovereign, that is, he shares the responsibility of determining—on moral as well as political and military grounds—a sound foreign policy. He cannot simply accept the existing foreign policy of his nation and proceed to execute the military dimensions of it; he cannot create a defense structure that is not intimately, actively and creatively related to the goals of foreign policy. Participating in the process of determining the *goals* of U.S. foreign and military policy is as important as participating in developing the *means* underlying those goals. There can be no hiatus between political and military planning. The military must become a faction in the sense advocated for all groups of U.S. citizens in *The Federalist* papers.

Professional military responsibility can be exercised in this fashion only by first overcoming the current separation of civilian and military sectors in our society so as to achieve a new integration of politics and strategy.

The reluctance of the military to participate fully in the process of policymaking finds its inception in what is generally understood by the term "civilian control of the military" and the unique concept of civil-military relations in the United States. Huntington sees the separation of powers between Congress and the Executive as "a perpetual invitation, if not an irresistible force, drawing military leaders into political conflicts."[6] These conflicts, however, focus on weapons, technology and budget, rarely on policy. The danger is less the domination of policy by military views than deficiencies in policy made in the absence of military views. The essence is a broader conceptual framework within which all participants in the policy process may contribute. Specialists in policy discussions—military, political, economic, or whatever—are advocates. But the military leader, reluctant to exercise a "political" role, limits himself to only the military aspects of a problem as more properly his concern and thereby contributes to strategic difficulties that prevent conceiving force in other than military terms. As General Marshall expressed it, thinking of political problems in military terms soon makes them military problems. War becomes a contest of logistics rather than of politics.

On the civilian side, important political consequences inextricably imbedded in strategically important events are isolated from policy as "purely military matters"; national goals are subordinated to military expediency. Political leaders have rarely understood fully the role—and limitations—of military power in seeking the ends of policy. Military leaders, though dominant in the staffing *process*, rationalize the lack of full

participation in *policymaking* as legitimate—if misguided—deference to the principle of civilian control of the military. Yet civilian control in itself carries no such connotation of isolation for either the diplomat or the warrior. The result, therefore, is an enigma of policy devoid of military participation yet dominated by military considerations.

In Vietnam, for example, in the critical stage of the war—the Kennedy and early Johnson eras—U.S. policy sought to apply a conventional military solution to an essentially political problem in which insurgency was only one symptom of underlying political causes. Dependence on military power neglected the crucial political dimension that was always the principal determinant of the outcome. Having opted for a major military role, the second error was failure to use sufficient military power in pursuit of objectives. Had civilian leaders shown greater willingness to use the military power at their disposal, U.S. policy would have enjoyed a greater measure of credibility, an increased possibility of suppressing the insurgency, and of resolution of the conflict within the limited aims of U.S. policy.

The first error represented a failure to understand the essentially political nature of the conflict; the second a failure of the civilian leaders to understand the use of military force once committed to a political problem. Better integration of military means with the aims of policy by civilian or military planners would have made success possible, by both would have made success likely. Both errors illustrate the central problem of civil-military relations, the failure to understand the decisive fundamental of statecraft, the integral relationship between foreign policy and military power.[7]

Deference to military advice dominated by "purely military considerations" contributed to overmilitarizing an essentially political problem, to

countering a complicated national revolution with conventional field tactics, and to measuring success in the field in engineering rather than in political terms.

Some may claim that broader participation by the military in the policy process leads to domination of policy by military considerations, even to the point of substantial takeover of the government. Yet the record indicates the contrary. Throughout its history the United States has been uniquely free of any reason to fear a coup by its military. Its uniformed leaders have invariably displayed a proper spirit of subordination to duly established civilian authority. At no time did the officer corps represent a threat of the kind that restored de Gaulle to power in France or that troubles so many countries in Latin America, Asia, and the Middle East. With varying degrees of influence of military counsel, key national security decisions are made by civilian authority: the decision to build a hydrogen bomb, the decision to rearm U.S. and allied forces, the decision to emphasize nuclear power in the 1950s, the decision to invest heavily in early warning defenses but not in bomb shelters, the decision to strengthen conventional and counterguerrilla forces in the 1960s. Civilian leaders called the turn on ABM, the B-1 and called it in Korea, the Formosa Strait, Dien Bien Phu, Suez, Lebanon, the Congo, Cuba, Cambodia, Tonkin Gulf, Hanoi, Luanda and the repeated crises in the Middle East. The rare instances of insubordination have been individual disagreements and not organized conspiracies. The MacArthur-Truman dispute, for example, was a challenge by the commander in the field to the strategic direction of the war, but the challenge was to his military chiefs and the President, not to the political control of the nation.

Civil and military power in the U.S. system was deliberately balanced by the Founders, one against the other, and fused in the person of the President. The status of the armed forces under "civilian" authority stems from the dual personality of the Chief Executive in the Constitution as both a civil and military official. There is no mandate that specifically places the military subordinate to civil authority; it is a heritage that finds expression only in the multiplicity of offices held by the Chief Executive. The President as a civilian is the Commander in Chief; as an elected official, he is subject to the control of the people. The fundamental principles involve popular power over both the President and the military, balanced or shared power between all the branches of the government, and military effectiveness despite the checks and balances. This is not civilian control over the military as much as it is a balance of civil and military authority with a fulcrum held by the chief of state.

Civilian control over the military, except through the legislature, was explicitly rejected by our Founders. The framers of the Constitution were more afraid of military power in the hands of politicians than they were of political power in the hands of the military. To a man they visualized Gen. George Washington as the first President. They were certainly aware he was a military officer. Their concern was less how he would carry out his civilian duties than how his successors would carry out the military function as Commander in Chief. Charles Pinckney of South Carolina had proposed that "the military shall always be subordinate to the civil power." This was stricken—the Constitution did not, in fact, provide for civilian control. But the remainder of his plan, for control over the military through the purse strings, was adopted in revised form.[8] In short, the Commander in Chief clause, insofar as operational authority over military forces is concerned, seems to be designed no more to provide than to prevent civilian control over the military.

Despite participation of both civilian and military officials in most, if not all, phases of the policy process, the military leadership has traditionally isolated itself from its role in the policy process. After the Bay of Pigs crisis, President Kennedy, unimpressed by JCS advice, specifically cautioned the Chiefs against limiting their counsel to "purely military considerations," a directive reiterated by each of his successors. The basic and fundamental isolation of power and policy in the American value system is deeply imbedded, however, especially among older and more senior participants. Integrated staffs have not produced integrated planning. It is at the operational level that a new approach to truly unified politico-military planning is clearly needed, not only as the natural development of the U.S. national security organization, but as the extremely important direction of change for the military in its own interest. Years before attaining the responsibility of public office, Henry Kissinger said,

A separation of strategy and policy can be achieved only to the detriment of both. It causes military power to be identified with the most absolute applications of power and it tempts diplomacy into an overconcern with finesse. Since the difficult problems of national policy are in the area where political, economic, psychological and military factors overlap, we should give up the fiction that there is such a thing as "purely" military advice.[9]

Kissinger visualized the day, as we do herein, where "At every stage of formulation of strategy, doctrine would be considered as a combination of political, economic and military factors replacing the present system which seeks to compromise two incommensurables, 'purely' military and 'purely' political considerations."[10] Lacking such a doctrinal framework, the military

leader becomes a technician and not a strategist, a weaponeer and not a warrior.

Some Practical Measures to Achieve the Reintegration of Civilian and Military Planning and Some Possible Career Consequences. The important aspect of ethics considred here is the obligation imposed on the military professional by his U.S. citizenship to participate in the public debate on public policy, not excluding national security policy. How would a military professional go about fulfilling these obligations? What measures could he adopt to exercise his moral responsibility to sharpen, and so to shape, the public argument on defense policy? Three avenues of participation may be suggested that will in varying degrees and by complementary strategies bring to bear his professional competence and experience on the public argument of defense policy: (1) intra- and interservice advocacy of sound military policies keyed to national goals; (2) military-Congressional dialogue; and (3) writing and speaking in civilian as well as military fora on foreign policy. A few words on each of these strategies may suggest opportunities for influencing the public debate as well as drawing attention to some of the career risks involved in exercising the professional responsibility proposed herein. Dissent, after all, has a unique role in American tradition that outsiders often find difficult to understand.

A nation born in revolution finds dissent a more wholesome emotion than in a society with a different heritage. The signatories of the Declaration of Independence held certain truths to be self-evident. But behind that statement lay an assumption that every American was capable of perceiving these truths for himself; that each bore an individual responsibility to his government. Different individuals have different moral apprehensions, some allowing widely divergent interpretations of the obliga-

tions they share. Widely varying opinions are no less with us today on major issues of policy; indeed no democracy is fully alive without such a debate. The question is the degree to which dissent is taken and the country's need for unity at the time.[11]

Thomas Jefferson theorized on the virtue of an occasional revolution and the necessity of watering the tree of liberty with the blood of patriots. Jefferson worried over the stern measures taken against the Pennsylvania farmers in the Whiskey Rebellion and the Massachusetts farmers in Shay's rebellion. "To punish these errors too severely," he said, "would be to suppress the only safeguard of the public liberty."

Toleration of opposition to national policy, however, has not ordinarily been extended to its military spokesmen. Legitimate dissent in a military organization gratifies the soul of the dissenter but has few other rewards even when successful. Spirited and energetic support of a position within the command, which is not shared by the commander, has been known to make for a lively but foreshortened career. The necessity for full obedience to a lawful order demands conformity in execution but breeds conformity in planning as well. It is a rare senior who welcomes dissent at all, far less one who can display the placidity of a Thomas Jefferson in welcoming dissent merely to keep the spark of freedom alive.

The military commander reaches his decision not by such democratic principles as majority rule and protection of minority rights. He alone is responsible for the consequences, and he decides accordingly. When he advises the civilian leadership of the nation, however, he is less responsible for the ultimate consequences because no such clear-cut lines of authority exist. Nevertheless, among senior military leaders, the spark of legitimate dissent is still too easily smothered. Not only does the system impress conformity, but agreement is stressed to a point that substance itself may often be sacrificed to the necessity of reaching agreed language. The written word is "waffled" to accommodate divergent views in deliberate ambiguity.

Both within his service branch, where the officer is often called upon to study alternative policy options and to make recommendations of one or another course of action, and in the senior councils where joint service policies are established, the military professional can exercise a great deal of influence on public debate by informing himself thoroughly of the political, strategic, economic and social consequences of various policy options. Because the only purpose of military power is to serve the ends of policy, in truth he can do no less.

If individual officers are to exercise, at comparatively senior levels, the imagination required to see beyond the bureaucratic interest of their own branch of service, to see the military sector of our society as a whole and to assimilate the perspectives of civilian society and of the leaders of other nations, not only will the policy debate be enhanced but intra- and interservice debates on policy may also become more productive, more politically sensitive and consequently more wise. The instinct to leave the metamilitary matters to officers at a higher level, to the civilian leadership, or to other departments or branches of the government, or even to the pressure of Allies, has frequently proven to be shortsighted or mistaken. One is never sure that one or all of these other actors will in fact consider all the alternatives. While such "think piece" papers may at first be extremely unpopular within a particular branch, or even among representatives of other services, they may provide an indispensable contribution to formulating a wiser policy for the nation. One cannot expect, nor should the structure of decision demand, that civilian

thinkers have a sufficient grasp of military affairs to comprehend the full range of military options available to the executive.

A coequal level of the national security debate occurs at the level of congressional committees. When officers are appointed to serve as witnesses before congressional committees, they are initially obliged to represent official policy. If such a policy were ethically repugnant to the officer he would, of course, be morally obliged to refuse the task of representation and to accept the consequences of refusal. In most cases, however, he will be in agreement, or at least not in substantial *moral* disagreement, with the policy. If, in the course of representing a policy option that he personally judges to be less wise or efficient, but still morally acceptable, he is asked by a Congressman whether he *personally* agrees with the proposal, he is morally obliged to discharge his moral obligation and offer his own view, presented as such. The law specifically provides both the means and the obligation. While many professional and personal circumstances would have to be weighed before making such a decision, there are situations in which an officer would be morally obliged to offer a personal view different from the service or joint-service option. In such circumstances his obligation to express his own opinion arises from the legislative need to understand the various policy options available. The cognizant law, though castigated by President Eisenhower as "legalized insubordination," supports testimony derived from military spokesmen as an indispensable aid to the exercise of legislative responsibility.[12] The public debate, in other words, may require an awareness on the part of Congress of a militarily respectable difference of opinion on a critical issue of public policy.

A clarification is appropriate here. Many an officer who wishes to express dissent from public policy may feel obliged—or may be encouraged—to take off the uniform and pursue his protest from retirement. However noble the sentiment, no such suggestion can be endorsed herein. The record of officers who retired in order to make their dissent public is wholly unencouraging. Gen. Maxwell Taylor is a rare exception.

Finally, there may be a further forum in which the military officer may be allowed or even obliged to express dissent, always excepting that his official position as executor allows no choice but wholehearted support of approved policy. That forum, or more correctly, those fora, would be constituted by the various media of public debate on foreign policy, including professional journals of the various war colleges and institutes, the national magazines and news journals, professional conventions, associations, and the lecture platform. On matters of such great public significance as strategic policy, planning for the defense of Europe, wars of intervention in developing regions of the world, antiterrorist operations and the like, it would be remarkable if there were no difference of opinion within the military corresponding to the range of views evident in the civilian professional community. If such a diversity of opinion exists in the officer corps, there may be times when it is incumbent on those who hold minority views to express their opinion in the appropriate medium. Once again, the public may be dependent on an awareness of differing but respectable military views in order to make progress in its own responsibility to adopt a wise foreign policy.

Merely to mention the levels of responsible dissent for an officer suggests the risks involved in the conscientious execution of any professional responsibility. The officer, no less than the doctor, lawyer or clergyman, has responsibilities to society at large that may conflict with personal career advancement. His ethics include an

obligation to contribute to public debate on foreign policy by articulating his views both within and outside the military services, as occasion demands. The likelihood that such responsibility may arrest or hazard a promising military career simply underlines the importance and dignity of the military profession itself, an integral factor in national well-being. The civilian leadership depends on and must defend the right of officers to contribute their perspective and advantages of study and experience in the art of warfare, including the limitation and prevention of war. It is precisely because civilian society is so dependent on the military that it rightly holds high expectations of the integrity of the military professional to declare himself even at the risk of career development.[13] The Nuremberg International Military Tribunal reached conclusions in large part based on the principle that the professional military defendants should have followed not the orders of Hitler but of their consciences. Those instances, even in the extreme and at direct peril to one's survival, are the occasions when the refusal of a military man to comply is not insubordinate but positively his legal and moral duty. In John F. Kennedy's words, "A man does what he must—in spite of personal consequences, obstacles and pressures—and that is the basis of all human morality."

NOTES

1. This assumption seems to underlie the learned article by Robert S. Poydasheff, "Military Justice: A Reinforcer of Discipline," *Naval War College Review*, Winter 1976, cf. especially pp. 78, 81.

2. Ethical and political perspectives on these decisions can be found in the works of George F. Kennan, e.g., *American Diplomacy, 1900-1950* (Chicago: University of Chicago Press, 1951), pp. 101-103; *Memoirs* (Boston: Little, Brown, 1967), v. I, pp. 309-310; and *Russia and the West Under Lenin and Stalin* (Boston: Little, Brown, 1961), pp. 366-368.

3. Jacob E. Cooke, ed., *The Federalist* (Middletown, Conn.: Wesleyan University Press, 1961), #10, pp. 60, 63, 64; #51, pp. 349-353; and #63, p. 423.

4. John Courtney Murray, S.J., *We Hold These Truths* (New York: Sheed and Ward, 1960), p. 6, citing Thomas Gilby, O.P., *Between Community and Society* (New York: Longmans, Green, 1953).

5. A welcome exception is the thoughtful essay, based on long experience in military life by Kermit Johnson, "Ethical Issues of Military Leadership," *Parameters*, v. IV, no. 2, 1974, pp. 35-39.

6. See Samuel F. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (New York: Vintage Books, 1974), p. 177.

7. See M.A. Pudlo, "The Double Imperative: U.S. Civil-Military Relations and the Vietnam War, 1961-1963," Unpublished manuscript, University of Lancaster.

8. The U.S. Constitution was modeled after the British constitutional arrangements to control the military, but the British Constitution, being unwritten, proved much more flexible. The U.K. Constitution today provides for extremely effective civilian political control and military planning within the Cabinet; the U.S. Constitution is frozen in an 18th-century model.

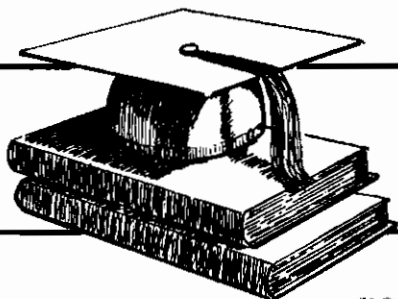9. Henry Kissinger, *Nuclear Weapons and Foreign Policy* (New York: Harper & Row, 1957), p. 422.

10. *Ibid.*

11. See Sir Peter Ramsbotham, "Thoughtful Dissent: A Cornerstone of Democracy," Commencement Address, University of Maryland, College Park, 20 June 1976.

12. For complete text see *The New York Times*, 28 May 1958, p. 3. See also *Navy Magazine*, October 1958, p. 46.

13. See Johnson.

Ψ

PROFESSIONAL READING

BOOK REVIEWS

Friedlander, Robert A. *Terrorism: Documents of International and Local Control.* Dobbs Ferry, N.Y.: Oceana, 1979. V. 1, 572pp., V. 2, 573pp.

The March-April 1979 issue of this *Review* included an article entitled "Reflections on Terrorist Havens," written by the author and editor of the volumes here being reviewed; and the May-June 1979 issue included an article entitled "Terrorists, Atoms and the Future," by Augustus R. Norton. The fact that two articles on terrorism were published in successive issues of the *Review,* and so recently, is some indication of the important position this problem presently occupies in the affairs of the world. Professor Friedlander's two-volume work contains a 200-page essay on the subject that gives the reader a historical overview of the problem, followed by a discussion in depth of its many facets, political, ideological, sociological, psychological, and legal; and ends with a not too encouraging look at the future. The balance of the two volumes contains approximately 1,000 pages of documents extending from the 1934 League of Nations debates that were generated by the assassinations of King Alexander of Yugoslavia and Foreign Minister Louis Barthou of France through the 1978 CIA report on *International Terrorism in 1977.*

Anyone who reads Friedlander's essay and the 102 documents reproduced in his work will probably have the same reaction that this reviewer had: "Never have so many said so much and accomplished so little!" (to borrow

from Winston Churchill). The total of 45 years of incidents, investigations, discussions, proposals, votes, etc., consists of: (1) three International Civil Aviation Organization (ICAO) conventions which certainly have not been very successful in eliminating, or even substantially reducing, aircraft hijackings, probably because this cannot be accomplished as long as there is even one country, like Libya, where the hijacker can find a refuge after completing his criminal act; (2) one regional convention drafted by the Council of Europe, all of whose member States which are potential victims of terrorism and hijackings and none of which gives asylum to terrorists; and (3) a few tongue-in-cheek resolutions of the General Assembly of the United Nations, where a number of members, as the author points out, seems much more interested in protecting terrorists who purport to act for the benefit of national liberation movements than they are in protecting the innocent victims of acts of terrorism.

The commentary by Friedlander makes clear that there is a consensus among the serious students of terrorism that the attention the news media, particularly television, give to every incident contributes substantially to the problem. One of the major objectives of terrorist groups is publicity for their goals. When, for hour after hour, television cameras are trained on a building that has been occupied by armed terrorists who are holding innocent civilians hostage, the terrorists are

accomplishing exactly what they sought—worldwide publicity for their cause. Only when some means is found of reducing or eliminating this publicity will a major step have been taken toward the reduction or elimination of the illness itself.

Despite the comparative paucity of affirmative accomplishment with respect to terrorism by the world community, these two volumes undoubtedly will prove invaluable as concentrated guidance for those involved in this area of world problems, as well as educational for the average citizen in enabling him to better understand what has and has not been done, why more has not been done, and, perhaps, what might possibly be done in the future to solve one of the major world problems of the second half of the 20th century.

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Gelb, Leslie H. and Betts, Richard K. *The Irony of Vietnam: The System Worked.* Washington, D.C.: Brookings Institution, 1979. 387pp.

The output of books on the American experience in Vietnam has reached the proportions of a small industry. Peter Braestrup, in a bibliographical essay in the Spring 1978 *Wilson Quarterly,* brought us up to date but since then the cascade continues. There is little hope that there will be a letup soon. The best we can hope for is that a good percentage of the new works will be useful for the future historian, or useful to the present student of that long war. This book is worthwhile on both counts.

Irony is thoroughly researched, and draws heavily on the *Pentagon Papers.* The study from which those *Papers* came was headed by Gelb in the 1960s. The period covered in the book is the same as that study—from World War II until the Tet 1968 Offensive.

The title pretty much sums up the authors' thesis. Contrary to those who contend that U.S. decisionmakers blundered into the Vietnam quagmire, the authors contend that American leaders knew they were getting into a long struggle. They do not contend, of course, that the events of 1968 were foreseen, but they do say that U.S. leadership recognized victory might well be unreachable. After the Tet 1968 Offensive, LBJ decided to deescalate because the price of continuing was too high, and the key variable in that war of attrition, American public opinion, was itself victim of attrition. Through all of this period "the system worked," say Gelb and Betts.

The book is divided into five parts. Part One is a very useful review of U.S. decisions concerning Vietnam from the Roosevelt administration until LBJ's deescalation decision. Part Two, "The Imperative Not to Lose," is built around the proposition that U.S. leaders believed Vietnam not to be vital in itself, but rather feared the domestic and international implications of the "loss" of Vietnam in the wake of the "losses" of China and the Korean war.

The central proposition of Part Three is that the U.S. presidents involved did what they deemed minimally necessary to keep Vietnam out of Communist hands. Part Four expands on the following proposition:

> The Presidents and most of their lieutenants were not deluded by reports of progress and did not proceed on the basis of optimism about winning a near-term or even longer-term military victory.

This proposition will engender, no doubt, some controversy, depending on whom one considers presidential "lieutenants," and the year one is talking about.

Part Five, "Conclusions," is the authors' attempt to set forth the lessons of Vietnam—a brave effort for anyone. Here, as they were writing in late 1978,

Gelb and Betts felt compelled to extend their study and to take a look at Nixon's and Ford's policies. It is understandable that they would feel it necessary to review this later period before pronouncing judgment. However, the coverage is so brief that the insight and research is not of the high caliber of the remainder of the book.

After supporting their thesis that the system worked, the authors develop two schools of thought on Vietnam, summed up and evaluated as follows:

> The Win School would have America vindicate mistakes in victory, while the Reformist School would have it avoid another mistake. Neither is comforting. The former gives promise of only threats and force. The latter suggests a certain naivete. . . . The problem, then, is not so much prevention as extrication, and the solution is not so much governmental restructuring as changing fundamental attitudes about and within the system.

Finally Gelb and Betts conclude that the basic lesson of the Vietnam war is "the need for pragmatism more than doctrines, formulas, and ideologies."

In the area of its main effort, an explication and analysis of Washington decisionmaking on the Vietnam war up to Tet 1968, the book is excellent and makes a fine contribution to the growing body of literature on the war. Upper level Political Science courses interested in the study of Presidential decisionmaking will find it especially useful.

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Gorshkov, S.G. *The Sea Power of the State.* Annapolis: U.S. Naval Institute Press, 1979, 290pp.

It may be that Admiral Gorshkov's book will be as frequently cited and as seldom read as Mahan's *The Influence of Seapower Upon History* is nowadays, but there seems little question but that it "will influence navies and governments for the rest of this century." This last judgment is from a review article, "A Primer on S.G. Gorshkov's *Sea Power of the State,*" that appeared in the Spring 1977 issue of this journal. That review was of a translation prepared by the Naval Intelligence Support Center, and while the translation was widely available to those who knew how to seek it out, one couldn't pop into the local bookstore for a copy. That inconvenience has been erased with this, the commercial publication of the "authorized" English version.

Because of the earlier review here, this note will not presume to provide further analysis of the work but rather is intended to announce the book's availability and to applaud the decision of the Naval Institute Press to arrange, with Great Britain's Pergamon Press, its American distribution.

Some of Gorshkov's views, particularly on differing American and Soviet rationale for and contribution to several episodes in World War II, will be offensive to some readers, but an awareness of those views adds, as does the study of this book, to our understanding of the design and purpose of the man and the powerful and impressive Soviet fleet that he has built. *Sea Power* is essential, not just to the naval officer, not just to the military professional, but to all who ponder international security questions.

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Heilbroner, Robert L. *Beyond Boom and Crash.* New York: 1978. 111pp.

In an age known to Michael Harrington as "The Twilight of Capitalism," one rarely encounters authors temerarious enough to protest that reports of the demise of capitalism are, indeed, greatly exaggerated. Witness the personification of capitalism, Henry Ford,

resigning from the eleemosynary institution that bears his name, protesting that too few people understand that philanthropy is often the child of capitalism *(The New York Times,* 12 January 1977, p. B6). Witness the phenomenon of stagflation that, in the opinion of some, now puts John Maynard Keynes in the antediluvian category of Adam Smith. Examples could be multiplied; see, for example, the discussions in the April 1978 issue of *Commentary:* "Capitalism, Socialism, and Democracy."

Now comes Robert L. Heilbroner, author of *The Worldly Philosophers* and *An Inquiry into the Human Prospect,* to propose, with Yugoslav economist Branco Horvat, that after competitive capitalism (1700-1875), monopoly capitalism (1875-1930), and welfare capitalism (1930-1973), we have begun a fourth period—that of planned capitalism. To be sure, Heilbroner is no Micawber. He contends that "deep changes will be required," and that the shift to economic planning is "the only institutional transformation that can . . . give a new measure of life, albeit a limited one, to the capitalist system." Simply put, Heilbroner's thesis is that a merger of the irresistible logic of economics and of ecology justifies and commands "planning the economic process in a way that has never before been necessary."

Heilbroner adamantly contends that planning is the salvation of capitalism, rather than its bane. He says it best himself:

> It is not planning, as such, that will
> be the Trojan horse of democracy,
> if democracy perishes. It will be
> severity of the seismic disturbances
> against which planning was meant
> to safeguard us, or the unwilling-
> ness or inability of a society to
> make bold alterations in its institu-
> tions, while these can still be
> carried out through appeals to rea-
> son and by democratic means.

Although he maintains that financial and environmental perils clearly indicate the need for "an unprecedented degree of monitoring, control, supervision, and precaution over the economic process," Heilbroner is a fan of neither the wholly planned economy of the Soviet Union nor of multinational corporations. To Heilbroner's mind, the American economy is still the world's most powerful. Although willing to concede that America's manufacturing position may have declined, he says that America's position as the world's breadbasket is practically preeminent. He points out that America has no significant political party that urges us to convert to large-scale "socialism"; he argues that the dollar "would seem to be one of the soundest, not one of the frailest, currencies," and that the American political situation is mercifully stable. Because unrestrained inflation is invariably the consequence of *political* collapse, he thinks that "a runaway inflation is [not] a matter to be taken seriously."

Unhappily, there is something cavalier about Heilbroner's clarion call for reasoned economic planning in a book of 89 pages of text; he has, in fact, completed more of an outline than of a substantial, clothbound book. Moreover, the little book is marred by a number of editorial errors. Words such as *preferable, stanched, management,* and *occurrence* are misspelled in the book. These matters aside, this small book is worth reading—if only because it is conspicuous by comparison with other books in its steadfast refusal to argue that capitalism alone is responsible for all the ills of mankind from alienation to acne.

Is it then possible to strike the balance between the desideratum of economic planning and the consequent risk (if not certainty) of political oppression? Perhaps Eric Hoffer said it best:

> I used to think it self-evident
> that freedom means freedom from

iron necessity. But it is not quite so. The moment necessity no longer regulates and disciplines there is need for imposed regimentation. On the other hand, a society living on the edge of subsistence cannot afford freedom. Thus the zone of individual freedom is midway between the extremes of scarcity and abundance. [*Harper's*, October 1978, p. 78]

One hopes that Heilbroner, in his next work, will define more exactly the boundaries of the area that exists somewhere between the boom and the crash.

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Holmes, W.J. *Double-Edged Secrets*. Annapolis: Naval Institute Press, 1979. 231pp.

The code name given to the World War II variant of today's COMINT (Communications Intelligence) was ULTRA. Deriving useful intelligence about Japanese fleet operations involved a painstaking, two-part process: first, the intercept of coded radio transmissions and second, the decryption of those messages from code into plain language—Japanese and then English. Secrecy shrouded the entire process. Documents containing ULTRA material were boldly marked with a warning that reveals the double edge of Holmes' fascinating memoir: "No action is to be taken on information herein reported, regardless of temporary advantage, if such action might have the effect of revealing the existence of the source to the enemy."

Double-Edged Secrets tells the story of U.S. communications intelligence operations in the Pacific during World War II and is written by one of a handful of dedicated men who operated a complex operational intelligence center in a Pearl Harbor base-

ment. Based principally on the recollections of its author, Capt. W.J. Holmes, the book will almost certainly be at odds with many of the official and unofficial accounts of those intelligence activities that are beginning to fill the shelves since recent archival declassification (the Naval War College Library is currently processing over 40 separate titles). However, Holmes' personal narrative captures uniquely the mood of the period and gives rare insight into the problems and personalities of the Pacific Fleet. The reader joins the author at FRUPAC (Fleet Radio Unit, Pacific) headquarters in the middle of an intriguing drama that unfolds in the aftermath of Pearl Harbor.

Communications intelligence was in its infancy and had only recently managed to outlive the famous moratorium of 1929 when President Hoover's Secretary of State, Henry Stimson had withdrawn support for the "Black Chamber" by declaring that gentlemen do not read each other's mail. After sketching a brief history of cryptanalysis in the years just before the war, Holmes plunges into the myriad problems of breaking Japanese operations code. However, there is much more to this fast-moving history than random additives and combinations and permutations of 5-digit groups. Thankfully, his recollection of failures is as good as that of the many victories produced by the dogged, learn-as-you-go work of the cryptanalysts. Their tasks were monumental and the infrequent rewards silently shared until new codes would send the small team back to start all over again. The great breakthroughs in decryption came from a mixture of extraordinarily long hours, odd coincidences, and a good measure of luck. These factors came together repeatedly in large part because of the exceptional personal chemistry, sensitivity, and dedication of the first unit. From the start it was

manned by nonconformists with seemingly unlimited analytic aptitude and mental capacity, handpicked because of their unusual talents in language, mathematics, and operations. By war's end, a stiff bureaucratic organization evolved to manage a larger but probably less effective and certainly less idiosyncratic group of analysts. Woven throughout the book is a colorful anecdotal history of the war: students at Roosevelt High School in Hawaii carrying their gas masks to the stage to receive diplomas at a June graduation following Pearl Harbor; the misleading and dangerous battle damage reports sent out by both sides; the U.S. Navy's problem with predetonation and the running depth of its torpedoes; assessing the strength of garrisoned troops on the basis of the privy density of an island; the decision to eliminate Admiral Yamamoto; and the tragic and ironic loss of U.S.S. *Indianapolis*.

Intelligence collection and analysis of radio intelligence was undoubtedly a crucial factor in the outcome of the war. Without ULTRA, many more lives would have been lost and the problem of the island warfare in the Pacific would have been greatly complicated. Histories and biographies of the war will not be changed as a result of this book, but I think those who read it will agree that there were many quiet, unsung heroes whose work in support of the fleet was as important as directing gunfire or leading troops ashore. The dilemma of having intelligence that cannot be used, of being in a position where the obvious need for secrecy "constipates the flow of information" at a time when it can mean life or death, is truly the telling message of the book: "Secrecy is a double-edged weapon, and it sometimes inflicts deeper wounds on its wielder than upon his opponents." This lesson should not be forgotten.

J.P. MORSE
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Korb, Lawrence J. *The FY 1980-1984 Defense Program: Issues and Trends.* Washington, D.C.: American Enterprise Institute for Public Policy Research, 1979. 53pp. and Pechman, Joseph A., ed. *Setting National Priorities: The 1980 Budget.* Washington, D.C.: Brookings Institution, 1979, 229pp.

A nation's military posture, the size and composition of its armed forces, is largely the consequence of decisions to commit financial resources to defense made in a series of annual national budgets. The federal budget for FY 1980 will determine the nature of U.S. military forces through the next decade. While much is written about the defense budget, two sources of description and analysis that have proven most useful in the past have been Lawrence J. Korb's annual monograph for American Enterprise Institute and the multiauthored chapter on the defense budget in the annual Brookings Institution analysis of the federal budget proposed by the President for the forthcoming fiscal year. Readers should find these two studies as full of helpful information and stimulating policy discussions this year as they have been in the past.

Korb's work is the richer in presenting the defense budget in its various possible formats and in giving comparisons over time in relation to the national economy and the national budget. There has been and will continue to be debate over the proposal of the Carter administration to limit the growth of the overall federal budget so that in the domestic area, with the inflation rate projected when the budget was published, domestic spending would not grow overall in real terms while defense was scheduled to have its outlays grow by 3 percent in real dollars as part of NATO's agreement to try to redress the relative strength of NATO and Soviet forces in Europe.

Korb provides an enlightening discussion of the debate about increasing

real defense spending and shows how the measured amount of real growth is sensitive to the base one uses for reference. The growth in real defense spending for FY 1980 that Korb shows (2.7 percent above the FY 1979 outlay level approved by Congress) is less than Brookings and most other sources cite. Inflation has been proceeding much more rapidly than the rate assumed in preparing the FY 1980 budget, so unless action is taken to raise outlays from the $122.7 billion proposed there may be no real growth in FY 1980 defense outlays. (Ed. note: The administration took such action 11 September 1979.)

Most of the Brookings' chapter is spent examining key force structure and policy issues; and Korb also treats the policy and program implications of major defense spending areas. As in his earlier monographs, Korb provides a useful background on how national security policy assumptions and goals are established in the guidance used in drawing up the FY 1980-1984 defense program budget. The central program issue areas that these works analyze are the strategic nuclear forces, naval forces, and forces for NATO.

In the strategic nuclear area the United States has seen the strategic balance turn against it and has been impelled to go forward with the development of new generations of strategic systems such as the MX mobile missile. However, Korb believes that delays in starting new systems, slowing the pace of programs like *Trident* missile submarines, and canceling the B-1 strategic bomber program have eroded the U.S. strategic position. The Brookings authors see the primary concern in the strategic deterrence area essentially as a need to develop a better strategic planning framework before rushing into new commitments to strategic weapons systems that may impose prohibitive costs in the future and complicate strategic stability with the Soviet Union.

The naval balance is another area where Korb and Brookings analysts view the problem differently. Korb finds the U.S. naval position relative to the Soviet Union to have deteriorated as a result of the number of U.S. naval ships being halved from FY 1969 to FY 1979 while the Soviet Fleet has continued to grow. He believes that the current naval balance makes it problematical whether the U.S. Navy could carry out its wartime missions of sea control and projecting power on NATO's northern and southern flanks. Brookings, however, cites analysts who believe that the Soviet Navy is not designed for high seas combat with the U.S. Fleet and because this threat probably does not exist the U.S. Navy should consider buying more, but less capable, ships than it has purchased with the Soviet threat in mind. This naval program would provide the United States with the larger number of ships it needs for worldwide low threat and peacetime naval presence missions. However, as the "dissenting analysts" see the Soviet Navy attacking forward U.S. Fleets in the European theater, it would seem that the U.S. Navy will still require high-capability ships and aircraft if it is to support NATO's flanks.

Both Korb and the Brookings analysts express concern about the emphasis in designing ground and air forces for fighting a short, intense, conventional war in central Europe. Korb argues that this "NATO first" effort may still not give the United States the ability to win a conventional war, while it makes U.S. forces less flexible and capable in other parts of the world. The Brookings authors also question whether the United States should make more Army divisions heavily armored and mechanized, and invest in prepositioned equipment stocks for NATO at the expense of forces that would be needed to deal with threats to U.S. security in other regions, such as the Middle East. The Brookings chapter discusses a number of

possible problems with the emphasis in key Army procurement programs and the need for considering trade-offs between Army and Air Force systems in such common areas as air defense and fire support. Brookings also believes that a modernization of theater nuclear forces should not be undertaken until the United States develops a coherent doctrine for the use of theater nuclear forces.

Both works contain several other sections that should interest readers, such as Korb's discussion of military retirement reform and Brookings chapters on the relationship of the federal budget to the economy in 1980, on key issue areas in the domestic budget, and on the problem of inflation. Considering the complex nature of the material they are dealing with, these publications are well written; and a reader will finish them much more knowledgeable on important areas of public policy than when he began.

JOHN A. WALGREEN
Wheaton College

Marder, Arthur J. *Jutland and After, May 1916-December 1916. From the Dreadnought to Scapa Flow. The Royal Navy in the Fisher Era, 1904-1919.* v. III, 2nd ed. (Revised and Enlarged). Oxford: Oxford University Press, 1978. 363pp.

A dozen years ago, when Professor Marder completed his *Jutland and After,* historians hailed as definitive his splendid treatment of the much debated engagement between the British Grand Fleet and the German High Seas Fleet. Marder has been moved, however, by the opening of new private and public materials to undertake an extensive revision of his masterwork. The revised edition confirms the main themes of the earlier version with considerable additional evidence, but it also adds insights into personalities and into the more technical aspects of the battle.

Especially noteworthy is his thoroughly revised chapter of reflections on the battle.

Marder still holds that Adm. John Jellicoe, the Commander in Chief of the Grand Fleet, was an astute, forceful leader endowed with far more courage than his critics would concede and that Adm. David Beatty, the Commander of the British Cruiser Fleet, was more cautious than his publicized heroics might suggest. Jellicoe's offensive ardor was cooled, however, by the knowledge that his primary objective was to retain control of the sea and that one false move on his part might (in Churchill's words) "lose the war in an afternoon." Marder acclaims "the peak moment of the influence of sea power on history" Jellicoe's opening maneuver that enabled him to cross the German T and that placed the British Fleet between the inferior enemy and his home ports. He sees Jellicoe's later controversial order to turn away from the torpedoes fired by charging German destroyers as entirely within the framework of prevailing British naval thought, and he holds that probably no tactics by Jellicoe on that fateful afternoon in May could have enabled the admiral to deal decisively with the German Fleet by nightfall. Some of Beatty's actions, on the other hand, are clearly difficult for Marder to defend.

Marder is extremely critical of the overconcentration of authority in the British commander in chief's hands that discouraged his subordinates from assuming the initiative and that may explain their repeated failures even to inform Jellicoe of German movements. Indeed, failures in communication within the Grand Fleet and between the Admiralty and the Fleet were perhaps the single most important factor that enabled the High Seas Fleet to escape to its home ports.

Marder points out that neither Jellicoe nor Beatty were in the habit of calling their captains into conference, as

had Nelson and Howe, so that the juniors would know instinctively how they should act in battle. Perhaps still more surprising, British destroyers never engaged in rigorous tactical exercises before Jutland, and their captains entered battle without written orders outlining offensive destroyer doctrine. Nor were the British prepared to fight at night, given the poor quality of their searchlights and their inability after dark to recognize friend from foe. Even had he been alerted that the High Seas Fleet was breaking through the British line in a dash for home under cover of dark, Jellicoe would not have reopened battle. Instead, he would have retired eastward to a position from which he might intercept the Germans at dawn.

Material deficiencies also plagued the British at Jutland. It was powder explosions arising from inadequate anti-flash protection rather than insufficient armor that cost the Grand Fleet three battle cruisers. German ships were well built, but their ability to survive British fire is attributed by Marder to faulty armor piercing shells that exploded on impact rather than within the German ships, where they would cause the greatest damage. To its credit, the Royal Navy profited from the lessons of Jutland, quickly raising the Grand Fleet to a high level of efficiency.

Marder praises the High Seas Fleet for the quality of its ships, for the precision of its movements, and for the superiority of its gunnery in the early phases of battle. He rates Admiral Hipper, the German battle cruiser commander, the "outstanding sea officer of the war," but his estimate of Admiral Scheer, the Commander in Chief of the High Seas Fleet, is low as Scheer was repeatedly outmaneuvered by the British and as his prime objective, after learning that he confronted the entire Grand Fleet, was to flee for home. Although the Germans claimed victory on the basis of ships sunk, Jutland was surely a strategic victory for the Grand Fleet, which retained control of the sea.

Marder's study of the battle and his superb explanation of the Grand Fleet's Battle Orders will delight every naval professional. It is safe to predict that no historian in our time will attempt a new study of Jutland, unless Professor Marder himself undertakes a third edition!

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WILLIAM REYNOLDS BRAISTED
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Margiotta, Franklin D., ed. *The Changing World of the American Military.* Boulder, Colo.: Westview Press, 1978. 488pp.

This book of 25 essays by 34 contributors—academics, experienced defense bureaucrats and military officers—focuses on military professionalism, international and domestic influences, manpower issues, organization dynamics and change, the service academies, and the future.

It is based on working hypotheses regarding military professionalism propounded by Samuel Huntington in *The Soldier and the State* (1957) and Morris Janowitz in *The Professional Soldier* (1960). Huntington contributed a brief foreword and Janowitz the opening article. Only in a footnote at the end does one find Maj. Gen. Robert Ginsburgh's observation of Janowitz' work as a self-fulfilling prophecy, as one might argue with respect to Huntington. A number of the essays, notably those by Sam Sarkesian, B. Guy Peters and James Clofelter (coauthors), Charles Moskos, George Odiorne and James R. Golden, examine how military professionalism seems to have been eroded by various external pressures. Moskos, arguing a shift from "calling" to "occupation" and John Lovell, in his Athenian-Spartan model, make the most valiant tries at reconception, while veteran organizational theorists Odiorne's essay on the pitfalls of the

"activity trap" is the most diverting and clearly written piece.

Because of the fragmentation of the work, not all beads are on the string: some are strung that should not have been, or should be strung on another necklace—a normal problem with a book of essays. Having labored in that vineyard, this reviewer will not engage in easy criticism. Editor Margiotta has done a very craftsmanlike job. But because it represents a sympathetic, "insider" perspective the book, overall, lacks a certain edge. Conceptual and critical sallies are incremental, more like reconnaissance patrols than break-throughs.

Interestingly, although there are no essays by academic or official historians, history is used by many authors not only to provide examples and embellish, but often to shore up main arguments, yet rarely with documentation. This is the case, for example, in the essay on military leadership by John Toomay, Richard Hartke, and Howard Elman, who suggest that Washington was an easy disciplinarian apparently in their ignorance of his monumental temper and heavyhanded use of field punishment when he first took command at Boston. On the other hand, the typing of Napoleon as authoritarian is well off heading. To learn that the need for military training in the 18th century was "nil" is amazing as that was an era when estimates of training for seasoned infantry ranged from 2 to 5 years. What, indeed, was von Steuben's function in the Continental Army? While Marx and Engels might agree with the suggestion that "before the age of technology the fighting man was motivated almost entirely by material considerations," such exceptions to this "law" as the Spartans, Crusaders, the Jesuit advisors to the Indians, various orders of warrior monks, the Arab armies of the 8th century, and the Janissaries come easily to mind.

In a similar vein, in an essay on "The Future Demands on the Military Professional," Vice Adm. Gerald Miller suggests that the United States "has enjoyed relatively stable conditions of government and 200 years of proof that this system of government is sound." A hundred, perhaps. But did not our nation suffer the bloodiest Civil War of modern times? This is followed by an assertion that changes in society reflect upon the military in a "traditional and logical manner." Cases of the tail wagging the dog such as Cromwell's Ironsides, Napoleon, the Indian "mutiny," the Kronshtadt sailors in the Russian Civil War, the Kiel Mutiny, Italian Fascism, the Spanish Nationalists, and the Japanese Army, 1923-41 come easily to mind. Did not Truman use the armed services as an example to the nation in ordering integration in 1947? At best, this is a chicken-egg argument. In Admiral Miller's argument that "Traditionally and logically, the operating forces have defined weapons requirements," what of Jefferson's gunboats; Congress blocking cavalry appropriations in the early 19th century; the Manhattan project; etc.? Several essays predicate a mystical past where civilians left the military in splendid isolation. How quickly the Truman Committee has been forgotten, not to mention the Covode Committee in the Civil War, the naval repair boondoggles of the 19th century, the Roosevelt-Root reforms, the War Industries Board. There is, also, frequent invocation of a world of almost monastic military professionalism before World War II. The aura of victory in World War II seems to have blinded many to careerism and bureaucratic maneuvering evident in diaries, memoirs, and biographies of that era, and in the official histories as well.

There is also frequent reference to civilianization as a recent phenomenon. Yet a century ago, General-in-Chief Sherman moved to St. Louis to escape the humiliation of being overridden by Robert Todd Lincoln, the Secretary of War, a battle that Sheridan also lost.

To steer away from the uses and abuses of history, it should be noted that many essays herein focus on the effect of forces and trends in society upon recruiting, force maintenance, and training. Three measure academy cadet traits in respect to Janowitz' original data and hypotheses, looking at social class, political, and sex differential attitudes.

There is no point in commenting on what this book intentionally excluded: arms control; effects of technology on hardware; tactics, strategy, and doctrine; weapons systems; missions; minorities and women. As adaptation to change is a main theme, however, it is interesting to consider factors omitted or treated lightly. There is but passing reference to the possibility that the EM-NCO-officer rank system may stand as a barrier to recruitment and retention, or that the service academy 4-year degree-granting system may offer too high an entry threshold, in more than one sense, while ROTC may be too low. Margiotta in his summary and others, like Russell Hale and Leland Jordan, while analyzing new legal and budget constraints, recognize formal changes in the wiring diagram of power *vis à vis* Congress and the executive branch of government. Yet much external social change is left unmentioned, particularly in respect to very recent history, and there is very little suggestion of rewiring the board in the military system itself. No distinction is made between leadership and the exercise of formal authority. Margiotta comes closest to this issue in pointing out the extensive fragmentation of motive and function with the growth of the administrative tail, and suggests that a persistent negative self-role concept in the military, in spite of increasing public favor, needs to be examined more carefully. Indeed it does, and derivative hypotheses as well, that the shift from the rewarding, athletic camaraderie of "tribal" life at basic unit, ship, and aircraft crew levels to the

careerist, sedentary, cerebral, and competitive middle and upper layers is a vital part of that problem. And that the military, swimming against strong currents in the culture, to the point where the real upper classes are the most unrepresented element in the officer corps, tends to attract many who see themselves short of full status, in a kind of reverse image of the alienation of the left.

Margiotta also hypothesizes a declining likelihood of the use of military force by Western Powers, while Huntington suggests the same, but warns of overreaction should forces be employed. If true, such paramilitary activities as propaganda, intelligence analysis, and economic warfare are not receiving enough attention. Margiotta's prediction of "few Pearl Harbors" in the future is not wholly reassuring in the nuclear age when one might be more than enough. Thus, it seems strange that amid all the concern about civilian authority over the military in this book there is no weighing of the major driving force: the threat of nuclear war and the "red phone." Perhaps this omission is analogous to what Stouffer and his colleagues noted in World War II, that combat troops suppress fear of those weapons statistically most likely to kill or wound, and fixate instead on exotic oddities in the enemy arsenal.

Also interesting are Margiotta's comments on the very wide gap in differences between suborganization function, and between the various services, a point often brushed aside or overlooked. Yet, it might also be asked, have not such differences tended to blur out in the upper reaches of the defense bureaucracy? In all these cases, more research needs to be done, and this thought-provoking work has done a solid job of suggesting where wells are running dry and where new ones might be drilled. Perhaps landmark is too strong a word, but *The Changing World . . .* will be hard

for those interested in strategic studies to avoid.

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Scherer, John L., ed. *U.S.S.R. Facts and Figures Annual.* Gulf Breeze, Fla.: Academic International Press, 1979. v. 3. 308pp.

A review in these pages of the 1977 volume of this series commented on the accuracy and completeness of the information in that volume and noted that if "appropriate information can be presented in tabular or statistical format, it probably can be found in UFFA." Those comments remain valid.

This, the 1979 volume, continues to fulfill the promise of its editor to provide "recent, basic data in fifteen major areas of Soviet life." The organization of the series remains generally fixed; that is, there are chapters on Government, Party, Demography, Armed Forces, the Economy, Agriculture, etc., but information is not repeated from year to year. Rather, each volume of UFFA is planned as a continuation of earlier volumes. This will obviously keep the cost of each volume at a reasonable level but will require that its users have access to the entire series. In this regard it is suggested that the editor reprint the table of contents of preceding volumes in the current *Annual* or provide some other sort of index to material previously published. Scholars and reference librarians will appreciate the added convenience (as they must already appreciate the convenience of one excellent source for such a wide range of information).

Institutional libraries and individuals whose research requirements include broad Soviet data will come to depend on UFFA (and they may wish to enter a standing subscription with the publisher) but even the casual browser will benefit (list of new Soviet movies, information on crime and crime rates, instant history in the year in review, major events from 1917 to the present, lists of artists and scientists, the complete constitution of the U.S.S.R., rental rates, the price of a television set, particle beam weapons assessment, biographic sketches, etc.). *U.S.S.R. Facts and Figures Annual* is the *World Almanac* of specifically Soviet information.

W.R. PETTYJOHN
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Scott, Harriet Fast and Scott, William F. *The Armed Forces of the USSR.* Boulder, Colo.: Westview Press, 1979. 439pp.

In the delicate strategic balance between the United States and the Soviet Union, the precise assessment of such quantitative power factors as orders of battle, force levels and technological developments represent only part of the matrix for determining the current posture of Soviet military power. Just as important, even if less tangible, are such qualitative areas as doctrine, strategy and organizational dynamics that add a meaningful thrust to the overall scope of the burgeoning Soviet military buildup as it has progressed over the past decade and a half. Despite the wealth of Soviet military source materials that has appeared during the post-1960 "Revolution in Military Affairs" period, there continues a distinct Western analytical tendency to "mirror image" or otherwise equate Soviet views on these qualitative factors with those more prevalent outside the U.S.S.R./Warsaw Pact region. In contrast, the work at hand allows the reader to view the Soviet Military Establishment as it perceives its own missions and roles in line with the above trio of qualitative factors and thereby helps clarify many of the misperceptions still apparent among the Western analytical community.

Both authors are highly qualified observers of the contemporary Soviet military scene. A former Air Force

attache and intelligence officer, Dr. Scott served two tours in Moscow from 1962 to his retirement in the rank of colonel a decade later. Since that time, he has lectured and written widely on the topic, as has Mrs. Scott who, in her own right, has prepared a number of excellent analyses on current developments in the Soviet high command and on the U.S.S.R.'s national civil defense program over the recent past. With such credentials, the Scotts are particularly able to skillfully penetrate the often perplexing facade of official Soviet policy pronouncements and precisely identify key conceptual elements of its military doctrine and strategy. As briefly cited above, this facility permits the reader to better comprehend the actual nature of modern Soviet military power while simultaneously avoiding analytical pitfalls emanating from either Soviet jargon or from the common Western propensity for mirror imaging. Based almost entirely on Soviet sources, including many written by prominent military leaders and theoreticians, their painstaking research effort has successfully refined these materials into a clear, crisp analytical presentation that should capture the attention of specialists and general readers alike.

Following a three-part, twelve chapter organization, the work reveals a major contextual strength with its consistently smooth literary transition from the more theoretical aspects of Soviet military doctrine and strategy to their practical application within the Soviet Armed Forces and in their militarizing effect on other key sectors of the modern Soviet state system. Initially featuring a comprehensive, but incisive, historial overview of the Soviet military from the October 1917 Bolshevik Revolution to the close of World War II, this chapter serves as solid background for their later treatment of more contemporary matters. Moreover, their attention to the Soviet military past as a firm prelude to the current era continues

throughout the book and provides both added dimension and flavor to their discussions of latter-day doctrinal concepts and organizational dynamics. Another major strength, this feature is readily apparent in the remainder of Part I (Chapters 2 and 3), which traces the origins and development of Soviet doctrine and strategy, and in their examination of the high command and its intricate network of force components and organizational support (Chapters 5 and 6).

The authors' ability consistently to maintain a contextual nexus between the theory and practice of modern Soviet military affairs is equally as pervasive as is their historical bent. After establishing the dominant role played by the Communist Party of the Soviet Union (CPSU) in both doctrine and defense policymaking, they further emphasize that there is but one officially approved view for the conduct of modern warfare. The most consistent theme in recent Soviet military writings along that line, they observe, is that the development of powerful strategic nuclear forces on a par with or superior to those of the United States is an absolute prerequisite to any projection of its military power and presence under either nuclear or nonnuclear warfare conditions. Carried a step further for nonconflict situations, this Soviet perception helps explain its recent activities in Africa and elsewhere in the Third World. Applying this factor of CPSU dominance to its political elite's almost total control of the already tightly knit, highly centralized defense structure with respect to the military, the economic sector and the national mobilization/training base, the Scotts provide a penetrating assessment of the U.S.S.R. as a modern "nation-in-arms" in Parts II and III. Their treatment of the military educational system, particularly its senior officer academies, in Chapter 11 also deserves special mention for its impressive insights into Soviet per-

spectives on this vital area. For naval readers, the sections on the Soviet Navy in terms of its leadership, doctrine and operational force components are especially worthwhile, if somewhat brief, for their relevance to the overall fabric of Soviet military affairs.

There are a few errrors throughout the work. For example, the famed Red Army leader Marshal Blyukher is portrayed as the chief Soviet Advisor to Nationalist China from 1924 to 1929 (p. 190). In fact, he had been expelled in mid-1927 after an abortive Soviet-CCP coup attempt and, by late 1929, had already commanded the famed Special Red Banner Far Eastern Army during the first modern Sino-Soviet border clash that autumn. Elsewhere, the Soviet IL-12 aircraft is described as "identical" to the famed U.S. DC-3 transport (p. 158), when the actual equivalent was the Lisunov LI-2 which the U.S.S.R. had both obtained from the U.S. and built under a Lend-Lease licensing agreement during the Second World War. Such slips are merely superficial and hardly detract from the authors' otherwise uniformly superior presentation of much more substantive issues.

Amply supported by nearly 150 charts and tables along with considerable photographic coverage, the work is as attractive as it is informative in its portrayal of the Soviet Military Establishment and the doctrine that comprises its driving force. The Scotts' analysis should serve as a solid source for forming judgments on such current issues as SALT II, MBFR and the East-West military balance and should endure as an authoritative topical reference.

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Office of the Assistant Secretary
of Defense for Public Affairs

Shawcross, William. *Sideshow, Kissinger, Nixon and the Destruction of Cambodia.* New York: Simon and Schuster, 1979. 396pp.

Sideshow is a gripping portrayal of men's frailties. It is a story of man's inhumanity to man, of deceit, psychological shock, bombing, torture, starvation, murder. William Shawcross would like to establish that Richard Nixon and Henry Kissinger were the villains directly responsible for all these excesses. Yet, somehow, the ultimate impression gained is that Cambodians themselves were most cruel to their countrymen, with Vietnamese, North or South, showing no sympathy for their neighbors and running a close second in cruelty.

If American leadership were error prone, it was less so than that of the grossly inept rulers of South Vietnam and Cambodia. Perhaps another team in Washington could have dealt with Vietnam and Cambodia more to Shawcross' satisfaction than did Nixon and Kissinger. Regardless of who made U.S. decisions, the problems certainly would have been vastly different had stronger men than Sihanouk and Lon Nol ruled in Phnom Penh. No, the author's argument simply won't wash. It is obvious that the real villains in the story were the leaders who made fewest errors as they implacably prosecuted their war, the Hanoi Politburo. *Sideshow* does not include this rationale.

Shawcross seems unable to understand that war is by nature irrational. War is best regarded as a gutter fight, where any participant uses the weapons he has and where even the noble, when perplexed, can lash out. He misreads history if he thinks that America had never lashed out prior to Vietnam.

Henry Kissinger reportedly has deferred publication of his memoirs in order to refute the record of Cambodia deduced by Shawcross. This is fortunate, because although *Sideshow* is touted as history by its publishers, it is lacking on two counts.

There is no sense of perspective. Shawcross has painstakingly compiled and excitingly related a wealth of facts, but does not put them in perspective. He is the barker for his sideshow, but he doesn't relate it to past sideshows.

Vietnam must be classed as a peninsular war, and a war of land power vs. seapower. The author had no further to look than to his own British history of the Napoleonic wars, particularly in Iberia, to see that the seapower is forced to put infantry on the ground and to deny sanctuary to its enemies. This is a standard course of action, yet it is decried in *Sideshow* because Cambodia's "neutrality" was violated.

Nor does the barker inform his customers what else was going on concurrently in the circus. Shawcross seriously shortchanges the important argument that Nixon and Kissinger were able to close out U.S. participation in the Indochina war by maneuvering at the tripolar, call it "three-ring," superpower level. It is well and good to say that Cambodia suffered and that Washington should have placed a higher premium on Cambodian interests than on Chinese, Soviet or U.S. interests. But if this also meant protracted U.S. involvement rather than withdrawal, what would have been the advantage? Cambodia was not a U.S. pawn in superpower politics, it was a Chinese pawn. Peking used it as long as possible to counter Moscow's use of Hanoi to further the encirclement of China. As we now know, by 1970 the Indochinese war had become an intramural Communist battle, not a "war of national liberation." Nixon and Kissinger saw and seized the opportunity offered by China's search for aid (ping-pong diplomacy) in her burgeoning struggle with Moscow. Who would contain Hanoi? Not the United States, but China. It is fascinating and ironic that this book, so critical of U.S. superpower politics, was published at a moment when China was waging war on Vietnam directly rather than by proxy.

When a good history of the Indochinese war is written, 30, 50, or 80 years from now, it is likely to tell us that American participation in Vietnam, 1954-1975, and in Cambodia,

1969-1975, was only an episode, a sideshow, in a protracted and passionate struggle of Asian realignment.

W. A. PLATTE
Captain, U.S. Navy

Smith, E.D. *Battle for Burma*. New York: Holmes & Meier, 1979. 190pp.

Burma has been so little in the American public or diplomatic eye in recent years that it is easily forgotten that in World War II Burma was the center of conflicting strategies of Britain, China, Japan and the United States. Brigadier Smith, who served with the Gurkhas in Southeast Asia during the war, started out to write about the battles of the Burma campaign but found that the actual engagements were "dictated by national aims and strategic aims of the combatants" to such an extent that his history had to be fitted into a larger frame.

Brigadier Smith discovered a tangled trail of political aims. Churchill had an obsession with the prestige of a speedy recapture of Singapore, and Burma was only a means to that end; but, he wanted to know from the Imperial General Staff, why had Americans liberated the first town in "British Burma"? The United States saw Burma only as a means of getting supplies to Nationalist China; once the successful two-pronged drive across the Pacific had ensured that no campaign on the China mainland would be necessary, the United States gave Burma a very low priority and even withdrew many air units in 1944. For his part, Chiang Kai-shek was suspicious of the British (a suspicion that was returned when Chiang tried to meddle in British-Indian affairs) and only agreeable to taking even a minimal part in what he saw as an imperialist campaign when the United States offered him additional arms or money. The Japanese, once their thrust toward India had been stopped, went on the defensive in a

"pointless and futile gesture," outnumbered and with no air force. The author concludes by asking "if the British or Japanese, for that matter, did much good by remaining locked in such a lengthy struggle?"

But before he reaches this Peterkin conclusion, Brigadier Smith tells a good story of the 1942-45 battles, from the initial disheartening defeats (the Japanese conquered Burma with two divisions) to the bittersweet capture of an abandoned Rangoon in May 1945. The British and the Americans had to learn modern jungle warfare practically from scratch. Brigadier Smith thinks that the British learned then the lessons that were so successful later in Malaya and Borneo against the Communists and the Indonesians. There were never very many men actually fighting in the Burma campaign, but because of terrain, weather and logistic problems it became very much a soldier's war. More Victoria Crosses were won in Burma than in Italy or Normandy.

The author is always fair in his judgments (even to Stilwell), but one wonders if his greatest admiration isn't reserved for the Japanese fighting man, just as his strongest strictures are saved for the Japanese high command whose "inflexible tactics, ill-conceived arrangements for administration, and unquestioning optimism became a dangerous mixture."

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Steiner, Zara S. *Britain and the Origins of the First World War*. New York: St. Martin's Press, 1977. 305pp.

Zara Steiner has written a worthy addition to the fine British series, *Making of the 20th Century*, edited by Christopher Thorne. The book fulfills the series' promise to examine the major events of this century through readable, general studies benefiting from the latest scholarly interpretation, sources

and bilbiography. In this work, the critical event is British involvement in the international politics leading to World War I.

The reader will find here no sharply revisionist interpretation of the British prewar role. Steiner contends that British foreign policy was relatively consistent and uncomplicated–the product of enduring and generally accepted objectives, the almost unchallenged personal direction of the Foreign Secretary, Sir Edward Grey, and the escalating external threat posed by the German Empire. That policy is implicitly contrasted with the aggressive and erratic conduct of concurrent German foreign affairs–generated by internal social, political and economic turbulence, and disruptive personal rivalries and ambitions. (German policy is well analyzed in the companion volume of this series, *Germany and the Approach of War in 1914* by Otto Berghahn.)

The text clearly identifies the paramount trends in 20th-century British foreign policy. The objectives are described as essentially defensive: retreat from overextended diplomatic commitments, consolidation of vital imperial holdings, and protection and preservation of an enviable trade preeminence. Such goals were well established and in large part implemented by Conservative Governments at the turn of the century; they prompted attempts at either rapprochement, entente or alliance with Japan, the United States, Germany, France, and Russia. These policies were continued with considerable fidelity by the prewar Liberal Ministries in which Grey directed diplomacy.

Grey's preeminence in the control of British foreign affairs, 1905-1914, is also thoroughly described. He is shown as master of his own elitist ministry, autonomous in thought and action despite the growing Germaniphobia of his subordinates. Nor did representatives of the military succeed in altering the course of policy charted by the Foreign

Secretary; in fact they were almost criminally ignored by the foreign policy establishment. Grey was also relatively immune from challenges within a Liberal Cabinet largely ignorant of the specifics of his policy and reluctant to jeopardize precarious party unity with disputes over foreign affairs. Parliament itself was seldom afforded clear explanations of the implications of Grey's diplomacy and had little institutional capacity to influence negotiations directly even had such information been forthcoming. Beyond this, the public was even further removed from the intricacies of policy formulation and proportionately less able to affect its course.

Noting that traditional policy and autonomous leadership operated to ensure consistency in British foreign affairs, the author also contends that circumstances afforded the Foreign Secretary very little freedom of action. At home, the Government faced a sluggish economy, escalating demands for expensive social welfare programs, and sharply rising costs of military hardware; abroad, new challengers arose to dispute British claims along the frontiers of empire in Africa, the Middle East and Asia, while the Boer war and other adventures demonstrated British military inefficiency and impotence. These factors made it indispensable that Grey conciliate the most dangerous of Britain's rivals, notably France and Russia; yet the very policies that did so placed England in the camp of those powers most vulnerable and resistant to the growing Continental power of Germany. Despite the initial lack of fundamental conflicts in Anglo-German interests, there were few areas of potential cooperation. Those there were soon fell victim to irresponsible and inflammatory German challenges to both the European and world status quo, and even worse, to the naval superiority Britain considered vital to imperial security. Thus Grey was left no choice

but to reinforce an anti-German Continental balance and Britain's own global naval supremacy.

The author concludes that when war came it was the culmination of German actions which, while not primarily directed against England, seriously threatened long-term British interests and recent obligations. These actions ultimately required the Foreign Secretary to lead the British people to war on behalf of an acceptable European balance, outstanding diplomatic commitments, and imperial security. Sir Edward Grey is thus depicted as the custodian of historic interests and policies that he skillfully defended until the final crises of 1914.

The reader need not challenge Professor Steiner's excellent account to arrive at a far less complimentary interpretation of British foreign policy as articulated by Sir Edward Grey. Other scholars have with the same evidence criticized the Foreign Secretary's determination to maintain the imperial status quo, in conjunction with France and Russia, at the expense of a more objective attitude toward the European balance. They have also marveled that Britain, who historically had refereed the disintegration of the Ottoman Empire in order to prevent the outbreak of any general European conflagration, was so insensitive to the equally apparent and even more dangerous threat of Austro-Hungarian dissolution. And from the evidence in these pages alone, anyone can question a policy that on the eve of crisis left British response unclear to friends and enemies, cabinet members and service chiefs, Parliament and public; that placed Britain's fate at the mercy of accidents such as the invasion of Belgium and imprudent Germanic declarations; that responded so clumsily and tardily to a situation that had been the focal point of British diplomatic maneuvering since the formation of the entente system. This reader concedes Steiner's claims for the

essential legitimacy and benignity of Grey's foreign policy efforts, but he finds little cause for praise in a policy so lacking in precision and initiative, and so devoid of strategic considerations.

In addition to its contribution to our understanding of and debate on the responsibility for the First World War, this work will inevitably be analyzed in the context of current U.S.-Soviet relations. The obvious analogies will be drawn between Great Britain and the United States. The latter will be seen as a similarly satisfied power facing domestic problems and costs, eroding military credibility, and an aggressive challenge to its international, and especially its naval, primacy; and this threatened power will also have the options of détente, preemptive strikes (as the British considered "Copenhagening" the German Fleet in 1904), defensive alliances, or an arms race, to assure its continued supremacy. One hopes that any such analogies will note major differences in the contemporary international environment, the nature of military conflict, and the policy control mechanisms of the states involved in ostensibly parallel situations. But analysts may legitimately ponder certain grim reminders of the consequences of error in assessing enemy intentions and passivity in the face of challenge.

RICHARD MEGARGEE
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RECENT BOOKS

Selected Accessions of the Naval War College Library

Annotated by

Ann Hardy, with Kathleen Ashook
Doris Baginski and Mary Ann Varoutsos

Boston Study Group. *The Price of Defense; a New Strategy for Military Spending.* New York: Times Books, 1979. 359pp. $15.00
The Boston Study Group favors a reduction in defense spending affecting both conventional and nuclear forces. Employing graphic comparisons between existing and projected U.S. and foreign military forces, they maintain that American military policy should be reassessed: it should eliminate half the present Military Establishment, reducing "interventionist" conventional forces; it should avoid the appearance of having a preemptive strike capability; it should depend on submarine-launched missiles and a very limited number of ICBMs; and it should discourage advanced technology for developing new weapons systems, and discontinue extensive arms sales abroad.

Buzan, Barry. *A Sea of Trouble? Sources of Dispute in the New Ocean Regime.* Adelphi Papers, no. 143. London: International Institute for Strategic Studies, 1978. 50pp. $1.50
Long regarded as inexhaustible and inaccessible, ocean resources have recently become an important source of international conflicts and disputes because of their realizable economic value and the growth in the number of sovereign states. After first categorizing disputes related to law-of-the-sea issues, this incisive analysis surveys past, present, and potential conflicts

within key regions. Though most of these disputes will not become armed confrontations, the innumerable technical problems and deep political divisions attending the changing ocean regime will probably preclude the formulation of a widely acceptable convention in the near future.

The Changing Pacific: Essays in Honour of H.E. Maude. New York: Oxford University Press, 1978. 351pp. $39.50

Anthropology and history receive major disciplinary representation in this collection of essays that recognize Harry Maude's years of governmental and professorial offices in behalf of the Pacific islands. Addressed to social change in the area, these interesting papers treat many phases of the ancient culture and tribal customs and affiliations, tracing their evolution and degree of adaptation to changing situations and world relationships.

Committee on the Present Danger. *Is America Becoming Number 2?* Washington: 1978. 46pp.*

Maintaining that the Soviet Union seeks military superiority over the United States in order to pursue her goal of world dominance, the Committee on the Present Danger stresses the responsibility of Americans to keep informed of the available facts on the Soviet-American military balance. A comprehensive assessment of Soviet strategic doctrine and military power, with a discussion of the implications for U.S. defense policy, is undertaken in this fourth study by the Committee.

*For price information, contact the Committee on the Present Danger, 1028 Connecticut Avenue, N.W., Washington, D.C. 20036

Cortada, James W. *Two Nations over Time: Spain and the United States, 1776-1977.* Westport, Conn.: Greenwood Press, 1978. 305pp. $22.95

The long-term hostility exhibited throughout the course of Spanish-American diplomacy is attributed to conflicting territorial claims; Spanish misconceptions of U.S. culture; competition for political and economic power; and the influence of past history, traditions, and dissimilar goals and values. The author summarizes past research on the subject, which he complements with his own investigations. There is a bibliographic essay, and appendixes list Spanish envoys to the United States and American envoys to Spain.

Duignan, Peter and Gann, L.H. *South Africa: War, Revolution, or Peace?* Stanford, Calif.: Hoover Institution Press, 1978. 85pp. $5.95

Duignan and Gann contend that the achievement of a just political system is possible through reform rather than revolution in South Africa, and that civil war in that country would be disastrous for the whole continent. They feel the Western democracies should not seek to isolate South Africa, but should encourage constructive change by promoting economic development and political reform within the country.

Ezell, Edward C. and Ezell, Linda A. *The Partnership; a History of the Apollo-Soyuz Test Project.* Washington: National Aeronautics and Space Administration. Scientific and Technical Information Office, 1978. 560pp. $8.30*

Based upon direct observation at working sessions, on-the-spot interviews, and ongoing access to reports, correspondence, and memoranda, this official

history of the first joint manned space flight emphasizes the human interaction evident in the execution of the Apollo-Soyuz Test Project. Although most of the narrative focuses on the years 1970 to 1975, the introductory chapters trace the origins of the cooperative space effort and provide some background into the state of the art. Photographs, charts, chronologies, and extensive source notes accompany the text.

*For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Hayes, James H. *The Evolution of Military Officer Personnel Management Policies: a Preliminary Study with Parallels from Industry.* R-2276-AF. Santa Monica, Calif.: Rand, 1978. 202pp. $10.00
To provide insight into the current practices and problems of military personnel management, this report traces the evolution of personnel management policies through six historical periods, placing particular emphasis on the 20th century. Comparisons with similar practices in industry during the same periods show that the military's management of its officer corps compares favorably with personnel management in larger firms, and is better than that found in small or medium-sized corporations.

Heise, Juergen A. *Minimum Disclosure: How the Pentagon Manipulates the News.* New York: Norton, 1979. 221pp. $10.95
The Department of Defense is scrutinized to determine how it handles information possibly damaging to its public image—a problem common to many government agencies. Heise considers the feasibility of a bureaucracy's adhering to a news release policy based on the premise that the direct publication of releasable information, even when painful, is ultimately healthier for a public agency than attempts to cloud uncomfortable issues.

Johnson, Kenneth F. *Mexican Democracy: a Critical View.* New York: Praeger, 1978. 267pp. $19.95
Quotations from Mexico's leading intellectuals strengthen the threads of this grim psychological study of Mexican political life. The effects of the ancient Aztec culture on the modern society are emphasized as the historical roots, present crises, and future prospects of democracy in Mexico are analyzed.

Johnson, Stuart E. with Yager, Joseph A. *The Military Equation in Northeast Asia.* Washington: Brookings Institution, 1979. 87pp. $2.95
Calling for a reexamination of U.S. force levels in Northeast Asia, the authors of this study assess the present balance of power in this region and analyze the nature and likelihood of various military contingencies from a broad, strategic point of view. They conclude that a posture matching forces and needs would not require any permanent ground combat troops in Japan or Korea, but only the forward deployment of one carrier group augmented by one or two assault landing ships carrying V/STOL aircraft.

Kinsella, William E., Jr. *Leadership in Isolation: FDR and the Origins of the Second World War.* Boston: G.K. Hall, 1978. 282pp. $15.50
Franklin D. Roosevelt's personal and official correspondence, memoranda, and intelligence reports are researched extensively in this appraisal of his

acumen in foreign affairs prior to American involvement in World War II. Roosevelt emerges as a skillful, perceptive statesman who foresaw the inevitability of global conflict, but realized that most Americans would not support the war until the country was placed clearly on the defensive.

Murray, Russell. *The Quest for the Perfect Study.* Professional Paper No. 182. Arlington, Va.: Center for Naval Analyses, 1978. 58pp.*
Russell Murray discusses the purpose, organization, and standards of the review process at the Center for Naval Analyses, where he served as review director from 1973-1977.

*For price information, contact the Center for Naval Analyses, 1401 Wilson Boulevard, Arlington, Virginia 22209.

Peterson, John E. *Oman in the Twentieth Century: Political Foundations of an Emerging State.* New York: Barnes & Noble, 1978. 286pp. $22.50
After observations on Oman and her people, this study identifies the four major themes in modern Omani politics. It examines the challenges to the Sultanate leading to the inevitable coup of 1970 which ended Oman's isolation, liberalized her traditionalism, and brought her into closer social and political alignment with her modernizing neighbor states. Though the tribal role has been severely reduced in the process, the dynastic Sultanate still endures.

Ruge, Friedrich. *Rommel in Normandy: Reminiscences.* San Rafael, Calif.: Presidio Press, 1979. 266pp. $12.95
As naval advisor to Field Marshal Rommel from November 1943 to August 1944, Admiral Ruge was in a unique position for closely observing Rommel on a daily basis as he planned and conducted the defense of the Western European coastline. Using personal notes, reminiscences, and official papers, Ruge focuses directly on Rommel's generalship during this campaign, suggesting that because of his conflicts with the Wehrmacht High Command, Rommel was not allowed the freedom of action, control of forces, or resources needed successfully to thwart the Allied invasion.

Soviet Dynamics—Political, Economic, Military. Pittsburgh: World Affairs Council of Pittsburgh, 1978. 97pp. $5.00
At the 17th Forum of the World Affairs Council of Pittsburgh a panel of five to six authorities was assigned for each of three aspects of U.S.-Soviet foreign relations—political, economic, and military. Their discussions and conclusions on U.S.S.R. capabilities in each area and their import for U.S. action in international affairs are reported in the three papers constituting this volume. Also included are the rapporteur's résumé of the Forum and the text of a luncheon address by the Honorable George Bush.

Soviet Succession: Leadership in Transition. Beverly Hills, Calif.: Sage, 1978. 80pp. $3.00
This Number 59 of The Washington Papers consists of five presentations by noted Sovietologists in which they scrutinize the structure, qualifications, and patterns of the present and emerging Soviet elites; the economic problems facing Brezhnev's successors; and the significance of a new Soviet leadership for U.S.-Soviet relations.

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