

1981

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Recommended Citation

Cordier, Sherwood S. (1981) "Set & Drift," *Naval War College Review*: Vol. 34 : No. 4 , Article 9.
Available at: <https://digital-commons.usnwc.edu/nwc-review/vol34/iss4/9>

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SET AND DRIFT



COMMAND OF THE AIR AT SEA: V/STOL AND SMALL CARRIERS*

by

Sherwood S. Cordier

How can the Western alliance cope with the challenge of Soviet naval airpower to the sealanes of the world? The most immediate, potentially devastating and rapidly growing threat is posed by the *Backfire* missile-firing bomber. What can be done to thwart the depredations of *Backfire*?

Can fighter units based on shore ensure protection for task forces and convoys far out at sea? Are land bases a less costly and more efficient means of securing effective tactical airpower? The limitations of land-based fighter cover are incisively underlined by M. Forrest:

To maintain a Combat Air Patrol of two Phantoms over a force 450 miles from an airfield would need six serviceable aircraft and 12 crews Move the force out to

700 miles or so and a squadron of 14 aircraft at 70 per cent serviceability is required.¹

And the vital part played by fighters against enemy warplanes is concisely portrayed:

Fighter aircraft have an important job to do even before any attack is launched The shadowing aircraft (enemy), keeping outside SAM range, is there to provide continuous briefing for the raid leader and it is the fighter's task to shoot down the shadower before the raid comes in. Secondly, if there are no fighters, the bombers can improve their chances of success by coming in close enough (a range bracket of 70-100 miles, depending on missile radar frequency) to allow the missile head to lock on to the target before launch

When the raid comes, only fighters can pre-empt attack by shooting down the bombers before missile release²

Thus there can be no substitute for carrier-based fighter aircraft.

*This paper constitutes the basis for a chapter in the forthcoming University Press of America book, *The Air and Sea Lanes of the North Atlantic: Their Security in the 1980s*. Research was supported by a fellowship and grant from the Faculty Research Fund of Western Michigan University at which the author is Professor of History.

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Moreover carrier-based warplanes are needed to protect Western interests in far corners of the world. Many of the natural resources upon which Western economies depend flow from the Persian Gulf area and southern Africa. In these regions airfields are few and quite inadequate to sustain operations by sophisticated aircraft. Politically, these areas are explosively volatile and unstable. Under such circumstances, carriers are the swiftest and most reliable way to bring airpower to bear in the crises that convulse these vital areas.

Studies have demonstrated that the giant attack carrier is the most powerful and efficient instrument of airpower at sea.³ The large carrier benefits from sheer economy of scale, and can carry many warplanes and much fuel and munitions. Such warships also feature extensive repair and maintenance shops. And the supercarrier is very fast and long ranging. Although no warship can be invulnerable, the giant carrier can absorb tremendous punishment and is extremely difficult to put out of action.

The large attack carrier is of course quite costly. Much of the striking power of the fleet is concentrated in a relatively small number of key warships. And even the huge carrier is vulnerable to nuclear weapons. Hence the loss of a supercarrier would be a serious blow.

In 1980 twelve firstline attack carriers were to be found in the American Fleet.⁴ One supercarrier is undergoing major overhaul and another has just begun comprehensive modernization. One nuclear fueled attack carrier of the *Nimitz* class is under construction and is expected to enter service in 1982. And funds have been appropriated for an improved *Nimitz*-class carrier. A series of thorough modernization overhauls, the Service Life Extension Program, will ensure the viability of the supercarrier fleet through the 1990s.

American carrier-based naval and Marine fighter strength in 1980 num-

bered 168 Grumman F-14As and 288 of the much older McDonnell Douglas F-4 *Phantoms*.⁵ The cutting edge of carrier-based airpower was to be found in 300 Vought A-7 *Corsair II* clear weather attack planes, 170 Grumman A-6 all weather attack machines, 80 McDonnell Douglas A-4M light attack aircraft, and 78 British AV-8A V/STOL fighter-bombers.

The aging *Phantom* fighters and the *Corsair* attack machines (limited to clear weather operations) are scheduled to be supplanted by a new fighter/attack airplane, the McDonnell Douglas F-18 or *Hornet*. However the *Hornet* is only now undergoing testing. And the expected cost of the *Hornet* program has skyrocketed to an estimated \$30 billion.⁶ It will thus be the most expensive weapon program in the Navy.

What capabilities does American naval airpower really need? How can these capabilities be realized as swiftly as possible?

The attack carrier must be protected against attack by fast bomber and missile. This essential task can be most effectively performed by the F-14. Substantially more of these advanced "swing-wing" machines should be secured. Indeed the *Tomcat* ought to be the Navy's fighter.

For offensive punch, the Navy needs a warplane able to operate in the worst weather conditions, function in a massive electronic situation, and possess a long-range capability. Fortunately, such a machine exists in the Grumman A-6E *Intruder*.⁷ Electronically a very sophisticated aircraft, the *Intruder* is equipped with an all weather navigation system and an extremely accurate computer attack system; and the A-6E can carry a substantial payload over a radius of some 950 miles. Considerably more *Intruders* are needed (shipboard squadrons are currently under strength) and should be procured. *Intruder* should constitute the prime offensive weapon of naval airpower.

Inasmuch as F-14 and A-6 can quite effectively fulfill the roles envisaged for the F-18 that costly program could be cancelled and the funds employed to purchase *Tomcats*, *Intruders*, and an improved model of the V/STOL fighter bomber. A warplane is needed to provide close support to the Marines and other ground troops.

The British Aerospace *Harrier* V/STOL fighter bomber has been in service with the Royal Air Force (151) and the U.S. Marine Corps (110) for some 10 years and is a thoroughly tested and proven aircraft. It is also operational with the Spanish Navy, and a special version, the *Sea Harrier*, is entering service with the Royal Navy.

Quite different from conventional aircraft, the *Harrier* enjoys many advantages. It can fly from small vessels with short decks—no costly and cumbersome steam catapults and arrestor gear are necessary. On shore it can operate from small and primitive airstrips and other rudimentary sites. The *Harrier* is easy to maintain, service, and rearm. And it can operate with a ceiling as low as 200 feet and visibility of ½ mile.

To augment range and payload the *Harrier* is most frequently flown with a short takeoff run and landed in the vertical mode. In Marine Corps service the AV-8A can carry a four-ton payload of fuel and munitions over a radius of 225 nautical miles, can fly more than six missions a day, and can be on its way within 1½ minutes of a request.⁸

Harrier is thus a particularly useful fighter-bomber in the close-support mission; and it is a formidable opponent in air-to-air combat. A very high ratio of engine power to weight endows the *Harrier* with excellent acceleration and a superlative rate of climb. Exceptional maneuverability is conferred by the ability to rotate the thrust nozzles while in level flight.⁹

The main opponents of *Harrier* are Soviet *Badger*, *Blinder*, and *Backfire* bombers and reconnaissance machines.

Harrier easily exceeds the top speed of the *Badger*. *Blinder* and *Backfire* are fast machines—but when laden with externally mounted missiles their cruise speed is reduced to 560 knots, well below the maximum *Harrier* speed of 737 knots. *Backfire*—clean—can outrun *Harrier* at altitude, but at low-level tops out at 650 knots.

The *Sea Harrier* in Royal Navy service can fly an interception mission out to a 400 nautical mile radius.¹⁰ In the reconnaissance role, *Sea Harrier* can scout at low level 20,000 square miles of ocean in 1 hour. And *Martel* or *Harpoon* missiles can be unleashed against enemy warships. Thus *Harrier* is a versatile warplane, capable of fulfilling enough roles to make a "Harrier carrier" a viable concept.

Critics of V/STOL aircraft have argued that such machines are inferior in range and payload to conventional airplanes. To be sure, the *Harrier* is not at all suited for long-range penetration or offensive, high-speed fighter operations. However, the installation of an upward curve in the front end of a flight deck can give extra impetus to a short takeoff. Enjoying the advantage of such a "ski-jump" takeoff, the *Harrier* can carry an extra ton of payload or gain a 50 percent increase in radius of action.¹¹

The most incisive assessment of *Harrier*, however, is voiced by Roy Braybrook who outlines the problems levied by V/STOL operation upon engine design:

In order to achieve a high thrust/weight ratio engine, the designers of the Pegasus chose a moderately high bypass ratio (in comparison with the normal order of bypass ratio for high performance aircraft), which inevitably involves a rapid thrust decay with forward speed. As a result, the maximum attainable speed of the *Harrier* is restricted to something in the region of 600 knots, a speed within the reach of conventional aircraft

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of much lower static thrust/weight ratio.¹²

Braybrook also emphasizes the necessity for a more powerful engine. As more equipment and weight has been added to *Harrier*, the margin of power available for operations in hot weather conditions and high airfields has waned considerably.¹³ A particular handicap for the *Harrier* in the fighter role is the difficulty in a vertical landing with the weight of unexpended missiles, especially in hot and high situations.

Even so, flexibility, versatility, and ability to operate from small and austere surfaces make the V/STOL warplane an attractive asset. And the employment of V/STOL aircraft could secure more airpower at sea on a much wider variety and larger number of vessels. Such a dispersal of sea-based airpower could partially offset the present concentration of naval aviation in a dozen super-carriers. The catastrophic effect of the loss of an attack carrier would be lessened by the survival of aircraft in dispersed and smaller aviation ships.¹⁴

Above all, airpower will be more widely available at sea for such purposes as amphibious operations and sealane security. It will be desirable to build a fleet of smaller carriers to operate the V/STOL aircraft. But *Harriers* can be brought into operation almost immediately on a wide array of ships currently in service. Even old carriers in reserve can be taken out of mothballs and readily adapted, with a minimum of crew, to *Harrier* operations.

The Marine Corps would certainly welcome *Harrier* contingents aboard the *Tarawa*-class amphibious assault ships. Indeed, *Guam* has functioned as a carrier for Marine AV-8As. And *Okinawa*, an *Iwo Jima*-class amphibious assault helicopter carrier, has sustained twelve *Harriers* in operation. Five *Tarawa*-class and seven *Iwo Jima*-class vessels are presently in service.¹⁵

It might be possible to employ *Oriskany*, now in reserve, as a V/STOL

carrier. Displacing 40,600 tons, *Oriskany* is swift and equipped with fairly modern electronic systems. Some 40 *Harriers* and a contingent of anti-submarine Lockheed S-3A *Viking* airplanes and Sikorsky SH-3G *Sea King* helicopters could be carried. Paul S. Triple, member of the House of Representatives Armed Services Committee, has pointed out: "For \$185 to \$200-million, this ship could be overhauled and have a service life of 15 years."¹⁶

What new V/STOL fighters could be brought into production? Now beginning to enter service with the British Fleet, the *Sea Harrier* is a navy version of the machine operated by the Royal Air Force. Major modifications include a modified wing design, a new radar and navigational computer, and a raised cockpit for improved visibility.¹⁷ The *Sea Harrier* is optimized for interception and reconnaissance missions. It will also be equipped with *Sea Eagle* air-to-surface missiles to be employed against warships.

McDonnell Douglas has developed and tested, under license, an improved version of the AV-8A to meet Marine Corps needs. The Marine Corps would like to procure 336 of these AV-8B advanced *Harriers*.

Weight is substantially reduced in the AV-8B through the employment of carbon fiber, more than 23 percent of the airframe being graphite epoxy. Carbon fiber composites are not only light in weight but are also long lasting and do not corrode.¹⁸ A new supercritical airfoil wing and redesigned engine intakes reduce cruise drag and thus increases range. A variety of devices are built into the bottom of the fuselage to improve vertical lift. Among the features incorporated in the avionics suite are a laser and TV tracker, the mounting of many essential controls on the throttle and stick, and digital displays on the instrument panel.

All these features result in a substantial increase in AV-8B performance. As

Graham Warwick summarizes:

AV-8B is essentially a bomb truck. Payload/range performance is at least double that of the AV-8A . . . The AV-8B is designed to lift 28,750 lb—including 5,500 lb of fuel and 16 Mk82 bombs (9,120 lb)—from a 1,000 ft, sea-level runway on a tropical (90°F) day.¹⁹

The AV-8B is thus optimized for cruising at medium altitude in a high-low-high mission.

Very different requirements dictate the choice of a successor to the current *Harrier* in Royal Air Force service. The RAF is committed to operations in the densely packed and immensely lethal central front of continental Europe. Under such circumstances a tactical fighter-bomber must be capable of high speed at low altitude to have any chance of survival in the face of massed anti-aircraft weaponry. Maximum maneuverability is also deemed essential to cope with swarms of nimble Russian fighters.

To meet these demands a new wing design is undergoing wind tunnel testing for the proposed *Harrier Mk.5*.²⁰ Lift is also substantially increased through an extension fitted to the leading edge of the wing root. A singular advantage of this new wing design is that it can be retrofitted to *Harriers* presently in service.

None of these developments, however, address a fundamental problem—the need for a substantial increase in engine power. An AV-8B Plus has been suggested incorporating radar and a modified *Pegasus* engine providing 23,000 pounds of static thrust.²¹ Whatever form a future *Harrier* may take, a more potent engine is necessary.

What new carriers are designed to operate V/STOL aircraft? Although the Italian Navy does not intend to bring such aircraft into service, the firm of Italcantieri is building a helicopter carrier readily adaptable to V/STOL operations. *Garibaldi* displaces 13,250

tons and is fast and well designed.²² The superstructure as well as the hull is built of steel. Special attention has been paid to stability for operations in severe weather. Heavily armed, *Garibaldi* mounts anti-aircraft missiles and cannon, antisubmarine torpedo tubes, and surface-to-surface missiles. Thus it can operate independently, as well as part of a task force.

Equipped with a ski jump ramp, *Garibaldi* is on offer to the navies of Australia and Brazil as a V/STOL carrier. In that role it can hangar eight to ten *Harriers* plus one to three *Sea King* helicopters. Although tightly packed and cramped, *Garibaldi* is the best armed and most efficient small V/STOL carrier.

Under construction for the Spanish Navy, which does operate a handful of AV-8As, is a 14,300 ton V/STOL carrier. This vessel is simple, relatively slow, and furnished only with short range gatling type anti-aircraft cannon armament.²³ It is to be protected by an escort of *Perry*-class frigates, three of which are to be built in Spanish yards. Nineteen *Harriers* and *Sea King* helicopters will be the complement of this new carrier. This Spanish warship will be essentially an austere floating airbase.

Currently the only new V/STOL carrier in service is *Invincible* of the Royal Navy. It will be joined in the early 1980s by *Illustrious* and *Ark Royal*. The design of the *Invincible* class underwent many permutations, reflecting the fierce debates over naval roles and missions that rang through the corridors of Whitehall. Originally intended as a helicopter carrier for antisubmarine operations, *Invincible* proved readily adaptable to V/STOL operations.

Invincible displaces 19,810 tons and is a fast and spacious warship.²⁴ Armament is limited to medium-range anti-aircraft missiles. Five *Sea Harriers* and nine *Sea King* helicopters represent the present air component. Far more *Harriers*, however, could easily be

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accommodated by *Invincible*. A ski jump ramp is fitted at the end of the flight deck.

Moreover, *Invincible* is a versatile warship. Designed to be the command center of a substantial task force, *Invincible* features commodious command facilities and an elaborate and comprehensive communications system.²⁵ Sufficient space is also furnished to carry a battalion of Royal Marines, some 750 troops.

American needs, however, may best be met by adding more *Tarawa*-class amphibious assault ships to the fleet. Displacing 39,300 tons, these vessels are versatile and well designed.²⁶ *Tarawa* is fully outfitted with command and communications equipment. Thirty assault helicopters and 1,900 Marines can be carried; and it is fairly well armed with anti-aircraft missiles and guns. Certainly a *Tarawa* can support a substantial number of *Harriers* and *Sea King* helicopters.

Four *Tarawa*-class carriers, dedicated to V/STOL operations, should be ordered. Funds with which to purchase the *Tarawas* might be secured through a sharp reduction in the planned acquisition of cruisers mounting the *Aegis* anti-aircraft system. Tentatively pegged at 24 vessels, the *Aegis* program would cost almost 20 billion in fiscal year 1980 dollars.²⁷ Twelve *Aegis* cruisers could be constructed for some \$9 billion and the Navy's avowed minimum goal of one such cruiser for each attack carrier achieved.²⁸ The money saved would be ample to finance the *Tarawas* and other vessels better suited to sealane protection and operations in the Third World.

The challenge of Soviet naval aviation can most effectively be met by Western carrier airpower. Carrier-based aircraft, both conventional and V/STOL, are the viable means of protecting the sealanes and supporting needed operations in the far corners of the world.

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NEW INTERNATIONAL CONSTRAINTS ON MILITARY POWER: NAVIES IN THE POLITICAL ROLE

by

Scott C. Truver*

Awakened by the recent crises in Iran and Afghanistan to new imperatives and responsibilities in the Third World, the United States is currently engaged in a debate both at home and abroad over the directions and form American and Western policies should take concerning the protection of interests outside of NATO. In the Middle East, the United States has for a number of years viewed the requirements of maintaining regional stability and an assured flow of oil as necessitating some military presence in the region. This presence was intended to underscore the importance of U.S. interests there and, at the same time, to counter nascent Soviet influence. However, other Third World areas, most notably the Caribbean and Latin America, Southeast Asia, and Africa, in addition to the "Arc of Crisis" in the Middle East and Persian Gulf region, increasingly are capturing the attention of Washington's foreign and defense policy planners. Since the low point in the post-Vietnam War reluctance to employ U.S. military force as an instrument of national policy—during Angola's 1975 civil war in which

massive Soviet and Cuban aid was offered to the Marxist Popular Movement for the Liberation of Angola without a tangible American response—Americans have gradually embraced military presence as an attractive policy alternative in situations short of actual conflict. Indeed, as Edward Heath remarked in the 1980 Alastair Buchan Memorial Lecture, there is a growing tendency toward a "more assertive use of military force as the only way of regaining dignity and authority in a hostile and confusing world."¹ An important component of this trend, naval forces are again being viewed as effective tools of diplomacy in these regions of instability and change. However, more than in any other time since the end of World War II, the naval forces of the United States are constrained by forces beyond the control of Washington.

Navies and Diplomacy of Force. U.S. naval forces since the early post-World War II years have been relied

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upon as the cutting edge in the use of military force as the "handmaiden of diplomacy."² The Navy has been the principal instrument because ships are easier to move about and can do so with greater speed and with less logistical and command difficulties than can units of the Army or the Air Force. Furthermore, while at the scene Navy ships are less disturbing psychologically and hence can be used more subtly to support foreign policy initiatives.³ The central component of this peacetime use of naval forces has been the large-deck aircraft carrier. Carriers were relied upon most frequently because of their capabilities and extensive operational flexibility inherent in the multipurpose carrier air wing.

Nevertheless, for the remainder of this century the regular employment of major naval combatants and large-deck carriers in Third World areas may become less tenable for a number of reasons. First, from a practical perspective, the small number of these ships that will be available for such purposes, notwithstanding campaign promises to rebuild the fleet to 600 ships, makes it mandatory that they be deployed to traditional areas of U.S. concern, such as the Mediterranean and NATO areas as well as the Northwest Pacific littoral. Aside from other issues relating to personnel retention and levels of training, these ships, except for short-term deployments for specific crisis management operations, simply will not be available on the routine basis necessary to establish meaningful presence in the Third World. If the United States intends to use the presence of naval forces as an instrument of national policy, the target nations' leaders must perceive that presence as something more than transient.

Second, the employment of high-value "capital" ships has usually implied that the United States has perceived a specific East-West confrontation

possibility in a region or crisis that requires the best, most capable naval assets that can be devoted to the operation. In the future, this may do more damage than good, in a political sense, particularly if regional powers view the situation as having solely internal or local importance and the U.S. (or Soviet) reaction as ignoring regional interests and needs.⁴ Given this perspective, a heavy-handed employment of naval force lacks a sense of priorities as any threat or challenge to U.S. interests becomes a symbolic test of U.S. military prowess or national will. In a less complex world than that of the 1980s, such a view could possibly succeed in preserving American interests. In most situations today, however, the more likely result will be a humiliating standoff or a disastrous showdown.⁵

This points out a third consideration. It is simply that the international environment has changed dramatically since the halcyon postwar years in which the wide-ranging applications of naval force were acknowledged means to preserve national interests. A single major trend underscores this movement to an international *milieu* in which the opportunities for the diplomatic use of naval forces are becoming increasingly circumscribed: the dissemination of sophisticated weapons among coastal states that might view with alarm the employment of naval suasion. The balance of this paper briefly addresses the political and military forces that will likely merge to place constraints on the employment of naval forces in Third World areas.

International Trends and Constraints on Seapower. Three significant trends became evident in the late 1970s that will certainly color the international system well into the next decade and will affect the willingness and ability to use U.S. naval forces in political roles. The first is the growing pluralism and diversity of the international scene. The once simple bipolar

and five-sided multipolar world of the 1950s through the early 1970s has given way to an explosion of independent nations demanding that their diverse interests be accommodated by the traditionally powerful states. The mosaic of national types expanded, with a multitude of national interests to be catered to, accepted, reshaped, or rejected by the major powers. The second trend is a widespread diffusion of power—economic, military, and political—among the small and middle powers. No longer is international power focused in one or two major states or groupings of states. Rather, a broad range of states have come to demand respect, grudging or otherwise, from the traditionally powerful countries because of the influence they could wield at the local, regional, or global levels. A third trend is the gradual realization by most observers of the inability of the two superpowers to shape and control events, not only in the unsettled regions of the Third World but within their own alliance systems as well.⁶ The direct result of these three trends was that more strains were placed on the fabric of détente between the United States and the Soviet Union in their mutual relations as well as the intermingling of their interests in Third World regions, while tensions unrelated to U.S.-Soviet competition commanded greater attention in the capitals of the developing countries and affected their relationships with the United States and the West.

Since the end of the Vietnam War, the disparate regions of the Third World have experienced almost constant conflict or crisis, in varying degrees affecting U.S. and Western interests. However, a major shortcoming of recent U.S. (and Western Alliance) policy toward the developing countries has been the failure to understand the nature of the political and social forces that gave rise to these events. A simple approach to Third World problems and a tendency to

brandish military force as a means to influence events there in many cases will not be successful. Some of this conflict was the result of disputes over territories: for example, between Somalia and Ethiopia (with the direct involvement of a major outside power), or in Northwest Africa between Tanzania and Uganda (without direct involvement). Other crises were created by direct annexations by an outside power under the guise of support for insurgents: Vietnam's attack against Kampuchea and the ouster of Pol Pot (with the ensuing Sino-Vietnamese conflict of February 1979). Alternatively, direct involvement by a major power was also justified under the guise of supporting a "legitimate government": the Soviet Union's incursion into Afghanistan in December 1979 in support of Babrak Karmal and "at the request" of the Afghans. A fourth source of tension in the Third World that may directly affect U.S. interests is the growing incidence of domestic upheaval and revolution, epitomized by the Nicaraguan and Iranian revolutions and the impracticality of a purely "military solution" by the United States in those situations.

Indeed, in the past year the Afghan and Iranian crises have been illustrative of the need for a reassessment of U.S. and Western "crisis management" policies and the use of naval forces to ensure U.S. interests. In Iran, a number of problems fundamental to the developing country's progress created a fecund atmosphere for instability. Moreover, these problems of development are common to a wide range of Third World states:⁷ (1) the threats that modernization poses to the traditional balance of society, (2) the danger of interruptions to production for countries whose income is derived from one raw material, (3) the vulnerability of a narrowly based political authority to challenges from within, and (4) the appeal of fundamentalist ideals to those unable or unwilling to adapt themselves

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to the speed of modernization. The resulting revolution in Iran and the long-term hostage crisis were therefore fundamentally unamenable to solutions employing solely military means.

In Afghanistan the United States has been hamstrung by distance and an unwillingness to become directly involved militarily with Soviet troops. Thus, a military solution was largely foregone except for the buildup of the Middle East Force to a battle group comprised of two carriers and their escorts. But these were largely temporary interposition forces; their presence signified, first, that limits would be placed on Soviet adventurism if the much-discussed Soviet drive for warm-water ports on the Arabian Sea ever commenced, and second, if the security of the West's oil SLOCs were jeopardized, the United States would be prepared to safeguard these vital transportation routes.

The Iranian and Afghan crises, moreover, point out the impracticability of sole reliance upon large-deck carriers and their escorts to underscore U.S. interests in farflung regions of the world. The first carrier on the scene was diverted from heading home after her Pacific deployment, thus delaying a much-needed yard period. When the decision was made to augment the one-carrier group from the 7th Fleet by an additional carrier, the normal two-carrier deployment to the Mediterranean was drawn upon, thereby reducing U.S. forces in a perennial crisis area. It would have been far better, according to some observers, had the United States been able to deploy on a routine basis to such Third World areas of concern smaller air-capable ships or light carriers. These ships, while less formidable than large-deck CV/CVNs, would nonetheless be impressive in certain world regions, their firepower more than adequate to underscore U.S. resolve and commitments. Furthermore, some analysts have argued that

the use of such "light carriers" could provide a graduated response in crises while, if required later, the large-deck carriers could be deployed if the United States wanted to signal an increased level of concern or commitment.⁸

Nonetheless, the experience in the Persian Gulf during 1979 and 1980 also demonstrated that while the interests of the developed states in the stability and political alignment of Third World states have increased, this enhanced interest comes at a time when the ability to influence events there by military intervention is distinctly limited. Distance tends to reduce the effectiveness of intervening forces and there will likely come a time at which what can be brought to bear is capable of being frustrated locally. In recent years the military forces of some Third World countries have become much more important in a potential intervenor's risk calculations. The acquisition of modern weapons and substantial numbers of forces by Third World states could drive the costs of intervening quite high and has raised doubts about the efficacy of symbolic shows of naval force offshore.⁹ There are two aspects of this development, one psychological and the other military, although both are closely related.

The psychological dimension is evidenced by the growing awareness shared by many Third World countries that the international system simply will not look favorably upon the unilateral exercise of active naval suasion by the major powers. The rules of the game have been altered and the international politics of power has changed subtly in such a way that this shared consciousness can mobilize support in a number of ways to stymie superpower designs. Third World appeals to supplier countries can result in a cutoff of vital raw materials to consumer nations, as happened in the 1973-1974 Arab oil embargo while latent Third World anticolonial sentiments can be

transformed into large majorities in international forums to frustrate the industrialized countries. Hedley Bull has warned:

These states have so altered the international legal rules relating to the use of force and magnified the costs of breaking them as to have precluded the older kind of "gun-boar diplomacy," which assumed a set of rules weighted in favor of the strong European powers and a division of the world into fully and partially sovereign states. They will be able to appeal to the prevailing Third World animus against interference by the rich industrial states of East and West, a spirit reflected in General Assembly majorities . . . and solemnized in zones of peace, such as that proclaimed since 1972 in relation to the Indian Ocean.¹⁰

One result of this heightened awareness has been an expanded assertiveness—the sloughing off of a small-power "castration complex"—and a willingness, if not a demand, to confront the major powers on equal terms.

Yet it is the military dimension of these changing circumstances that will provide the capabilities to fulfill Third World ambitions. The sinking of the Israeli destroyer *Eilat* in 1967 by Russian built and provided cruise missiles and fast patrol boats of the Egyptian Navy and the destruction of the Pakistani destroyer *Khaibar* by *Styx* cruise missiles launched from Indian missile boats in December 1971 graphically illustrated the lethality of the readily available modern weapons. A large number of coastal states in the early 1980s possess the military wherewithal to counter directly the naval threats of the major powers, especially if the threats materialize close offshore, and many more coastal countries are likely to take advantage of the largess of the superpowers and other major weapons suppliers—the French, British, and Israelis, among

others, for example—to develop potent forces.

Future Considerations. The critical element in U.S. postwar interventions, naval forces, and especially large-deck aircraft carriers, doubtless will continue to be the central focus of any U.S. crisis intervention or conventional war operation for the simple reason that, in the event it becomes necessary to do so, a modern carrier battle group can still inflict far more damage on land targets than any other naval unit. However, in Third World confrontations the fighting potential of a U.S. carrier battle group—whether structured around a large-deck CV/CVN or a smaller light carrier of a new design—is in question as a result of the force a number of developing countries can now muster. Although there is scant evidence that Third World forces' levels of training, C³ capabilities, or proficiencies in a sophisticated EW environment have improved concomitantly with their acquisition of modern weapons (there are exceptions, of course), intervention or crisis management operations by U.S. naval forces, including carriers, clearly will require adequate defenses against cruise missile attacks, torpedoes, or even mine warfare in straits and constricted waterways.

In summary, a number of complex political, social, legal and military issues must be faced squarely during the currently intense discussions over such foreign and defense policies as the use of military forces in situations short of war, the expansion of the U.S. Fleet, or the establishment of quick reaction forces intended to provide the United States with effective and flexible capabilities to respond quickly to future Third World crisis situations. Furthermore, along with this renewed interest in the assertive use of military force must come a clear acknowledgment of the central role to be played by naval forces in future international emergencies.

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Yet, in addition to the extremely complex and intractable problems involving logistics, C³ capabilities, specialized equipment and weapons, tactics, and training, defense planners must recognize the sometimes severe limits placed by a dramatically transformed international system on the use of armed forces as instruments of national policy. Edward Heath again provides a warning about the complex defense and foreign policy issues facing the United States:

In short, we are witnessing the emergence of a tendency to frame defence priorities and to use or threaten force without any clear

conception of the relevance of these policies to our security needs, of the risks and costs involved, and of the conditions under which they might be made effective. This tendency is symptomatic of a deep yearning for a less ambiguous and more predictable world. But it conceals a heroic view of the use of military power which is no longer relevant to our modern problems.¹¹

Without a fundamental appreciation of the world as it really is, the result of years of planning and billions of dollars of defense spending may be simply frustration and failure.

NOTES

1. Edward Heath, "The 1980 Alastair Memorial Lecture," *Survival*, September-October 1980, p. 198.
2. Edward Luttwak, *The Political Uses of Seapower* (Baltimore, Md.: Johns Hopkins University Press, 1974); and James A. Nathan and James K. Oliver, *The Future of United States Naval Power* (Bloomington: Indiana University Press, 1979), pp. 68ff.
3. Barry Blechman and Stephen Kaplan, *The Use of Armed Forces as a Political Instrument* (Washington: Brookings Institution, 1976); and Scott C. Truver, *The Strait of Gibraltar and the Mediterranean* (The Netherlands: Sijthoff and Noordhoff, 1980), pp. 71ff.
4. In late May 1980, for example, North Yemeni officials, reacting to U.S. and Saudi concerns over North Yemen's acceptance of massive Soviet military aid, stressed that their military policies were shaped by North Yemen's interests and not dictated by those of the Soviet Union. North Yemen's Prime Minister remarked, "The equipment is equipment whether it comes from the United States or the Soviet Union." *Washington Post*, 5 June 1980, pp. A1, A30. Furthermore, even once-firm Soviet Third World allies were having second thoughts about the costs and benefits of that relationship, as events in Angola made clear in late 1979 and 1980. "Angola Growing Uneasy with Soviets," *Washington Post*, 5 June 1980, pp. A29, A33.
5. Heath, p. 199.
6. See Robert W. Tucker, "America in Decline: The Foreign Policy of 'Maturity'"; Peter Jay, "Regionalism as Geopolitics"; Willaim B. Quandt, "The Middle East Crises"; David Ottaway, "Africa: U.S. Policy Eclipse"; Alfred Stepan, "The U.S. and Latin America: Vital Interests and Instruments of Power"; and Robert A. Scalapino, "Asia at the End of the 1970s," in *America and the World 1979, Foreign Affairs*, v. 58, no. 3, 1980.
7. *Strategic Survey, 1978* (London: International Institute for Strategic Studies, 1979), p. 2.
8. *Ibid.*, p. 15.
9. Helga Haftendorn, "The Proliferation of Conventional Arms," *The Diffusion of Power: I. The Proliferation of Force*, Adelphi Papers, no. 133 (London: International Institute for Strategic Studies, Spring 1977); also, Nathan and Oliver, pp. 109ff, and Truver, pp. 82ff.
10. Hedley Bull, "Sea Power and Political Influence," *Power at Sea: The New Environment*, Adelphi Papers, no. 122 (London: International Institute for Strategic Studies, Spring 1976), p. 7.
11. Heath, p. 199.

