

AD-A145 912

SOVIET STRATEGY AND THE OBJECTIVES OF THEIR NAVAL  
PRESENCE IN THE MEDITER. (U) CENTER FOR NAVAL ANALYSES  
ALEXANDRIA YA NAVAL PLANNING AND MA. R G WEINLAND  
SEP 82 CNA-PP-410 N00014-83-C-0725 F/G 5/4

1/1

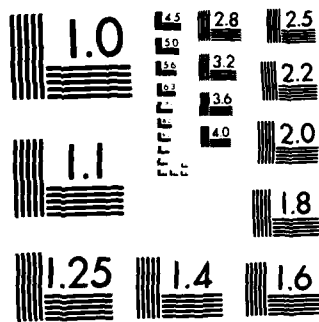
UNCLASSIFIED

NL


END

FILMED

DTIC



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A145 912

PROFESSIONAL PAPER 410 / September 1982

*(Handwritten mark)*

# SOVIET STRATEGY AND THE OBJECTIVES OF THEIR NAVAL PRESENCE IN THE MEDITERRANEAN

Robert G. Weinland

DTIC  
SELECTE  
SEP 24 1984  
A

*N10014-83-C-1725*

DTIC FILE COPY

This document has been approved for public release and sale; its distribution is unlimited.



CENTER FOR NAVAL ANALYSES

**The ideas expressed in this paper are those of the author.  
The paper does not necessarily represent the views of either  
the Center for Naval Analyses or the Department of Defense.**

PROFESSIONAL PAPER 410 / September 1982

# SOVIET STRATEGY AND THE OBJECTIVES OF THEIR NAVAL PRESENCE IN THE MEDITERRANEAN

Robert G. Weinland



Handwritten notes and a rectangular stamp area, possibly containing a signature and date.



*Naval Planning and Management Division*

**CENTER FOR NAVAL ANALYSES**

2000 North Beauregard Street, Alexandria, Virginia 22311

SOVIET STRATEGY AND THE OBJECTIVES OF THEIR NAVAL\*  
PRESENCE IN THE MEDITERRANEAN

INTRODUCTION

This discussion has three objectives. Providing a definitive description of the growth and current configuration of Soviet naval forces in the Mediterranean is not one of them. The same applies to attempting to identify the direct antecedents of specific actions those forces have undertaken. Neither is feasible in a discussion of this nature.

Neither is, however, essential for identifying the general structure and content of the policies that have guided the Soviets in establishing and exploiting politically their Mediterranean naval presence. And in view of developments suggesting that these policies are in flux, it seems unwise at this point to attempt more than that. Sketching the broad outlines of those policies thus constitutes the first objective of this discussion.

Identifying the indications that those policies may be changing (or may already have changed) constitutes its second objective. Forecasting

---

\* This is a personal, not an official interpretation. As such, it does not necessarily reflect the views of the Center for Naval Analyses, the U.S. Navy, or any other component of the U.S. Government.

what these changes might bring--in particular, what they portend for efforts to negotiate restrictions on the presence and activities of superpower forces in the Mediterranean--constitutes the third.

The discussion begins with a brief attempt to locate naval strategy in the Soviet scheme of things. Next, it addresses the evolving expectations of future war and prescriptions for its conduct that have structured Soviet military thinking over the last two decades, and consequently seem likely to be reflected in the Mediterranean Squadron's war plans. These expectations and prescriptions also shape the peacetime operations of the Squadron, the conceptual background of which is then discussed in some detail.

In dealing with both their planning for wartime and their policy in peacetime, the discussion presents a number of descriptions of Soviet strategy--i.e., the objectives they seek and the course(s) of action they would follow to achieve them. These descriptions are, of course, nothing more than inferences. In the case of Soviet planning for war, the inferences drawn have two origins: Soviet military doctrine (as reflected in their military literature), and the logic of the situation. They cannot be validated. In the case of Soviet policy in peacetime, the inferences drawn are amenable to validation. The actions they take can be examined, evidence can be marshalled, hypotheses can be tested.

The discussion consequently proceeds from postulations about Soviet strategy to observations about Soviet actions. And it is those observations and what they suggest about the strategies postulated that inform the attempt at the end to outline future Soviet policy and practice.

As should be apparent by now, this discussion lays no claim to certainty. Certainty cannot in any event be achieved. Soviet strategy per se remains hidden from view, and subject to change. Fragmentary evidence from statements and actions provides glimpses of it, but no more. Marshalled appropriately, those glimpses outline its general thrust, but no more. All that can be achieved is some reduction in our uncertainty about Soviet intent. That, one hopes, has been achieved.

## NAVAL STRATEGY

The protestations of some Soviet naval enthusiasts to the contrary, there is no such thing as Soviet "Naval Strategy". What in the West would be considered and treated as such is in the Soviet Union subsumed under the general rubric of "Military Strategy."

This is no idle distinction. It reflects the fact that the Soviet military establishment has been, is now, and in all probability will continue to be both highly integrated and dominated by the ground forces. As a result, in military affairs, the Soviet Navy is anything but an independent entity. It is one component of a larger whole, and the role envisaged for it in the direct defense of the Soviet Union and its Warsaw Pact allies is closely coordinated with (and indeed cannot be meaningfully considered in isolation from) the roles envisaged for the other branches of the Soviet armed forces (or for that matter, the forces of the other members of the Warsaw Pact).

In political-military affairs, on the other hand, where not the direct but the indirect defense of the Soviet Union and its Warsaw Pact allies and the protection and promotion of Soviet overseas interests are concerned, the situation is quite different. Here, The Soviet Navy appears to have achieved the status of a "senior service." Its importance as an active instrument of Soviet foreign policy and its capability to operate in that capacity as an independent entity are now

clearly beyond question. This does not mean independent of Soviet political control, but independent of most of the remainder of the Soviet military establishment--the exception being the Strategic Rocket Forces, which, with a major assist from the Navy's strategic missile submarine component, provide the deterrent umbrella under which Soviet foreign affairs are conducted.

A unique system of views has been developed to structure the actions of the Soviet Navy in this latter, political-military, capacity. In this sense, there is a "Soviet Naval Strategy", but it is a political strategy, focusing on the peacetime rather than the wartime utilization of the fleet. In implementing this strategy, the main thing the Soviets are attempting to do is modify the behavior of other actors in the international arena, and they are relying mainly on exploitation of the political influence potential of the forces they deploy outside their home waters in peacetime, rather than combat actions per se, to achieve those modifications.

## PLANNING FOR WARTIME

What would the Soviet Mediterranean Squadron do in wartime? What would its combat objectives be; how would it set about their accomplishment?

In part, what the Squadron did would reflect the specific circumstances of the war: its antecedents and geographic focus, the strength and disposition of the forces available to each side, etc. In part, what it did would also reflect what the opposition did, especially if the opposition was able to seize the initiative. In part, therefore, what the Squadron would do cannot be predicted--or, more accurately, can only be forecast in terms of whatever specific conflict scenario is posited.

For the most part, however, at least in the opening phases of a conflict, Mediterranean Squadron operations would be structured by the Soviets' integrated combat plan. That plan in turn would reflect--be, in fact, a concrete expression of--Soviet military doctrine. This doctrine provides Soviet planners with a uniform system of expectations concerning the character of future war and dictates with regard both to how it should be fought and to what should be done to prepare for it. Those expectations and dictates are stated in the abstract. Their impact is nonetheless pervasive. Insight into these prescriptions is

consequently useful in forecasting aspects of the Squadron's operations that would be present in all scenarios.

Its "official" status and abstract character notwithstanding, Soviet military doctrine is not immutable. The expectations and prescriptions embodied in it change as the Soviets' definition of the situation and evaluation of their ability to cope with it change. Reviewing its evolution over the last 20 years outlines their current stance with reasonable clarity, and identifies those developmental trends and patterns in their perceptions and policies that seem most likely to persist.\*

Two such trends are discernible in Soviet expectations of the character of a future war. One involves the degree of restraint expected to be exercised by the belligerents, which is seen to be increasing. The second--a concomitant of the first--involves the anticipated length of the conflict, which is also seen to be increasing. Both appear to have been incorporated into Soviet planning.

In the early 1960s, the Soviets held that conflict between the Superpowers would automatically escalate to all-out, world-wide, nuclear war. In the mid-1960s, they modified that forecast, dropping their

---

\* Where this discussion treats questions of the evolution of Soviet military doctrine, it draws heavily on the analyses of the author's colleague, James M. McConnell--who, one prays, will be held blameless for any distortions it may contain.

contention that escalation necessarily would occur. In the early 1970s, they changed it again, concluding that, should war between the coalitions develop, although inevitably nuclear and world-wide, it need not necessarily be all out. Intra-war deterrence was feasible. In the mid-1970s, they made a further modification. They concluded that, although inevitably nuclear, a war between the coalitions need not necessarily be world-wide. Expansion of the scope of conflict could be deterred. Now, in the early 1980s, they appear to have concluded that even a coalition war can remain conventional. Intensification of the level of conflict can be deterred as well.

In the early 1960s, they held that the inescapable escalation to all out, world-wide, nuclear war would occur immediately. In the mid-1960s, as they began to recognize limitations on the intensity of conflict, they also began to recognize limitations on the dynamics of escalation. They began to plan for a "war by stages." Not only was such a war likely to begin at the conventional level, it could remain at that level for some time before escalating. Since then, the prospective length of that opening, conventional phase of the war has grown significantly (from, say, a week or two in the late 1960s-early 1970s to as much as, say, a month in the late 1970s). By the early 1980s, the war between the coalitions that they had begun to feel could be held at the conventional level was seen as likely to last for as long as three to six months.

Many of these changes in Soviet expectations were reflected in changes in their prescriptions for the employment of their naval forces. The two changes with greatest impact on Soviet naval presence and activities in the Mediterranean occurred in the mid-1960s, when they dropped their contention that conflict between the Superpowers would necessarily escalate, and in the mid-1970s, when they began to foresee conventional conflict between NATO and the Warsaw Pact lasting for an extended period.

The first of those modifications probably reflected their perception that, after a number of false starts and setbacks, they were finally on the way to acquiring a viable strategic deterrent, and as a consequence were acquiring increased freedom of action in the international arena. That made it possible for the Soviets to contemplate the exploitation of one of their principal assets (military power) in situations and for purposes (in peacetime, as an instrument of political influence) previously denied them.\*

Confrontations between the Superpowers' military forces obviously could produce conflict. As long as the Soviets perceived such conflict--no matter what its scope or level of intensity--as no less than a pre-

---

\* Again, where this discussion treats questions of the conditions, objectives and limits of the political employment of Soviet naval forces, it is in many respects the product of sustained interchange with the author's colleagues, most notably Bradford Dismukes and James M. McConnell. Their interpretations and the evidence supporting them are detailed in: Dismukes and McConnell (eds.), Soviet Naval Diplomacy (New York: Praeger, 1979).

liminary to all out war between the coalitions, the risks of such confrontation in situations where central values were not threatened were unacceptably high. As soon as confrontation-produced conflict between the Superpowers was perceived as no more than a preliminary to all out war--which consequently could be avoided--then the range of situations in which such confrontations could be staged with acceptable risk expanded to encompass the protection of less-than-central values.

As will be outlined further below, this doctrinal change not only "permitted" the establishment of a militarily significant Soviet presence in the Mediterranean in the mid-1960s\*, and the subsequent employment of those forces for politically significant purposes, but accorded a degree of priority to both. The second doctrinal modification referred to above, which came a decade later, appears to have shifted Soviet priorities elsewhere, and may have had the effect of establishing limits on their Mediterranean presence and its exploitation.

As long as it was felt that any conflict that erupted between the Superpowers could not be constrained, it was imperative that no action be taken that could lead to its initiation. Once it was recognized that

---

\* Actually, it would be more appropriate to refer to it as a "counter-presence," since the U.S. Sixth Fleet had already been in the Mediterranean for a decade and a half. And it might be more appropriate to refer to the "reestablishment of a Soviet military presence there, since a contingent of Soviet submarines had been stationed in Albania from 1958 to 1961 (the basing arrangement became a casualty of the Sino-Soviet split). However, the military significance of this contingent was questionable, and it had little if any political impact. It is consequently ignored in this discussion.

escalation to all-out war was not inevitable, that conflict could be constrained, it became imperative that action be taken to impose such constraints. Posing a deterrent to conflict-engendering undertakings by the other side represented one such action. Preemptive strikes to eliminate the other side's ability to expand the scope or increase the intensity of a conflict represented another. From the beginning, the mission of the Soviet Mediterranean Squadron appears to have encompassed both. It apparently still does.

It also appears, however, that neither mission is now accorded the relative priority it once had. After it was recognized that conflict between the Superpowers not only could be constrained, but probably would be--inherent in the recognition that conflict was likely to begin at the conventional level, and could remain there--the Soviets' action imperatives were modified. Once again, this shift in prescription probably reflected a shift in their perception of the strategic balance: by the mid-1970s, the Soviets felt that they had acquired an assured destruction capability like that they knew the United States possessed. As long as that capability for assured destruction remained mutual, neither side had an incentive to escalate a conflict to the point where those capabilities would be employed.

The Soviets' action imperatives under these conditions were substantially different. The scope and impact--and, most likely also pace--of a conflict fought with strategic weapons could, and hence probably

would, be great. That was unlikely to be the case in a conflict fought without strategic weapons. The range and destructiveness of tactical weapons were, by definition, far less. The pace of a conflict fought with such weapons would be, of necessity, much slower.

In a short war expected to end in strategic interchange, priority had to be accorded to mounting preemptive strikes against the strategic offensive capabilities of the other side that could be attacked in time. The Mediterranean Squadron's well-documented anti-carrier mission, and the steps the Soviets took to maintain the ability to mount such strikes, both reflect just such an imperative.

In a longer war, particularly in a war in which there is reason to believe that strategic weapons may not be used at all--or, if so, then only long after the initiation of conflict--other threats and opportunities emerge, and a different constellation of actions must be accorded priority.\* For example, as long as the Soviets expect to be able to bring a conflict in Europe to a successful conclusion in days or at most weeks, they do not need to allocate forces to stopping the movement of men and materiel from North America to Europe. Although such movements could determine the outcome of the war, they are unlikely to occur. It would take at least weeks, perhaps months, to execute them. However, if

---

\* For a discussion of this attention and resource allocation problem and some of its ramifications, see: Robert G. Weinland, Northern Waters: Their Strategic Significance, CNA Professional Paper No. 328, December 1980.

European NATO can contain a Soviet advance, creating an opportunity for the movement of reinforcements and resupply from America to take place, that advance can be repulsed. As a result, the longer the Soviets consider a conflict on the Central Front to be likely to last, the more importance they must accord the interdiction of NATO's trans-Atlantic lines of communication. If they expect the war to go on for months, and wish to win, they must allocate forces to the task of interdicting those lines of communication.

In similar fashion, as long as the Soviets can count on a potential war's being "nasty, brutish, and short," the question of protecting their sea-based strategic offensive forces--a principal component of their assured destruction capability--is not likely to arise. Strategic offensive forces were taken to sea so that they would be invulnerable to preemptive strike by opposing strategic offensive forces. They remain so. NATO, however, has impressive tactical sea-control capabilities. In a short war, those tactical capabilities pose little threat to the Soviets' SLBM force. A long war, on the other hand, would provide an opportunity for those tactical capabilities to be employed strategically. As a result, the longer the Soviets consider a conflict to be likely to last, the more importance they must accord to providing direct protection to their SLBM force.

Both of these missions--interdicting NATO's lines of communication across the Atlantic and providing for the tactical defense of their sea-

based strategic offensive forces--require roughly the same types of submarines and surface combatants the Soviets have been deploying to the Mediterranean since the mid-1960s. Neither mission, however, can be carried out effectively by forces located there.

Competition for employable resources is a predictable consequence of such a shift in Soviet priorities. As will be indicated below, the functions the Soviets have long felt it necessary to have performed in the Mediterranean seem not to have won out in that competition.

This should not be taken as an indication that those functions have lost their importance in any absolute sense (although recent Soviet behavior suggests this could be the case). It only indicates that other functions and other regions have acquired increased importance in Soviet planning.

## POLICY IN PEACETIME\*

Navies are, first and foremost, warfighting instruments. But they are also useful, and used, in peacetime.

There are two fundamental categories of reasons why a state would use its warfighting instruments in peacetime. One is to implement its war-related policies (for example, attempting to deter war, or insuring readiness to fight should war occur). The other is to implement those of its policies that are not war-related (for example, supporting foreign policy or protecting overseas interests).

Even these very broad distinctions (not to mention the possible subdivisions of each category) can be rendered academic in practice, since a single action can serve more than one end. Moreover, they are not of equal importance. They do, however, provide a simple standard, based on familiar concepts and logic, against which to compare Soviet statements and actions, some of which reflect modes of thinking that are, to say the least, unfamiliar.

---

\* The argument advanced below concerning the conceptual antecedents, structure and content of the Soviet navy's peacetime mission was first presented, in a significantly different context, in: Quester (ed.) Navies and Arms Control, New York: Praeger, 1980).

How does the Soviet employment of its naval forces in peacetime compare with this basic breakdown of functions? Several observations can be made straightaway.

First, as far as the Soviets are concerned, the two war-related functions of deterrence and preparation for combat are closely linked. They consider achievement of the capability to fight a war successfully (as opposed to being prepared only to punish a potential attacker) as being a most important factor--some would say the most important factor--in the deterrence of war. Thus, despite the importance they attach to avoiding armed conflict, much of their peacetime naval activity is devoted to direct preparation to fight. Second, they consider deterrence of war, and preparation to fight, to be important ends of not only their military activity but also their foreign policy. Thus, given the active role assigned the Navy in direct support of Soviet foreign policy, and the active role played by Soviet foreign policy in advancing Soviet security, much of their peacetime naval activity is devoted to indirect preparations to fight as well. Consequently, the first three of the peacetime functions noted above--deterrence, preparation to fight, and direct support of foreign policy--are to some degree indistinguishable in Soviet eyes, and hard for Western eyes to differentiate in Soviet practice.

This is all somewhat abstract. The urge to move from the abstract to the concrete in search of clarity should be resisted, however. It

won't necessarily improve our understanding of Soviet behavior, since some of its policy antecedents appear to be abstract in the extreme.

Two political functions carried out by the Soviet Navy in peacetime will be discussed in depth here. The first of these two functions, "active defense of peace and progress," represents an attempt to achieve two no-less abstract ends: support of "progressive change" and prevention of war. The objective of the second function, "preparation of maritime theaters of military operations," is more practical: improving the likelihood of success should combat take place. Both are carried out by the same means: the manipulation of naval forces to influence the behavior of other actors in the international arena. They differ only in the ends they serve. Both characterize Soviet Naval activity in the Mediterranean.

#### Active Defense of Peace and Progress

If the Soviets actually view the international system in the terms in which they describe it--and this is admittedly a big "if"--then a substantial portion of their naval activity in the Mediterranean (and elsewhere in the Third World) may be devoted to an attempt to intervene in, and alter, what they consider to be the "normal" progression of events in international conflict. The objectives of such intervention are not only to create and maintain a favorable political-military

environment for what they refer to as "progressive change", but also to reduce the likelihood of their becoming involved in a major war triggered by an attempt to effect such change. Their descriptions of the way the inter-national system works, and in particular the processes of international conflict, are tortuous and reflect distortions in perception and rea-soning that can be traced directly to Marxist-Leninist ideology. However, these descriptions are not completely divorced from reality; and following the Soviets' basic argument from premises to conclusions provides potentially useful insight into some of the considerations that may be motivating them.

#### Defense of peace

There are two ways in which the Soviet Armed Forces are considered to serve, albeit indirectly, in the defense of the homeland in peacetime. The first is, of course, through strategic deterrence. The second, and for this discussion more interesting, way is through what might be termed "local deterrence": deterrence of the reactionaries' and imperialists' use of their military forces, first to start local conflicts in the Third World, and then to attempt to influence the course and determine the outcomes of those conflicts. The Soviet Navy is held to play a leading role in both types of deterrence.

The Soviets' perceived requirement for local deterrence is a direct outgrowth of the way in which they view the international situation--in

particular, the situation in the Third World. As they see it, the most important characteristic of contemporary developments there is the continuing, historically-determined process of what they refer to as "progressive" change. At the domestic level they see this process producing radical political reorganization and socio-economic transformation (following the "socialist" example). On the international level, they see it leading to the establishment of what they consider to be national political and economic independence (by which they mean independence from the capitalist-imperialist West). The principal protagonists of "progressive" change are what they term the "progressive" forces: national liberation movements, newly-independent states, and, of course, world socialism.

The principal antagonists to "progressive" change are the aggressive forces of local reaction (they would cite Israel as an example) and worldwide imperialism (led, of course, by the United States). Attempts by reactionaries and imperialists to stop progress, and eventually reverse it, both cause and exacerbate local conflicts.

Local conflicts occur frequently in the Third World. The Soviets consider them to have two causes. One is local contradictions (economic, political, military, ideological, territorial, national, ethnic, etc). The other and more prevalent cause of local conflict is held to be the aggressive actions of the forces of reaction and imperialism.

The most frequent targets of these local aggressive actions are the "progressive" forces--national liberation movements in particular.

In the Soviet view, regardless of how local crises originate, the aggressive forces almost invariably intervene in them in order to advance their own interests. These interventions result in the escalation and expansion of those conflicts, producing threats to not only regional but world peace.

Given that they see the world this way, the Soviets see an imperative to pursue, in concert with other forces of "peace and progress", two objectives. One is to protect and promote "progressive" change. The other is to prevent the exacerbation of local conflicts. Both objectives are served by "actively counteracting" the attempts of "aggressive" forces to start and exploit local conflicts.

"Active counteraction to imperialist aggression" is called for because of what the Soviets consider the pernicious effects of the involvement of imperialist powers in local conflicts. Their intervention not only delays future progress, but by threatening regional and world peace, threatens progress that has already been achieved--the "gains of socialism". If unchecked, the imperialists' proclivity for intervention in local conflicts could eventually create a situation placing not only progress per se but the security of the Soviet homeland (the bastion of the forces of "peace and progress") in jeopardy.

"Actively counteracting imperialist aggression" could, however, also prove dangerous for the Soviet Union. The involvement of the great powers of both the imperialist and socialist camps in a local conflict could transform such a conflict into what the Soviets refer to as an acute international political crisis. And that development, because of the perceived propensity of the United States to threaten the use of all its forces (i.e., from local conventional to strategic nuclear) in carrying out its "from a position of strength" crisis management policy, could lead to global nuclear war.

Fortunately, from the Soviet point of view, the correlation of forces between the two camps, which the Soviets see as having over the last decade increasingly come to favor the forces of "peace and progress" over those of reaction and imperialism, has had an inhibiting effect on the aggressors. This shift in the correlation of forces, and the continuing implementation of the Peace Program first promulgated by the XXIV and endorsed by the XXV and XXVI CPSU Congresses, are bringing about a radical restructuring of international relations.

The Peace Program calls for the Soviets to undertake three closely-related action programs. The first is a fundamental reorganization of the international political-military environment (through negotiations, agreements, etc.). The second is the modification of critical interstate relations (the consolidation of detente with the West and enhanced

collaboration with the other members of the Socialist Community). The third is "active counteraction to imperialist aggression."

The last of these, which provides the content of the "internationalist mission" of the Soviet Armed Forces, foresees the performance of two separate tasks: "stopping aggression," and "supporting victims of aggression." "Stopping aggression" involves preventing acute international political crises from occurring (by deterring both the aggressive actions of reactionary forces that cause local conflicts and the imperialist interventions that exacerbate them). It also involves regulating those crises that can't be prevented (by deterring both the imperialists' threats to use their nuclear forces and their demonstrative movement, concentration and actual use of their conventional forces). It is these particular functions--intended to control both the initiation and the continuation of local conflicts, and prevent their evolution into major war--that forward-deployed Soviet naval forces are performing when engaged in the "active defense of peace."

"Supporting victims of aggression," the second of the two tasks carried out in actively counteracting imperialist aggression, can involve the provision of military assistance (including even direct support and combat forces) to national liberation movements and newly-independent states. Since this activity is oriented not toward Soviet self-defense but toward the protection and promotion of Soviet overseas interests, and since there are conclusions to be drawn regarding the

defensive purposes of Soviet forward deployments, discussion of the use of the Navy in support of "progressive change" will be delayed for a moment.

Assuming the depiction of the Soviet perspective on international conflict outlined above to be more accurate than not, and assuming that perspective to be more influential than not in Soviet decision-making, the deployment of Soviet naval forces first into the Mediterranean and subsequently to other areas of the Third World could have had an important purpose, perhaps too readily discounted in the West as reflecting only empty rhetoric. That purpose need not have been to oppose the aggressive actions of local reactionary forces, or for that matter support the actions of the progressive forces, although elements of both have unquestionably been present. It might have been to at least constrain if not actually prevent intervention in local conflicts by the great powers of the imperialist camp. Most importantly, it might have been to deter the United States from threatening, if not actually employing, its conventional area control and projection forces to determine the outcomes of such conflicts (in particular, to deter the United States from further such use of its Sixth Fleet). One reason for the Soviets adopting such a dangerous course might have been to avoid something they considered even more dangerous: to preclude the "necessity" for Soviet counter-intervention, with its unpredictable but potentially even more explosive consequences, and thus keep general war at as great a distance from the Soviet Union as possible.

That perspective on conflict has several potentially important implications for the Soviets in their approach to involvement in peripheral conflicts. First, local conflicts (at least those growing out of local contradictions) are not considered to represent a threat to regional or world peace. Second, the involvement of "peace-loving" forces in local conflicts, including the involvement of the Soviet Union or the other major powers of the Socialist Community, is not considered to represent a threat to regional or world peace either. It is only when the major powers of the imperialist camp intervene that such a threat emerges. Third, it is only when the great powers of both systems become involved that the threat of world nuclear war arises.

In other words, using the October 1973 Arab-Israeli War as an example, the Arabs could attack the Israelis, and the Soviets could assist the Arabs in preparing for the attack and sustaining the fight without the emergence of a threat to other than local peace. But as soon as the United States began to assist Israel actively, the situation threatened to get out of hand--hence the Soviet emphasis on deterring direct U.S. intervention, and their reluctance to go very far with their own movement toward direct intervention.

### Defense of progress

If accurate, and influential in Soviet policy-formulation, this definition of the international situation and the policies and practices required to cope with it may explain some of the things the Soviets have (and have not) done with their Navy, but not all of them. Both common sense and careful analysis of Soviet behavior suggest that the Soviet naval presence in the forward area in peacetime is intended to do more than just defend peace. That's a negative objective. They also have some positive objectives: things they would like to see happen, particularly in the Third World.

What is the Soviet Union attempting to accomplish in the Third World, and how does it employ its military forces in the effort? Neither answer should be considered a mystery. They have told us at length what they intend, and we have seen in detail what they do.

As indicated further above, they are attempting to advance what they view as "progressive" change in the Third World. It was noted that they view local reactionaries and the forces of worldwide imperialism as the principal opponents of "progressive" change. And while such change can be delayed by reactionary/imperialist opposition, it is in the "progressive" direction that the Soviets see history moving.

They define the situation and structure their behavior in the Third World in terms of that movement. For the Soviets, "progressive" change represents the status quo in contemporary Third World affairs. Their preferred role in those affairs is the establishment of "favorable conditions" for such change, and, in addition to the protection and promotion of their more prosaic interests (like insuring the safety of Soviet citizens and protecting trade flows) it is for that express purpose--establishing favorable political-military conditions for "progressive" change--that Soviet military forces, almost exclusively their naval forces, are employed for positive ends in the Third World. The mission of those forces is to defend the status quo. They perform that mission by deterring the initiation and compelling the cessation of what they see as attempts to alter that status quo: reactionary and imperialist efforts to stop or reverse "progress."

Soviet military forces consequently are not intended to be, and do not act as, the engines of "progressive" change in the Third World. They are not employed to overthrow established regimes; they do not participate in consolidating the gains of revolutions. Those functions are performed by other elements of the forces of "progress": national liberation movements, newly-independent states, and other instruments of world socialism--like the Cubans and East Germans. The Soviet military is simply "riding shotgun" for them, their efforts, and their achievements.

As such, the immediate objective of stationing Soviet forces in the Third World in defense of "progress" is once again deterrence, not war-fighting. The ability to fight effectively is, of course, a prerequisite for deterring effectively; but significant combat is not what they have in mind, or prepare for. Local reactionary forces are unlikely themselves to possess great military strength and therefore can be intimidated by the presence the Soviets maintain deployed forward. And when the far more numerous and capable forces of worldwide imperialism become involved--in particular, when the United States moves forces to the scene--the Soviets can deploy additional forces of their own to reestablish the deterrent counterweight of their presence.

The Soviet Union doesn't appear to possess either the combat forces or the support infrastructure that would be required to carry out such a mission if it entailed taking vigorous or forceful action in the Third World--especially if the ability to sustain high-intensity combat operations in distant areas were one of the requisites. In most circumstances, however, establishing "favorable political-military conditions" for "progressive" change is not that demanding. And should circumstances prove otherwise, the Soviets have demonstrated a remarkable ability to distance themselves from such situations. They are, after all, not themselves responsible for actually bringing about "progressive" change. Theirs is "a more lofty task..."

"Preparation of Maritime Theaters of Military Operations"

There are a variety of very practical reasons to move forces into potential combat zones in peacetime. Some, like being in the optimum position to fight now if necessary and improving one's capability to fight at some unspecified point in the future, need no elucidation. Both of these probably explain a significant portion of Soviet naval activity outside their home waters today. This arguably has been the case with their presence in the Mediterranean.

The Soviets have an additional reason to deploy their forces in potential combat zones in peacetime. It is oriented toward the same ultimate military end: structuring the situation to improve the likelihood that Soviet forces will prevail if war should come. But it employs a different means of achieving that end. Where the first two conflict-oriented rationales (establishing optimum position and improving readiness) involve taking military actions intended to enhance their own combat potential, this third rationale involves taking military-political actions intended to detract from their likely opponents' combat potential.

The political process involved is relatively straightforward. It is commonly referred to as intimidation. It involves manipulating the peacetime presence and activity of Soviet forces in potential combat theaters (such as the Eastern Mediterranean) to affect to Soviet advan-

tage the definitions of the situation and consequent policies of those they perceive likely to oppose them there. Specifically, this means taking actions that increase the likelihood that potential opponents will perceive the balance of military power in the region as lying so far in favor of the Soviet Union that it would not be cost-effective to attempt to challenge them there.

Along with other, more concrete measures, such as making preparations to control strategic locations, establishing land-based support facilities, providing for surveillance and setting up appropriate command-control and communications relationships, the Soviets obviously consider this political campaign an effective peacetime contribution to the establishment of favorable military conditions for winning a dominant position in a theater in wartime. This approach to the problem of preparing to fight probably goes a long way toward explaining the frequency, location, magnitude, and openly demonstrative character of some of their major fleet exercises, and in particular the large-scale maneuvers such as Okean and Vesna that they held in the 1970s. It also may help to explain their exaggerated efforts to defend the legitimacy of expanding their naval operations beyond Soviet home waters, and the vigor with which they tend to react to the presence of the forces of potential opponents in close proximity to the Soviet Union.

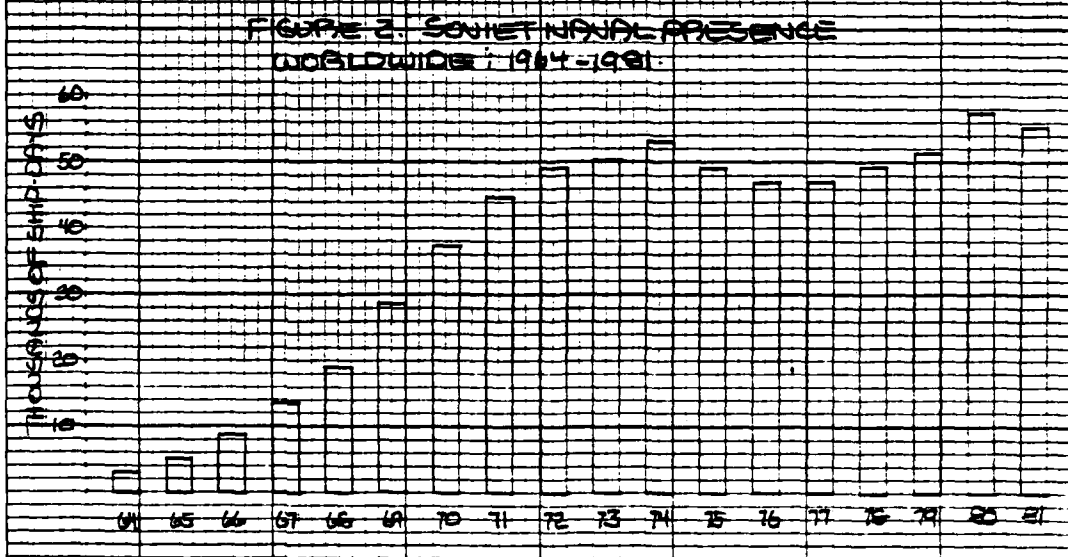
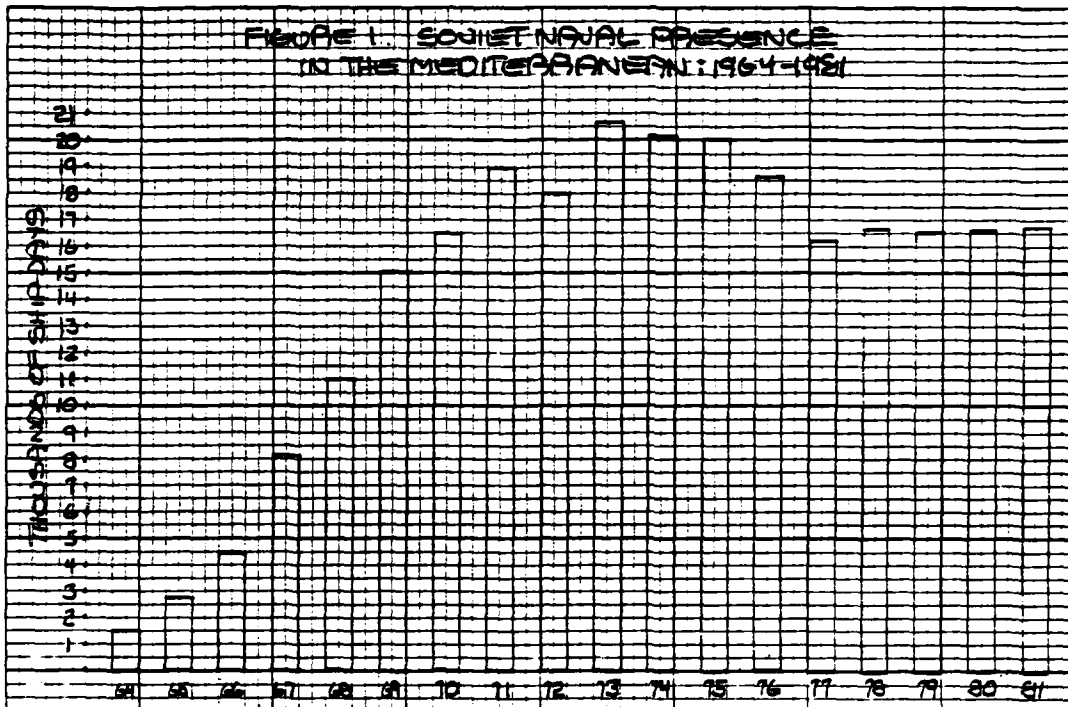
In essence, they devote a significant amount of effort in peacetime to creating an image of themselves as possessing overwhelming warfight-

ing strength, not only in their own home waters, where no one would doubt that, but in potential combat theaters in the forward area as well, where such doubts might be legitimate. They view this as a means of reducing the level of effort that must be devoted in wartime to the establishment and maintenance of control of those theaters--a task they recognize as a sine qua non of the successful performance of other, critically important, wartime functions.

THE EVOLUTION OF THE SOVIET NAVAL PRESENCE  
IN THE MEDITERRANEAN

Soviet deployments to the Mediterranean have undergone significant change since their inception. Both the size and the composition of the force they maintain there have been altered. These changes reflect--and illustrate--the evolution of Soviet expectations of future war and its imperatives outlined above. They also have significant implications for the exploitation of their presence for political purposes in peacetime, which will be discussed further below.

It is not necessary to examine Soviet naval operations in the Mediterranean in detail to recognize the most important of these changes (which is fortunate, since a substantial portion of the information required for such an examination has yet to be placed in the public record). Figure 1 describes the evolution of the Soviet naval presence in the Mediterranean. Figure 2, which describes the evolution of the world-wide Soviet naval presence during the same period, provides an appropriate context for evaluating those Mediterranean deployments. Both illustrations are drawn in terms of annual ship days. This is an aggregate measure of the time spent, in the one case in the Mediterranean and in the other outside home waters, by Soviet naval and naval-associated units of all types. It is a reasonable representation of level of effort.



As figure 1 demonstrates, the evolution of the Soviet Mediterranean Squadron has progressed through three more-or-less distinct stages. From their inception in 1964 through 1971, Soviet naval deployments to the Mediterranean increased in scale steadily (from 1,500 ship days in 1964 to 19,000 in 1971). From 1972 through 1976, they fluctuated (averaging 19,400 for the period, and reaching an all-time high of 20,600 in 1973). In 1977, they fell back to roughly 16,500, and have remained remarkably close to that figure ever since. As noted above, it looks as though a limit has been placed on the presence the Soviets are willing (or, perhaps, able) to maintain in the Mediterranean. When that decision was taken is not altogether clear, although the 1976-77 period is a logical candidate. That some such decision was taken is, however, obvious.

As figure 2 demonstrates, worldwide Soviet naval operations have also evolved in identifiable stages. In the early years, the worldwide pattern (steady increase) paralleled that evident in the Mediterranean. This is not surprising. For the first five of those years, operations in the Mediterranean accounted for more than half of the worldwide total. In the most recent five-year period, the worldwide pattern (renewed increase) has not been reflected in the Mediterranean. This is surprising--but for other reasons, since Mediterranean operations now account for less than one-third of the total.

Comparing figures 1 and 2 makes a second important point about Soviet deployments to the Mediterranean: the limit that has been placed on their presence there is intentional. The cut-back in Mediterranean activity in the second half of the 1970s could have been dictated by operational considerations. Throughout the first half of the 1970s, the Soviets employed their naval forces not only extensively but intensively. It is conceivable that this level of effort was beyond what they could sustain, that increased deployments were undertaken at the expense of future availability--for example, keeping ships in service by delaying overhauls. If that is what they did, and the cut-back in Mediterranean activity occurred because the past caught up with them, then the significance of that cutback for explaining present and forecasting future Soviet actions in the Mediterranean is diminished significantly.

However, the parallel cut-back in world-wide activity that began in 1975, and could itself have been an artifact of the situation just described, has now been reversed. The total level of effort reflected in Soviet naval operations undertaken in both 1980 and 1981 exceeds that achieved in 1974. Clearly, if in the second half of the 1970s the Soviets were unable to achieve what they had in the first half, they can surpass it now. And clearly, even if diminished operational availability were the explanation for the reduction in Mediterranean opera-

tions in the second half of the 1970s\*, it does not explain their failure to increase in parallel with increased operations elsewhere in the 1980s. They could have. They didn't. They clearly weren't meant to.

Why this is so is not as clear. A rationale was outlined further above, and the subject will be addressed again further below. One observation should suffice for the moment. The Soviets' decision to limit the size of the naval presence they maintain in the Mediterranean obviously was accompanied (if not occasioned) by a shift in their priorities--possibly to the performance of other functions, but certainly to increased presence in other regions.\*\*

This line of argument should not be taken very far. Soviet priorities may have shifted. Their resources may now be allocated differently. Even if they have, and are, these changes do not alter the fundamental situation in the Mediterranean. The Soviet Mediterranean Squadron remains where and what it was. It has not been moved elsewhere. It has not been disbanded. It has not been disarmed. Its

---

\* An issue on which this discussion takes no stand. The author has argued elsewhere that loss of access to support facilities in Egypt contributed significantly to the reduction. That is, however, a short-run phenomenon. Why in the long run (and surely, six years qualifies as the long run) the Soviets have not taken steps to rebuild their presence is a different issue. See: "Land Support for Naval Forces: Egypt and the Soviet Escadra 1962-1976," Survival 20-2 (Mar/Apr 1978), pp. 73-79.

\*\* Primarily the Pacific and Indian Oceans (where, one should not forget, the United States has recently shifted some of the forces it previously kept in the Mediterranean).

strength may be diminished somewhat, but it is still significant: the annual average for 1981 was some 45 units, both combatant and auxiliary. And it still possess formidable combat capabilities. As before, it is what the Soviets want it to be: a force that cannot be ignored.

(What under other circumstances would have been an extended discussion of) TRENDS IN THE SOVIETS' EXPLOITATION OF THEIR MEDITERRANEAN NAVAL PRESENCE FOR POLITICAL PURPOSES

This (early August 1982, in the midst of the second contest for control of Beirut\*) is both an appropriate and an inappropriate moment to attempt an assessment of trends in the Soviet Mediterranean Squadron's use as an instrument of international political influence. Some attempt is called for. Those trends outline the utility the Soviets are likely to see in the Squadron in the future, and hence the likelihood that efforts to negotiate constraints on it will prove successful.

It is an appropriate moment for such an assessment because important changes in Soviet policy and practice, outlined above, appear to have been introduced after the last directly comparable instance of the Squadron's use. This was in 1976, during the previous contest for control of Beirut. Comparison of the Squadron's activities in that situation with its activities in the present situation should highlight whatever changes have occurred in the interim in its peacetime political role. At the minimum, what it has and has not done in this instance must be taken into account.

This is an even more inappropriate moment to undertake such an assessment, however, because the present contest for control of Beirut

---

\*Or whatever euphemism one prefers to use to describe the situation.

has not yet run its course, and it is by no means clear what will occur before it does. As a result, while some of the context is known, as are some of the actions the Soviets have taken in this context, it remains too early to reach conclusions on the nature of their response to the situation.

Arguably the single most important question in such a trend assessment--the extent of the Soviets' current willingness to threaten the use of force to influence the course of events in a local conflict, implicit in any injection of the Mediterranean Squadron into such a situation--cannot be answered until it becomes possible to assess the opportunities this situation has presented to them. Even lesser issues, like the relative level of effort devoted to maintaining forces in the vicinity so they could be employed if desired, cannot be resolved until the dimensions of this occasion can be compared with those of its predecessor. None of that can be done until the case is closed.

One observation, about one aspect of Soviet behavior in this situation, can be made legitimately. The occasion has come and gone. The subject is their response to US actions--specifically, to the concentration in the Mediterranean of four aircraft carriers, the largest such force to assemble in the region in decades. Prior to the outbreak of conflict in Lebanon, additional forces had been ordered to augment the US Sixth Fleet for a NATO exercise. They arrived in the Mediterranean

soon after the conflict started, carried out the exercise, and departed-- without playing any role in the conflict.

Previously, the concentration in the Mediterrean of US forces of such strength would have prompted a noticeable Soviet response. Some 50 ships were present, in excess of 250 aircraft would have been aboard the carriers. That would have elicited the deployment of countervailing forces to the Mediterranean Squadron. During the October 1973 Arab-Israeli War, for example, when the US assembled a three-carrier task force in the Mediterranean, augmentations increased the strength of the Mediterranean Squadron to 96 units. That was an all-time high. This time, no such response occurred. The Squadron's strength rose only fractionally and peaked at roughly half that figure.

Of course, this situation and the October War are not directly comparable politically. Different players are involved, their relationships to the Superpowers are different, and--thus far--the stakes in the two situations are different. And politics may explain the difference in the Soviet's response, or apparent lack of response, to this aspect of this situation.

On the other hand, at least with regard to the one aspect of the situation under discussion here--Soviet responses to US actions--the two situations are fully comparable. In both, a strong US force, with the

capability to do significant damage to the Soviet Union itself, moved close enough to the Soviet Union to do such damage.

Again, until events have run their course and the full context becomes known, conclusions with regard to current Soviet behavior, and what that implies about the future, should not be drawn. The lack of a proportionate counter-deployment in this case does, however, suggest that Soviet priorities are no longer the same as they were in 1973, that, as argued further above, the imperatives that shape both the Mediterranean Squadron and the actions it undertakes have been modified.

## THE FUTURE

Any attempt to make a direct forecast of the future of the Mediterranean Squadron that does not acknowledge the evidence of its most recent employment is liable to be in error, particularly when that employment may represent a critical test of the utility the Soviets now attach to the maintenance of a naval presence in the region in peacetime and its exploitation for political purposes. This discussion attempts no such direct forecast.

It is possible, however, to approach the question of the Squadron's future indirectly: by addressing the factors that appear likely to shape its future. Two of these have been discussed at length above. One is the doctrinal expectations and prescriptions that appear to structure Soviet military planning for war. The other is Soviet perceptions of the dynamics of international conflict and the role in its "management" their forces should, and should not, play in peacetime. These two factors are not independent. The former drives the latter. What the Soviets do with their forces in peacetime is predicated on what they expect to have to do with them in wartime.

As outlined above, they appear to expect the United States and NATO--and themselves--to exercise increasing restraint in the use of force. And they appear to expect that restraint to translate into at least lengthier, if not less, conflict between the coalitions.

As their expectations of potential conflict change, their prescriptions for its conduct and the steps they must take to prepare for it change accordingly. Protracted conventional war appears more and more to be what they expect, and its requirements differ substantially from those that prevailed when the Mediterranean Squadron was being established. New requirements imply the reallocation of priorities among combat functions and theaters, and that implies the reallocation of resources.

It is possible that the apparent changes in the strength and activities of the squadron noted above reflect such reallocations. The importance of some of the functions previously performed by the Mediterranean Squadron may have been downgraded; resources previously deployed to the Mediterranean may have been assigned to other theaters to perform functions assuming increased importance.

If, in fact, this is what has occurred, it could be an indication that the role assigned the Mediterranean Squadron in Soviet war plans has been downgraded. And that, in turn, could be an indication that attempts to negotiate limitations and eventual reductions in the presence and activities of Soviet forces in the Mediterranean might prove successful. But that isn't necessarily what has occurred, and even a significant downgrading of the combat role of the Mediterranean Squadron wouldn't guarantee the success of such negotiations.

First, the changes observed in the strength and activities of the Squadron could well be more apparent than real. Moreover, even if real, they do not necessarily imply a downgrading of combat functions previously assigned to the Squadron.

The unit capabilities of Soviet combatants have increased significantly over the years as new weapons and sensors have been developed and deployed to the fleet. The Soviets may have concluded that a lesser number of more capable units can still perform the Squadron's combat functions. In the same vein, some of the combat functions previously assigned to the Squadron could have been reassigned to other forces--the strike aircraft of the Black Sea Fleet, for example.

Second, even if the Squadron's potential wartime contribution were now so minimal as to permit its existence to be negotiated away, the continued performance of its peacetime functions could be considered of sufficient importance to justify its continued existence. Unlike many of its potential wartime functions, which could be performed--perhaps less efficiently--in other ways or by other means, the performance of the Squadron's peacetime functions requires its presence in the Mediterranean.

An assessment of the Soviets' current use of the Mediterranean Squadron as an instrument of international political influence is re-

quired to go beyond this point. If the Squadron's peacetime functions remain essentially what they were as recently as 1976, and if the Soviets still accord the performance of those functions the importance they accorded it then, it seems unlikely that they would agree to the Squadron's withdrawal from the Mediterranean--as long as local conflict remained endemic to the region, and the United States had not agreed to withdraw the Sixth Fleet. Even if those functions have been reduced in scope and importance, it seems unlikely they would withdraw unless those two additional conditions had been met.

CNA PROFESSIONAL PAPERS - 1978 TO PRESENT\*

- PP 211  
Mizrabi, Maurice M., "On Approximating the Circular Coverage Function," 14 pp., Feb 1978, AD A054 429
- PP 212  
Mangel, Marc, "On Singular Characteristic Initial Value Problems with Unique Solution," 20 pp., Jun 1978, AD A058 555
- PP 213  
Mangel, Marc, "Fluctuations in Systems with Multiple Steady States, Application to Lanchester Equations," 12 pp., Feb 78 (Presented at the First Annual Workshop on the Information Linkage Between Applied Mathematics and Industry, Naval PG School, 23-25 Feb 1978), AD A071 472
- PP 214  
Weinland, Robert G., "A Somewhat Different View of The Optimal Naval Posture," 37 pp., Jun 1978 (Presented at the 1978 Convention of the American Political Science Association (APSA/IUS Panel on "Changing Strategic Requirements and Military Posture"), Chicago, Ill., 2 Sep 1976), AD A056 228
- PP 215  
Colle, Russell C., "Comments on: Principles of Information Retrieval by Manfred Kochen," 10 pp., Mar 78 (Published as a Letter to the Editor, Journal of Documentation, Vol. 31, No. 4, Dec 1975), AD A054 426
- PP 216  
Colle, Russell C., "Lotka's Frequency Distribution of Scientific Productivity," 18 pp., Feb 1978 (Published in the Journal of the American Society for Information Science, Vol. 28, No. 6, Nov 1977), AD A054 425
- PP 217  
Colle, Russell C., "Bibliometric Studies of Scientific Productivity," 17 pp., Mar 78 (Presented at the Annual meeting of the American Society for Information Science held in San Francisco, California, Oct 1976), AD A054 442
- PP 218 - Classified
- PP 219  
Huntzinger, R. LaVer, "Market Analysis with Rational Expectations: Theory and Estimation," 60 pp., Apr 78, AD A054 422
- PP 220  
Maurer, Donald E., "Diagonalization by Group Matrices," 26 pp., Apr 78, AD A054 443
- PP 221  
Weinland, Robert G., "Superpower Naval Diplomacy in the October 1973 Arab-Israeli War," 76 pp., Jun 1978 (Published in Seapower in the Mediterranean: Political Utility and Military Constraints, The Washington Papers No. 61, Beverly Hills and London: Sage Publications, 1979) AD A055 564
- PP 222  
Mizrabi, Maurice M., "Correspondence Rules and Path Integrals," 30 pp., Jun 1978 (Invited paper presented at the CNRS meeting on "Mathematical Problems in Feynman's Path Integrals," Marseille, France, 22-26 May 1978. Published in Springer Verlag Lecture Notes in Physics, 106, 1979), AD A055 536
- PP 223  
Mangel, Marc, "Stochastic Mechanics of Molecule Molecule Reactions," 21 pp., Jun 1978, AD A056 227
- PP 224  
Mangel, Marc, "Aggregation, Bifurcation, and Extinction in Exploited Animal Populations," 48 pp., Mar 1978, AD A058 536  
\*Portions of this work were completed at the Institute of Applied Mathematics and Statistics, University of British Columbia, Vancouver, B.C., Canada
- PP 225  
Mangel, Marc, "Oscillations, Fluctuations, and the Hopf Bifurcation," 43 pp., Jun 1978, AD A058 537  
\*Portions of this work were completed at the Institute of Applied Mathematics and Statistics, University of British Columbia, Vancouver, Canada.
- PP 226  
Raiston, J. M., and Mann, J. W., "Temperature and Current Dependence of Degradation in Red-Emitting GaP LEDs," 34 pp., Jun 1978 (Published in Journal of Applied Physics, Vol. 50, May 1979) AD A058 538  
\*Bell Telephone Laboratories, Inc.
- PP 227  
Mangel, Marc, "Uniform Treatment of Fluctuations at Critical Points," 50 pp., May 1978, AD A058 539
- PP 228  
Mangel, Marc, "Relaxation at Critical Points: Deterministic and Stochastic Theory," 54 pp., Jun 1978, AD A058 540
- PP 229  
Mangel, Marc, "Diffusion Theory of Reaction Rates, I: Formulation and Einstein-Smoluchowski Approximation," 50 pp., Jan 1978, AD A058 541
- PP 230  
Mangel, Marc, "Diffusion Theory of Reaction Rates, II Ornstein-Uhlenbeck Approximation," 34 pp., Feb 1978, AD A058 542
- PP 231  
Wilson, Desmond P., Jr., "Naval Projection Forces: The Case for a Responsive MAF," Aug 1978, AD A058 543
- PP 232  
Jacobson, Louis, "Can Policy Changes Be Made Acceptable to Labor?" 18 pp., Aug 1978 (Submitted for publication in Industrial and Labor Relations Review), AD A061 528

\*CNA Professional Papers with an AD number may be obtained from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151. Other papers are available from the Management Information Office, Center for Naval Analyses, 2000 North Beauregard Street, Alexandria, Virginia 22311. An Index of Selected Publications is also available on request. The Index includes a Listing of Professional Papers, with abstracts, issued from 1969 to June 1981.

- PP 233  
Jacobson, Louis, "An Alternative Explanation of the Cyclical Pattern of Quits," 23 pp., Nov 1978
- PP 234 - Revised  
Jondrow, James, and Levy, Robert A., "Does Federal Expenditure Displace State and Local Expenditure: The Case of Construction Grants," 25 pp., Oct 1979, AD A061 529
- PP 235  
Mizrahi, Maurice M., "The Semiclassical Expansion of the Anharmonic-Oscillator Propagator," 41 pp., Oct 1978 (Published in Journal of Mathematical Physics, Vol. 20, 1979), AD A061 538
- PP 237  
Maurer, Donald, "A Matrix Criterion for Normal Integral Bases," 10 pp., Jan 1979 (Published in the Illinois Journal of Mathematics, Vol. 22, 1978)
- PP 238  
Utgoff, Kathleen Classen, "Unemployment Insurance and the Employment Rate," 20 pp., Oct 1978 (Presented at the Conference on Economic Indicators and Performance: The Current Dilemma Facing Government and Business Leaders, presented by Indiana University Graduate School of Business), AD A061 527
- PP 239  
Trost, R. P., and Warner, J. T., "The Effects of Military Occupational Training on Civilian Earnings: An Income Selectivity Approach," 38 pp., Nov 1979, AD A077 831
- PP 240  
Powers, Bruce, "Goals of the Center for Naval Analyses," 13 pp., Dec 1978, AD A063 759
- PP 241  
Mangel, Marc, "Fluctuations at Chemical Instabilities," 12 pp., Dec 1978 (Published in Journal of Chemical Physics, Vol. 69, No. 8, 15 Oct 1978), AD A063 787
- PP 242  
Simpson, William R., "The Analysis of Dynamically Interactive Systems (Air Combat by the Numbers)," 160 pp., Dec 1978, AD A063 760
- PP 243  
Simpson, William R., "A Probabilistic Formulation of Murphy Dynamics as Applied to the Analysis of Operational Research Problems," 18 pp., Dec 1978, AD A063 761
- PP 244  
Sherman, Allan, and Horowitz, Stanley A., "Maintenance Costs of Complex Equipment," 20 pp., Dec 1978 (Published By The American Society of Naval Engineers, Naval Engineers Journal, Vol. 91, No. 6, Dec 1979), AD A071 473
- PP 245  
Simpson, William R., "The Accelerometer Methods of Obtaining Aircraft Performance from Flight Test Data (Dynamic Performance Testing)," 403 pp., Jun 1979, AD A075 226
- PP 246  
Brechling, Frank, "Layoffs and Unemployment Insurance," 35 pp., Feb 1979 (Presented at the NBER Conference on "Low Income Labor Markets," Chicago, Jun 1978), AD A096 629
- PP 248  
Thomas, James A., Jr., "The Transport Properties of Dilute Gases in Applied Fields," 183 pp., Mar 1979, AD A096 464
- PP 249  
Glasser, Kenneth S., "A Secretary Problem with a Random Number of Choices," 23 pp., Mar 1979
- PP 250  
Mangel, Marc, "Modeling Fluctuations in Macroscopic Systems," 26 pp., Jun 1979
- PP 251  
Trost, Robert P., "The Estimation and Interpretation of Several Selectivity Models," 37 pp., Jun 1979, AD A075 941
- PP 252  
Nunn, Walter R., "Position Finding with Prior Knowledge of Covariance Parameters," 5 pp., Jun 1979 (Published in IEEE Transactions on Aerospace & Electronic Systems, Vol. AES-15, No. 3, Mar 1979)
- PP 253  
Glasser, Kenneth S., "The d-Choice Secretary Problem," 32 pp., Jun 1979, AD A075 225
- PP 254  
Mangel, Marc, and Quanbeck, David B., "Integration of a Bivariate Normal Over an Offset Circle," 14 pp., Jun 1979, AD A096 471
- PP 255 - Classified, AD B051 441L
- PP 256  
Maurer, Donald E., "Using Personnel Distribution Models," 27 pp., Feb 1980, AD A082 218
- PP 257  
Thaler, R., "Discounting and Fiscal Constraints: Why Discounting is Always Right," 10 pp., Aug 1979, AD A075 224
- PP 258  
Mangel, Marc S., and Thomas, James A., Jr., "Analytical Methods in Search Theory," 86 pp., Nov 1979, AD A077 832
- PP 259  
Glass, David V.; Hsu, Ih-Ching; Nunn, Walter R.; and Perin, David A., "An Analysis of a Layered Defense Model," 17 pp., Mar 1980, AD A077 833
- PP 260  
Mangel, Marc S., and Cope, Davis K., "Detection Rate and Sweep Width in Visual Search," 14 pp., Nov 1979, AD A077 834
- PP 261  
Frank-Vile, Carlos L.; Zvijec, David J.; and Ross, John, "Franck-Condon Theory of Chemical Dynamics. VI. Angular Distributions of Reaction Products," 14 pp., Nov 1979 (Reprinted from Journal Chemical Phys. 70(12), 15 Jun 1979), AD A076 287
- PP 262  
Petersen, Charles C., "Third World Military Elites in Soviet Perspective," 50 pp., Nov 1979, AD A077 835
- PP 263  
Robinson, Kathy L., "Using Commercial Tankers and Container-ships for Navy Underway Replenishment," 25 pp., Nov 1979, AD A077 836

- PP 264  
Weinland, Robert G., "The U.S. Navy in the Pacific: Past, Present, and Glimpses of the Future," 31 pp., Nov 1979 (Delivered at the International Symposium on the Sea, sponsored by the International Institute for Strategic Studies, The Brookings Institution and the Yomiuri Shimbun, Tokyo, 16-20 Oct 1978), AD A077 837
- PP 265  
Weinland, Robert G., "War and Peace in the North: Some Political Implications of the Changing Military Situation in Northern Europe," 18 pp., Nov 1979 (Prepared for presentation to the Conference of the Nordic Balance in Perspective: The Changing Military and Political Situation," Center for Strategic and International Studies, Georgetown University, 15-16 Jun 1978), AD A077 838
- PP 266  
Utgoff, Kathleen Classen, and Brechling, Frank, "Taxes and Inflation," 25 pp., Sep 1979, AD A081 194
- PP 267  
Trost, Robert P., and Vogel, Robert C., "The Response of State Government Receipts to Economic Fluctuations and the Allocation of Counter-Cyclical Revenue Sharing Grants," 12 pp., Dec 1979 (Reprinted from the Review of Economics and Statistics, Vol. LXI, No. 3, Aug 1979)
- PP 268  
Thomason, James S., "Seaport Dependence and Inter-State Cooperation: The Case of Sub-Saharan Africa," 141 pp., Jan 1980, AD A081 193
- PP 269  
Weiss, Kenneth G., "The Soviet Involvement in the Ogaden War," 42 pp., Jan 1980 (Presented at the Southern Conference on Slavic Studies in October, 1979), AD A082 219
- PP 270  
Remnek, Richard, "Soviet Policy in the Horn of Africa: The Decision to Intervene," 52 pp., Jan 1980 (To be published in "The Soviet Union in the Third World: Success or Failure," ed. by Robert M. Donaldson, Westview Press, Boulder, Co., Summer 1980), AD A081 195
- PP 271  
McConnell, James, "Soviet and American Strategic Doctrines: One More Time," 43 pp., Jan 1980, AD A081 192
- PP 272  
Weiss, Kenneth G., "The Azores in Diplomacy and Strategy, 1940-1945," 46 pp., Mar 1980, AD A085 094
- PP 273  
Nakada, Michael K., "Labor Supply of Wives with Husbands Employed Either Full-Time or Part-Time," 39 pp., Mar 1980, AD A082 220
- PP 274  
Nunn, Walter R., "A Result in the Theory of Spiral Search," 9 pp., Mar 1980, AD A112 481
- PP 275  
Goldberg, Lawrence, "Recruiters, Advertising, and Navy Enlistments," 34 pp., Mar 1980, AD A082 221
- PP 276  
Goldberg, Lawrence, "Delaying an Overhaul and Ship's Equipment," 40 pp., May 1980, AD A085 095
- PP 277  
Mangel, Marc, "Small Fluctuations in Systems with Multiple Limit Cycles," 19 pp., Mar 1979 (Published in SIAM J. Appl. Math., Vol. 38, No. 2, Feb 1980), AD A086 229
- PP 278  
Mizrabi, Maurice, "A Targeting Problem: Exact vs. Expected-Value Approaches," 23 pp., Apr 1980, AD A085 096
- PP 279  
Walt, Stephen M., "Causal Inferences and the Use of Force: A Critique of Force without War," 50 pp., May 1980, AD A085 097
- PP 280  
Goldberg, Lawrence, "Estimation of the Effects of a Ship's Steaming on the Failure Rate of its Equipment: An Application of Econometric Analysis," 25 pp., Apr 1980, AD A085 098
- PP 281  
Mizrabi, Maurice M., "Comment on 'Discretization Problems of Functional Integrals in Phase Space'," 2 pp., May 1980, (Published in "Physical Review D", Vol. 22, No. 8, 15 Oct 1980), AD A094 994
- PP 283  
Dismukes, Bradford, "Expected Demand for the U.S. Navy to Serve as An Instrument of U.S. Foreign Policy: Thinking About Political and Military Environmental Factors," 30 pp., Apr 1980, AD A085 099
- PP 284  
Kelson, J.;\* Nunn, W.; and Sumita, U.,\*\* "The Leguerre Transform," 119 pp., May 1980, AD A085 100  
\*The Graduate School of Management, University of Rochester and the Center for Naval Analyses  
\*\*The Graduate School of Management, University of Rochester
- PP 285  
Remnek, Richard B., "Superpower Security Interests in the Indian Ocean Area," 26 pp., Jun 1980, AD A087 113
- PP 286  
Mizrabi, Maurice M., "On the WKB Approximation to the Propagator for Arbitrary Hamiltonians," 25 pp., Aug 1980 (Published in Journal of Math. Phys., 22(1) Jan 1981), AD A091 307
- PP 287  
Cope, Davis, "Limit Cycle Solutions of Reaction-Diffusion Equations," 319 pp., Jun 1980, AD A087 114
- PP 288  
Golman, Walter, "Don't Let Your Slides Flip You: A Painless Guide to Visuals That Really Aid," 28 pp., (revised Aug 1982), AD A092 732
- PP 289  
Robinson, Jack, "Adequate Classification Guidance - A Solution and a Problem," 7 pp., Aug 1980, AD A091 212
- PP 290  
Watson, Gregory M., "Evaluation of Computer Software in an Operational Environment," 17 pp., Aug 1980, AD A091 213
- PP 291  
Maddala, G. S.,\* and Trost, R. P., "Some Extensions of the Nerlov Press Model," 17 pp., Oct 1980, AD A091 946  
\*University of Florida

- PP 292  
Thomas, James A., Jr., "The Transport Properties of Binary Gas Mixtures in Applied Magnetic Fields," 10 pp., Sep 1980 (Published in *Journal of Chemical Physics* 72(10), 15 May 1980)
- PP 293  
Thomas, James A., Jr., "Evaluation of Kinetic Theory Collision Integrals Using the Generalized Phase Shift Approach," 12 pp., Sep 1980 (Printed in *Journal of Chemical Physics* 72(10), 15 May 1980)
- PP 294  
Roberts, Stephen S., "French Naval Policy Outside of Europe," 30 pp., Sep 1980 (Presented at the Conference of the Section on Military Studies, International Studies Association, Kiawah Island, S.C.), AD A091 306
- PP 295  
Roberts, Stephen S., "An Indicator of Informal Empire: Patterns of U.S. Navy Cruising on Overseas Stations, 1869-1897," 40 pp., Sep 1980 (Presented at Fourth Naval History Symposium, US Naval Academy, 26 Oct 1979), AD A091 316
- PP 296  
Dismukes, Bradford, and Petersen, Charles C., "Maritime Factors Affecting Iberian Security," (*Factores Maritimos que Afectan la Seguridad Iberica*) 14 pp., Oct 1980, AD A092 733
- PP 297 - Classified
- PP 298  
Mizrahi, Maurice M., "A Markov Approach to Large Missile Attacks," 31 pp., Jan 1981, AD A096,159
- PP 299  
Jondrow, James M., and Levy, Robert A., "Wage Leadership in Construction," 19 pp., Jan 1981, AD A094 797
- PP 300  
Jondrow, James, and Schmidt, Peter, "On the Estimation of Technical Inefficiency in the Stochastic Frontier Production Function Model," 11 pp., Jan 1981, AD A096 160  
\*Michigan State University
- PP 301  
Jondrow, James M.; Levy, Robert A.; and Hughes, Claire, "Technical Change and Employment in Steel, Autos, Aluminum, and Iron Ore," 17 pp., Mar 1981, AD A099 394
- PP 302  
Jondrow, James M., and Levy, Robert A., "The Effect of Imports on Employment Under Rational Expectations," 19 pp., Apr 1981, AD A099 392
- PP 303  
Thomson, James, "The Rarest Commodity in the Coming Resource Wars," 3 pp., Aug 1981 (Published in the *Washington Star*, 13 Apr 1981), AD A104 221
- PP 304  
Duffy, Michael K.; Greenwood, Michael J.;\* and McDowell, John M.,\*\* "A Cross-Sectional Model of Annual Interregional Migration and Employment Growth: Intertemporal Evidence of Structural Change, 1958-1975," 31 pp., Apr 1981, AD A099 393  
\*University of Colorado  
\*\*Arizona State University
- PP 305  
Nunn, Laura H., "An Introduction to the Literature of Search Theory," 32 pp., Jun 1981, AD A100 420
- PP 306  
Anger, Thomas E., "What Good Are Warfare Models?" 7 pp., May 1981, AD A100 421
- PP 307  
Thomson, James, "Dependence, Risk, and Vulnerability," 43 pp., Jun 1981, AD A102 698
- PP 308  
Mizrahi, M.M., "Correspondence Rules and Path Integrals," 17 pp., Jul 1981. (Published in *"Nuovo Cimento B"*, Vol. 61, 1981), AD A102 699
- PP 309  
Weinland, Robert G., "An (The?) Explanation of the Soviet Invasion of Afghanistan," 44 pp., May 1981, AD A100 422
- PP 310  
Stanford, Janette M., and Wu, Tai Te, "A Predictive Method for Determining Possible Three-dimensional Foldings of Immunoglobulin Backbones Around Antibody Combining Sites," 19 pp., Jun 1981 (Published in *J. Theor. Biol.*, 1981), 88, AD A100 423  
\*Northwestern University
- PP 311  
Boves, Marianne, Brechling, Frank P. R.; and Utgoff, Kathleen P. Classen, "An Evaluation of UI Funds," 13 pp., May 1981 (Published in *National Commission on Unemployment Compensation's "Unemployment Compensation: Studies and Research,"* Volume 2, Jul 1980), AD A100 424
- PP 312  
Jondrow, James; Boves, Marianne; and Levy, Robert, "The Optimum Speed Limit," 23 pp., Jul 1983 (Revised), AD A100 425
- PP 313  
Roberts, Stephen S., "The U.S. Navy in the 1980s," 36 pp., Jul 1981, AD A102 696
- PP 314  
Jehn, Christopher; Horowitz, Stanley A.; and Lockman, Robert F., "Examining the Draft Debate," 20 pp., Jul 1981, AD A106 192
- PP 315  
Buck, Ralph V. (Capt., USN), "Le Catastrophe by any other name....," 4 pp., Jul 1981, AD A102 697
- PP 316  
Roberts, Stephen S., "Western European and NATO Navies, 1980," 20 pp., Aug 1981, AD A104 223
- PP 317  
Roberts, Stephen S., "Superpower Naval Crisis Management in the Mediterranean," 35 pp., Aug 1981, AD A104 222
- PP 318  
Vego, Milan M., "Yugoslavia and the Soviet Policy of Force in the Mediterranean Since 1961," 187 pp., Aug 1981

- PP 319  
Smith, Michael W., "Anti-air Warfare Defense of Ships at Sea," 46 pp., Sep 1981 (This talk was delivered at the Naval Warfare System and Technology Conference of the American Institute of Aeronautics and Astronautics in Washington on 12 Dec 1980; in Boston on 20 Jan 1981; and in Los Angeles on 12 Jun 1981.), AD A106 191
- PP 320  
Trost, R. P.; Lurie, Philip; and Berger, Edward, "A Note on Estimating Continuous Time Decision Models," 15 pp., Sep 1981, AD A106 193
- PP 321  
Duffy, Michael K., and Ledman, Jerry R.,\* "The Simultaneous Determination of Income and Employment in United States-Mexico Border Region Economies," 34 pp., Sep 1981, AD A106 540  
\*Associate Professor of Economics, Arizona State University
- PP 322  
Werner, John T., "Issues in Navy Manpower Research and Policy: An Economist's Perspective," 66 pp., Dec 1981, AD A110 221
- PP 323  
Boese, Frederick M., "Generation of Correlated Log-Normal Sequences for the Simulation of Clutter Echoes," 33 pp., Dec 1981
- PP 324  
Horowitz, Stanley A., "Quantifying Seapower Readiness," 6 pp., Dec 1981 (Published in Defense Management Journal, Vol. 18, No. 2), AD A110 220
- PP 326  
Roberts, Stephen S., "Western European and NATO Navies, 1981," 27 pp., Jul 1982, AD A118 703
- PP 327  
Hammon, Collin (Capt., USN), and Graham, David R., "Estimation and Analysis of Navy Shipbuilding Program Disruption Costs," 12 pp., Mar 1980, AD A112 514
- PP 328  
Weinland, Robert G., "Northern Waters: Their Strategic Significance," 27 pp., Dec 1980, AD A112 509
- PP 329  
Mangel, Marc, "Applied Mathematicians And Naval Operators," 40 pp., Mar 1982 (Revised), AD A116 598
- PP 330  
Lockman, Robert F., "Alternative Approaches to Attrition Management," 30 pp., Jan 1982, AD A112 510
- PP 331  
Roberts, Stephen S., "The Turkish Straits and the Soviet Navy in the Mediterranean," 15 pp., Mar 1982 (Published in Navy International)
- PP 332  
Jehn, Christopher, "The RDF and Amphibious Warfare," 36 pp., Mar 1982, AD A115 592
- PP 333  
Lee, Lung-Fei,\* and Trost, Robert P., "Estimation of Some Limited Dependent Variable Models with Application to Housing Demand," 26 pp., Jan 1982. (Published in Journal of Econometrics 8 (1978), AD A 112 536  
\*University of Minnesota
- PP 334  
Kenny, Lawrence W.;\* Lee, Lung-Fei;\*\* Maddala, G. S.;\* and Trost, R. P., "Returns to College Education: An Investigation of Self-Selection Bias Based on the Project Talent Data," 15 pp., Jan 1982. (Published in International Economic Review, Vol. 20, No. 3, Oct 1979), AD A112 480  
\*University of Florida  
\*\*University of Minnesota
- PP 335  
Lee, Lung-Fei;\* Maddala, G. S.;\*\* and Trost, R. P., "Asymptotic Covariance Matrices of Two-Stage Probit and Two-Stage Tobit Methods for Simultaneous Equations Models with Selectivity," 13 pp., Jan 1982. (Published in Econometrica, Vol. 48, No. 2, Mar 1980), AD A112 483  
\*University of Minnesota  
\*\*University of Florida
- PP 336  
O'Neill, Thomas, "Mobility Fuels for the Navy," 13 pp., Jan 1982. (Accepted for publication in Naval Institute Proceedings), AD A112 511
- PP 337  
Werner, John T., and Goldberg, Matthew S., "The Influence of Non-Pecuniary Factors on Labor Supply: The Case of Navy Enlistment Personnel," 23 pp., Dec 1981, AD A113 094
- PP 338  
Ledman, Paul and Jondrow, James, "American Journal of Political Science," 19 pp., Feb 1984
- PP 339  
Wilson, Desmond P., "The Persian Gulf and the National Interest," 11 pp., Feb 1982, AD A112 505
- PP 340  
Lurie, Philip; Trost, R. P.; and Berger, Edward, "A Method for Analyzing Multiple Spell Duration Data," 34 pp., Feb 1982, AD A112 504
- PP 341  
Trost, Robert P., and Vogel, Robert C.,\* "Prediction with Pooled Cross-Section and Time-Series Data: Two Case Studies," 6 pp., Feb 1982, AD A112 503  
\*Southern Illinois University
- PP 342  
Lee, Lung-Fei;\* Maddala, G. S.;\*\* and Trost, R. P., "Testing for Structural Change by D-Methods in Switching Simultaneous Equations Models," 5 pp., Feb 1982, AD A112 482  
\*University of Minnesota  
\*\*University of Florida
- PP 343  
Goldberg, Matthew S., "Projecting the Navy Enlisted Force Level," 9 pp., Feb 1982, AD A112 484
- PP 344  
Fletcher, Jean, W., "Navy Quality of Life and Reenlistment," 13 pp., Nov 1981, AD A113 095

- PP 345  
Utgoff, Kathy, and Thaler, Dick, "The Economics of Multi Year Contracting," 47 pp., Mar 1982. (Presented at the 1982 Annual Meeting of the Public Choice Society, San Antonio, Texas, 5-7 Mar 1982), AD A114 732  
\*Cornell University
- PP 346  
Rostker, Bernard, "Selective Service and the All-Volunteer Force," 23 pp., Mar 1982, AD A113 096
- PP 347  
McConnell, James, M., "A Possible Counterforce Role for the Typhoon," 24 pp., Mar 1982, AD A116 601
- PP 348  
Jondrow, James, and Trost, Robert, "An Empirical Study of Production Inefficiency in the Presence of Errors-in-The-Variables," 14 pp., Feb 1982, AD A113 391
- PP 349  
Breckenridge, W. H.,\* and Maimin, O. Kim, "Collisional Intramultiplet Relaxation of Cd(5s5p<sup>3</sup><sub>0,1,2</sub>) by Alkane Hydrocarbons," 7 pp., Jul 1981. (Published in Journal of Chemical Physics, 76(4), 15 Feb 1982), AD A113 093  
\*University of Utah, Dept. of Chemistry
- PP 350  
Levin, Marc, "A Method for Increasing the Firepower of Virginia Class Cruisers," 10 pp., Apr 1982. (To be published in U.S. Naval Institute Proceedings), AD A116 602
- PP 351  
Coutre, S. E.,\* Stanford, J. M.; Hovis, J. G.;\* Stevens, P. W.;\* and Wu, T. T.,\* "Possible Three-Dimensional Backbone Folding Around Antibody Combining Site of Immunoglobulin MOPC 167," 18 pp., Apr 1982 (Published in Journal of Theoretical Biology)  
\*Northwestern University, Depts. of Biochemistry & Molecular Biology and Engineering Sciences & Applied Mathematics
- PP 352  
Berfoot, C. Bernard, "Aggregation of Conditional Absorbing Markov Chains," 7 pp., Jun 1982 (Presented to the Sixth European Meeting on Cybernetics and Systems Research, held at the University of Vienna, Apr 1982), AD A116 603
- PP 353  
Berfoot, C. Bernard, "Some Mathematical Methods for Modeling the Performance of a Distributed Data Base System," 18 pp., Jun 1982. (Presented to the International Working Conference on Model Realism, held at Bad Honnek, West Germany, Apr 1982), AD A116 604
- PP 354  
Hall, John V., "Why the Short-War Scenario is Wrong for Naval Planning," 6 pp., Jun 1982., AD A118 702
- PP 356  
Cylke, Steven; Goldberg, Matthew S.; Hogan, Paul; and Mairs, Lee; "Estimation of the Personal Discount Rate: Evidence from Military Reenlistment Decisions," 19 pp., Apr 1982, AD A122 419
- PP 357  
Goldberg, Matthew S., "Discrimination, Nepotism, and Long-Run Wage Differentials," 13 pp., Sep 1982 (Published in Quarterly Journal of Economics, May 1982)
- PP 358  
Akst, George, "Evaluating Tactical Command And Control Systems--A Three-Tiered Approach," 12 pp., Sep 1982, AD 122 478
- PP 359  
Quester, Aline; Fletcher, Jean; and Marcus, Alan; "Veteran Status as a Screening Device: Comment," 26 pp., Aug 1982, AD A123 658
- PP 361  
Quanbeck, David B., "Methods for Generating Aircraft Trajectories," 31 pp., Sep 1982, AD A122 386
- PP 362  
Horowitz, Stanley A., "Is the Military Budget Out of Balance?," 10 pp., Sep 1982, AD A122 368
- PP 363  
Marcus, A. J., "Personnel Substitution and Navy Aviation Readiness," 35 pp., Oct 1982, AD A122 420
- PP 364  
Quester, Aline, and Nakada, Michael, "The Military's Monopsony Power," 29 pp., Oct 1982, AD A123 657
- PP 365  
Greer, William L., and Bartholomew, James C., (Cdr.USN), "Psychological Aspects of Mine Warfare," 15 pp., Oct 1982 AD A128 244
- PP 366  
Sprull, Nancy L., and Gestwirth, Joseph L.,\* "On the Estimation of the Correlation Coefficient From Grouped Data," 9 pp., Oct 1982, (Published in the Journal of the American Statistical Association, Sep 1982, Vol. 77, No. 379, Theory and Methods Section), AD A122 382  
\*George Washington University, Dept. of Statistics
- PP 367  
Peterson, Charles C., "Soviet Tactics for Warfare at Sea (Two Decades of Upheaval)," 57 pp., Nov 1982
- PP 368  
Weinland, Robert G., "The Evolution of Soviet Requirements for Naval Forces--Solving the Problems of the Early 1960s," 41 pp., Nov 1982, AD A123 655
- PP 369  
Quester, Aline, and Lockman, Robert, "The All-Volunteer Force: A Positive Perspective," 29 pp., Nov 1982, AD A128 279
- PP 370  
Rostker, Bernard D., "Human Resource Models: An Overview," 17 pp., Nov 1982, AD A123 656
- PP 372  
Hurley, William J., "An Overview of Acoustic Analysis," 46 pp., Jan 1983, AD A128 316
- PP 373  
Jacobson, Louis, "Research to Quantify the Effect of Permanent Change of Station Moves on Wives' Wages and Labor Supply," 35 pp., Jan 1983, AD A128 300
- PP 374  
Clay-Mendez, Deborah, and Ballis, Ellen, "Balancing Accession and Retention: The Disaggregate Model," 27 pp., Aug 1982

- PP 375  
Feldman, Paul, "Privatizing Airports in Washington, D.C.," 17 pp., Feb. 1983, AD A128 236
- PP 376  
Weiss, Kenneth G., "Power Grows Out of the Barrel of a Gunboat: The U.S. in Sino-Soviet Crises," 136 pp., Dec 1982
- PP 377  
Anger, Thomas E., "The Outlook for Military Operations Research," 14 pp., Apr 1983
- PP 379  
Jondrow, James M.; Chase, David E.; and Gamble, Christopher L., "The Price Differential Between Domestic and Imported Steel," 17 pp., May 1983
- PP 380  
Bells, Ellen, "Balancing Accession and Retention: Cost and Productivity Tradeoffs," 38 pp., Mar 1983
- PP 381  
Reeves, John M. L., "CNA's Conceptual Design and Cost Models for High-Speed Surface Craft," 23 pp., Apr 1983, AD A128 245
- PP 382  
Levy, Robert A., and Jondrow, James M., "The Adjustment of Employment to Technical Change in the Steel and Auto Industries," 40 pp., May 1983
- PP 383 (Revised)  
Thomas, James A., Jr., and Mengel, Marc, "Properties of Quick Look Passive Localization," 39 pp., Jul 1983
- PP 384  
Goldberg, Matthew S., and Heger, Michael F., "A Comparison of the Prophet and ACOL Force Projection Models," 35 pp., Jun 1981
- PP 385  
Angler, Bruce; Driscoll, Kurt; and Gregory, David, "Manpower Requirements Derivation for the Navy Comprehensive Compensation and Supply Study," 22 pp., Sep 1982
- PP 386  
Angler, Bruce M.; Driscoll, Kurt A.; and Carpenter, Kathy A., "Construction of 'Training Cost Per Graduate' for the Navy Comprehensive Compensation and Supply Study," 67 pp., Nov 1982
- PP 387  
Bells, Ellen, and Clay-Mendez, Deborah, "Balancing Accession and Retention: The Aggregate Model," 20 pp., Jul 1982
- PP 388  
Clay-Mendez, Deborah, "Models of Accession and Retention," 11 pp., Oct 1982
- PP 389  
Clay-Mendez, Deborah, "A Minimum Recruiting Cost Function for Male High School Graduates," 31 pp., Jan 1982
- PP 390  
Clay-Mendez, Deborah, "Documentation for the Recruiting Cost Estimates Utilized in the Navy Comprehensive Compensation and Supply Study," 30 pp., Sep 1982
- PP 391  
Goldberg, Larry, "Summary of Navy Enlisted Supply Study," 11 pp., Jul 1981
- PP 392  
Warner, John T., and Simon, Bruce, "An Empirical Analysis of Pay and Navy Enlisted Retention in the AVF: Preliminary Results," 31 pp., Dec 1979
- PP 394  
McGibney, Donald; Camerini, Ugo; Roberts, Arthur; and Winston, Roland, "Development of an Underwater High Sensitivity Cherenkov Detector: See Urchin," 20 pp., Aug 1983
- PP 396  
Jondrow, James M.; Brechling, Frank; and Marcus, Alan; "Older Workers in the Market for Part-Time Employment," 34 pp., Aug 1983
- PP 398  
Levy, Robert A.; Bowes, Marianne; and Jondrow, James M.; "Technical Change and Employment in the Steel, Auto, Aluminum, Coal, and Iron Ore Industries," 25 pp., Sep 1983
- PP 399  
Roberts, Stephen, "Western European and NATO Navies," 23 pp., Nov 1982
- PP 400  
Laird, Robbin F., "French Nuclear Forces in the 1980s and 1990s," 37 pp., Aug 1983
- PP 401  
Maloney, Arthur P., "The Berlin-Baghdad Railway as a Cause of World War I," 27 pp., Jan 1984
- PP 402  
Herz, Henry L., "A Parametric Analysis of Duels," 41 pp., Mar 1984
- PP 405  
Peterson, Charles C., "Aircraft Carriers in Soviet Naval Theory From 1960 to the Falklands War," 20 pp., Jan 1984
- PP 406  
Bowes, Marianne, "Profit-Maximizing vs. Optimal Behavior in a Spatial Setting: Summary and Extensions," 10 pp., Jan 1984
- PP 407  
Laird, Robbin F., "The French Strategic Dilemma," 41 pp., Mar 1984
- PP 408  
Marcus, Alan, and Quester, Aline, "Measuring the Productivity of First Term Navy Enlistees," 30 pp., Apr 1984
- PP 410  
Weinland, Robert G., "Soviet Strategy and the Objectives of Their Naval Presence in the Mediterranean," 44 pp., May 1984 (Published as Giacomo, Luciani (ed.), The Mediterranean Region: Economic Interdependence and the Future of Society, (London & Canberra/New York: Croom-Heim/St. Martin's Press 1984, pp. 267-291)
- PP 411  
Horowitz, Stan, "Skill Mix, Experience and Readiness," 12 pp., Oct 1983
- PP 412  
McConnell, James M., "The Interacting Evolution of Soviet and American Military Doctrines," 119 pp., Sep 1980

**END**

**FILMED**

**10-84**

**DTIC**