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United States Naval Operations in Low Level Warfare (U)

Final Report
BSR 2453
December 1968

Volume I
Summary and Major Tasks

Bendix
Aerospace Systems Division

UNITED STATES NAVAL OPERATIONS IN LOW LEVEL WARFARE (U)

FINAL REPORT
BSR 2453
DECEMBER 1968

VOLUME I
SUMMARY AND MAIN TASKS

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Bendix

AEROSPACE SYSTEMS DIVISION
OFFICE OF NATIONAL SECURITY STUDIES
ANN ARBOR, MICHIGAN

PREFACE

This report contains a summary and the findings of the main tasks of a study on U.S. naval operations in low-level warfare. Section I presents the research findings and a discussion of their relevance to the Navy and other agencies. Sections III, IV, and V contain the results of factor analytic studies on post-World War II conflict, U.S. Navy operations in conflict, and foreign influence in "less-developed" countries. Section II is an essay which places in context the decision-making and planning processes for low-level warfare naval operations. Because of funding limitations and technical redirection, the dependency of the outbreak and course of low-level conflict upon foreign influence, national characteristics and U.S. naval operations was not rigorously tested in this study. Section VI, a summary of quantitative research on political instability and violence, is directed at the extension and development of the work reported herein.

Volume II of this report contains the five appendices which support Volume I. Those interested in the data-making and analytical procedures should consult Appendices A and B. Appendix C consists of systematic abstracts of relevant quantitative studies by other investigators. Appendix D is on naval civic action. Appendix E lists the sources of information used in the research.

The results of the first phase of the study, approximately a year's work, were reported to the U.S. Naval Research Laboratory in Bendix Aerospace Systems Division, BSR 2198, September, 1967 (SECRET-NO FOREIGN).

Not reported herein are three supplementary tasks undertaken at the U.S. Naval Research Laboratory. In this work Bendix personnel participated with government and other contractor personnel in ad hoc, special studies. Code 4020 of the Laboratory has reported the results of this work elsewhere and has made use of the inputs from Bendix on this contract.

The work on this study spanned the period from June 1966 through December 1968 and was under the supervision of Richard H. Cady and William G. Prince, Principal Investigators. Mr. Prince prepared Section II, supervised the factor analyses performed in Phase II, and obtained all the data on naval operations. Other data were obtained and coded primarily by Mrs. Karen S. Tidwell and Mr. F. J. Mogdis. Messrs. W. Martin and R. Young worked as research assistants on the conflict data. Mr. F. Pearson prepared Section VI and interpreted several of the factor analyses. Dr. D. Armsby and Messrs. B. L. Tauber and A. Siemon also contributed pieces of work to the study. Appendix D was prepared by Professor E. B. Glick, Temple University. Professor R. J. Rummel and Mr. W. Phillips, University of Hawaii, provided valuable advice on research design, analysis, and interpretation.

The sources cited in Appendices A and E and elsewhere in the report show that considerable access to official sources was obtained via the U.S. Naval Research Laboratory. The cooperation of the following offices is gratefully acknowledged:

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None of these agencies nor the sponsor are responsible for the selection of variables or the validity of indices used in this report. The findings and recommendations contained in this report are those of the Contractor and do not necessarily represent the views of the U.S. Naval Research Laboratory or any other agency or office of the U.S. Government.

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SECTION I

SUMMARY REPORT

INTRODUCTION

In 1965 the Naval Analysis Group, Office of Naval Research, began a study of low-level warfare and its relationship to Navy-Marine Corps planning and requirements. A Summer Study Group at ONR produced a report which attempted to define "sublimited warfare" and outlined areas of research.[1] The definition tentatively adopted was as follows:

> Sublimited warfare is a state of continuous international conflict and tensions, arising from basic ideological differences of major antagonists and representing a subtle threat to national security, or in some other way involving important national interests, wherein the necessary resources available are employed with varying intensity short of limited war to achieve national objectives.

This study reported herein was undertaken primarily by Bendix Aerospace Systems to define the nature of low-level warfare, to go beyond the generalizations of the summer study, and to subject aspects of the definition to empirical tests.[2]

PRIOR WORK

The first use of the term, sublimited war, was in President Kennedy's speech during the 1961 Berlin crisis. The most extensive examination by the military prior to the beginning of the Navy program was the study, WINS II, performed in Headquarters, U.S. Army, DCS for Military

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[1] "Supporting Discussions for Research and Analysis Program in Sublimited War Operations of the Navy and Marine Corps," (U) 20 September 1965. (mimeo, SECRET)

[2] Bendix had just completed a preliminary study of Navy involvement in conflict. See The Navy and Sublimited Conflicts (U), Final Report, BSR 1407 (Ann Arbor, Michigan, 30 December 1966) (SECRET). The term "sublimited warfare" was dropped from usage because of its vague meaning and because it is not approved for use as official military terminology.

Operations.[3] WINS II was concerned with "conflicts in the lower spectrum of war" and postulated a region of sublimited war where both means and costs averaged less than, but overlapped with, limited war. The difficulty with this concept was that it was generalized from an inadequate data base and that scales for the measurement of cost and means were unspecified. Nevertheless, the report is a provocative, broad and sweeping assessment of low-level conflict, contains some principles for dealing with it, and makes specific recommendations on national security planning as well as Army roles. WINS II focused on the problem of insurgency, suggesting causes other than communistic subversion, and pointed to the importance of socio-economic environmental factors. Its most relevant recommendation was that conflict "in the lower spectrum" should be met by 'particularized" or specialized forces, material, doctrine, and organization as opposed to general purpose forces.

Another important study was conducted by the Center for Naval Analysis[4] and examined a somewhat higher level of violence. It contains estimates of the type, number, and location of future conflicts and recommends means by which the Navy may deal with them.

Of particular value to the present Bendix study was the conflict data for the period 1945-1965, obtained by the Institute of Naval Studies (INS) from open sources. These data were displayed in histograms, frequently polygons, and the like, but the data was subjected only to univariate analysis. The INS conflict data were made available to Bendix and were the starting point for the quantitative investigation of conflict and Navy operations.

In addition, considerable body of systematic empirical research has been done on violent conflict, much of it employing factor analysis, the principle analytical technique used in this project. Of particular relevance are studies by Rummel, Tanter, Singer and Small, and Denton and Phillips, all of which involved the factor analysis of large amounts of data de-

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[3] WINS II, A Worldwide Integral National Strategy for 1970, (U) (Washington, D.C., 1 March 1965) (SECRET - NOFORN).

[4] Institute of Naval Studies, Study No. 14, Navy Contributions to Deterrence at Conflict Levels Less than General War, 1975-1980, (Cambridge, Massachusetts, January 1966).

scribing war to extract underlying dimensions or patterns.[5] There are significant differences, however, between this study and the earlier efforts to quantify war or to discover regularities in it which will help one understand its nature. First, the time period covered in this study is restricted to the post World War II era, 1945-1966,in accordance with guidance received from USNRL and based on the assumption that the nuclear era has manifested different forms of violence than obtained previously. Secondly, all levels of politically significant intrastate and interstate violence were included, ranging in magnitude from attempted coups through the Korean War. Third, access to some classified data may lend a somewhat greater validity and reliability than might otherwise be the case had open sources been the only basis for data. Finally, and most significantly, a large number of descriptors of Navy operations were included in order to relate them to the characteristics of war.

Some other research related to this study has relied on traditional methods of inquiry, often times producing very useful insights. Robert Osgood's pioneering work[6] on limited war highlighted ten years ago the "rational" basis for limiting violence so as to achieve limited objectives

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5 R. J. Rummel, "Dimensions of Conflict Behavior Within and Between Nations," General Systems Yearbook, VIII, 1963; R. J. Rummel, "Dimensions of Dyadic War, 1820-1952," The Journal of Conflict Resolution, XI, 2 June, 1967; R. Tanter, "Dimensions of Conflict Behavior Within and Between Nations, 1958-1960," The Journal of Conflict Resolution, X, 1, March, 1966; J. D. Singer and M. Small, "National Alliance Commitments and War Involvement, 1945-1965," Peace Research Society, Papers, V, 1965; F. H. Denton and W. Phillips, "Some Cyclical Patterns in the History of Violence," The RAND Corporation (Santa Monica, California, 1967).

6 R. Osgood, Limited War: Challenge to American Security (Chicago, University of Chicago Press, 1958).

in the nuclear age. Schelling noted that tacit bargaining is necessary between belligerents who abstain from using the maximum levels of violance available to them.[7] In a later work, Schelling stressed the concept that war is merely a form of violent bargaining wherein the capacity to produce damage or pain is used by adversaries to compel or deter each other.[8] Schelling's "The Art of Commitment"[9] is a superb exposition of the complexity and nuances of that much-used, often misunderstood term, "commitment," which is one of the elements of national security planning examined in this study. The typologies and organized information in Deitchman's study[10] are inadequate to define the nature of sublimited war, to deduce naval requirements, or even to make a persuasive case that there is, in fact, a form of organized violence which is unique from others and is congruent with ONR's original tentative definition.

FINDINGS

National Objectives, Strategy, Commitments and Requirements for Low-Level Warfare

Warfare has been the object of many attempts at description and explanation. In the NRL low-level warfare study program, both theoretical models of revolutionary processes and empirical data on post-World War II political violence were analyzed to develop some form of predictive theory which will be useful to naval planners. It is obvious that no simple explanations exist. War is not just a matter of wrong actions harming an innocent party, or evil men expanding their power at another's expense, or good ideas competing with bad ideas, etc. Decisions to use force are made when a party views its interests as being served by the use of force. The complexity of interests and flexibility of objectives are common to all warfare.

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7 T.C. Schelling, The Strategy of Conflict (New York, Oxford University Press, 1963).

8 _____, Arms and Influence (New Haven and London, Yale University Press, 1966).

9 Ibid., pp. 35-91.

10 S. J. Deitchman, Limited War and American Defense Policy (Cambridge, The MIT Press, 1964).

Conflicts of national interests or societal group interests may or may not result in violence to resolve the issues. Actions of the parties are based on their view of the situation; hopefully, the views represent "the facts of the situation." Yet, it is often clear in restrospect that the facts of the situation did not show that national interests were served by the initiation or provocation of war. While these observations may appear only remotely relevant to the problems of naval planners, the intention is to illustrate the importance of and difficulty in determining the facts of the situation.

Once some objectives for the low-level warfare fleet are formed on the basis of good, bad, or indifferent knowledge of the situation, another set of problems remains concerning the relations of the fleet with the belligerents. Besides locating and identifying the belligerents, some means of communicating the fleet's intentions, capability, desired behavior for the target party, etc., must be found. This can present a wide range of special problems. For the case where the desired objective is for an enemy to cease all military action, a simple answer is to destroy him if he can be found. For other cases where cooperation is the desired behavior, there are no simple answers. Furthermore, the simple situations are not likely to solve problems without creating new and larger ones. The interests and objectives which motivate a belligerent are no less complex than the reasons why low-level warfare forces have a mission of deterring, coercing, or enticing some form of behavior from him. Consideration should therefore be given to the target parties' motivations and options and the fleet's actions tailored so as to make the options which are most desirable for the U.S. appear equally desirable to the target party.

One way of thinking of low-level warfare forces is as a tool for use in coercive bargaining. As such, they may serve as an instrument for control of specified areas. This control may be threatened or promised as part of the bargaining process. It may also be carried out with the relaxation of control included in the terms of the bargain, as in a quarantine or blockade. Another function, which may have to precede control in some instances, is conquest and occupation. However, national objectives, as assumed for this discussion, do not always provide for conquest; therefore, some other function should take its place in the bargaining process. Such a function could be that of

punishment. Should the adversary fail to bargain or abide by the terms of some understanding, forces may be ordered to carry out punishment (i.e., inflict some harm on the adversary short of conquest). This, of course, raises the difficult problem of what kind and how much harm will be interpreted as punishment by the recipient. This is a question which lies outside the realm of the current discussion. If U.S. involvement constitutes coercive bargaining, the function of naval forces may be summarized as providing a credible capability to inflict harm in support of U.S. efforts to deter or compel certain behavior.[11]

While the forces have a potential to harm an adversary, they may also function to reassure a threatened friend. A completely different function, which is largely incidental to the fleet's inherent destructive resources and the circumstances of its employment, is the performance of humanitarian projects which are designed to provide needed assistance to less fortunate peoples and to enhance the image of the U.S., in general, and the fleet, in particular.

Low-level warfare is a potential catalyst for large-scale conventional or general nuclear war. As such, this warfare should not be treated as a particular size or method, but rather in terms of how the U.S. is involved by its relationship to the belligerents. The status of the U.S. as a global power and its capability to take actions which would influence the course of conflicts nearly anywhere brings to the U.S. a form of unavoidable involvement in these conflicts whether action is taken or not. In addition to military action, the conduct of low-level warfare by the U.S. is characterized by the simultaneous application of non-military resources in the economic, diplomatic, and psychological fronts. Those military actions which are carried out are very closely controlled to achieve the required coordination with activities in other fields. Military action is directed at largely political objectives and subjected to forms of restraint which are not necessarily compatible with concepts and weapons designed for comparatively unrestricted use of force.

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[11] See Schelling, op. cit., p. 69, for elaboration of the notions of deterrence and compellence. Very briefly, the implication of deterrence is passive (punishment if) and that of compellence is active (punishment until). Matters such as timing, communication, and relevance are particularly critical to inducing the desired adversary behavior.

On the basis of several assumptions concerning the conflict situations possible, and the kinds of operations which naval forces might undertake in these situations to achieve the assumed national and military objectives, the possible missions and tasks were estimated. Generally, the concept is that of a modification of the amphibious ready group concept. The concept of operations involves extended deployment in forward areas without supporting bases ashore. The pattern of operations within the area includes repeated visits of each unit to the same ports of call at which a well-organized and coordinated program of non-combatant service functions could be carried out to utilize fleet resources in appropriate nation-building and environmental change projects. Numerous opportunities for such projects exist due to the circumstances of the presence of fleet capabilities. A long range plan and interdepartmental direction of this non-combatant effort is required to achieve lasting benefits and to avoid excessive diversion of fleet resources away from combat readiness.

In the area of military functions, such as, combat or combat support operations, the operational concept for the fleet is for only brief and sporadic engagements rather than the sustained operations. These latter would be possible through fleet augmentation by major combatant forces. The fleet would provide a visible presence of military force capable of quick response to a variety of military problems. Capabilities for rapid movement between ship and shore, and the defense of small enclaves ashore are considered very important. The fleet would have a limited capability for executing strike warfare missions in an unsophisticated combat environment. To avoid a situation in which the value to general warfare readiness of fleet units is so great as to require the deployment of extensive covering and defensive forces, it is desirable that the combatant units do not include those with major strike or defensive roles in general war such as attack carriers or their major fleet escorts. For reasons of defense, greater visibility, greater coverage of patrol activities, and the performance to the non-military functions, more and smaller units capable of visiting and dispersal in more and smaller ports are needed.

While it is anticipated that strike operations would be conducted in an unsophisticated (very permissive) combat environment, fleet defense should be concerned with both clandestine challenges from irregular forces and sporadic attack by small numbers of highly sophisticated weapons systems. Restraints on the fleets' combat activities are particularly important to defense and should be considered in weapons systems operational concepts.

Another important capability is the capacity to collect timely information concerning the course of events and actions of belligerents in a time of crisis. Aside from its obvious importance to national decision-makers, this information could rapidly and routinely be made available to multilateral or international organizations responsible for preservation of peace in the region. The knowledge that immediate exposure of threatening or aggressive actions is likely though the fleet would greatly enhance its deterrent capabilities.

Finally, the fleet should include a variety of capabilities for harassment, deception, propaganda, and support of small operations ashore, including clandestine activities.

Politically Significant Conflict, 1944-1966

As a beginning to the empirical description of low-level warfare since 1945, data was collected on the characteristics of 324 cases of politically significant conflict and 27 naval incidents. The task was to search for regularities in the data in an effort to uncover a "sublimited" region category or classification. In addition, some aspects of the ONR preliminary definition of sublimited warfare were included in the conflict characteristics so as to test the validity of the definition. Is this type of warfare "continuous," "international," "ideological" at the source? How do the analyzed data agree with other empirical investigations and do they tell us the underlying nature of this kind of warfare?

Politically significant conflicts were identified from an OSD/ISA document prepared by DIA and CNA Study 14. These consist of both internal and interstate uses of force for political ends in the period 1945-66. The essential criterion for identifying these units of analysis was whether the national or metropolitan government responded to a challenge by using its armed forces. Thirty-seven characteristics are treated as variables on a data matrix. Definitions and methods of measurement are discussed in Appendix D. The variables describe time (start-stop) degree of national involvement, fatalities and disruption, type, location, and outcomes. This data matrix was subjected to a factor analysis. The steps in the analysis are detailed in Section III of this report and will only be briefly sketched here. All variables are intercorrelated, e.g., fatalities with length of conflict, U.S. involvement, location ..., to form a matrix of Pearson product-moment correlation coefficients. When factor analyzed, the patterns of intercorrelations emerge as factors (or dimensions in the

geometric sense) which account for decreasing amounts of variance in the data. The statistical independence of these factors is tested in order to obtain unique patterns of warfare. The meaning of the factors is obtained by examining how the characteristics of conflicts (the original variables) "load" on the factor.

These factor analyses at various levels of deadliness yielded the following results:

1. Large-scale crises and conflict, mainly in the European theater, have preoccupied U.S. policy-makers and strategists, especially in the preparation of large nuclear and conventional combat force commitments since 1946.

2. In the analyses at the three levels of deadliness, the variable, number of dead, loaded onto an independent factor. This, plus the similarity of the factor structures regardless of number killed, indicates that deadliness in conflict is a unique aspect but does not necessarily determine the tactics used or the other characteristics of the conflict.

3. Among the changes that do occur when we restrict the analysis to conflicts with deaths greater than 1 or 100, the importance of Soviet participation in European conflict diminishes. This indicates that the Soviets largely have confined their conflict behavior to verbal exchanges and non-violent moves. Militarily the Soviets have not been overt participants.

4. The guerrilla or unconventional war dimension describes situations where domestic turmoil, such as, mass demonstrations, strikes and protests, do not take place simultaneously with guerrilla warfare.

5. Overt East-West confrontations tend to entail widespread participation, including the U.N. However, Communist Chinese participation in such confrontations seems to become slightly less correlated as the conflicts become more deadly. Instead, Chinese deadly conflicts seem to load on a separate factor, confined to the periphery of China.

6. Conflicts may be classified either as world-wide (involving many states) or regional. Separate, weaker conflict factors emerge for Asia, Africa, and the Middle East. (These are not discussed in the analysis but are found in Volume II, Appendix B).

7. It is meaningful to distinguish conceptually amongst civil wars, guerrilla wars, colonial wars, border wars, overt East-West confrontations, coups, and crises, since they have not regularly occurred together. We must be aware, however, of the difficulty in categorizing conflicts, such as those in Greece, Lebanon, and Vietnam, because elements of civil, guerrilla, and East-West conflict existed in all three. A formal operational definition of these conflict typologies must be sought.

8. Just as distinguishable types of conflict emerge, it is also possible to distinguish two sets of naval expectations about conflict. One set concerns large-scale conventional operations, and the other concerns terrorist or unconventional operations.

9. The concept of low-level warfare, composed of mostly East-West conflict, subtle, continuous, and implicitly small in forces applied and damage incurred, is not confirmed by this analysis. Nor are the prescriptive or doctrinal definitions used in DOD borne out.[12]

10. A comparison of the factors extracted from the three populations and with various techniques shows firstly that duration of conflict, a major aspect of the posited definition tested in the analysis, loaded most consistently, though not very highly, on the dimension of military roles in unconventional warfare--often including guerrilla warfare. However, duration also loaded on a factor of deadly conflicts in general. Unless guerrilla war is the sole trait of "low-level" war, there seems to be few other types of conflict that can be termed "continuous". If ideological struggle is an essential part of the

[12] See JCS, Dictionary of the United States Military Terms of Joint Usage, JCS Pub. 1 (Washington, D.C., DOD, 1 January 1966).

low-level war phenomenon, "East-West Conflict" should load with other characteristics such as unconventional warfare, guerrilla warfare, lack of casualties, Soviet, Chinese and U.S. involvement, and threat perception. In most of the analyses the East-West issues do involve the great powers and high threat perceptions. Overt interstate operations are part of the cluster, casting doubt about the dominance of the internal aspects of "low-level warfare." Duration and guerrilla warfare load with the other factors above the .30 level variables only on the least typical of the data analyzed,

11. Thus, we have an "image" in the factors of the hypothesized "world-wide involvement" pattern. But we should remember that conflicts highest on this pattern were the Vietnam war, the Gulf of Tonkin incident, the Lebanon civil war and landings, the Tachens crisis, the Guantanamo dispute, the Laotian civil war, and the Egyptian-British-French Suez war. Thus, "limited war" may be a better designator for this factor. Certainly, ideological differences are involved in it, but there is no guarantee that incidents not involving overt combat can remain at a low level. Factor 2 comes closest to the posited definition, but seems to involve mainly intense ideological conflict.

12. It is also worthwhile to note the strength of certain factors across all these analyses outlined above. Large-scale perceived Soviet threat in Europe (Factor 1), world-wide confrontations (Factor 2), deadly conflict (Factor 5), conclusive conflict (Factor 7), guerrilla operations in non-turmoil situations (Factor 4), and U.S. naval anticipation about terrorist operations (Factor 3) have stable characteristics which appear across all three analyses regardless of the morality level or factor analytic parameters used.

13. The northern hemisphere and anti-Soviet anti-Chinese aspects of the results also indicate that, at least for 1945-1966, the United States has been less concerned with conflicts in the "third world" than is often stated. Factor 1 of all the analyses is consistently the strongest factor and it is "European."

14. Note also the high loading for U. N. involvement in Factor 2, for conflicts involving few deaths or more than 100 dead. In conflicts between 1 and 100 deaths less U. N. involvement is found. Thus, crises or serious wars seem to involve U. N. attention more consistently than other types of disturbances. The U. N. takes an active military part in such conflicts but limits itself to political intervention in less deadly conflicts.

15. The pattern of guerrilla operations in the absence of turmoil changes slightly as deaths in conflict increase. Ground operations become more extensive, while levels of domestic turmoil and guerrilla war seem to fall-off somewhat. It should also be noted that "sea operations" emerges as a strong characteristic on this factor only in one analysis (when a five-factor, very general solution was obtained).

16. Factor 7, illustrating conclusive military victories, shows that guerrilla warfare and coups are neither systematically concluded nor subject to military victory at deadliness levels above 100. Predictions about the outcome of such deadly conflicts cannot be made rigorously.

17. The analyses show that naval operations in Latin America do not emerge except at levels of conflicts with more than 100 dead. It is relatively stable across all analyses, though formal U.S. involvement drops off dramatically in the most deadly conflicts.

18. The concept of sublimited warfare, composed of mostly East-West conflict, subtle, continuous, and implicitly small in forces applied or damage incurred, is not found in these data. Nor are the prescriptive definitions used in DOD borne out. The fact that different kinds of conflict instead of different levels were obtained indicates that the theoretical basis for limited war may have no empirical justification. The northern hemispheric and anti-Soviet anti-Chinese aspects of the results indicate that, at least for 1945-1966, the United States has been less concerned with conflicts in the "third world" than is often stated.

Conflict and Navy Operations

To derive naval requirements for low-level warfare it is necessary first to describe operations in conflicts of the past twenty years and to develop an understanding of the relationships between the characteristics of conflict and the naval operations. Toward this end specific objectives must be identified so as to find the regularities which have occurred between various forms of naval involvement in low-level conflicts and:

1. The type of conflict.
2. The actual level of hostilities.
3. The level of perceived potential hostilities.
4. The geographic area and access to the sea.
5. The number and identity of involved parties.
6. The armed forces in the area of conflict capable of opposing U.S. naval forces.
7. The outcome of the conflict.

From these patterns of relationships some generalizations can be made concerning:

1. How naval forces may be employed in sublimited warfare including a categorization of the functions of naval forces according to prevention-reaction and stabilization-deterrence-conflict control.
2. Patterns of variation among conflict characteristics, naval forces employed, and outcomes.
3. The nature of hostile forces which tend to oppose U.S. naval forces and the nature of their hostile acts.

Naval operations were related to conflict characteristics through the analysis of data collected on 25 attributes of the naval operations and the 37 attributes of conflicts. The data on naval operations were summarized for statistical generalizations, and were also factor analyzed by

themselves and with the conflict data.

The propositions that "preventive-reactive" and "stabilization-deterrence-conflict control" form two basic descriptive categories for naval operations in sublimited warfare were not confirmed in this analysis. Neither of these descriptions were very strongly associated with characteristics of the conflict nor with the types of naval operations in the conflicts.

However, the patterns identified in the data on naval operations do represent significant findings, as follows:

1. SIMPLIFICATION - the twenty-five characteristics of U.S. naval operations were reduced to seven underlying factors which account for 59% of the variance in the data over 351 conflicts.

2. INDEPENDENT STRUCTURE - these factors and the seven other weaker factors form essentially independent dimensions for the description of naval operations in conflict from 1945-1965.

3. SOVIET CAPABILITY - the strongest dimensions relate to the Soviet military forces, both conventional and nuclear.

4. INFREQUENT COMBAT - aside from incidents, combat operations by the U.S. Navy occurred in only 6 of 89 cases of U.S. naval participation in conflicts.

5. FREQUENT NON-COMBAT - in contrast, various kinds of influence operations, intended to deter opposition or compel a desired response, predominate in this period. These operations usually include the whole spectrum of U.S. naval power, from small to large units, and regularly include anticipatory re-deployments, shows of force, and extraordinary surveillance.

In terms of aggregate data the following may be said about the Navy's involvement in post-World War II conflicts; 1945-66:

1. A show of force consisting of at least some intra-theater re-deployment to the conflict/crisis area is the most frequent operation. In decreasing order, the frequency of operations conducted were:

TYPE OF OPERATION	NUMBER OF CASES
Show of force	48
Special surveillance	20
Anticipatory presence	19
Continuing surveillance	17
Military assistance	11
Evacuation	10
Combat	6
Intervention	5
Interposition	5

2. Although forceful opposition to the naval operations was perceived to be quite likely on at least 25 occasions, operations were generally unopposed. Hostile acts were directed at U.S. naval forces only 6 times, exclusive of incidents.

3. While East-West tensions were obviously a consideration in every general alert (6 cases); there has not been a general alert after 1962 and there have been 27 other cases involving East-West tensions which have resulted in only a limited alert for the Navy.

4. Limited operations have been carried out in 35 other cases which did not directly involve East-West tensions.

5. U.S. naval forces have been directly involved in only 2 colonial conflicts. In the 12 other conflicts related to colonial issues, the action taken by the Navy has been indirect and stronger than a show of force only 2 times.

6. Every case involving combat operations was related to intrastate conflict. Eleven out of 19 other cases when combat was considered likely also involved internal war.

7. The kind of naval task organization employed included surface patrol, amphibious, or attack carrier twice as often as the other types of task organizations. The overall summary of task organization employment is as follows:

TYPE OF FORCE	NUMBER OF CASES
Surface patrols	46
Amphibious	44
Attack carrier	42
Aircraft patrol	31
Service	22
Surface action	20
Anti-submarine	19
Mine	14
Submarine	6 (probably low due to missing data)

The factor analysis produced sevel orthogonal dimensions of naval operations which were also rotated to an oblique solution. Together, the seven factors account for 59% of the total variance in the data. Table I-1 provides a summary of the results.

TABLE I-1
FACTORS OF NAVAL OPERATIONS, 1945-66

Oblique Factor	Title	% Total Variance	Indexing* Variable	Example Case
I	Soviet Capability	24	Strength of Anti-Aircraft Defenses	Cuban Missile Crisis

Oblique Factor	Title	% Total Variance	Indexing* Variable	Example Case
II	U.S. Intervention in Guerrilla Warfare	10	Unconv. Warfare Threat	Tonkin Gulf Incident
III	Extraordinary Surveillance in Crises	7	Surveillance and Patrol Operations	Tachens Evacuation
IV	Military Assistance	6	Service Forces	Quemoy-Matsu Bombardment
V	Preemptive Redeployment	5	Anticipatory Presence	Assassination of Trujillo and Disorders in Dominican Republic (1961)
VI	Super Readiness	4	Nuclear Opposition Readiness Measures	Berlin Crisis (1961-1963)
VII	Preventive Operations	3	Redeployment	China Off-Shore Islands Crisis

Soviet Capability, Factor 1, is dominant and is composed of high perceptions of threats posed by Soviet forces. Threats to U.S. national interests also load moderately high on this factor while unconventional warfare and combat are uncorrelated with it. This factor describes operations in high-alert situations where vital U.S. interests are thought to be at stake and Soviet or Soviet-backed active opposition is thought likely. It resembles Factor 1 in the analysis of conflict, "Large Scale Perceived Threat to U.S. Forces in Europe."

U.S. Intervention in Guerrilla Warfare, Factor II, is the "insurgency" or "special warfare" dimension emerging from the data. Note that it has less than half the strength of Factor 1, indicating that operations, real and anticipated, at a conventional and nuclear level have been more often the case than has irregular warfare. Of the seven factors, combat operations are best subsumed on this factor.

Extraordinary Surveillance in Crises, Factor III, describes a pattern of unusually high aircraft and surface patrol activity aimed at deterring or controlling conflict in remote areas.

Military Assistance, Factor IV, is a pattern of extensive use of surface and submarine forces during local conflicts of average durations. Threat perception of conventional and nuclear is not strongly correlated with it, but unconventional threats are moderately correlated with the pattern.

Preemptive Redeployment, Factor V, represents anticipatory intra-theatre and/or intertheatre redeployment of predominatly air and amphibious forces for moderately long periods. The redeployments are for the purpose of showing U.S. naval force during periods of localized instability. The only perceived threat is low and is posed by local ground forces. Apparently, this factor represents the use of U.S. naval forces to isolate small prolonged conflicts in situations where neither opposition nor U.S. interests are considered to be particularly important.

Super Readiness, Factor VI, is a reaction to crises in which nuclear-armed forces and submarines are perceived as high threats and large combatants somewhat lower. Operations most typical of this factor include extraordinary readiness measures and ASW. Deterrence and enhanced ability to conduct combat operations seem to characterize this factor.

Preventive Operations, Factor VII, is a weak dimension whose meaning is not clear. At its negative end, it consists of conflict control and interposition of naval forces (e.g., the 6th Fleet maneuvers off Cyprus) to stabilize local conflicts.

Soviet and Chinese Influence in Less Developed Countries

"Wars of National Liberation," "Peoples Wars," which, to the Chinese and Soviets are justified anti-colonial struggles are a principal

concern of the U.S. military establishment. The redundant label, "subversive insurgency" is used to identify such conflicts; and elaborate machinery is established to deal with it in NSAM 182 and NSAM 341. What is the relationship of Soviet and Chinese theory on revolution to behavior? Does the behavior show regularities? How can it be used to predict conflict? These are large problems, and some efforts were made to solve them in the first phase of the study.

Surveys of Soviet and Chinese writings indicate similarities and differences in their political-military theories about revolution. These theories are discussed in Appendices A and B of the Annual Report. It is unnecessary to proceed through the nuances, development, and polemic involved in the four basic strategies: "Left," "United Front from Below," "United Front from Above," and "on the bayonets" (of the Red Army). Much of this theory is so political in its instrumentalities as to be irrelevant for the U.S. Navy. A more interesting question is whether Soviet and Chinese behavior is like the theory.

In the first phase of work on great power influence in less-developed countries, an analysis was made of Chinese and Soviet interaction with the countries of Asia, the Middle East, Africa and Latin America. Initially, it appeared that data for the years 1955-1965 could be collected, analyzed by year, and the resulting patterns examined for shifts over time as the Chinese-Soviet rift developed and widened and as low-level conflict occurred on a world-wide basis. Accordingly, two data boxes were established, one for Chinese and one for Soviet interaction with the 90-odd less developed countries (LDC's). Data was collected on 56 types of interactions between the two major Communist powers and the LDC's under five broad categories: economic, military, diplomatic, para-military, and information-culture.

Limitations on the amount and quality of the data led to a decision to analyze only the 1963 matrices. Soviet and Chinese interactions with the LDC's were intercorrelated, factored to an orthogonally-rotated 20 factor solution and interpreted.

The twenty-factor solution extracted 86% of the total variance from the correlation matrix and yielded the following main factors:

FACTOR NUMBER	FACTOR NAME	COMMON VARIANCE	INDEXING VARIABLE(S)
1	Strong Soviet and Chinese Diplomatic Ties	21.5%	Diplomatic Recognition
2	Soviet Technical and Military Support to Populous Countries	9.7%	Population, or Total Imports, or Soviet Military Grants
3	Strong Soviet and Chinese Economic Ties	8.1%	Percentage of Exports to Soviet Union
4	Targets of Soviet Chinese Subversion	7.0%	Soviet Support to Insurgents
5	Targets of Competing Soviet and Chinese Influence	5.9%	Size of Communist Party
6	Exclusion of Soviet and Chinese Influence	5.3%	Soviet Economic Aid Extended (negative correlation)

These factors have been named descriptively on the basis of the size, composition and signs of the factor loadings. Because each factor can be thought of as a basis dimension in the space defining the location of LDC's, one may choose either end of the dimension for labelling. Except for Factor 6, the positive pole of the factor has been chosen because of the ease in ascribing common-sense meanings to these patterns of behavior. Alternatively, the factors might be more generally labelled, as follows:

FACTOR	NAME
1	Diplomatic-Cultural
2	Technical-Military
3	Economic
4	Subversive
5	Local Communist Party
6	Western Orientation

SUMMARY OF FINDINGS, 1963 STUDY

1. Soviet and Chinese interaction with LDC's in 1963 was highly patterned. This implies a selective application of scarce national resources by the two communist regimes.

2. The substantial variance accounted for by Factor 1 indicates that much Soviet and Chinese interaction was neither subversive nor economically exploitive in character.

3. In terms of revolutionary tactics, the "United Front from Below" appears as Factor 4 and "United Front from Above" as Factors 5 and 2.

4. Assuming that Chinese and Soviet attempts at influencing less developed countries were validly tapped by the measures used herein, e.g., trade, military aid, etc., then the movement of "target countries" in the space defined by the dimensions of influence could be tracked over time. This would provide a scalar basis for shifts in location of target countries over time and their relative importance as targets of Chinese and Soviet attempts at influence.

5. Despite China's rhetoric in the early 1960's, its military aid did not play a significant role on a world-wide basis. Competition in the less developed countries between the two major communist powers emerged. Subversion and its converse, cooperation with the government, are selective.

6. If these patterns of influence were found to recur over time, it would be possible to index Chinese and Soviet behavior by means of a few primary indicators which are highly correlated with the factors.

7. Another use of the factor analytic results would be to explain the variation in a phenomenon of particular interest as the weighted linear addition of several factors. This allows the policy planner to concentrate on one of the input variables of special interest to him.

Examples:

a. 83% of variation in the POPULATION in less developed countries subject to Soviet Union and Chinese influence = 4% of Soviet and Chinese Diplomatic and Cultural Ties (Factor 1) - plus - 74% of Soviet Technical and Military Support (Factor 2) -etc.-

Thus, Soviet technical and military support is approximately 20 times as important as any other pattern of behavior in accounting for variation in the population of recipient LDC's.

b. 84% of variation in TRAINING OF CADRE from LDC's by the Soviet Union = 1.7% of Soviet Technical and Military Support (Factor 2) -plus- 2% of Soviet and Chinese Economic Ties (Factor 3) -plus- 65% of Soviet and Chinese subversion (Factor 4) -etc.-

Thus, most of the training of revolutionary cadre by the Soviet Union is associated with a unique pattern of subversive activity.

Great Power Influence in Less Developed Countries: The 1959, 1961, 1963, 1965 Study

The second phase of work differed from the study of data on interactions in 1963 in several ways. The number of "major actors" was expanded to include the United States and Eastern Europe (aggregated). Data were included on three additional years to discern changes in behavior toward less developed countries over time, particularly during the period of the open rift between China and the Soviet Union. In addition, variables to index interaction were chosen to increase the number of interval or ratio measurement scales. Some of the variables from the 1963 study were eliminated due to their redundancy and their low correlations with the factors. Finally, variables with missing data were eliminated because of the requirement to calculate exact factor scores.

The data were arrayed in four sets representing the years studied. The "cases", or observations, were the same less-developed countries in Latin America, Asia, the Middle East and Africa as were included in the 1963 study. The variables indexed political, economic, military, technical and cultural interaction between the four major actors and the less-developed states. The data on the variables were intercorrelated and the resulting correlation matrix factored to a 20-factor orthogonally rotated solution. Exact factor scores were calculated and plotted on cartesian coordinates. The results were compared across the four years for factor structure and consistency.

It is important to bear in mind the overall research strategy in this study in order to understand why the "foreign influence" factors were sought. The objective of the project was an empirical description and explanation of low-level conflict. Because of variance in conflict across nations, the non-experimental nature of the research, and the numerous plausible explanatory variables, a multiple regression model was thought best as an analytical technique. Had the work been continued, country scores on the "foreign influence" factors would have been used as independent variables (along with national attributes) to account for variance in national conflict scores as the dependent variable.

A side benefit of the "foreign influence" factors is that one can discern a small number of statistically independent indexing variables. These should be helpful to those who collect and analyze data on great power interaction with less developed countries. They can be thought of

as "prime parameters" derived from a factor analytic model of reality.

Finally, the orthogonally rotated factors can be interpreted as a multiple linear regression model. The factor loadings are equivalent to partial correlation coefficients, and the communality of a variable is equivalent to explained variance in the dependent variable.

The overall results show that only the first three and the eighth factors appear in 3 or 4 of the annual periods examined. This indicates changes in behavior of the major actors with the less developed countries in the period under analysis. Factor one, U.S. Military, Economic and Technical Aid, is clearly a manifestation of the U.S. policy of containment. This is even more evident when one examines the scores for countries on this factor: the countries having high scores are on the rimland of the Soviet Union and China.

Factor two represents a U.S. trade pattern with less-developed countries. The factor scores show the consistent strong economic ties between the U.S. and Latin America.

Factor three is, perhaps, the Sino-Soviet counterpart of U.S. containment, but it would be improper to label it "penetration" or even "influence" without evidence of political change, subversion or conflict within the states which are high on this factor.

Another general finding is that Soviet behavior is much more complex than is that of the U.S. This is indicated by the large number of independent Soviet factors and confirms the findings of the 1963 analysis.

A random number, which was introduced as a means of data quality control, correlates at not more than .17 of any of the factors. This means that 3% or less of the random variance introduced is subsumed on any factor. A "random number factor" emerged for each year. These values give validity to the factors, i.e., they are not artifacts of the analytical technique.

Summary

1. Three major factors, each accounting for substantial variance, emerged from the data. They define the U.S. policy of containment, Sino-Soviet economic, military and technical interaction, and U.S. trade with Latin America.

2. Soviet behavior is much more complex than is Chinese, U S., or Eastern European toward less-developed countries.

3. Much Soviet and Chinese interaction with less developed countries is neither subversive nor economically explotive. The strongest pattern is one of trade, aid, and technical assistance.

4. The primary indicators of major power interaction with less-developed countries are:

Patterns (Factors)	Indicator
Soviet and East European Military and Technical Assistance	Percent of imports from the Soviet Union
U.S. Containment Policy	U.S. military grants
U.S. trade with Latin America	Percent imports from the U.S.

5. A relatively small number of less-developed countries have high scores on the patterns of great power involvement. While this implies a selective allocation of scarce resources by the four major actors, there are strong regional groupings and a greater number of countries appearing as targets of U.S. efforts than there are for the Soviet Union or China. This highly selective behavior of the major actors is further illustrated by the year to year stability shown by the strongest factors and the consistent high scores of the "target" countries on these factors.

6. On the basis of the Indonesian case study (Appendix C of the Annual Report) neither Soviet nor Chinese influence was the predominant determinant in the Madiun Rebellion of 1948 or the September 30 Movement of 1965.

Research on Political Instability and Violence

A survey of 20 quantitative studies of political instability and violence was performed to gather findings, insights and propositions which might be useful in building a model of low-level warfare. The findings, culled

from these studies, should be used as an aid in defining American policies toward less developed countries.

1. The poorest countries are unlikely to undergo domestic violence as long as developmental efforts lag. American economic aid may spur development, and with it may come a certain inevitable violence. America should expect this, and beware of the fact that a quick military over-reaction may strengthen the hand to those who charge the United States with interference control of the recipient of the aid.

2. American aid to governments being troubled by civil unrest should depend in large part of the degree of institutional development within the society. Gurr has shown that well-organized unions, interest groups, and political parties, together with efficient government bureaucracy, afford non-violent means of protest and also make the governments' law enforcement task easier. Gurr asserts that, "Politics with high levels of institutionalization tend to have high coercive potential and to have few of the conditions that facilitate strife."

3. Popular attitudes toward the government and the political system in general should be assessed, as Almond and Verba have done. This may afford an idea of the pervasiveness of anti-government sentiment. Tanter's study indicates the importance of popular reaction to the United States as a barometer of civil unrest in a society whose government is closely aligned with the United States.

4. Tanter's and Midlarsky's work shows that American aid and economic presence may spur economic development, but in the process violence might erupt. Periodic threats to American enterprise abroad are a "normal" by-product of the development process. Over-reaction to such threats may exacerbate anti-U.S. resentment, and thus may lead to greater civil violence, even overthrow of the government.

5. There are certain key barometers of political friction between countries. Smoker suggests that periodic checks of the frequency of inter-governmental communications be made to identify periods

of potential crisis. Russett, Rummel and Brams all point to the importance of trade as a barometer. Trade, it appears to Rummel, seems to be a distinct (uncorrelated) form of interstate behavior, relatively little affected by other types of political or military relationships between states (such as student exchanges or protests, etc.). To the contracy, Russett finds that states involved in much trade have greater opportunity for conflict and, hence, more likelihood of war than states which have no contact and are too poor to impinge on each others' interests. Finally, Brams adds that trade is the most sensitive indicator of friendliness vs. hostility between states. Few states will break diplomatic relations in any situation short of a crisis. But trade is soon interrupted by a state of political hostility. Therefore, periodic examinations of world trade patterns might help assess the probabilities of interstate conflict.

6. Communist party strength is not likely to be great in the poorest countries. It tends to be stronger in countries at middle levels of development--but here American efforts to counter communist strength must depend on: (1) the viability of the government in question--i.e., its ability to effectively reach people and to gain legitimacy throughout the country; (2) the efficiency and incorruptibility of both the bureaucracy and the army (lack of corruption is a rarity in countries going through the crucial phases of industrialization); (3) the strength and popularity of non-communist mass parties as opposed to communist-oriented nationalism. Communist party strength is likely to fall as the country successfully pulls through the development process. Thus, if development brings with it inevitable pressures, firstly, for predictable amounts of upheaval and violence, and, secondly, for the rationalization of technology and removal of ideology from the economic sphere, communist control of developing states may be very difficult whether or not the U.S. intervenes.

7. Political (or military) action in states undergoing civil insurrection must be: (1) swift and firm enough to avoid exacerbating the degree of resentment of authority; (2) not so strong as to engender permanent popular bitterness and long-run retaliation.

This "line of proper response" is so thin, and forceful response is so unlikely to inhibit the effects of long-term deprivation, that, on the whole, police action is not a long-range solution to the violence accompanying development, It may, however, be very necessary in the short run.

8. If coercion is necessary, it is necessary to know what kinds of violence are likely to be encountered. The types of violence most likely in countries in the most rapid stages of development (the stage of Indonesia or Colombia) are internal (of a guerrilla-warfare or organized nature) and "conspiracy" (centering on military coups d'etat). As more people are mobilized into the political system, however, mass turmoil (protest and riot) becomes more likely. Much depends on the context and degree of homogeneity of the country in question. Any of the three types of internal violence may follow any of the two in time. Newly independent states may be very prone to internal war soon after either mass protests or military coups, since tribal or parochial loaylties and passions are easily inflamed. In addition, when the new state is large, as are Nigeria or Indonesia, it is difficult to see how violence can be kept at a low level.

9. It should be remembered that, on the whole, intrastate instability is not likely to bring about violent regional instability.

Navy Civic Action, 1966

The non-combatant functions of armed forces may have a unique importance in low-level warfare. Civic action is, perhaps, the only means by which long term environmental change to prevent insurgency may be performed by the Navy. The objective of this task was to survey the Navy's capabilities for performing such functions in 1966, the nature and desirability of opportunities for the utilization of these Navy capabilities in the future, and the general status of the Navy's civic action organization and programs. Particular attention is directed to those activities which come under the heading of military civic action. In this area, the role of the Navy has been small in comparison to that of the Army, the service assigned primary responsibility for civic action. Furthermore, the other non-combatant operations, such as, disaster and emergency relief (for

which the Navy currently enjoys a good reputation) were excluded in accordance with technical guidance supplied by NRL.

In a survey [13] of that portion of Navy resources employed in civic action, specific points of interest included:

1. Effectiveness of current civic action programs.

2. Unique capabilities and/or requirements for civic action inherent in the nature of U.S. Naval forces.

3. Special problems relating to selection and training of personnel.

Civic action in the Navy is not a major mission which ranks with other naval functions such as ASW or strike warfare. While there may be considerable justification for placing civic action at relatively low priority in the Navy, the current organizational status of Navy civic action at high levels of command (as only a collateral function) must have some adverse effect on the planning and general effectiveness of those civic action programs which are underway or desirable in the future. Civic action in 1966 represented the primary responsibility of little more than the approximately 500 officers and men comprising some 38 Seabee Technical Assistance Teams (STATs). In addition to a lesser degree of high-level organizational attention to civic action in the Navy than in the Army, the Navy depends largely on Army schools for training, and the utilization of these Army facilities by the Navy has been small.

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[13] Survey is the appropriate description of the method employed to cover the broad, general scope of this task. Sources of information in this brief overview of Navy civic action programs included interviews with personnel responsible for Navy civic action in the U.S. Southern Command, OPNAV, OSD, and a review of planning documents for and reports of these programs. The nature of Navy humanitarian and disaster relief activities, not included here as civic action, is noted and included, as an attachment to Section VI, the detailed report of work on this task in the Annual Report.

Although the work of STATs has produced effective results in many countries, limitations have developed in the availability of these teams because of the demand in Southeast Asia. The result has been inability to take advantage of opportunities in other regions such as Latin America. Knowledge of these limitations by the countries in these other regions appears to have led to a falling off in demand for the services of teams which requesting nations have learned cannot be filled. The lack of sufficient teams is the result of many influences including budget limitations, training requirements (which involve cross training of construction skills and the language and cultural training aspects), and the number of qualified men available both in and out of the service.

Aside from the kind of activity carried out by the STATs there are other opportunities for Navy involvement in civic action. These include non-military functions which are traditionally carried out by naval units of other nations, such as, transportation, medical care, ship construction and repair, communications, water supply, etc. While interactions between the U.S. Navy and foreign navies in essentially "deep water" mission areas such as ASW and amphibious warfare are carried out regularly, there are relatively few contacts with smaller "shallow water" navies of some of the countries which are more apt to be prone to insurgency.

Pressures to show tangible results of military civic action through completed projects tend to result in defeating the basic mission of the technical ssistance teams, which is: to train indigenous military personel to do the work themselves. This may simply be a reflection of the limited resources to carry out civic action and the need to react to current "hot" problem areas. However, if the primary purpose of civic action is prevention through environmental change, there is a need to consider the allocation of more resources to regions where insurgency is not yet a critical problem. Clearly, there is a need for increasing resources invested in civic action, for providing additional organizational support, and stepped up training. Moreover, the unique mobile-technical capabilities of the Navy should be utilized with the same vigor and competence as has been shown with the forward deployment of the Seabees.

The implications of these findings to the Navy's conduct of low-level warfare are as follows:

1. The Navy should provide greater capabilities to meet the civic action demands of insurgency-prone areas.

2. The U.S., through the Navy, should learn lessons from and promote the civil functions performed by foreign navies.

3. The Navy should consider upgrading the organizational support for and prestige of military civic action.

4. Improved training for military civic action by naval personnel.

RECOMMENDATIONS

1. There are a variety of problems remaining which need to be considered in the planning of naval forces for low-level warfare. Some of the problems identified in this discussion, which should be the object of further study, are:

a. The influence of threatened punishment by naval forces on behavior of irregular forces.

b. The proper or optimum mix of non-military and combat-oriented resource utilization by a naval force.

c. The utility and feasiblity of placing a naval force's capabilities at the disposal of an international organization for peacekeeping operations.

d. Reconsideration of the Navy's position that the need for low-level warfare forces, planning and organization can be adequately met by the General Purpose Forces and the diffusion of responsbility for such forces.

Two methods which would provide more specific inputs to the planning of low-level warfare forces are:

e. Gaming of detailed situation narratives or scenarios for each kind of low-level warfare problem suggested herein, to derive some range of quantitative requirements for the operational capabilities of naval forces.

f. Review the normal procedures for fleet defense in a non-alert status and test alternate concepts against the challenges to U.S. Naval forces projected in the scenarios.

2. The fact that the 38 characteristics of naval operations reduced to 7 relatively uncorrelated factors shows that post-WW II operations can be simplified to a basic structure and associated indexing parameters. The elements (factors) in the structure vary in strength with the two outstanding patterns of variation being caused by Soviet capabilities and guerrilla warfare. Whether General Purpose Forces are best configured to deal with guerrilla warfare is a question which is not dealt with in this analysis. However, there is evidence that guerrilla warfare is very significant for the Navy because of the relatively high degree to which the Navy has been used as an instrument of national policy in such conflicts.

The Navy's substantial strategic nuclear deterrent mission is met with the POLARIS system. The Navy has a portion of Strategic Forces (Program One) in the form of the POLARIS system, and one can see in the analysis of Navy Operations the conscious use of that force ("Super Readiness" and "Soviet Capability"). The utility of such a system is seen by the strength of Factors I and VI which reflect the U.S. -Soviet military competition and crisis behavior.

However, there is no comprehensive, mission-oriented program plan and budget for naval counterinsurgency and special warfare aside from a program element in General Purpose Forces (Coastal/River Patrol and Assault Forces) and some RDT&E support for inshore and special warfare. Clearly, the patterns of naval operation discerned in this analysis highlight the importance of naval counterinsurgency. As long as the United States continues its national policy of selective intervention during threatened or actual insurgent conflicts, it would seem advisable to establish an overall naval counterinsurgency program, treated as a "package" of resources optimally configured to meet the mission and distinguished from the heterogeneous General Purpose Forces.

3. Naval combat has been infrequent since World War II, a fact which is easily forgotten in light of the magnitude of the Korean and Vietnam Wars. When U.S. naval forces have been opposed, enemy forces have tended to be numerically and qualitatively inferior. Nevertheless, these inferior forces have not been fully deterred from the use of sporadic attacks and harassment. Should hostile states (or insurgent

forces within friendly states) acquire modern weapons through the burgeoning world flow of arms, the character of the opposition to U.S. forces, and the outcomes, will change.

4. The stabilization-deterrence-conflict control notion as a meaningful classification of naval missions seems justified on the basis of this analysis. A careful examination of the factors, their loadings and the extreme cases indicate that only factors IV and VII are different than these operational concepts. In these two cases, U.S. forces were used in a primarily aggressive manner to assure the maintenance of the status quo through force. Such distinctions are difficult, however, and T. C. Schelling's "deterrence-compellence" dichotomy would seem more apt on the basis of a close study of U.S. interests and the outcomes.

The preventive-reactive dichotomy (as defined herein) emerges from the data as follows:

	Largely Preventive	Largely Reactive
Factor I		Soviet Capability
Factor II		U.S. Intervention in Guerrilla Warfare
Factor III	Extraordinary Surveillance in Crisis	
Factor IV	Military Assistance	
Factor V	Preemptive Redeployment	
Factor VI	Super Readiness	
Factor VII	Preventive Operations	

5. For the near term future (5-10 years) a major anticipated mission for the Navy, aside from strategic deterrence and multilateral peacekeeping, will be restrained tactical warfare, usually in an environment which makes identification of enemy forces difficult. Their mere presence of U.S. forces on foreign soil may be politically undesirable. Irredentism and nationalism are likely to cause an erosion of forward bases. These

"political" factors may have more effect upon the quality and numbers of U.S. forces than will strictly economic-technical constraints or even the character of the opposition.

6. It is not possible to specify at this time detailed operational environments for future naval involvement in low-level wars from an analysis of general national objectives, strategies, and military options. Detailed hypothetical situations or scenarios might be used to do so, but with questionable reliability and validity. However, the following questions for future investigation are recommended:

1. What kind of influence does threatened punishment by naval forces have over potential belligerents?

2. What would be a proper or optimum mix of non-military and combat-oriented resource utilization by a naval force?

3. What are the utility, feasibility, and penalities of placing a naval force's capabilities (in particular surveillance capabilities) at the disposal of an international organization for peacekeeping operations?

7. Given the postulated kinds of future conflicts and a number of ways in which the Navy could become involved, an operational concept for low-level naval operations has been formulated. The concept of operations is that of long-term deployment in remote areas without supporting bases ashore. The patterns of operations within the area includes repeated visits of each unit to the same ports of call at which a well-organized and coordinated program of non-military service functions could be carried out to utilize fleet resources in appropriate projects aimed at nation-building and environmental change. For military functions and combat or combat-support operations, the fleet is expected to participate in only brief and sporadic engagements rather than the kind of sustained operations which would require augmentation by major combatant units. The fleet would provide a visible and credible presence of military force capable of quick response to a variety of military problems.

Specific capabilities include that of rapid movement between ship and shore and the defense of small enclaves ashore. Also required is a capability for the conduct of occasional, essentially unopposed strike operations against small, fleeting targets. The composition of the fleet

should not include large, prestigious units which would also have important strike or defensive missions in general war contingencies such as attack carriers on their major fleet escorts. Instead, reasons of defense, greater visibility, greater coverage of area, and advantage to the non-military functions of the fleet appear to call for more small units capable of visiting and dispersal in large numbers of small ports.

SECTION II

RELATIONSHIPS OF NATIONAL OBJECTIVES, STRATEGIES, COMMITMENTS, AND MILITARY OPTIONS FOR LOW-LEVEL WARFARE

Introduction

This discussion of the relationships among national objectives, strategies, commitments and military options is undertaken with the aim of providing a framework for naval planners concerned with how the U.S. Navy may best serve U.S. interests in future low-level warfare. Naval planners function within the framework of complex relationships to determine the various military options possible for naval forces, to formulate operational concepts for execution of acceptable options, and to derive the kind and size of naval force required for the operational concepts. While the demands upon naval planners are by no means limited to these three steps in practice or in theory, the problem addressed here is to place the planning process in its various settings: formal and informal, existing and potential, complementary and competing.

We will posit some options for the employment of naval forces, identifying some practical problems in the effective execution of naval operational commitments, and discuss the effects upon naval force requirements of potential military opposition and self-imposed restraints.

The tentative definition[1] of low-level warfare indicates no single aspect of political violence which can explain or define this form of warfare as a distinct problem or set of problems for naval planners. The Navy should not plan its force requirements for low-level warfare solely

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[1] "... a state of continuous international conflicts and tensions, deriving from basic ideological differences of major antagonists and representing a subtle threat to national security, wherein the necessary resources available are employed with varying intensity, short of limited war, to achieve national objectives ...". Section III of this report shows that this proposition has little factual basis as a framework for modern conflict within and between states. In Section III of this report an analysis of post World-War II conflict tests the validity and utility of this definition.

on the basis of an oversimplified notion of threat and objectives such as that expressed by protection of sea lanes, control of vital airspace, defense against a given size and quality of enemy military force, or protection of U.S. interests. Low-level warfare involves the use of many, if not all, available and appropriate means concurrently with naval operations. It is not something that begins where diplomacy ends. Military operations must therefore be conceived and planned in the context of national objectives, strategies, and commitments and along with operations employing other means such as diplomacy, economic policy, and psychological (including propaganda) operations. The need is for greater understanding and the fashioning of efficient apparatus.

The ways in which U.S. naval forces have been employed in the past two decades tend to demonstrate the significance of all aspects of the national defense planning process to the Navy.[2] Some of the general aspects of this naval force employment were found to be as follows:

1. Combat operations have been infrequent. The combat which has occurred, with the exception of brief incidents, has usually not been with forces of a major power or even with other naval forces.

2. The U.S. naval forces employed appear to be those readily available. While this demonstrates flexibility, it also implies use of forces in other than their designed function. Reliance on general purpose forces creates a potential for inefficient utilization of naval resources and the lack of needed, specialized capabilities.

3. In accordance with national policies of deterring nuclear war and containing anticipated Soviet and Chinese expansion, naval forces have been deployed in forward areas near the scene of potential crisis and confrontation. This forward deployment risks the involvement of U.S. forces in local conflicts whether such involvement is in the best interest of the United States or not.

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[2] See Section IV of this report.

4. The range of perceived threats to U.S. interests for cases of naval force employment in conflict following World War II extends from that of a nuclear exchange with the Soviet Union to almost no threat at all. Within this threat spectrum, there does not appear to be any obvious threshold which could mark the upper or lower bounds of low-level warfare.

Because the level of potential opposition to U.S. naval forces also does not appear to define low-level warfare, it may be more useful to consider this form of warfare in terms of self-imposed limits on military operations. For the Navy, low-level warfare consists of restrained tactical operations to influence the course of conflicts and confrontations in directions favorable to U.S. interests. Thus, low-level warfare may include deterring both general and local war, limiting the scope of local wars which do occur, and facilitating the termination of these wars. This will be the frame of reference from which extrapolations for missions and tasks will be made.

Prior Studies

An exhaustive review of the open literature related to an area of concern that extends from national objectives to military operational requirements represents a task of major dimensions in itself. The Bibliography (Appendix E of Volume II in this report) lists all of the sources examined in the course of this study. The material pertaining to national security policy, foreign policy, limited war, counterinsurgency, deterrence, naval strategy, and specific naval operational concepts has particular relevance to this task. Very useful is T.C. Schelling's[3] essays in which the function of military forces in war is explained as a concept of violent bargaining: the capacity to produce damage is used by the adversaries to compel or to deter one another. This work also contains a very useful exposition of complexity and nuances of the frequently used, often misunderstood term, "commitment."

In addition to the open literature noted above, the Bibliography also contains a number of public documents and reports of Government-sponsored studies. These references provided background for this task in the form

[3] T.C. Schelling, Arms and Influence, (New Haven and London, Yale University Press, 1966).

of policy or programs for dealing with problems of national security and analyses of various naval operational problems or concepts for fulfilling the Navy's national defense responsibilities.

A study carried out by the Headquarters, U.S. Army, DCS OPS, contains a broad, sweeping assessment of low-level conflict which is especially relevant to this task. The study, WINS II,[4] uses the term "sublimited war" and contains some principles for dealing with it. A number of useful insights are contained in its specific recommendations for national security planning and Army roles. The most relevant recommendation to the problems of Navy planners was that the conflicts "in the lower spectrum" should be dealt with by a specialized and integral amalgamation of forces, material, doctrine, and organization in lieu of the concept of using traditionally configured general purpose forces, especially for countering insurgency.

The portions of this task concerned with national security policies and objectives and the national security planning process, insofar as they deal with counterinsurgency, received significant inputs from directives outlining U.S. "Overseas Internal Defense Policy."[5]

All this prior work has some importance as either the source of ideas for inclusion in this analysis or the identification of advantages and disadvantages of various kinds of military options and operational concepts. At the same time, much of this material has its own perspective of the problems analyzed. Few general works on national security have specific relevance to Navy problems and interests. Those dealing with specific Navy questions are frequently limited to a single operational problem such as anti-submarine warfare, air defense, or river patrol. The problem is to tie all this background material together in a Navy-oriented perspective from which to derive some general guidance for restrained tactical operations, and to delineate a spectrum of appropriate responses.

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[4] A Worldwide Integral National Strategy for 1970 (U), (Washington, D.C., 1 March 1965) (SECRET-NOFORN).

[5] National Security Action Memorandum 182 (NSAM-182). of 24 August 1962; NSAM 341 of 2 March 1966, and reports of policy review committees prior to the issuance of NSAM 341.

A Naval inter-laboratory study group recently prepared a Report to the Director of Navy Laboratories on overall requirements for Special Warfare. This report is a systems analysis pointing to basic improvements in technology required for successful prosecution of low-level conflict. The spectrum of threats posited in the committee's report includes insurgency; crises, harassment, and "Cold War" threats; revolt; and interstate conflicts. This preliminary analysis contains a broad framework within which conflict situations, national objectives, and potential U. S. naval operations are related. R&D needs are identified in the report.[6]

Naval operational requirements for a portion of low-level warfare are authoritatively documented in GOR-38.[7] This requirements document establishes overall objectives and R&D needs in "non-conventional" operations which are defined as including: "special naval operations, unconventional warfare, psychological warfare, tactical cover and deception, counterinsurgency, and certain special tactical intelligence collection operations..." A basic premise of GOR-38 is that the Soviet Union and China will continue to support insurgents, accrete power, influence, and territory and generally clash with U. S . national interests. The most fundamental policy notion in GOR-38 is the continuation of the Navy's position that General Purpose Forces shall have the capacity to conduct special warfare, in addition to their other assigned roles. Thus, the Navy remains "general" rather than "special" when confronting the threats of unconventional, irregular combat operations.

Another authoritative source of information on the counterinsurgency portion of low-level warfare is the JCS "Counterinsurgency Bluebook" series.[8] These annual reports cover national policy, doctrine, organization, resources, program status, accomplishments in the collection of

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[6] U.S. Naval Research Laboratory, Report to Director of Naval Laboratories from Advanced Concept Formulation Group - Special Warfare, Parts I (U) and II (C), 1 April 1967 (mimeo).

[7] CNO, General Operational Requirement No. 38 (Rev. 68); Special Warfare (U), forwarded by letter Op-721/701D, Ser 00544P70, dated 4/22/68, mimeo, (SECRET).

[8] See U.S. Joint Chiefs of Staff, Counterinsurgency Bluebook, (an annual publication), mimeo, (SECRET NOFORN.)

DOD counterinsurgency activities and are produced by the Special Assistant for Counterinsurgency and Special Activities (SACSA). The most relevant aspects of the SACSA reports for this study of low-level warfare are:

(1) the interpretation of national policy on counterinsurgency (CI)
(2) details of the Navy's staff organization for CI
(3) the Crisis Situations Alert Report which lists in temporal sequence by various threat categories, potential situations which both involve U.S. interests and may evoke a U.S. military response.

The National Security Process

The concept of national security and the influence of this "ambiguous symbol" upon national policy and action have been widely discussed and debated.[9] Much of the debate probably originates from the confusion of security with interest. While the national interest and national security are related, all that may affect national interest does not necessarily affect the security of the nation. For example, the preservation of open spaces for recreation may be in the national interest, but a reduction of "wilderness" area does not correspondingly decrease national security. Nor will the gain or loss of foreign exchange through the operation of soft drink plants in other countries by U.S. business affect national security even though it may be in the national interest for such operations to be protected when endangered by violence and to return a profit to the U.S. owner.

In this discussion, the concept of "national security" represents the nation's ability to protect its population, independence, territorial integrity, institutions, values, and other symbols from the dangers which may exist in the international system. In its efforts to achieve security, a nation often posits certain "vital interests"; formulates national security policy to protect and/or maximize those interests; establishes national security objectives, or policy goals; pursues various strategies; makes commitments; and seeks to maintain the military and other means required to

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[9] Arnold Wolfers, "National Security as an Ambiguous Symbol," Discord and Collaboration, (Baltimore: The John Hopkins Press, 1962).

translate ideas into action. The decision processes going into these efforts to achieve security are the national security planning process. The process does not necessarily take place in any given sequence, nor need it include all the steps. Some of the considerations which influence these decisions for low-level warfare will now be explored.

Geography and the role played by a nation in the international system help to define certain interests which must be protected if national security is to be achieved. It has been noted that not all national interests have equal importance and that not all are related to the question of security. Those interests which must be protected in the pursuit of security are usually termed "vital"[10] or those over which a nation will threaten war or wage it when they are threatened. These vital interests tend to be durable regardless of the idiosyncracies of national decision makers; however, their relative importance and the level of threat which may lead to war in their defense depend largely on the perceptions of the decision makers in a given situation. Therefore, vital national interests are frequently stated in only general terms, if at all, and are useful only as very broad guidelines for policy formation.[11] In fact, national interest, when stated in anything but very general terms, often is a mere rationalization of why a nation has formed a certain policy rather than consisting of postulates which are guides to future behavior.

Frequently, national interest expressed in specific terms may actually be a form of commitment, a contingent promise or threat directed at another state. It may also be a compromise between current realities and the need to keep old promises. Military forces are maintained to protect national interest, but the protection of these forces and their supporting bases may itself become a question of vital interest. Because

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[10] One set of broad, vital national interests posited for foreign policy planning consists of: (1) "Contain the U.S.S.R., China, Cuba"; (2) "Avoid thermonuclear war"; (3) "Satisfy the economic and other internationally relevant demands of the American people." See R. W. Cottam, Competitive Interference and Twentieth Century Diplomacy (University of Pittsburgh Press: Pittsburgh, 1967), Chapter 3.

[11] See, for example, NSAM-182 which asserts four broad U.S. interests: "political and ideological," "military," "economic," and "humanitarianism" in connection with counterinsurgency.

other nations can expect a nation to employ its military forces in certain circumstances, and it is sometimes in the national interest to maintain such an expectation (the essence of deterrence), a nation may occasionally find itself committed to military action which may run counter to its other national interests. Thus, a state may become involved in the wrong war, in the wrong place, with the wrong enemy, at the wrong time, fought in the wrong way. One form of military action may end a war quickly and decisively protect a national interest. At the same time, such an action may not be undertaken because it is counter to another "more vital" interest. It follows that resources committed to war must be fitted the importance of the objective.[12]

Within the context of the general perceptions of national interest and of their relationship to the other members of the international system, the nature and extent of national resources available, plus the domestic demands on these resources, the national decision makers attempt to establish specific national security goals or objectives which minimally conflict with one another. These specific objectives are not so firmly imbedded in geography or international power status as are national interests. Where national interests are the long-range directions considered essential to the national well-being (including its security), national security objectives can be the basis for formation of policies and allocation of resources.

This relationship is illustrated by some assumptions for U.S. interests and objectives for this discussion. The territorial integrity and sovereignty of the U.S. is made secure in one respect by the absence of neighboring states capable of mounting a serious threat. Thus, one U.S. objective has been to maintain a dominant military position in the Western Hemisphere. Although isolated from Europe and Asia by oceans, the security of the U.S. is also enhanced because no single Western Hemisphere state is capable of challenging U.S. dominance.

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12 "Limited war" theory has its roots in the speculations of Clausewitz. "The compulsion which we must use towards our enemy will be regulated by the proportions of our own and his political demands." K. Clausewitz, On War, tr. by J.J. Graham (Routledge and Kegan Ltd: London 1956), III, 87.

However, the advent of the nuclear-missile age has seen the loss of American military isolation. The damage which would result from a general nuclear war and the danger of conflicting Soviet and U.S. interests in some local war leading to general warfare between these nuclear powers gives the U.S. an interest in the causes, conduct, and outcome of local war (both internal and interstate). Translating these U.S. interests, and the various threats to them into national security objectives for the United States leads to the following typical list:

1. Avoidance of general nuclear war.
2. Military, economic, technical, and policital support to states surrounding the Soviet Union, Eastern Europe and China (containment).
3. Preservation of Western influence in Africa, Latin America, and the Middle East.
4. Deterrence or limitation and prompt termination of local wars.

Given some set of national interests and objectives as the motivation and direction for U.S. behavior, a scheme is required for coordinating and directing the employment of the allocated resources. Some of the resources are measurable material and human capabilities, e.g., industrial capacity, natural wealth, manpower, military equipment, alliances, etc. Less tangible resources include morale, public attitudes, leadership capability, friendship, national character, etc. Some of these resources are used in commitments to explicit military ends. Military forces are organized, equipped, trained, and deployed in combat or in readiness for combat. Alliances are concluded. Economic and military aid programs are initiated. Diplomatic, propaganda, and psychological battle lines are drawn.

These actions are purposely flexible, sometimes vague, to allow a choice of responses in a crisis. This aspect was pointed out by Secretary of State Dean Rusk before the Senate Preparedness Subcommittee on 25 August 1966:

> ... These commitments do not bind us to any particular course of action. Most of them state that in the event of aggression we would act to meet the common danger in accordance with our constitutional processes. How we act in the fulfillment of these obligations will depend upon the facts of the situation.

During times of crisis or conflict, when a nation may be called upon to fulfill its obligations, reactions are subject to many unpredictable variables which not only may make the facts of the situation extremely complicated, but may also make these "facts" unavailable to the decision maker. The rapid pace at which crises develop and change, the lack of information or its inaccuracy, the status of military forces which may be either unavailable or inadvertently involved, the phenomenon of narrowing options as crises deepen, added to the inherent problems in predicting conflict and the uncertain responses of other nations--all detract from the ability of planners to determine exactly what military capabilities may be needed for a given commitment or set of commitments under given circumstances.

Despite these problems, a range of four basic strategic options for the case of counterinsurgency are postulated. They are:

1. To strengthen threatened societies and encourage peaceful and meaningful social and economic change so that resort to violence or revolutionary warfare will be unnecessary.

2. To assist governments threatened by communistic insurgents.

3. To wage combat operations on the territory of the threatened state, assisting indigenous or regional forces.

4. To carry out combat operations directly against the forces or territory of those fomenting or supporting a conflict within or directed at a friendly state.

The first option is, of course, the preferred strategy and in many instances has been successful. In many other cases, success has not been achieved partly because the task is enormous, expectations outstrip government performance, and many recipient governments are inefficient, uninterested or repressive; but largely because many societies are marked by internal divisions and strains which impede peaceful political and economic development. Thus, there has been and continues to be a potential requirement for the U.S. to become involved in various degrees of military aid and assistance, as well as combat operations, both within the threatened state and against external parties to the conflict.

Military Posture Planning

Although the commander's estimate[13] of the situation is generally associated with the planning for a particular mission, it can also provide a useful point of departure for discussing military planning on the national level. In the U.S., the annual military posture statement of the Secretary of Defense regularly begins with an assessment of the international situation and its implications for military plans and policies. Some nations face a relatively simple problem in their estimate of the international situation. Their problems are simplified by circumstances ranging from a single well-defined threat or no threat at all to their security, to the possession of so few resources as to greatly limit their alternative courses of action. As a major world power, the U.S. must deal with a very large number of circumstances affecting the military planning problem. Thus, the task of U.S. military planners is one of narrowing the scope of the problem so that it is manageable for the determination of military requirements.

One way of accomplishing this is to consider the various circumstances of the international situation according to the kind of military threat to U.S. security they may represent. Other ways in which the problem may be approached include a breakdown by individual states, regions, or alliance groupings; by relevant national objectives or policies; or by some functional categorization of the kind of warfare anticipated. In practice, the approach generally involves a combination of the analytical categories for breakdowns. Certain circumstances which may be important can be classified according to some well-defined, measurable threat to national security (e.g., numbers of missiles capable of striking a nation's territory). Others are threats only in the sense that some potential for doing a nation harm exists or could develop, although how, when, and at whose direction remains uncertain (e.g., control of a strategic location such as the Panama Canal or Singapore by a hostile power, or the potential implications of warfare between two or more of a nation's allies).

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[13] The commander's estimate is defined as a logical process of reasoning by which a commander considers all the circumstances affecting the military situation and arrives at a decision as to a course of action to be taken to accomplish his mission. The Joint Chiefs of Staff, Dictionary of United States Military Terms for Joint Usage, (Washington, D.C.: GPO, 1966), page 43.

For low-level warfare, the threat will generally defy precise definition. Nevertheless, some categorization of potential kinds of situations linked to the appropriate national objectives in these situations could be of value. A general threat and mission definition for naval forces can be derived as a first step toward determining the required operational capabilities.

A major concern of the U.S. with "small" wars is the danger of their escalation; therefore, the major "threat" for low-level warfare may be conceived as the existence of local war and the dangers inherent in any direct or indirect great power confrontation growing out of such conflicts. This appears to be more useful for the derivation of missions and the capabilities required of U.S. military forces than the alternative approach of deriving requirements directly on the basis of order of battle data for the world or a specific region. These data have their place in the planning process, but until the various parties to a conflict commit their resources, it has no direct relationship to the "facts of the situation" on which the U.S. response will be made.

For this discussion, a categorization of warfare on the basis of how the belligerants are related to the U.S. is a useful way to derive which military operations may be likely. This likely set forms the basis for operational capabilities. The threat of low-level warfare will fit into one or all of the following forms:

1. Great power "cold war" type confrontation either directly or indirectly related to specific conflicts of interest in which interactions between the respective armed forces are restrained and generally (but not necessarily) non-violent with mutually perceived understanding of the clear potential for escalation to a nuclear exchange.

2. Heightened tensions, civil disorder, economic and social unrest or significant disaffection which endangers the authority and continued existence of the government in nations which are non-aligned or the object of a U.S. defense commitment.

3. Civil war, insurrection, military revolt or mass armed revolution against the government in nations which are non-aligned or which are the object of a U.S. defense commitment.

4. Threatened or open hostilities between the armed forces of two nations which are non-aligned or which are the objects of U.S. defense commitments.

5. Subversion, exploitation of internal disaffection, or support of armed revolt by a major communist adversary of the U.S. or its proxy against a nation which is non-aligned or which is the object of a U.S. defense commitment.

6. Internal disaffection or disorder, insurrection or armed revolt, or interstate conflict involving only communist nations or those hostile to the U.S.

For each of these six situations, it is possible to postulate a number of operational objectives or missions for naval forces which might be undertaken in support of U.S. national objectives. Table 2-1 presents some naval operations which were derived on this basis for a study of naval special warfare requirements. This is a different, more general framework than that contained in GOR-38 but is not inconsistent with that requirement. The principal differences are that conflict situations are more elaborate and that unconventional warfare, special naval operations, and counterinsurgency are detailed.

Operational Concepts and Military Options

Given some task or mission and the general nature of the situation, the naval planner faces two kinds of problems. In one case, the situation is current or anticipated in the near future so that the concept of operations must be on the basis of currently available forces and their capabilities. The other planning problem is that of formulating a concept to determine what forces and capabilities would be needed to carry out the operation in an assumed future situation. Here the potential number of options is as great as the number of combinations of belligerents, forces and weapons, causes and objectives, etc.

Again, some means are available for simplifying the problem. The planner can use experience--plan to achieve the objective in the way it has always been done. A combination of innovation and experience can also be used--plan to achieve the objective using proven methods with better resources. Or the planner may be bolder by attempting to achieve the objective through new military resources provided by the advances in technology.

TABLE 2-1

CONFLICT SITUATIONS, OBJECTIVES, NAVAL OPERATIONS*

Conflict Situation	National/Military Objectives	Naval Operations (Missions & Tasks)
I. Cold War competition, military confrontations, and incidents (Cold War)	A. Restrict enemy influence (1) Embarrass enemy government (2) Limit enemy sphere of military activity (3) Decrease enemy military effectiveness (4) Divert enemy efforts and resources (5) Depreciate enemy achievements	1. Harass military and commerical ships and aircraft 2. Shadow and conduct surveillance 3. Inspect/divert/exclude ships and aircraft 4. Intefere administratively 5. Sabotage 6. Expose illegal activities 7. Seize or detain personnel and equipment 8. Influence weather 9. Influence sea life 10. Counter similar enemy activities 11. Civic action 12. Combined exercises (Foreign - U.S.) 13. Environmental prediction (weather/castastrophy) 14. Ship and VIP visits 15. Military demonstration 16. Training and education through MAP program 17. Advice and assistance through MAP program 18. Psychological operations
II. Heightened tensions civil disorder, political, economic, and social unrest in friendly nations (incipient insurgency)	A. Reduce tensions and facilitate settlement of problems (1) Support threatened government (2) Improve social and economic conditions (3) Deter violence (4) Protect U.S. interests (5) Avoid recognition of insurgents B. Prevent spread of conflict	1. Conduct coastal surveillance 2. Training and education of and assistance to international security forces through MAP 3. Civic action 4. Show of force 5. Protect U.S. bases in area 6. Evacuate U.S. citizens
III. Insurgency by communists against friendly governments.	A. Support of internal security forces of government under subversion B. Strengthen and stabilize indigenous government (nation building/civic action) C. Clandestine disruption of enemy operations in enemy territory, enemy held areas of beleaguered nation, and "sanctuary" areas	1. Coastal surveillance 2. Coastal patrol and inspection 3. Amphibious raids in coastal region 4. River patrol and inspection 5. River assault operations 6. Tactical deception 7. Intelligence collection along coast and rivers 8. Population control, curfews, restricted areas 9. Psychological operations 10. Joint search and destroy operations 11. Sea (water) based logistic support 12. Defend own forces and bases vs waterborne attack 13. Naval gunfire and close air support 14. Mining, minesweeping, and mine countermeasures 15. Electronic intercept, jamming, and deception 16. Training and advisory support for indigenous naval forces for internal security operations 17. Train and advise indigenous personnel in administrative and civic action activities 18. Provide craft, vehicles, equipment, and logistic support for indigenous forces 19. Civic action programs by U.S.N. units 20. River, harbor, and port improvement 21. Reconnaissance and intelligence collection in enemy harbors, coastal areas and restricted waterways 22. Demolition raids on enemy installations 23. Swimmer limpeteer attack vs enemy ships and craft 24. Limited shore bombardment 25. Infiltrate own and friendly agents 26. Psychological operations in enemy territory 27. Electronic cover and deception 28. Clear enemy harbor, river, and coastal defenses including mines 29. Rescue downed pilots from enemy territory 30. Assist POW escape and evasion

TABLE 2-1 (CONT.)

Conflict	National/Military Objectives	Naval Operations (Missions & Tasks)
IV. Civil war, insurrection, military revolt and/or revolution against friendly governments by non-communists	A Support internal security forces of government (1) Control of violence unilaterally (2) Control of violence through international peace-keeping organizations B. Prevent spread of conflict (1) Deter external aid (2) Isolate from foreign influence	1. Defend U.S. installations 2. Evacuate U.S. citizens 3. Evacuate key indigenous political and military personnel 4. Conduct surveillance and reconnaissance 5. Provide troop lift and logistic support for indigenous and/or international forces 6. Conduct inshore and river patrol supporting indigenous government and/or international forces 7. Psychological operations 8. Show of force 9. Electronic intercept and jamming
V. Threatened or open conflict between nations friendly to U.S.	A. Deter, limit, or end violence unilaterally or in support of international or multilateral peacekeeping organizations B. Prevent spread of conflict (1) Deter external aid (2) Isolate from foreign influence	1. Defend U.S. installations and bases in area 2. Protect U.S. property and evacuate citizens 3. Show of force to deter naval and air activities of both parties 4. Conduct border and coastal surveillance 5. River and coastal patrol and inspection 6. Psychological operations
VI. Insurgency against governments unfriendly to the U.S.	A. Support friendly partisan forces B. Clandestine support for subversion	1. Land and recover guerrillas 2. Limited shore bombardment 3. Furnish logistic support for guerrillas and partisans 4. Decoy and divert enemy forces 5. Provide communications link 6. Psychological operations 7. Reconnaissance and intelligence collection in harbors, coastal areas and restricted waterways 8. Demolition raids 9. Sabotage of installations 10. Swimmer limpeteer attacks 11. Disrupt enemy communications 12. Threaten and/or demoralize coastal and river populations by kidnapping leaders and fishermen 13. Infiltrate and exfiltrate own and enemy agents 14. Clear harbor, river, and coastal defenses 15. Plant sea and land mines – disrupt LOC 16. Employ non-lethal biological/chemical agents in destroying crops, contaminating fuel, and water supplies, etc. 17. Deceptive tactics 18. Psychological operations 19. Electronic cover and deception for covert operations

* Adapted from Report to Director of Navy Laboratories from Advanced Concept Formulation Group-Special Warfare, 1 April 1967. Op. Cit.

All approaches have their advantages and faults. For low-level warfare, there may be certain restraints on the use of old and even new concepts. A military problem solved in the past by simply eliminating the opposition through conquest or destruction might be complicated by a need to avoid collateral violence and destruction, particularly in an internal war. Avoiding combat, or influencing the opponent to avoid combat, could be one way to realize such a need. Where it was once possible to communicate intentions and desires to the enemy with the application of force, in low-level warfare both friend and enemy may not be aware of one another's identity or even presence. The sophisticated products of the space age have some theoretical application in a general nuclear exchange or in deterrence of such an exchange, but they have virtually no use as a deterrent to unsophisticated forces.

A concept for defense of one's own force under conditions of general war may not be effective against sporadic, isolated challenges to forces deployed to an area of prolonged crisis. In addition to the implication that the requirements for low-level warfare are smaller than those for general war, the differences in operational objectives make it likely that these requirements are also different in kind.

Planning and Commitments for Low-Level Warfare

Some of the differences between the requirements for limited and general war and low-level warfare will be explored in three steps. The U.S. national security planning organization as it pertains to low-level warfare will be examined to identify some of the military and non-military options for the U.S. which may conflict with, or complement, the possible ways in which naval forces might be employed. Next, U.S. commitments which might involve the U.S. Navy in local wars will be a representative sample of what the facts of the situation are likely to be when the Navy becomes involved in a U.S. response. Finally, the likely naval operations will be analyzed to identify what, if any, unique problems might be encountered that should be considered in the planning of general purpose forces and any specialized forces for low-level warfar

The conduct of low-level warfare requires the coordinated employment of national resources simultaneously on the many fronts which characterize this form of warfare (i.e., diplomatic, military, economic, psychological, etc.). That the problem of planning, preparation, and

actual involvement in the counterinsurgency aspect of this form of warfare is somehow special is shown by the establishment of special interdepartmental organs responsible for overseas internal defense. This special organization, the Senior Interdepartmental Group (SIG), consists of the Undersecretary of State, Deputy Secretary of Defense, Administrator of AID, Director of the CIA, Chairman of the JCS, Director of the USIA, and the Special Assistant to the President for National Security Affairs. Its function is to assist the Secretary of State in the direction and coordination of U.S. intelligence, planning, training, diplomatic, aid, and military efforts in counterinsurgency operations.

However, other situations (e.g., the recent Middle East War) can result in ad hoc inter-departmental structures to plan and direct the U.S. actions. The need for such special organizations outside of or in addition to the National Security Council indicates the difficulty of translating generalized objectives and policies into an action organization capable of responding to the wide range of threats represented by low-intensity warfare. Objectives and policy need to be interpreted on the basis of generally unpredictable details of future situations. This complicates the task of planning and developing military capabilities where lead-times are measured in years and makes it difficult to have the right force to fight the right war in the right place at the right time. The current Navy compromise to the dilemma is a flexible, general purpose force structure combined with forward deployment. What must be remembered is that problems actually confronted rarely fit the well-defined general pattern. General Purpose Forces are often called upon to perform specialized missions.

As in prior years, the Secretary of Defense noted in his 1967 defense posture statement that:

> The General Purpose Forces include .. virtually all Navy units (except for the Polaris forces), all Marine Corps units, and .. These are the forces upon which we rely for all military actions short of general nuclear war; that is, limited war and counterinsurgency operations. [14]

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14 House of Representatives, Committee on Armed Services, 90th, 1st, Hearings on Military Posture, (Washington, D.C.: GPO, 1967), page 883.

The specific sections of the Secretary's statement relating to the Navy are roughly organized according to the broad functional purposes which naval forces are designed to serve. These are attack carrier forces, anti-submarine warfare and destroyer forces, other combatant ships, amphibious assault ships, mine countermeasure force, logistical and support ships, and Marine Corps forces.

Within the operating forces and planning establishment of the Navy, the organization follows essentially the same pattern of well-defined threat and/or mission. These include divisions, branches or sections for various naval warfare functions such as strike warfare, air warfare, undersea warfare, anti-air warfare, anti-submarine warfare, amphibious warfare, electronic warfare, mine warfare, surveillance, submarine warfare, unconventional warfare, counterinsurgency/Project Handclasp, etc. For most of these naval warfare functions, the threat and/or mission is defined largely in terms of the armed forces of the Soviet Union, China and its allies, which represent the greatest military challenge to U.S. security and the naval forces acting to protect U.S. interests. Requirements for these naval forces are determined by analysis of various ways U.S. and adversary forces might engage in war at sea ranging from tactical nuclear war to non-violent confrontation or mutual harassment of either nation's naval operations.

Although there are certainly plans for contingencies not involving Soviet forces, the primary operational characteristics of U.S. naval units appear to be largely determined by the requirements for conflict with the Soviet and Chinese armed forces. While these forces do represent the greatest military threat to the U.S., and it is necessary and proper that the operational characteristics of the U.S. Navy are capable of meeting this threat, the kinds of operations which might be carried out in low-level warfare are different and require unique operational characteristics.

Although the Navy has been assigned specific tasks for counter-insurgency which include organizing and providing naval forces, development of doctrine, joint training, research and development, military intelligence, and area specialist training, the high level organization of the Navy remains primarily oriented toward the traditional naval role of control of the sea. With few exceptions, the problems related to counter-insurgency are treated on lower levels as collateral functions. Indeed, low-level warfare, in the sense of restrained tactical operations, is not strongly reflected in the Navy's organization. In contrast to the more

specialized approach adopted by the Army, the Navy's views of conflict in the lower spectrum continue to reflect the generalist attitude.

The remainder of this discussion will examine some of the commitments which could involve the U.S. Navy in low-level warfare and endeavor to identify some of the practical problems and unique capabilities this involvement might require.

Commitments can be implicit and/or explicit, are subject to change with time, vary in strength, and both determine or are determined by other aspects of the national security planning process. A commitment is thus a form of contingent promise or threat subject to all the foregoing qualifications. Commitments are made elastic by the flexibility inherent in reserving the right of a nation to interpret for itself the nature of the contingency which might demand honoring its promise. Commitments may overlap or compete with one another, as in the case of U.S. commitments directly to a state involved in a conflict and U.S. commitments to the U.N. for the peaceful resolution of conflicts by multilateral means.

Particular examples of U.S. commitments relevant to low-level warfare obviously include the more than forty formal mutual defense promises. Also included are the contingent promises found in U.S. policy regarding specific areas of East-West confrontation such as Berlin and Southeast Asia. Less obvious commitments are found in the very presence of U.S. military forces in the forward deployment that support a policy of the containment and the stabilization of troubled areas. There is even a certain degree of commitment implicit in the presence of U.S. citizens and commercial interests in other nations. U.S. policy for overseas internal defense implies by its very name some commitment to assist governments in maintaining internal security. This policy and other statements of U.S. policy regarding limited or local wars imply a commitment to peaceful change, to the deterrence of these wars, to the limitation of wars which do occur, and to the facilitation of their termination. Finally, it should be recognized that an apparent or claimed ability to influence somehow militarily (or otherwise) the conduct and eventual course of hostilities may itself be interpreted as a form of automatic involvement and commitment to respond to the facts of the situation, whatever they may be. In other words, if the capability to use force is available, that capability may feed back to modify intentions.

Military Options for Low-Level Warfare

The six general categories of low-level conflict situations and the naval operations noted above and in Table 2-1 form a basis for organizing military options. The operations are grouped into the following categories:

1. Clandestine activities
2. Harassing/deceptive activities
3. Non-combatant training, advisory, and logistic activities
4. Combat and combat support activities
5. Defensive or reactive activities
6. Area/population control activities
7. General surveillance activity
8. Influence activities
9. Environmental prediction and change activities.

This listing is not without some overlap between categories and some of the operations are really a combination of several activities. However, the groupings appear to provide a means of identifying some of the environmental, political, and military problems which should be considered.

Clandestine Activities:

The operations which may be characterized as being mostly clandestine in nature and the situations in which they are likely to take place are as follows:

Operation	Situation(s)[15]
Sabotage	1
Intelligence collection along coasts and rivers	5
Reconnaissance and intelligence collection in (enemy) coasts, harbors and restricted waters	5, 6
Demolition raids on (enemy) installations	5, 6

[15] See Table 2-1 for situation identifications.

Clandestine Activities (Con't)

Operation	Situation(s)
Swimmer limpeteer attack against (enemy) ships and craft	5, 6
Limited shore bombardment (harassing fire or support of cladestine operations)	5, 6
Infiltrate and exfiltrate agents	5, 6
Land and recover partisan forces	6
Clear (enemy)harbor, river and coastal defenses (including mines)	5, 6
Plant land and/or sea mines disrupting LOC	6
Employ non-lethal BW/CW agents in destroying crops, contaminating fuel and water, etc.	6
Provide logistic support for partisan forces	6
Rescue downed pilots	5
Assist POW escape and evasion	5
Provide communications link for clandestine operations and agents	6

Exposure of many of these activities carries a substantial danger of escalation and it may be assumed that they would be employed only in those cases where vital U. S. interests are felt to be involved. For example, in the case of threatened conflict between two U. S. allies in which diplomacy, threat of sanction, reprisal, or intervention fails to deter, the selective neutralization of key elements of both parties' ability to wage war might be an acceptable option. In any event, these activities may be required to add to an opponent's problems or to remove a reluctant ally's option.

Harassing/Deceptive Activities

This category of operations is characterized by the use of non-violent means of denial or depreciation of an opponent's free and unencumbered use of the sea. The operations and likely situations are as follows:

Operation	Situation(s)
Harass military and civil ships and aircraft	1, 4
Electronic intercept and jamming	3
Electronic intercept, jamming and deception	5
Tactical deception	5, 6
Electronic cover and deception for clandestine activities	6

These operations probably do not involve the inevitable high risks which may harm other national objectives or policies. (The Tonkin Gulf and Pueblo incidents notwithstanding.) However, there is always the danger that harassment and deception will give the appearance of an aggressive action to the target. For example, a high speed approach by warships or low overflight by aircraft can readily be viewed as hostile actions. In addition to the need for a considerable amount of alertness and finesse on the part of tactical commanders, these activities also require a variety of electronic devices which may be employed to confuse or embarass an opponent. While many devices and concepts presently exist for the intercept, interference, or deception of a fairly sophisticated enemy's communications or information systems, they may not have an application against the kind of military forces which are likely to be encountered in low-level warfare situations 3, 4 and 5.

In hypothetical low-level warfare forces it is possible that many electronic and tactical deception operations fit more properly in the influence activity category because the objective is to convey some desired impression of the fleets position, size, force, or intentions in order

to influence the behavior of the target nation or group. The forces require some capability for communicating with and influencing an unsophisticated military force.

Non-Combatant Training, Advisory and Logistic Activities

This category of non-combatant activity has some degree of overlap with the influence activity and environmental-change activity categories. The training, advisory and logistic activities are characterized by the use of combatant forces in non-military projects which may be appropriate due to the circumstances of the military units' deployment and the local situation, and by the employment of military support organizations to service the civil and military needs of another nation. These activities include:

Operation	Situation(s)
Civic action projects by Navy & Marine Corps units	1, 2, 5
Training, education, and services to civilians	1, 2
Training and advisory support of indigenous naval forces for internal security	2, 5
Training and advisory support of indigenous military civic action	5
Provision of craft, vehicles, equipment, and logistic support for indigenous internal security and military civic action programs	5
Construction support for indigenous river, harbor, and port improvement projects	5

This kind of activity should probably consits largely of those short-term projects which are appropriate for the fleet units in any particular

situation. It does not appear desirable to include in all of the fleet units the type of support forces which would be required to participate effectively in indigenous internal security or civic action programs in coordination with other U. S. assistance efforts. The short-term projects to be undertaken by the fleet units would have to be coordinated with other U. S. activities. However, what can be done and how the coordination may be carried out depend largely on the operating schedule of the fleet. A well-organized untilization of the resources of the combatant units can probably be best done on the basis of repeated rotation of fleet units to a series of ports which would allow both a degree of familiarization of fleet personnel with the characteristics and problems of a locale, and the identification of the population of each area with a certain unit or units. This would allow time for routine training operations at sea as required to maintain military readiness and at the same time provide for a long-range plan to produce lasting results from the non-combatant activities carried out during brief visits to individual ports of call.

Within the composition of the fleet itself for the conduct of these noncombatant activities, a basic question exists as to what proporation of its resources, including skills, manpower, time and space as well as consumable supplies, should be diverted from the more "military" problems of material and personnel readiness for combat. Should a low-level warfare force operate for years without any military opposition, its involvement in non-military functions will probably grow along with its organization for and opportunity to carry out these functions. Finally, it should be noted that the advantages of mutual familiarization and understanding justify a pattern of semi-permanent overseas deployment of units with rotation of individual personnel as required. It may also indicate a need for individual specialization in certain areas.

Combat and Combat Support Activities

This category of naval operations includes some aspects of most functional naval warfare areas for which the Navy plans and maintains combatant and support forces. These operations include:

Operation	Situation(s)
Amphibious raid on coastal region	5
River assualt operations	5

Operation	Situation(s)
Joint search and destroy operations	5
Mining, mine sweeping and mine counter-measures	5
Troop lift and logistic support for indigenous or international forces	3
Water based logistic support	5
Naval gunfire and close air support	5

The way in which where these operations differ from the operational concepts for conventional strike warfare forces and capabilities is in the anticipated combat environment. A number of limitations, ranging from non-employment of nuclear weapons to rules of engagement, often restrict the concepts or acceptable military options to something less than the designed combat potential of most existing forces. Because these rectrictions have and will continue to have a certain cost to the U. S. in terms of both lives and material resources, an important consideration in future operational characteristics should be the restraints which are likely to be imposed on operations. The most important restraints for combat and combat support activities are those regulating the kind of weapons which may be employed, the kind of targets which may be engaged, and the areas in which the fleet units may operate. Restraints pertaining to when and how hositle, threatening, and unidentified forces may be engaged in combat are also important, but relate primarily to defensive/reactive activities which will be discussed in the next section. Some capability to carry out all of these combat or combat support operations until additional force can be deployed is desirable for a specialized low-level warfare force.

Defensive/Reactive Activities

This category of activities represents both combat and non-violent operations which differ from those in the preceding sections in that the concern here is with the initial defensive/reactive measures taken in response to some hositle military action. These activities include:

Operations	Situation(s)
Countering harassment, surveillance, sabotage, etc.	1
Defense of U. S. overseas bases and installations	2, 3, 4
Evacuation of U. S. citizens	2, 3, 4
Evacuation of key indigenous civilian and military personnel	3
Harbor and coastal defense against waterborne attack	5
Defense of own force on high seas	2, 3, 4, 5, 6

Besides the possible restrictions on the means allowable for defensive action, the conditions under which naval forces are likely to be challenged in combat also pose significant problems. It is not likely that air, surface, or submarine attack will occur at a time when the fleet or independent units are fully alerted in a state of maximum readiness. Attacks are more likely to take place during situations which are characterized by prolonged, uneventful deployment to the troubled area. There is a need for quick reaction defensive weapons systems which are designed to be an integral part of a units normal cruising watch organization. Other defensive/reactive activities which involve operations ashore require a capability for rapid transportation of landing force contingents and/or evacuees between ship and shore.

Area/Population Control Activities

Operations in which a force is employed to dominate or control an area, or to enforce certain behavior, make up this category. These operations consist of:

Operation	Situation(s)
Inspect, divert, or exclude ships and aircraft	1
Seize or detain persons and equipment	1
Inshore and river patrol supporting indigenous or international forces	3
River and coastal border patrol and inspection	4, 5
Enforce population controls, curfew, and area restrictions	5

The problems involved in controlling a specified area or population are readily quantified. Given certain parameters such as the area, population size, and some specification of what constitutes normal or allowed activity, the size of the force required to achieve a desired degree of coverage can be estimated with appropriate models. Should the control be challenged, the problem becomes one of defense or reaction. This does not in any way imply that a low-level warfare force does not require substantial surveillance, intercept, and inspection capabilities, nor that area control activities can be effectively carried out by any type of force which may be available. It means that for a given problem, such as, intercept of arms runners or enforcement of a neutral zone, the force required can be defined to a degree not possible with a problem such as deterring outside intervention in a coup or revolt.

General Surveillance Activities

The general surveillance operations differ from the category of area control in that the objective does not include enforcement of controls. These activities seek only to provide information concerning what is happening in an area of U.S. interest. The operations are as follows:

Operation	Situation(s)
Shadow or track designated forces	1
Border and coastal surveillance	2, 3, 4, 5
Surveillance and Reconnaissance of crisis area troop, ship and aircraft movement	2, 3, 4, 5

It is likely that the capabilities to carry out area control activities will also provide a specialized low-level warfare naval force with the capabilities required for general surveillance. It should be noted that timely, accurate information can be very important to the ability of a peacekeeping organization to act in a crisis. The establishment of low-level warfare forces as a reliable source of information to these peacekeeping organizations will increase the influence of the fleet's presence in troubled waters and help to remove the need for unilateral U.S. intervention by the fleet.

Influence Activities

Each category of low-level warfare naval activities can be viewed as having an objective of influencing adversary behavior to achieve a military objective. However, the naval operations in this category have as their primary purpose the communication of U.S. intentions, capabilities, interest, concern, etc., to the target groups. The influence activities include the following operations by naval forces:

Operation	Situation(s)
Show of force	1, 2, 3, 4, 5, 6
Combined exercises	1, 2, 5
Ship and VIP visits	1, 2, 5
Military demonstrations	1, 2
Exchange cruises	1, 2
Delivery of psychological warfare materials	1, 2, 3, 4, 5, 6
Language training	1, 2

The forces required to accomplish most of these operations could be estimated by its capabilities to help or to harm. However, in many cases of low-level conflict, the situation can be very ambiguous, the parties difficult to identify and influence, and fleet actions open to a number of incorrect interpretations by the parties involved. A force capable of destroying formations of aircraft, ships, submarines, or armed troops may have little influence over a belligerent who has no aircraft, ships, submarines or armor. Demonstration of an intervention capability may well show a degree of U.S. concern over a crisis, but it may also negate a policy of neutrality. Just how the movements of U.S. naval forces are likely to be interpreted by parties to a crisis is probably as difficult to predict as is the occurrence of the crisis itself. It is also true that interpretations are influenced by the adversaries own expectations as well as by actions of U.S. forces. One approach to planning and evaluating influence operations would be to consider them in terms of how they add or remove options for the other parties involved.

Environmental Change or Prediction Activities

This final category of operations involves the Navy's use of its knowledge of the ocean environment to render clearly non-military services to the people in the area of operations. These services could include weather and natural disaster prediction, location of marine life, influencing the movement of marine life, and influencing weather.

Summary

Warfare has been the object of many varied attempts at description and explanation. In the NRL low-level warfare study program, both theoretical models of revolutionary processes and empirical data on post-World War II political violence were analyzed to develop some form of predictive theory which will be useful to naval planners. It is obvious that no simple explanations exist. War is not just a matter of wrong actions harming an innocent party, or evil men expanding their power at another's expense, or good ideas competing with bad ideas, etc. Decisions to use force are made when a party views its interests as being served by the use of force. The complexity of interests and flexibility of objectives was noted earlier in this discussion.

Conflicts of national interests or societal group interests may or may not result in violence to resolve the issues. Actions of the parties

are based on their view of the situation; hopefully, the views represent "the facts of the situation." Yet, it is often clear in retrospect that the facts of the situation did not show that national interests were served by the initiation or provocation of war. While these observations may appear only remotely relevant to the problems of naval planners, the intention is to illustrate the importance of and difficulty in determining the facts of the situation.

Once some objectives for the low-level warfare fleet are formed on the basis of good, bad, or indifferent knowledge of the situation another set of problems remains concerning the relations of the fleet with the belligerents. Besides locating and identifying the belligerents, some means of communicating the fleet's intentions, capability, desired behavior for the target party, etc., must be found. This can present a wide range of special problems. For the case where the desired objective is for an enemy to cease all military action, a simple answer is to destroy him if he can be found. For other cases where cooperation is the desired behavior, there are no simple answers. Furthermore, the simple situations are not likely to solve problems without creating new and larger ones. The interests and objectives which motivate a belligerent are no less complex than the reasons why low-level warfare forces have a mission of deterring, coercing, or enticing some form of behavior from him. Consideration should therefore be given to the target parties' motivations and options and the fleet's actions tailored so as to make the options which are most desirable for the U.S. appear equally desirable to the target party.

One way of thinking of low-level warfare forces is as a tool for use in coercive bargaining. As such, they may serve as an instrument for control of specified areas. This control may be threatened or promised as part of the bargaining process. It may also be carried out with the relaxation of control included in the terms of the bargain, as in a quarantine or blockade. Another function, which may have to precede control in some instances, is conquest and occupation. However, national objectives, as assumed for this discussion, do not always provide for conquest; therefore, some other function should take its place in the bargaining process. Such a function could be that of punishment. Should the adversary fail to bargain or abide by the terms of some understanding, forces may

be ordered to carry out punishment (i.e., inflict some harm on the adversary short of conquest). This, of course, raises the difficult problem of what kind and how much harm will be interpreted as punishment by the recipient. This is a question which lies outside the realm of the current discussion. If U.S. involvement constitutes coercive bargaining, the function of naval forces may be summarized as providing a credible capability to inflict harm in support of U.S. efforts to deter or compel certain behavior.[16]

While the forces have a potential to harm an adversary, they may also function to reassure a threatened friend. A completely different function, which is largely incidental to the fleet's inherent destructive resources and the circumstances of its employment, is the performance of humanitarian projects which are designed to provide needed assistance to less fortunate peoples and to enhance the image of the U.S., in general, and the fleet, in particular.

Low-level warfare is a potential catalyst for large-scale conventional or general nuclear war. As such, this warfare should not be treated as a particular size or method, but rather in terms of how the U.S. is involved by its relationship to the belligerents. The status of the U.S. as a global power and its capability to take actions which would influence the course of conflicts nearly anywhere brings to the U.S. a form of unavoidable involvement in these conflicts whether action is taken or not. In addition to military action, the conduct of low-level warfare by the U.S. is characterized by the simultaneous application of non-military resources in the economic, diplomatic, and psychological fronts. Those military actions which are carried out are very closely controlled to achieve the

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[16] See Schelling, op. cit., p. 69, for elaboration of the notions of deterrence and compellence. Very briefly, the implication of deterrence is passive (punishment if) and that of compellence is active (punishment until). Matters such as timing, communication, and relevance are particularly critical to inducing the desired adversary behavior.

required coordination with activities in other fields. Military action is directed at largely political objectives and subjected to forms of restraint which are not necessarily compatible with concepts and weapons designed for comparatively unrestricted use of force.

On the basis of several assumptions concerning the conflict situations possible, and the kinds of operations which naval forces might undertake in these situations to achieve the assumed national and military objectives, the possible missions and tasks were estimated. Generally, the concept is that of a modification of the amphibious ready group concept. The concept of operations involves extended deployment in forward areas without supporting bases ashore. The pattern of operations within the area includes repeated visits of each unit to the same ports of call at which a well-organized and coordinated program of non-combatant service functions could be carried out to utilize fleet resources in appropriate nation-building and environmental change projects. Numerous opportunities for such projects exist due to the circumstances of the presence of fleet capabilities. A long range plan and interdepartmental direction of this non-combatant effort is required to achieve lasting benefits and to avoid excessive diversion of fleet resources away from combat readiness.

In the area of military functions, such as, combat or combat support operations, the operational concept for the fleet is for only brief and sporadic engagements rather than the sustained operations. These latter would be possible through fleet augmentation by major combatant forces. The fleet would provide a visible presence of military force capable of quick response to a variety of military problems. Capabilities for rapid movement between ship and shore, and the defense of small enclaves ashore are considered very important. The fleet would have a limited capability for executing strike warfare missions in an unsophisticated combat environment. To avoid a situation in which the value to general warfare readiness of fleet units is so great as to require the deployment of extensive covering and defensive forces, it is desirable that the combatant units do not include those with major strike or defensive roles in general war such as attack carriers or their major fleet escorts. For reasons of defense, greater visibility, greater coverage of patrol activities, and the performance to the non-military functions, more and smaller units capable of visiting and dispersal in more and smaller ports are needed.

While it is anticipated that strike operations would be conducted in an unsophisticated (very permissive) combat environment, fleet defense should be concerned with both clandestine challenges from irregular forces and sporadic attack by small numbers of highly sophisticated weapons systems. Restraints on the fleets' combat activities are particularly important to defense and should be considered in weapons systems operational concepts.

Another important needed capability is the collection of timely information concerning the course of events in a crisis.

Finally, the fleet should include a variety of capabilities for harassment, deception, propaganda, and support of small operations ashore including clandestine activities.

Recommendations

There are a variety of problems remaining which need to be considered in the planning of naval forces for low-level warfare. Some of the problems identified in this discussion, which should be the object of further study, are:

1. The influence of threatened punishment by naval forces on behavior of irregular forces.

2. The proper or optimum mix of non-military and combat oriented resource utilization by a naval force.

3. The utility and feasibility of placing a naval force's capabilities at the disposal of an international organization for peacekeeping operations.

4. Reconsideration of the Navy's position that the need for low-level warfare forces, planning and organization can be adequately met by the General Purpose Forces and the diffusion of responsibility for such forces.

Two methods which would provide more specific inputs to the planning of low-level warfare forces are:

1. Gaming of detailed situation narratives or scenarios for each kind of low-level warfare problem suggested herein, to derive some range of quantitative requirements for the operational capabilities of naval forces.

2. Review the normal procedures for fleet defense in a non-alert status and test alternate concepts against the challenges to U.S. naval forces projected in the scenarios.

SECTION III
DIMENSIONS OF POLITICALLY SIGNIFICANT VIOLENT CONFLICT, 1944-1966

INTRODUCTION

In 1965 the Office of Naval Research began a study of low-level warfare and its relationship to Navy-Marine Corps planning and RDT&E requirements. The original conception centered on a postulated phenomenon, "sub-limited warfare", a term used by President Kennedy in a 1961 speech on the Berlin crisis. A Navy summer study produced a report which postulated a definition of "sublimited warfare" and outlined areas of research.[1] The definition tentatively adopted as a basis for a set of studies was as follows:

> Sublimited warfare is a state of continuous international conflict and tensions, arising from basic ideological differences of major antagonists and representing a subtle threat to national security, or in some other way involving important national interests, wherein the necessary resources available are employed with varying intensity short of limited war to achieve national objectives.

In August 1966 this study was undertaken with its principal task being to define empirically the nature of sublimited war.[2] It soon became clear that empirical verification of the analytical constructs in the definition could be extremely difficult. The idea of "low level" warfare was therefore substituted for sublimited war because it would not arbitrarily restrict inquiry within the ephemeral boundary between "limited" and "sublimited" war. Subsequently, technical direction of the study was transferred to NRL and it was integrated into the Laboratory's Special Warfare Program.

PRIOR WORK

With exception of counterinsurgency studies, the most extensive examination of the concept of low-level warfare by the military prior to the

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1 Office of Naval Research, "Supporting Discussions for Research and Analysis Program in Sublimited War Operations of the Navy and Marine Corps," (U) 20 September 1965. (mimeo, SECRET).

2 Bendix had completed a preliminary study of Navy involvement in conflict. See The Navy and Sublimited Conflicts (U), Final Report, BSR 1407 (Ann Arbor, Michigan, 30 December 1966) (SECRET).

beginning of the Navy program was the Army study, WINS II.[3] WINS II was concerned with "conflicts in the lower spectrum of war" and postulated a region of "sublimited war" where both means and costs averaged less than, but overlapped with, limited war.[4] The difficulty with this concept (apart from the distinction between limited and sublimited war) was that it generalized from an inadequate data base and that the scales for the measurement of cost and means were unspecified. Nevertheless, the report is a provocative, broad and sweeping assessment of low-level conflict, contains some principles for dealing with it, and makes specific recommendations on national security planning and Army roles to cope with insurgency. WINS II suggested causes for insurgency other than communistic subversion and pointed particularly to the importance of socio-economic environmental factors. Its most relevant recommendation was that conflict "in the lower spectrum" of warfare should be met by "particularized" or specialized forces, material, doctrine, and organization and not solely by General Purpose Forces.

Another important study was conducted by the Center for Naval Analysis[5] and examined higher levels of violence. It contains estimates of the type, number, and location of future conflicts and recommends means by which the Navy may deal with them. Of particular value to the Bendix study was the conflict data for the period 1945-1964, coded by the Institute of Naval Studies from open sources. These data were displayed in histograms, frequency polygons, and the like, but the data was subjected only to univariate analysis and a least-squares, time-series projection. The INS conflict data were a useful starting point for the quantitative investigation of conflict and Navy operations.

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3 Department of the Army, Office of the Deputy Chief of Staff for Military Operations, WINS II, A Worldwide Integral National Strategy for 1970, (U) (Washington, D. C., 1 March 1965)(SECRET-NOFORN).

4 Limited war is understood here to be a military conflict in which force is used proportionate to the political stakes of the conflict and short of general nuclear war.

5 Institute of Naval Studies, Study No. 14, Navy Contributions to Deterrence at Conflict Levels Less than General War, 1975-1980, (Cambridge, Massachusetts, January 1966).

A considerable body of systematic empirical research has been done on violent conflict, much of it employing factor analysis, the principle analytical technique used in this project. Of particular relevance are studies by Rummel, Tanter, Singer and Small, and Denton and Phillips, all of which involved the factor analysis of large data bases describing war to extract underlying dimensions or patterns.[6] The Rummel-Tanter work is confined to two three-year time slices: 1955-57 and 1958-60. Singer and Small take a longer period, going back to 1815, and have set a deadliness threshold for wars considered. They work only with international war. Denton and Phillips also take a broad historical perspective with L.F. Richardson's conflict data. Other related studies have dealt mainly with intra-state conflict. These include Gurr's (1967); Tanter and Midlarsky's (1967); and the Feierabend's (1966) studies.[7] Gurr does not employ factor analysis, but instead uses regression analysis and a causal model of recursive, hierarchical equations. Tanter and Midlarsky also employ causal modelling through partial correlation to examine specific hypotheses about US influence on internal war in Latin America. The Feierabend study used factor analysis, but only to replicate and substantiate the categorization of conflicts. No hypotheses were tested by the factor analysis.

Some other research related to this study has relied on traditional methods of inquiry, often producing very useful insights. Robert Osgood's

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6 R. J. Rummel, "Dimensions of Conflict Behavior Within and Between Nations," General Systems Yearbook, VIII, 1963; R. J. Rummel, "Dimensions of Dyadic War, 1820-1952," The Journal of Conflict Resolution, XI, 2 June 1967; R. Tanter, "Dimensions of Conflict Behavior Within and Between Nations, 1958-1960," The Journal of Conflict Resolution, X, 1 March 1966; J. D. Singer and M. Small, "National Alliance Commitments and War Involvement, 1945-1965," Peace Research Society, Papers, V, 1965; F. H. Denton and W. Phillips, "Some Cyclical Patterns in the History of Violence," The Journal of Conflict Resolution, XII, 2 (June, 1968). See the reviews of other relevant conflict research in Appendix C, Volume II of this report and the interpretative essay in Section VI below.

7 Selected items have been abstracted in Appendix C, Volume II and are discussed below in Section VI.

pioneering work[8] on limited war highlighted the "rational" basis for limiting violence so as to achieve limited objectives in the nuclear age. Schelling noted that tacit bargaining is necessary between belligerents who refrain from using the maximum levels of violence available to them.[9] In a later work, Schelling stressed the concept that war is a form of violent bargaining wherein the capacity to produce damage or pain is used by adversaries to compel or deter each other.[10] Schelling's "The Art of Commitment"[11] is an excellent exposition of the complexity and nuances of that much-used, often misunderstood term, "commitment," which is one of the elements of national security planning examined above in Section II of this report. The typologies and organized information in Deitchman's work[12] are inadequate to define the nature of low-level war, to deduce naval requirements, or to make a persuasive case that there is, in fact, a form of organized violence which is unique from others and is congruent with the tentative definition. Precoda's conjecture of a "spectrum of conflict" based on a unidimensional and increasing level of violence lacks an empirical basis and contains a postulated but untested set of "interaction states."[13] There are significant differences, however, between this study and earlier efforts to quantify war or to discover regularities in it which will help define its nature. First, the time period covered in this study is restricted to the post-World War II era, 1945-1966 in accordance with guidance received from USNRL and based on the

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8 R. Osgood, Limited War: Challenge to American Security (Chicago, University of Chicago Press, 1958).

9 T.C. Schelling, The Strategy of Conflict (New York, Oxford University Press, 1963).

10 _____, Arms and Influence (New Haven and London, Yale University Press, 1966).

11 Ibid, pp. 35-91.

12 S.J. Deitchman, Limited War and American Defense Policy, (Cambridge, the MIT Press, 1964).

13 See N. Precoda, "The Spectrum of Conflict," Air University Review, November-December, 1966, pp. 31-44.

assumption that the nuclear era, de-colonialization, and a largely bi-polar configuration of the international system have combined to manifest different forms of violence than obtained previously. Secondly, all sorts of politically significant intrastate and interstate political violence were included in the analysis, ranging in magnitude from attempted coups through the Korean War. Third, access to some classified data may lend a somewhat greater credibility to government agencies than might otherwise be the case had only open sources been used. Finally, and most significantly, a large number of descriptors of Navy operations were included in order to relate them to the characteristics of warfare.

PROBLEM STATEMENT

The conflict analysis tests the concept of low-level warfare against data on post-World War II politically significant violent conflict. The characteristics of the original definition of sublimited warfare were included to test inductively for patterns of variation which were implicit in the definition. Thus, time, east-west issues, the existence of combat, level of deadliness, threat perception, U.S.-Chinese-Soviet participation -- all are measured and included in the data describing conflict.

A necessary part of this task was to derive an empirical description of low-level conflict which has relevance to military planning. The concepts of sublimited warfare and special warfare are tested inductively by a multi-variate analysis which treats these ideas as hypotheses. To the maximum extent possible within the limits of conceptual clarity, time, and data resources, quantification or "sizing" of modern warfare was also an objective of this task. The relevant strong patterns of internal and interstate warfare are intended as guides for near and mid-term RDT&E planning and to serve as empirically-based, conceptual frameworks for the preparation of operational concepts and military doctrine.

Finally, the emphasis within the U.S. military establishment on counterinsurgency, and within the Navy on Special Warfare, create a need for discerning certain unique patterns of variation in conflict. In other words, is there an insurgency factor in modern warfare and precisely how does it differ from other patterns of conflict?

METHOD

Data were collected on the characteristics of 309 cases of politically significant conflict and 28 naval incidents. Politically significant conflicts were identified from an OSD/ISA document prepared by DIA and CNA Study 14 and an examination of open sources. These conflicts consist of both internal and interstate uses of force for political ends in the period 1945-66. The essential criterion for identifying the units of analysis was whether the national or metropolitan government responded to a political challenge by using or threatening to use its armed forces. Fifty-two characteristics of conflict and Navy operations are treated as variables yielding a data matrix of 339 rows (conflicts) and 52 columns (characteristics). The definitions and methods of measurement are discussed in Appendix A. The variables describe time (start-stop), degree of national involvement, fatalities, disruption, type, location, threat perceptions, outcomes, etc. All variables were intercorrelated,[14] to form a matrix of product-moment correlation coefficients. The patterns of intercorrelations, which are clusters of interrelated variables, were then obtained by factoring the matrix. The patterns emerge in terms of factors (or dimensions, in the geometric sense) which account for progressively decreasing amounts of variance in the data. The meaning of the factors is obtained by examining how the characteristics of conflicts (the original variables) "load" on the factor. In this study, the factors are named descriptively, i.e., the labeling of the factors emphasized the characteristics of the highest loading variables on the factor. Normally, the highest loading variable was used to identify the factor, and the factor was named consistent with the direction of the signs (+ or −) of the highest loading variables. The steps in the analysis are shown on Figure III-1.

In addition, some naval variables were included in the conflict study to indicate, for example, the level of military involvement the U.S. anticipated and used in various types of conflict. A more extensive conflict and naval operation study was also undertaken and is described in Section IV, below.[15]

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14 To "intercorrelate" variables means that we determined the degree and direction of relationship between the variables, taken two at a time.

15 A similar procedure was employed in the first phase of the study and reported in Bendix Systems Division Report, BSR-2198 (Ann Arbor, Michigan, September, 1967) SECRET NOFORN. In that report the conflict data and Navy Operations data were factor analyzed separately and jointly. The report is available from the U.S. Naval Research Laboratory.

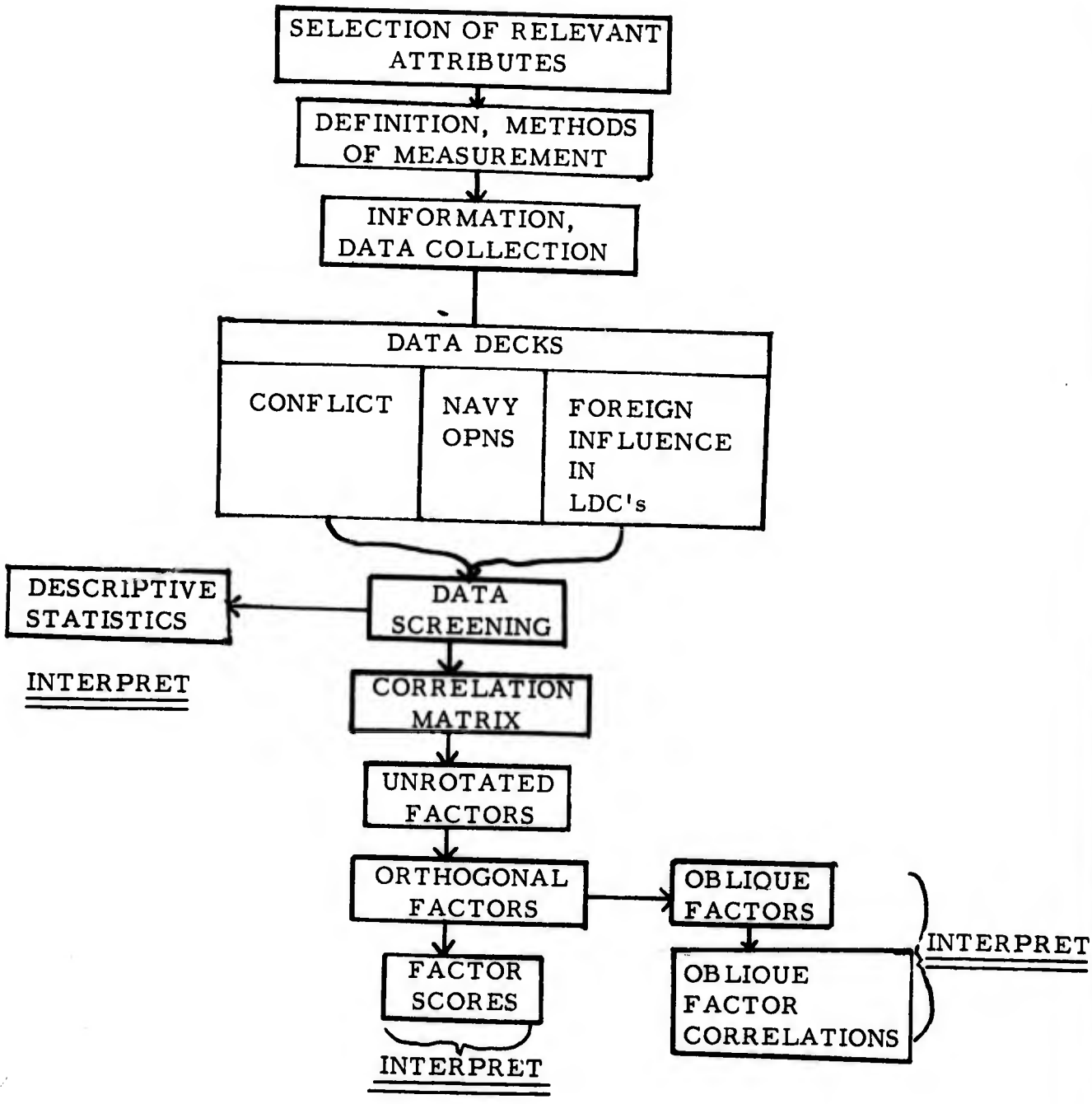

Figure III-1

STEPS IN ANALYSIS OF CONFLICT,
NAVY OPERATIONS AND FOREIGN INFLUENCE
IN LESS DEVELOPED COUNTRIES

Factor analysis[16] was chosen as the analytical technique because:

1. It has been successfully employed in other similar investigations.

2. It tests for the interrelationship or clustering of variables and thus may uncover patterns otherwise not obvious.

3. It should yield independent patterns of conflict behavior if such patterns exist.

Multiple factor analysis is based on a model which delimits independent patterns (factors) of interrelationships. It is possible to score the observations (in this case, conflicts) upon these patterns using the product of the standardized values for the variables of a given conflict with the correlations of the variables on the patterns. These scores help to define the nature of the patterns in terms of "low" and "high" ends of the patterns.

Possibly, the approach to the task of finding the "spectrum of warfare" should have been undertaken another way with potential pay-offs for the isolation of sublimited or special warfare. If each of the post-World War II conflict situations is treated as a process of action-reaction, in the style of an ascending "escalation" ladder, then a Guttman scale of conflict could be constructed. With the exception of the incidents, most of the conflicts analyzed herein actually went through such a process. A typical pattern might be a pro-communist coup, accusations, protests, warnings, redeployment of U.S. forces, severance of diplomatic relations, U.S. overflights or other shows of force, intervention, combat, and so forth. All conflicts could be located on such an

16 The factors discussed in this report are products of an orthogonal rotation (see Appendix B) setting minimum eigenvalues at 0.5 and maximum iterations at five times the number of variables squared. Missing data were deleted from this analysis. A comparison of this analysis was made with those done with other minimum eigenvalues, maximum iterations, and with mean values substituted for missing data. In general, the findings were quite consistent over all the analyses, and the 0.5 eigenvalue level is chosen here for uniformity when comparing analyses at various levels of deaths in conflict.

"escalation ladder" and could be viewed collectively as a spectrum of conflict. If such a Guttman scale across conflicts were factor analyzed it would break up into three or four independent dimensions of conflict behavior which could then be compared to the posited definition cited above.

As in all research, some choices had to be made as to the maximum returns expected within limited resources available. It was thought more useful to attempt some rough mapping of the domain of politically significant violent conflict inasmuch as verbal conflict behavior has already been extensively studied and is of less relevance to the Department of Defense than violent conflict which potentially or actually involved U.S. forces. There would also be some difficulty in constructing a reliable and militarily relevant Guttman scale, a ladder of ascending conflict intensity. In any case, the findings reported herein are those based on clusters of intercorrelated behaviors (factors) which suggest a preliminary set of dimensions of violent conflict since World War II. They tell us a good deal about distinct types of conflict and the scores on them provide exemplary cases of conflicts on the dimensions.

FINDINGS

Seven major factors describing conflict in the post-World War II era were obtained from the data. They are listed as Table III-1 along with "relative strength," i.e., amount of total variance accounted for in data across the 37 conflict variables, by the factor. The seven factors together account for 40% of the total variance in the conflict data. The principal generalizations which can be made about these factors are:

1. Post-World War II politically significant violent conflict has been complex, and seven factors are required to explain even 40% of the variance in data describing it. However, a reduction of complexity from the 52 characteristics was achieved and the indexing variables (parameters) were identified.

2. These factors of conflict are not correlated,[17] are qualitatively different, being composed of differing clusters of correlations. Therefore, it is inaccurate to describe post-World War II conflict as a continuum or in "stages" on which an empirical "low-level" can be discerned.[18]

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17 Both orthogonal and oblique rotations were made with no substantial change in the factor structure.

18 Had the factor structure contained a single, very strong factor which accounted for most of the variance in the data, it would be appropriate to conceive of a continuum of conflict.

Table III-1

Factors* Describing Conflict, 1944-1966
(no death threshold)

		Relative Strength**	Original Factor No.***
1.	Large Scale Perceived Soviet Threat to US Forces in Europe	8.5	1
2.	Overt Confrontations with World-Wide Involvement	7.6	5
3.	Conventional Naval Tactics	6.9	20
4.	Deadly Conflict	4.7	2
5.	Short, Conclusive Military Confrontation or Coup	4.6	6
6.	U.S. Anticipation of Terrorist Operations and Unconventional Warfare	4.0	3
7.	Military Reaction to Unconventional Warfare in Non-Turmoil Situations	3.5	4
		39.8	

* Orthogonal factors, Varimax technique

** The percent of the total variance in the data accounted for by the factor.

*** Original factor matrices with appropriate number for each factor are found in Appendix B, pp. B-19 to B-22.

3. The strongest pattern concerns Soviet-U.S. deterrence centered in Europe and the seriousness with which the Navy has taken preparation for conflict there. This factor is interpreted as an empirical description of U.S. and Soviet mutual deterrence.[19]

4. Guerrilla, civil, colonial, unconventional, regional, world-wide, short, and protracted conflicts form distinct categories of conflict.

FACTORS OF CONFLICT WITH NO DEADLINESS THRESHOLD

The population of deadly conflicts numbering 310 was factor analyzed four ways to discern the principal patterns. Results are shown in Table III-1.

19 The Table below indicates that only the first factor, Large Scale Perceived Soviet Threat, is strongly related to a geographic region.

RELATIONSHIP OF FACTORS OF CONFLICT TO GEOGRAPHIC REGIONS

	FACTORS						
REGIONS	Large Scale Perceived Soviet Threat	Overt Confrontations	Conventional Naval Tactics	Deadly Conflict	Short, Conclusive Military Confrontation or Coup	U.S. Anticipation of Terrorist Opns and Unconventional Warfare	Military Reaction to Unconventional Warfare in Non-Turmoil Situations
Europe	.80	-.02	.08	-.02	.02	-.02	-.10
Middle East	-.08	-.02	.17	-.001	.02	-.001	.002
Asia	-.05	.03	.02	-.02	-.14	-.02	-.04
Latin America	-.16	.01	-.08	-.04	.04	-.11	.04
Southeast Asia	-.06	.13	.08	-.09	.03	.09	.10
Africa	-.09	-.14	-.17	-.08	.03	.08	-.05

Discussion

Factor 1 is the strongest, most cohesive factor (explaining 8.5% of total variance) and, according to the positive factor loadings, indicates U.S. preparation for a perceived Soviet threat to Europe. Soviet and other communist involvement are included on the factor, along with the conflict's location in Europe and the type of adversary forces expected by the Navy to participate. These include nuclear forces, aircraft, anti-aircraft, large combat forces, submarines, and mines.

To give some idea of the type of conflict typical of this factor, factor scores[20] were calculated for each conflict. A total of 41 conflicts had missing data -- usually involving the level of deadliness. Values for missing data were estimated using means to make the factor score calculations. The factor analysis obtained from such estimated data agrees very closely with the analysis of data with missing cases deleted. Most of the same variables load similarly on the factors in both analyses.

Highest scoring[21] conflicts most characteristic of the first factor were: (1) the Hungarian revolution - 1956 (6.57); (2) the East-German urban uprising - 1953 (6.34); (3) the Poznan uprising in Poland of 1956 (6.05); (4) the Berlin Wall crisis in 1962 (5.81); (5) Yugoslavia threatened by Soviet bloc troops in 1951 (4.72); Berlin tensions (4.6); and Trieste civil disorder of 1952 (4.13). Conflicts which are representative of the inverse of the factor, i.e., its negative end, included: (1) the Dominican Republic dictator assassination of 1961 (-1.18); and (2) the India-China conflict in 1962 (-1.14). In the latter the U.S. and Soviet Union were not squared off as potential opponents, and in one they actually cooperated to resolve the conflict. Thus, the opposite of Soviet-U.S. mutual deterrence in Europe was U.S.-Soviet cooperation during local conflicts.

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20 Note that a high factor score does not mean that a particular conflict scored high on all the high loading variables which define the factor.

21 Factor scores are given in parentheses. The higher a positive factor score, the more the characteristics of the factor describe the conflict. Zero or near zero factor scores (which are not given here) would mean that the conflicts were near the average of characteristics defining the factor and would have very little in common with conflicts at either the high or low end of the factor. High negative factor scores mean that the conflict is relatively far below the average on characteristics defining the factor.

Factor 2 - The next strongest factor, explaining 7.6% of total variance, is a dimension reflecting overt confrontation, often involving the East-West blocs. It indicates that a large number of actors are drawn into such confrontations, including the U.S., the Soviet Union, Communist China, and the U.N. Air involvement loads at a rather low level, with sea involvement somewhat higher. This might be called conflict in a world-wide setting. Highest scoring, most characteristic conflicts were: (1) South Vietnam vs. Vietcong since 1959 (5.25); (2) Gulf of Tonkin incident and reprisal of 1964 (3.58); (3) Tachens crisis - 1954 (3.02); (4) Laotian civil war with rightists in 1961 (3.28). These examples show that the East-West conflicts on this dimension have involved the greatest number of participants. Conflicts least representative of this factor were: (1) the Indonesian abortive coup and anti-PKI activity in 1965 (1.9); (2) Indonesian Sumatra military activity from 1958-1961 and (3) South-African Durban race riots in 1949. The opposite of world-wide, East-West confrontation is apparently local turmoil and revolt.

Factor 3 - This factor does not seem to be related either to the level or type of conflict involved; it represents U.S. military preparation for perceived world threats of a conventional nature. Explaining a substantial 6.7% of the total variance of the data, it indicates a cohesive set of tactics which include regular ground force readiness, anti-aircraft defense, small craft participation, medium and large combat preparations and, at a lower loading, submarine warfare expectations. Notably low was the expected use of nuclear weapons.

No particular conflict scored very highly on this factor. Highest positive scores went to the Vietnam war (1.72) and the Guatemala invasion of 1954 (1.44) and the 1959 Panama invasion (1.40). These accounted for substantial U.S. threat perceptions. Conflicts at the negative end of this factor were the Laotian rightist coup and civil war (-2.47 and -2.22) of the early 1960's.

Factor 4 - Deadly Conflict shows up as a separate dimension evidently not strongly related to other conflict characteristics. It explains 4.7% of total variance. Total involvement of actors also loads relatively weakly on the factor. Over 87% of the variation in numbers killed in the post-World War II conflict as measured by these data is explained by this single factor.

Conflicts most typical of the deadliness factor were: (1) Columbian terrorism in the 1950's (8.18); (2) the Vietnam war through 1966 (7.44); (3) the French-Indochina war (6.05); and (4) the Indonesian abortive coup and anti-PKI reaction-1965. (It must be noted that the Korean war was not included in this aspect of the study in order to reduce the effects of extreme values.) At the negative end of deadly conflict was the routing of Laotian troops crossing the Thai border (-1.0). No other extreme negative scores occurred.

Factor 5 - This factor reflects conflicts brought conclusively to a halt evidently by military victory. Duration loaded moderately negatively on the factor, indicating such conflicts were relatively short. The factor accounted for 4.6% of total variance.

For this factor, most typical conflicts were: (1) the Laotian abortive rightist coup - 1965 (1.59); (2) South Vietnam Diem overthrow - 1963 (1.59); and (3) Israel-Egypt border incidents and Sinai campaign - 1956 (1.58). None of these scores is extremely high, but they illustrate conclusive military decisions. At the negative end of the factor were: (1) Insurgencies in Ethiopia from 1963 onward (approximately -2.10); (2) Sudanese Southern revolt of 1956 (-2.01); (3) Burmese Karen dissident activity and other Burmese disputes from 1949 onward (approximate score for all -2.10); (4) Cuban counter-revolutionary activity - 1959 (-2.34); and (5) the Indian Nagaland rebellion of 1955 onward (-2.09). Apparently the factor describes short, decisive conflicts vs. protracted irregular warfare.

Factor 6 - A different type of expected conflict (by U.S. Navy) is indicated; it consists of anticipation of unconventional action including terror, sabotage, and to a lesser extent unconventional ground forces in general. This goes along with Factor 3 above to show two distinct categories of Navy threat perception -- conventional-non-nuclear and unconventional-non-nuclear. The factor explains approximately 4% of total variance.

More typical of the unconventional conflicts were: (1) Zambian Lumpa church uprisings of 1964 (2.32); (2) Zanzibar Revolt (2.20) of 1964; (3) the 1963 Portuguese Guinea anti-colonial activity (-2.17); (4) Nicaraguan invasion by Castroite insurgents (2.21); (5) Panama anti-U.S. demonstrations in 1959 (2.06); (6) Dominican Republic insurrection of 1965 (2.12) and dictator assassination (2.03); (7) Indian and Pakistani communal rioting - 1964 (2.01); and (8) Jordanian internal unrest in 1963 (2.06). At the negative end of the factor were: (1) Soviet-supported rebellion in Iran in 1946 (-2.43);

(2) the 1962 Berlin wall crisis (-2.42); (3) North Vietnam rural uprising of 1956 (-2.39); (4) Dominican Republic communist guerrilla activity - 1963 (-2.42); and (5) Ecuador-Peru border dispute - 1951 (-2.28).

Factor 7 - A weaker factor (3.5% of total variance), but one of substantial interest includes guerrilla warfare but indicates strongly that other types of domestic turmoil (acts of civil strife such as widespread or violent strikes, riots, terror, or assassinations which are politically motivated) do not systematically occur while guerrilla warfare is simultaneously in progress. This rather curious finding may indicate something about the coercive potential of governments which are conscious of keeping order in urban areas while under guerrilla siege in the countryside. Ground involvement (conventional and potentially unconventional), air involvement, guerrilla war and reform coups all load positively, while domestic turmoil loads strongly negatively. This seems to indicate the conduct of counter-guerrilla warfare by governments while interest group agitation is checked. Further study of this phenomenon is necessary, and might include such variables as government coercive capability, number of political prisoners, number of newspapers closed, progress of land reform, popular satisfaction with social services, etc. This would allow a clearer indication of the way governments and societies react in situations of guerrilla warfare. Until such study, we can only say that the evidence indicates guerrilla war is inversely related to the spontaneous form of domestic conflict. This is contradictory to the results of Rummel and Tanter (see abstracts of studies by Rummel, Tanter, Gurr and Mitchell in Appendix C and the discussion in Section VI).

Military Reaction to unconventional warfare in non-turmoil situations seem best typified by: (1) the Burmese Red-Flag guerrilla operations of 1948 (2.31); (2) Indonesian-Dutch West Irian dispute from 1954-1962 (2.02); (3) Malaya Communist Terrorist Campaign of 1948 (2.05); (4) Pakistani insurrection by Pathan tribe after 1949 (2.34); and (5) the Philippine Huk rebellion of 1946-1955 (2.17). Least typical of guerrilla and more typical of conflicts with mass domestic unrest were: (1) Jordanian internal unrest in 1963 (-3.05); (2) China-Hong Kong rioting of 1956 (-2.85); (3) terrorism outbreak in Ceylon in 1953 (-2.78); (4) language riots in Ceylon in 1958 (-2.75); (5) 1956 Tibet Golor tribal rioting (-2.21); and (6) 1946 Indian religious rioting (-2.43). Evidently the latter type conflict is not systematically accompanied by foreign military intervention, directly or indirectly.

In addition, civil wars and African colonial and ethnic wars tended to load on two separate factors (Factors 15 and 7 in Appendix B). This

shows that these types of conflicts are relatively unrelated to the other types outlined above. The factors were too weak, in terms of total variance explained, however, to be included as the major factors of the study.

DEADLINESS

From the general conflict patterns outlined above we find that deadliness in warfare seems to vary independently of other characteristics such as naval tactics or other conflict variables. This brings up the interesting possibility that patterns, types, and characteristics of conflict may be unaffected by the level of deadliness involved.

To examine this possibility, separate analyses were conducted, excluding first all non-deadly conflicts (with missing data estimated as mean values for each variable) and then all conflicts with fewer than 100 mortalities (see Appendices A and B for details). The findings of these studies are presented, along with the strength of various factors, in Tables III-2 and III-3. First, examining Table III-2 for conflicts with deaths ≥ 1, we find great similarity to the factor structure of Table III-1 where all conflicts were deadly.

Factor 1 - The factor explaining the most total variance (10.7%) is again composed of variables indicating naval anticipation of large scale -- potentially nuclear -- conflict with the Soviets and East Europeans in Europe. All types of military operations except unconventional ground operations or clandestine activities are included. Naval preparations seem even more extensive when only conflicts with fatalities are considered.

Conflicts with highest (most characteristic of factor) scores include: (1) East German urban uprising - 1963 (6.13); (2) Hungarian revolution - 1956 (5.92); (3) Poznan uprising in Poland - 1956 (5.95); (4) Trieste civil disorders - 1952 (3.96) and (3.79); (5) Turkish military coup ousting Menderes - 1960 (3.74); and (6) abortive revolt by Ankara military academy in 1963 (3.58). It is evident that U.S. Navy threat perception has been high for conflicts in Eastern Europe and Turkey. At the negative end of the factor are: (1) the Israeli war of independence - 1948 (-1.29); (2) British Guiana racial and political violence in 1964 (-1.22); (3) the Congolese army mutiny of 1960 (-1.01); and (4) Thai Northeastern provinces insurgency since 1962 (-1.04). None of these brought on large scale naval operational planning in reaction to a large perceived threat.

Table III-2

Factors* Describing Conflicts with at Least One Killed, 1944-1966

		Relative Strength	Original Factor No.**
1.	Large Scale Perceived Soviet Threat to U.S. Forces in Europe	10.7	1
2.	Overt Confrontations with World-wide Involvement	7.0	5
3.	Overt Disruptive Conflict with UN Involvement	5.4	20
4.	Deadly Conflict	4.6	6
5.	Short Conclusive Military Confrontation or Coup	4.5	17
6.	U.S. Preparedness for Terrorist Operations	4.0	3
7.	Guerrilla Operations in Non-Turmoil Situations	3.9	2
		40.1 ***	

* Orthogonal factors, Varimax technique.

** May be found in Appendix B, pp. B-29 to B-32.

*** % of total variance in the conflict data which is accounted for by the seven factors.

TABLE III-3

DIMENSIONS OF POST WORLD WAR II POLITICALLY SIGNIFICANT VIOLENT THREE LEVELS OF DEADLINESS

Conflicts* Analyzed	Large Scale Perceived Soviet Threat to U.S. Forces in Europe	Overt Confrontations With World-Wide Involvement	Conventional Naval Tactics	Deadly Conflict	Conclusive Military Confrontation or Cou
All, no Death Threshold N = 310	-Europe, moderate to high threat perceptions, conventional and nuclear -Soviet Involvement -East-West issues	-High U.S., Communist countries, U.N. and total nations involved -Sea, Air, operations -Overt conflict	-High threat perceptions for all conventional opposition -No correlation with unconventional threats	High deaths, deaths/pop. Moderate deaths/day, duration, total nations involved	-Overt conflict -Moderate air operati -High resolution by de cisive military vict r -Not colonial, not African
Deaths $\geq$ 1 N = 287	-High threat perceptions, all forces -Europe -Moderate Soviet, E.E. involvement	High U.S.. Communist countries, U.N. & total nations involved High E-W issues Moderate Sea, Air operations -Low overt, favorable outcomes to U.S.		High deaths, deaths/pop. Moderate deaths/day Some total nations involved	-High resolutions by d cisive military victor -Moderately short -Some Civil war and coup
Deaths $\geq$ 100 N = 113	-High threat perceptions, all kinds of conventional and nuclear forces -Soviet Involvement	-U.S., U.N. & total nations involvement -Sea operations -Overt and covert operations		High deaths, deaths/pop, Moderate deaths/day; mine threats; duration	-Military victory short -Unilateral neg. action responses -Dead/day

*Orthogonal factor matrices for these three levels of deadliness are found in Appendix B, Volume II.

VIOLENT CONFLICT

onclusive Military confrontation or Coup	U. S. Preparedness for Terrorist Operations and Unconventional Warfare	Military Roles in Unconventional Warfare in Non-Turmoil Situations	Overt Disruptive Conflict with U. N. Involvement	Soviet Conflict Involvement	Naval Operations in Latin America
vert conflict oderate air operations gh resolution by de- ive military victory t colonial, not rican	-High threat perceptions for unconventional operations -No correlation for conventional, nuclear threat perceptions	-Negative domestic turmoil -Conventional, unconventional ground operations -Low coups, guerrilla war			
gh resolutions by de- ive military victory oderately short me Civil war and up	Ditto	-High negative domestic turmoil -Moderate conventional, unconventional ground operations -Moderate guerrilla war -Some length	-Overt conflict -U. N. involvement -Some Disruptive Effects -No regularly high or low threat perceptions		
litary victory short ilateral neg. action sponses ad/day	Sabotage* Terror* East-West -Reg. Ground Forces*	Unconventional Ground* -Turmoil Duration Air Operations Guerrilla War Terror*		Europe Other Communist Countries Soviet Union East-West Issue Covert Operations	-Access to the Sea -Sea Forces -Small Craft* -Air Forces -Latin America -Africa

2

Factor 2 - As in the study of conflict in general, the second major factor, explaining 7% of total variance in the study of deadly conflicts concerns world-wide confrontations. All major states are involved in what seems to be conflict with world wide implications. The results may be unfavorable to the U.S., and the tactics may include aircraft involvement. A difference that emerges when we speak only of conflicts with one or more deaths is that such conflicts may be either overt or covert; in Table III-2 we found that the second factor concerned mainly overt incidents.

Conflicts typical of East-West confrontation and total world involvement were: (1) the South Vietnam-U.S. vs. Viet Cong war since 1959 (5.40); (2) the Cuban -U.S. dispute over Guantanamo in 1962 (3.48); (3) the Laotian civil war renewal in 1963 (3.40); and (4) the Tachens crisis of 1954 (2.92). The Guantanamo dispute scores so highly because it is mainly typical of "U.S. involvement" and "other Communist involvement" as high loading variables on this factor. At the negative end of this factor were: (1) Burmese Karen dissident activity from 1949-64 (-1.51); (2) Indonesian fighting at Macassar in 1950 (-1.48);(3) British-Egyptian canal zone conflict through 1954 (-2.25); and (4) Columbian terrorism from 1948-57 (-2.09). These conflicts tended to be limited to the parties directly concerned.

Factor 3 - The third factor is one that did not emerge when deadly and non-deadly conflicts were studied together. It seems to reflect conflicts not significantly involving the U.S., Soviet Union or Communist China, though there seems to be some involvement for the U.S. and Communist China. It rather consistently concerns the U.N.--and perhaps other great and small powers. The conflicts did seem to be of concern to the U.S. Navy, as reflected by the high threat perception loading. This factor resembles what is today often called local conflict, i.e., overt, interstate combat between less than great powers. The factor accounts for 5.4% of total variance.

This factor's most characteristic conflicts include: (1) Israel-Egypt border incidents from 1955-56 (3.86); (2) India-Pakistan Kashmir fighting from 1951 on (3.81) and (3.15); (3) Tunisian-France Bizerte clashes from 1957-61 (3.72); (4) Indian invasion of Goa (3.30); (5) Tibet invaded by the Chinese in 1950 (3.05); (6) Egyptian-British-French Suez war - 1956 (3.37). Those factors with scores at the opposite extreme were: (1) Malaysian insurgent activity in 1962 (-1.46); (2) Thai-French Indochina

conflict - 1946 (-1.47); (3) East German urban uprisings - 1953 (-3.07); (4) Algeria-Morocco border struggle - 1963 (-1.87); and (5) Indonesian abortive coup and anti-PKI reaction of 1965 (-2.28). These conflicts seem to show that the U.N. becomes closely involved in conflicts especially when they involve some casualties, and when they do not involve cold-war disputes, or disputes of a clearly domestic nature (such as Indonesia's).

Factor 4 - The dimension of deadliness of conflict showed up once again independently. It accounted for 4.6% of the variance of all variables and over 88% of the variation in numbers killed in conflict. Total nation-state involvement and numbers killed per day also showed up on the factor with lower loadings for deaths and deaths as a percentage of population.

Typical of the deadliness conflict dimension were: (1) the Algerian war for independence ending in 1952 (9.20); (2) Columbian terrorism (7.00); (3) Indonesian abortive coup and anti-PKI reprisals (3.02); and (4) the Vietnam war (7.06). At the opposite extreme of the factor were: (1) the Greek-Turkish-Cypriot civil war (-1.20); and (2) the Italian Communist uprising of 1948 (-1.10).

Factor 5 - Another factor carrying over identically from the previous analysis concerns short, conclusive conflicts ending in military victory. 4.5% of the total variance is explained. Rebellions and coups typify this factor.

Conflicts most typically "conclusive" were: (1) the Hungarian revolution (2.50); (2) the Iraqi abortive military revolt of 1959 (1.44); (3) the Zanzibar revolt - 1964 (1.45); (4) the Laotian abortive rightist coup (1.51); and (5) the Panamanian coup ousting Arias in 1951 (1.52). At the opposite end of the factor were: (1) British-Egyptian Suez Canal Zone conflict, 1952-55 (-2.97); (2) Cuban counter-revolutionary activity (-2.46); (3) Philippine revolt and sporadic guerrilla activity during the 1950's (-2.43); (4) the 1948 Burmese Red Flag operations (-2.34); and (5) the 1955 Indian Nagaland rebellion (-2.36).

Factor 6 - U.S. preparations for terrorist operations explain 4% of total variance just as it did for conflicts in general. The factor, when confined to conflict with fatalities, does not have unconventional ground forces loading significantly as it did previously. Preparations here seem to be confined to terror and sabotage possibilities. It should

be noted that no factor of "conventional naval tactics" emerges in this second analysis. Instead, readiness for regular ground, nuclear, aircraft, anti-aircraft, small craft, and medium combat operations -- which we were able to isolate on a separate dimension in the general analysis -- load along with other tactics on Factor 1. Thus, naval preparations for unconventional war may still be distinguished from conventional preparations, but the latter are tied strongly to anti-Soviet operations in Europe when only deadly conflicts are included in the analysis.

Conflicts most characteristic of the terrorism dimension included: (1) Tibet tribal rioting of 1956 (2.61); (2) the Zambian Lumpa church uprising of 1964 (2.54); (3) Algerian post-independence power struggle-1964 (2.24); (4) Malaya Communist terrorist campaign - 1949-60 (2.16); (5) Zanzibar revolt of 1964 (2.13); and (6) the 1963 Nicaraguan FSLN insurgency (2.22). At the negative end of the factor were: (1) Nicaraguan invasion by Castroite insurgents in 1960 (-2.51); (2) Dominican Republic communist guerrilla activity in 1963 (-2.59); (3) North Vietnam rural uprising of 1956 (-2.74); and (4) Tibet invaded in 1950-51 by Communist Chinese (-2.41). Thus, terrorism and sabotage seem most often expected in contexts of recent national independence, such as in Zambia or Algeria, and do not seem to inspire naval concern where communists are overtly involved in the conflict. Though this finding is relevant to conflicts with more than one death, it goes along with the finding in the previous section for Factor 6 when non-deadly as well as deadly conflicts were considered.

Factor 7 - Again the interesting factor of guerrilla operations in non-mass turmoil situations shows up. In this analysis, which included only deadly conflicts, ground involvement and air involvement show up more clearly than for all conflicts. The factor accounts for 3.9% of total variance.

Examples of conflicts at the extreme of the guerrilla or unconventional operations end of the dimension include: (1) the Burmese Red Flag movement of the 1940's (1.52); (2) Pakistani insurrection by Pathan tribes starting in 1949 (1.54); (3) the Omani rebellion in Muscat Oman starting in 1955 (1.80); (4) and the 1949-60 Malayan Communist terrorist campaign. At the domestic turmoil end of the spectrum we find: (1) Ceylonese language riots of 1958 (-3.01); and 1953 outbreak of terrorism (-3.03); (2) Trieste civil disorder in 1953 (-2.93); (3) the Italian Communist uprising of 1952 (-2.81); and (4) Ivory Coast uprisings in 1950 (-2.37).

A HIGHER DEADLINESS THRESHOLD

When only conflicts with 100 or more deaths were analyzed the results were somewhat different (see Table III-4).

Factor 1 - The strongest factor (11.2%) reflects large scale crisis preparation by the Navy, without specification that such preparation applied to any particular conflict or region, though a weak Soviet loading indicates the anticipated naval adversary. The factor has changed markedly from Factor 1 in the previous two analyses, as active Soviet participation in Europe is not present. This change is interpreted as an indication that the Soviets tend to participate directly since the Second World War only in less deadly conflict with the West.

Most pressing crises according to positive factor scores were: (1) the Hungarian Revolution (3.79); and (2) the civil war in Lebanon (2.93). Conflicts at the opposite end of the factor were 1963 and 1964 British Guiana racial and political acts of violence (-1.63 and -1.30). The latter evidently did not seem particularly salient to U.S. policy interests.

Factor 2 - U.S., Communist Chinese and total world involvement reappears on separate patterns with conflicts having $\geq$ 100 dead. This factor reflects world-wide problems and accounts for 7.4% of total variance. There is air and sea involvement in such conflicts, nuclear confrontation is sometimes expected and conflict is often overt. There seems to be no regular expected naval role in such politically volatile conflicts.

Deadly conflicts most typical of the pattern were: (1) the Vietnam war since 1959 (3.94); and (2) the Egyptian-British-French Suez war (3.23). At the negative end of the factor were: (1) the abortive Indonesian coup and anti-PKI reprisals (-2.37); and (2) Columbian terrorism throughout the 1950's (-1.57).

Factor 3 - Once again, deadliness of conflicts is established as an independent pattern. The similar results regarding deadliness from three analyses at various levels of deadliness point to the conclusion that fatality is only one of many independent ways which explain conflict. Terrorist activity shows up with a low loading on this factor and turmoil is uncorrelated with the factor. The factor accounts for 5.3% of total variance.

Table III-4

Factors Describing Conflic s with at Least 100 Killed, 1945-1966

		Relative Strength	Original Factor**
1.	Large Scale U.S. Crisis Preparation	11.2	1
2.	Overt Confrontations with World-wide Involvement	7.4	9
3.	Deadly Conflict	5.3	2
4.	Soviet Conflict Involvement	4.4	18
5.	U.S. Preparedness for Terrorist Conflict	4.3	12
6.	Naval Operations in Latin America	4.2	8
7.	Conclusive Conflict	3.8	11
8.	Guerrilla Operations in Non-Turmoil Situations	3.7	3
		44.3***	

* Orthogonal factors, Varimax technique.

** May be found in Appendix B, pp. B-34 to B-37.

*** % of total variance in the conflict data which is accounted for by the seven factors.

The deadliness factor showed highest scores for: (1) the Indo-China and Vietnam wars (3.89 and 3.38); (2) Columbian terrorism (5.25); and (3) the Algerian war for independence (5.83). Highest negative scorers were: (1) the Greek-Turkish-Cypriot civil war (-1.05) and (2) Moroccan unrest in Rif and Middle Atlas in 1958-1959 (-1.18). Although all conflicts in this particular analysis had over 100 mortalities, the Cypriot and Moroccan unrest evidently had less systematic killing than the Vietnamese, Columbian, or Algerian conflicts.

Factor 4 - When considering the more deadly conflicts, Soviet and East European activity seems confined to Europe -- and inferentially mainly to intra-Communist bloc conflicts such as Hungary (3.59). This factor accounts for 4.4% of total variance, but over 70% of variation patterns of Europe's most deadly conflicts since 1945. In terms of factor scores, the Greek Civil War (3.26) was also typical of this factor. Thus, in terms of deadly combat, past Soviet participation has come mainly in territorially peripheral areas to the Soviet Union. Vietnam since 1959 has been at the opposite end of this factor (-1.68).

Factor 5 - U.S. naval expectation of terrorist activities again constitutes a separate type of U.S. view of conflict. 4.3% of total variation is explained by this factor. Most typical conflicts were the Tibet Golor tribal riots (2.81) of 1956 and the Indonesian-Dutch West Irian dispute (2.65). Conflicts connotating the least terrorism were the India-Pakistani communal riots (-2.14) and the Hungarian revolution (-2.62).

Factor 6 - A new factor showing up for more deadly conflicts appears to identify U.S. naval operations in Latin America. Sea involvement, air involvement, small craft utilization, and what seems to be easy access (low distance from conflict point to sea) characterizes this factor -- accounting for 4.2% of total variance.

Highest scoring conflicts on this factor were: (1) Venezuelan FALN terrorist activity starting in 1961 (2.42); (2) the Columbian civil war of 1957 (2.07) and (3) the Cuban-U.S. dispute over Guantanamo (2.03). Least characteristic of these Latin American operations were: (1) the Zambia Lumpa church uprisings (-2.59); and (2) the tribal warfare of the Congo starting in 1964 (-2.39).

Factor 7 - Shortness and conclusiveness is a pattern in the more deadly conflicts, just as it was for some less deadly ones, though shortness (quite logically) seems to be less characteristic of conflicts with over 100 deaths than it was with lower intensity conflict. The factor explains 3.8% of total variance.

Most characteristic of the short, conclusive conflicts were: (1) the Hungarian revolution (1.77); (2) the French-Indochina war (1.75); and (3) the abortive Iraqi military revolt in 1959. At the negative end of the factor were: (1) the protracted British-Egyptian Suez Canal Zone conflict (-2.45); and (2) Congo tribal warfare (-2.09).

Factor 8 - At the 3.7% level we once again find a factor indicating guerrilla war in non-turmoil situation. Unconventional ground warfare is very characteristic of this factor and the conflicts tend to be long, while domestic turmoil has a somewhat lower negative loading than in previous analyses.

Factor 8 is best characterized by: (1) the Hyderabad fighting of 1948 (2.09); and (2) the Indonesian-Dutch rebellion of 1945-49. It is least represented by: (1) Brazilian terrorist acts in 1948 (-2.73); and (2) the Bolivian student insurrection of 1946 (-2.44). Cases typical of this factor seem somewhat different from those characterizing it in the analyses with lower mortality levels.

Tables III-2 and III-4, illustrating the analysis of conflicts at two levels of deadliness, indicate that the factor structure remained essentially uniform. Hence, at least among the characteristics of warfare included herein, we can say that certain largely independent patterns of conflict emerge; that there are distinct types of conflict. Table III-3 summarizes the factor structure at the three levels of deadliness.

SUMMARY OF FINDINGS

1. Large-scale crises and conflict, mainly in the European theater, have preoccupied U.S. policy-makers and strategists, especially in the preparation of large nuclear and conventional combat force commitments since 1946.

2. In the analyses at the three levels of deadliness, the variable, number of dead, loaded onto an independent factor. This, plus the similarity of the factor structures regardless of number killed, indicates that deadliness in conflict is a unique aspect but does not necessarily determine the tactics used or the other characteristics of the conflict.

3. Among the changes that do occur when we restrict the analysis to conflicts with deaths greater than 1 or 100, the importance of Soviet participation in European conflict diminishes. This indicates that the Soviets largely have confined their conflict behavior to verbal exchanges and non-violent moves. Militarily the Soviets have not been overt participants.

4. The guerrilla or unconventional war dimension describes situations where domestic turmoil, such as, mass demonstrations, strikes and protests, do not take place simultaneously.

5. Overt East-West confrontations tend to entail widespread participation, including the U.N. However, Communist Chinese participation in such confrontations seems to become slightly less correlated as the conflicts become more deadly. Instead, Chinese deadly conflicts seem to load on a separate factor, confined to the periphery of China.

6. Conflicts may be classified either as world-wide (involving many states) or regional. Separate, weaker conflict factors emerge for Asia, Africa, and the Middle East. (These are not discussed in the analysis but are found in Appendix B).

7. It is meaningful to distinguish conceptually amongst civil wars, guerrilla wars, colonial wars, border wars, overt East-West confrontations, coups, and crises, since they have not regularly occurred together. We must be aware, however, of the difficulty in categorizing conflicts, such as those in Greece, Lebanon, and Vietnam, because elements of civil, guerrilla, and East-West conflict existed in all three. A firmer operational definition of these conflict typologies must be sought.

8. Just as distinguishable types of conflict emerge, it is also possible to distinguish two sets of naval expectations about conflict. One set concerns large-scale conventional operations, and the other concerns terrorist or unconventional operations.

CONCLUSIONS AND INTERPRETATION

1. The concept of low-level warfare, composed of mostly East-West conflict, subtle, continuous, and implicitly small in forces applied and damage incurred, is not confirmed by this analysis. Nor are the prescriptive or doctrinal definitions used in DOD borne out.[22]

2. A comparison of the factors extracted from the three populations and with various techniques shows firstly that duration of conflict, a major aspect of the posited definition tested in the analysis, loaded most consistently, though not very highly, on the dimension of military roles in unconventional warfare -- often including guerrilla

22 See JCS, Dictionary of United States Military Terms for Joint Usage, JCS Pub. 1 (Washington, D.C., DOD, 1 January 1966).

warfare. However, duration also loaded on a factor of deadly conflicts in general. Unless guerrilla war is the sole trait of "low-level" war, there seem to be few other types of conflict that can be termed "continuous". If ideological struggle is an essential part of the low-level war phenomenon, "East-West Conflict" should load with other characteristics such as unconventional warfare, guerrilla warfare, lack of casualties, Soviet, Chinese and U.S. involvement, and threat perception. In most of the analyses the East-West issues do involve the great powers and high threat perceptions. Overt interstate operations are part of the cluster, casting doubt about the dominance of the internal aspects of "low-level warfare." Duration and guerrilla warfare load with the other factors above the .30 level variables only on the least typical of the analyses performed.

3. Thus, we have an "image" in the factors of the hypothesized "world-wide involvement" pattern. But we should remember that conflicts highest on this pattern were the Vietnam war, the Gulf of Tonkin incident, the Lebanon civil war and landings, the Tachens crisis, the Guantanamo dispute, the Laotian civil war, and the Egyptian-British-French Suez war. Thus, "limited war" may be a better designator for this factor. Certainly, ideological differences are involved in it, but there is no guarantee that incidents not involving overt combat can remain at a low level. Factor 2 comes closest to the posited definition, but seems to involve mainly intense ideological conflict.

4. It is also worthwhile to note the strength of certain factors across all these analyses outlined above. Large-scale perceived Soviet threat in Europe (Factor 1), world-wide confrontations (Factor 2), deadly conflict (Factor 5), conclusive conflict (Factor 7), guerrilla operations in non-turmoil situations (Factor 4), and U.S. naval anticipation about terrorist operations (Factor 3) have stable characteristics which appear across all three analyses regardless of the mortality level or factor analytic parameters used.

5. The northern hemisphere and anti-Soviet anti-Chinese aspects of the results also indicate that, at least for 1945-1966, the United States has been less concerned with conflicts in the "third world" than is often stated. Factor 1 of all the analyses is consistently the strongest factor and it is "European."

6. Note also the high loading for U.N. involvement in Factor 2, for conflicts involving few deaths or more than 100 dead. In conflicts between 1 and 100 deaths less U.N. involvement is found. Thus, crises or serious wars seem to involve U.N. attention more consistently than other types of disturbances. The U.N. takes an active military part in such conflicts but limits itself to political intervention in less deadly conflicts.

7. The pattern of guerrilla operations in the absence of turmoil changes slightly as deaths in conflict increase. Ground operations become more extensive, while levels of domestic turmoil and guerrilla war seem to fall-off somewhat. It should also be noted that "sea operations" emerges as a strong characteristic on this factor only in one analysis (when a five-factor, very general solution was obtained).

8. Factor 7, illustrating conclusive military victories, shows that guerrilla warfare and coups are neither systematically concluded nor subject to military victory at deadliness levels above 100. Predictions about the outcome of such deadly conflicts cannot be made rigorously.

9. Finally, the analyses show that naval operations in Latin America do not emerge except at levels of conflicts with more than 100 dead. It is relatively stable across all analyses, though formal U.S. involvement drops off dramatically in the most deadly conflicts.

SECTION IV

ANALYSIS OF NAVAL OPERATIONS, 1945 - 1965

INTRODUCTION

Since shortly after the end of World War II the national defense posture of the United States has been largely oriented toward the defense of the U.S. and its allies against military aggression by the Soviet Union. Operational concepts and force structures were developed largely on the basis of the military capabilities of the Soviet Union and its allies.[1] Because U.S. forces have not yet been directly engaged in combat with Soviet military forces is sometimes interpreted to mean that the Soviet Union intended direct attack upon the West and was deterred from doing so. Whether this is true or not, the steadily increasing Soviet and Chinese Communist military capabilities justify the maintenance of U.S. strategic deterrent forces. Without entering into a discussion of the successes or failures of U.S. deterrent capabilities at the lower levels of warfare, or invoking the popular limited war cliches, one may observe that the commitment of U.S. forces to protect U.S. interests in both Communist - and nationalist - inspired "small wars" and crises remains a major issue of U.S. foreign and military policy.

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[1] For example, see The Library of Congress, Legislative Reference Service, United States Defense Policies in 1965, (Washington, D.C. GPO, 1966), pp 7-34 in which the "threats to world peace" are discussed in the following order: (1) The military capabilities of the USSR;(2) The other Communist military forces; and(3) Areas of potential trouble which include Algeria, Berlin, Congo, Cuba, Dominican Republic, Korea, Taiwan Strait, Latin American insurgency, Iran, India-Pakistan, Cyprus, Israel-Arab nations, India, Communist China, Indonesia, Cambodia, Laos, Thailand, Malaysia Singapore, South Vietnam, and Southern Africa. The persistance of these troubled areas (not an exhaustive list) over the past two decades would appear to forecast continued commitment of U.S. forces to confront threats less powerful and sophisticated than the Soviet armed forces.

The employment of U.S. forces in low-level wars and crises during the past twenty years has been frequent and demanding. The deployment of naval and marine forces to forward areas has sometimes been brief during crises, and at other times continuous in areas of recurrent East-West competition, e.g., in the Mediterranean and off East Asia. The forces employed have ranged from Strategic Nuclear Forces, through the General Purpose to Special Warfare Forces. Some actions have led to political stability. Other outcomes have been marked by prolonged frustration and, at best, suppression of the basic political issues which continue to threaten international peace and security.

This section contains an analysis and interpretation of the patterns of Navy and Marine Corps operations over the past two decades. The purpose is to develop an understanding of the regularities associated in these operations as a guide for planning.

PRIOR STUDIES

There have been numerous studies, monographs, and articles concerning the operations of naval forces over the past twenty years.[2] Other than Navy Contributions to Deterrence at Conflict Levels Less Than General War 1975 - 1980 (INS Study 14) by the Center for Naval Analysis and an earlier study by Bendix,[3] most studies have tended to focus on

[2]The first comprehensive overview of the problem of low-level warfare from a Navy viewpoint is found in "Supporting Discussions for Research and Analysis Program in Sublimited War Operations of the Navy and Marine Corps," (Mimeo),(SECRET) 20 Sept. 1965, the report of an ONR-sponsored summer study. WINS II: A Worldwide Integral National Strategy for 1970, prepared by the Dept. of the Army, DCS for Military Operations, March, 1965 (SECRET) deals explicitly with war and "conflicts at the lower spectrum of war." Its findings have only limited relevance for Navy operational planning because of its broad focus on instruments of U.S. power and reliance on extrapolations without methodological rigor. Most of its detailed recommendations deal with the Army problems. WINS II makes a strong case for the "specialist" vs "generalist" solution to low-level conflict. See also C. Wolf, Jr., "Small Wars": Some Possible Lessons for the U.S. Air Force (U), RM-5420 PR (RAND Corp., Santa Monica, Calif., February, 1967). The output of the U.S. Naval Research Laboratory's studies in Special Warfare are also directly related to this task.

[3]Bendix Systems Division, The Navy and Sublimited Conflicts (U), BSR-1407, 30 Sept. 1966 (SECRET).

particular operational problems in a single case, or on the missions and capabilities of particular types of forces.[4] The CNA and Bendix projects were concerned with broad aspects of the naval roles and missions in low-level conflict.

The distinguishing aspects of the work reported herein are: (1) it is based on official Navy information and data from archival sources (see Appendix A, Volume II); (2) it is worldwide, attempts no sampling, and is a multivariate analysis aimed at discerning consistent patterns of naval operations on an empirical rather than a doctrinal basis.

METHOD

The research method used in this analysis is multiple factor analysis as described in Section III, pp III-6 to III-8 and illustrated by Figure III-1. The unit of analysis is the deviation of U.S. Naval and Marine Corps forces from normal operational schedules prior to or during the politically significant conflicts (whose analysis is discussed above in Section III). Some 85 cases were found in the period 1945-66 in which naval forces deviated from the scheduled operating patterns in connection with conflicts. Within the coding rules established for measuring change, there are 121 separately discernable observations of operations connected with conflicts. For each observation, data were arrayed for 38 characteristics of naval operations, the definitions for which are found in Appendix A. These characteristics include assigned naval missions, perceived threats to U.S. interests, naval operations performed, readiness measures taken, the level of military threats assessed by the Navy, U.S. naval forces employed, access to the sea from the conflict's "center," duration, etc. The data for operations were arrayed in a matrix, intercorrelated, and factored to orthogonal and oblique solutions, as was done for the conflict data. Factor scores were computed to supply scores for particular naval operations on the dimensions of the matrix as an aid to identifying the factors and to provide a basis for causal modelling.

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[4] See Beebe, Robert P. (Capt.): "Operations in Restricted Waters," U.S. Naval Institute Proceedings, June 1962; Delaney, Robert F.: "A Case for a Doctrine of Unconventional Warfare," U. S. Naval Institute Proceedings, Sept. 1961; McClintok, Robert: "River War in Indochina," U.S. Naval Institute Proceedings, Dec. 1954; McDonald, David L. (Admiral): "Our Naval Capability," Ordnance, Mar-Apr 1965; and: "Carrier Employment since 1950," U.S. Naval Institute Proceedings, Nov. 1964; Rusk, Dean: "The United States Navy, Watchdog of Peace," Dept. of State Bulletin, 8 Feb. 1965; Stevenson, R.J., et al : Service Limited War Environments (U), (The Mitre Corporation for Dir. of Systems Integration, ESD, AFSC, USAF, L. G. Hanscom Field, 1965); and Virden, Frank: "Fleet Readiness Today," Ordnance, May-June 1963.

In addition to determining the patterns of variation in the characteristics of conflicts and U.S. naval operations, the following propositions concerning the basic functions of naval forces as an instrument of U.S. policy were tested:

1. With respect to the onset of hostilities, the operations of U.S. naval forces can be classified as either preventive or reactive.

   Nearly every event in international relations may be interpreted as a reaction to some prior event, and this tends to make a preventive-reactive dichotomy a subjective matter. Nevertheless, there may be a distinction between the role of U.S. naval forces before and after U.S. interests are threatened by overt hostilities.

2. The functions of stabilization, deterrence, and conflict control are fundamental aspects of low-level warfare and relate to characteristics of the conflict.

   The function of military force may be either stabilizing or deterring with respect to hostilities. Following the onset of open fighting, force may be employed to deter expansion of the conflict in terms of level of violence, area, and number of participants or to control the conduct and termination of hostilities. Again the validity and significance of these distinctions may appear from the analysis of data on conflicts during which Navy operations took place.

DATA

There are limitations in the level of detail in the data which are reflected in the measurement scales. These limitations were caused by a general lack of specific operational objectives in the orders to naval forces, the difficulty in relating events in direct, "initiative-reaction" terms, and the frequent lack of knowledge and/or misinformation concerning naval operations in the open literature and press. In other words, some of the concepts to be included were "non-operational" in a scientific sense. As a result, nominal, ordinal and interval measurement scales were used according to the precision of definitions and availability of information. The basic information which was transformed into data, consisted of communications between the major decision-makers in the U.S. Navy and the Departments of Defense and State, and staff papers based on these communications. These communications do not tell all. Some gaps are unimportant and

others could be filled by inference. In all cases an attempt was made to use the best available description of how the Navy actually did in relation to politically significant conflict.

FINDINGS

Before discussing the outputs from the factor analysis, it is useful to inspect some generalizations that have been made concerning the nature of operations, the type of conflicts, the frequency of operations, and the type of forces employed.

In terms of aggregate data the following may be said about the Navy's involvement in post-World War II conflicts; 1945-66:

1. A show of force consisting of at least some intra-theater redeployment to the conflict/crisis area is the most frequent operation. In decreasing order, the frequency of operations conducted were:

TYPE OF OPERATION	NUMBER OF CASES
Show of force	48
Special surveillance	20
Anticipatory presence	19
Continuing surveillance	17
Military assistance	11
Evacuation	10
Combat	6
Intervention	5
Interposition	5

2. Although forceful opposition to the naval operations was perceived to be quite likely on at least 25 occasions, operations were generally unopposed. Hostile acts were directed at U.S. naval forces only 6 times, exclusive of incidents.

3. While East-West tensions were obviously a consideration in every general alert (6 cases); there has not been a general alert after 1962 and there have been 27 other cases involving East-West tensions which have resulted in only a limited alert for the Navy.

4. Limited operations have been carried out in 35 other cases which did not directly involve East-West tensions.

5. U.S. naval forces have been directly involved in only 2 colonial conflicts. In the 12 other conflicts related to colonial issues, the action taken by the Navy has been indirect and stronger than a show of force only 2 times.

6. Every case involving combat operations was related to intrastate conflict. Eleven out of 19 other cases when combat was considered likely also involved internal war.

7. The kind of naval task organization employed included surface patrol, amphibious, or attack carrier twice as often as the other types of task organizations. The overall summary of task organization employment is as follows:

TYPE OF FORCE	NUMBER OF CASES
Surface patrols	46
Amphibious	44
Attack carrier	42
Aircraft patrol	31
Service	22
Surface action	20
Anti-submarine	19
Mine	14
Submarine	6 (probably low due to missing data)

The factor analysis produced seven orthogonal dimensions of naval operations which were also rotated to an oblique solution. Together, the seven factors account for 59% of the total variance in the data. Table IV-1 provides a summary of the results.

TABLE IV-1
FACTORS OF NAVAL OPERATIONS, 1945 - 66

Oblique Factor	Title	% Total Variance	Indexing* Variable	Example Case
I	Soviet Capability	24	Strength of Anti-Aircraft Defenses	Cuban Missile Crisis
II	U.S. Intervention in Guerrilla Warfare	10	Unconv. Warfare Threat	Tonkin Gulf Incident
III	Extraordinary Surveillance in Crises	7	Surveillance and Patrol Operations	Tachens Evacuation

* See Appendix A for definitions and scaling.

TABLE IV-1 (CONT)

Oblique Factor	Title	% Total Variance	Indexing Variable	Example Case
IV	Military Assistance	6	Service Forces	Quemoy - Matsu Bombardment
V	Preemptive Redeployment	5	Anticipatory Presence	Assassination of Trujillo & Disorders in Dominican Republic (1961)
VI	Super Readiness	4	Nuclear Opposition Readiness Measures	Berlin Crisis (1961-1963)
VII	Preventive Operations	3	Redeployment	China Off-Shore Islands Crisis

The correlations of the oblique factors are shown in Table IV-2. The maximum correlation is -.36 which is an angular displacement of 50° between factors 4 and 6.

TABLE IV-2
FACTORS FOR NAVY OPERATIONS, 1945-66
CORRELATIONS OF OBLIQUE FACTORS

Factors	Factors 1	2	3	4	5	6
2	-.02					
3	-.33	-.02				
4	.20	.22	-.10			
5	.13	-.09	-.07	.00		
6	-.23	.01	-.11	-.36	-.20	
7	-.02	.28	-.12	.09	-.16	-.17

DISCUSSION OF FACTORS

Soviet Capability, Factor I, is dominant and is composed of high perceptions of threats posed by Soviet forces. Threats to U.S. national interests also load moderately high on this factor while unconventional

warfare and combat are uncorrelated with it. This factor describes operations in high-alert situations where vital U.S. interests are thought to be at stake and Soviet or Soviet-backed active opposition is thought likely. It resembles factor I in the analysis of conflict in Section III, "Large Scale Perceived Threat to U.S. Forces in Europe."

U.S. Intervention in Guerrilla Warfare, Factor II, is the "insurgency" or "special warfare" dimension emerging from the data. Note that it has less than half the strength of Factor 1, indicating that operations, real and anticipated, at a conventional and nuclear level have been more often the case than has irregular warfare. Of the seven factors, combat operations are best subsumed on this factor.

Extraordinary Surveillance in Crises, Factor III, describes a pattern of unusually high aircraft and surface patrol activity aimed at deterring or controlling conflict in remote areas.

Military Assistance, Factor IV, is a pattern of extensive use of surface and submarine forces during local conflicts of average lengths. Threat perception of conventional and nuclear is not strongly correlated with it, but unconventional threats are moderately correlated with the pattern.

Preemptive Redeployment, Factor V, represents anticipatory intratheatre and/or intertheatre redeployment of predominantly air and amphibious forces for moderately long periods. The redeployments are for the purpose of showing U.S. naval force during periods of localized instability. The only perceived threat is low and is posed by local ground forces. Apparently, this factor represents the use of U.S. naval forces to isolate small prolonged conflicts in situations where neither opposition nor U.S. interests are considered to be particularly important.

Super Readiness, Factor VI, is a reaction to crises in which nuclear-armed forces and submarines are perceived as high threats and large combatants somewhat lower. Operations most typical of this factor include extraordinary readiness measures and ASW. Deterrence and enhanced ability to conduct combat operations seem to characterize this factor.

Preventive Operations, Factor VII, is a weak dimension whose meaning is not clear. At its negative end, it consists of conflict control and interposition of naval forces (e.g., the 6th Fleet maneuvers off Cyprus) to stabilize local conflicts.

CONCLUSIONS

The fact that the 38 characteristics of naval operations reduced to 7 relatively uncorrelated factors shows that post-WWII operations can be simplified to a basic structure and associated indexing parameters. The elements (factors) in the structure vary in strength with the two outstanding patterns of variation being caused by Soviet capabilities and guerrilla warfare. Whether General Purpose Forces are best configured to deal with guerrilla warfare is a question which is not dealt with in this analysis. However, there is evidence that guerrilla warfare is very significant for the Navy because of the relatively high degree to which the Navy has been used as an instrument of national policy in such conflicts.

The Navy's substantial strategic nuclear deterrent mission is met with the POLARIS system. The Navy has a portion of Strategic Forces (Program One) in the form of the POLARIS system, and one can see in the analysis of Navy Operations the conscious use of that force ("Super Readiness" and "Soviet Capability"). The utility of such a system is seen by the strength of Factors I and VI which reflect the U.S.-Soviet military competition and crisis behavior.

However, there is no comprehensive, mission-oriented program plan and budget for naval counterinsurgency and special warfare aside from a program element in General Purpose Forces (Coastal/River Patrol and Assault Forces) and some RDT&E support for inshore and special warfare. Clearly, the patterns of naval operation discerned in this analysis highlight the importance of naval counterinsurgency. As long as the United States continues its national policy of selective intervention during threatened or actual insurgent conflicts, it would seem advisable to establish an overall naval counterinsurgency program, treated as a "package" of resources optimally configured to meet the mission and distinguished from the heterogeneous General Purpose Forces.

Naval combat has been infrequent since World War II, a fact which is easily forgotten in light of the magnitude of the Korean and Vietnam Wars. When U.S. naval forces have been opposed, enemy forces have tended to be numerically and qualitatively inferior. Nevertheless, these inferior forces have not been fully deterred from the use of sporadic attacks and harassment. Should hostile states (or insurgent forces within friendly states) acquire modern weapons through the burgeoning world flow of arms, the character of the opposition to U.S. forces, and the outcomes, will change.

The stabilization-deterrence-conflict control notion as a meaningful classification of naval missions seems justified on the basis of this analysis. A careful examination of the factors, their loadings and the extreme cases indicate that only factors IV and VII are different than these operational concepts. In these two cases, U.S. forces were used in a primarily aggressive manner to assure the maintenance of the status quo through force. Such distinctions are difficult, however, and T.C. Schelling's "deterrence-compellence" dichotomy would seem more apt on the basis of a close study of U.S. interests and the outcomes.

The preventive-reactive dichotomy (as defined herein) emerges from the data as follows:

	Largely Preventive	Largely Reactive
Factor I		Soviet Capability
Factor II		U.S. Intervention in Guerrilla Warfare
Factor III	Extraordinary Surveillance in Crises	
Factor IV	Military Assistance	
Factor V	Preemptive Redeployment	
Factor VI	Super Readiness	
Factor VII	Preventive Operations	

For the near term future (5-10 years) a major anticipated mission for the Navy, aside from strategic deterrence and multilateral peacekeeping, will be restrained tactical warfare, usually in an environment which makes identification of enemy forces difficult. The mere presence of U.S. forces on foreign soil may be politically undesirable. Irredentism and nationalism are likely to cause an erosion of forward bases. These "political" factors may have more effect upon the quality and numbers of U.S. forces than will strictly economic-technical constraints or even the character of the opposition.

SECTION V

PATTERNS OF INFLUENCE IN LESS DEVELOPED COUNTRIES

INTRODUCTION

The United States, China and the Soviet Union are engaged in a competition for influence in the less developed countries. The commitment of U.S. resources for this purpose has been explained on the grounds of heading off communistic revolutions, or of advancing humanitarian and economic interests. Soviet and Chinese rhetoric, on the other hand, contains an anti-Western, ideological component whose purpose appears to be the transformation of nationalistic revolutions to socialist systems. For military planners, the more important consideration is that the clash of U.S., Soviet and Chinese efforts to influence the course of events in the third world may be related to the outbreak, intensity and outcome of armed conflict in underdeveloped countries. A first step in finding the relationship between attempts at foreign influence and low level conflict is to discern the regularities in patterns of great power influence.

Developments in the Communist world over the past decade have dispelled the idea of a monolithic Sino-Soviet bloc. A polycentric cluster of Communist states has evolved in which two power centers stand out - the Soviet Union and People's Republic of China. Each seeks to exercise the predominant influence in or has the allegiance of the Communist Parties of certain states. Soviet influence has been stronger, over the parties of Eastern Europe. Chinese influence appears stronger in the states on its periphery. There are also a number of Communist governments which are following more independent policies, such as Yugoslavia, Rumania, and North Korea.

This general scheme of Soviet, Chinese, or independent orientation also appears to be true of Communist Parties in states or colonies where the party does not hold power or has been outlawed. The orientation of local parties is particularly significant in the less-developed countries where, along with the stress which accompanies political and economic

development, there is often inadequate experience in governmental administration, frequently an absence of democratic traditions, and hostility toward the former metropolitan power and the West in general. Besides areas of Africa and Southeast Asia which face the problems of transition from colonial status to nationhood, the economic backwardness and political instability of much of Latin America also presents a potential revolutionary situation. The three areas present potential targets for the promotion of wars of national liberation by the Soviets and Chinese. Thus, the Soviet and Chinese views on the promotion of such wars and their behavior in relation to the countries of these areas appears to be important to the analysis of low-level warfare and the consequent U.S. military requirements for the U.S.

A significant aspect of the Sino-Soviet split is a difference of opinion on the conduct of revolutionary warfare. In those countries where wars of national liberation are or may be waged, this difference in approach may require different forms of U.S. military operations according to which of the Communist powers has promoted or is supporting the revolution. Even more important than the Sino-Soviet doctrinal differences, however, is the question of how these differences have been reflected in their actions to promote and support revolution. In warfare, as in other human activity, theory and practice are quite different.

The use of U.S. military and economic resources to contain Communism, to minimize the influence of the Soviet Union and China in less developed countries has been described by the Secretary of Defense. A typical assessment, and one that occurred in one of the years analyzed in this study, is the Secretary's presentation to the Congressional appropriations committees for the FY 1966 budget. Effective countermeasures to Soviet and Chinese support for revolutionary warfare ("covert armed aggressions, insurrections and subversion") demands an orchestration of many resources:

> It is not solely a military problem. It pervades every aspect of human endeavor and concern--political, social, economic and ideological. We can help a besieged government with economic and military assistance; with training and administrative support and with advice and counsel. [1]

[1] U.S. Dept. of Defense, R. S. McNamara, "FY 1966-70 Program and FY 1966 Budget," (mimeo) p. 6.

Taking a turn around the world, the Secretary evaluated local situations and generalized about the nature of the threat to U.S. interests and the necessary antidotes. Crises would come and go but "the basic situation would remain essentially unchanged," a situation in the underdeveloped world where "it is quite possible that in the decade of the sixties the decisive struggle between Communism and Freedom will take place". The remedies offered were numerous: countering Soviet economic and military assistance, especially in Asia and the Middle East; providing external support to challenged governments, e.g., South Vietnam, Thailand, Laos, and South Korea; expanding military assistance to include India so as to counter Chinese threats; and extending technical aid, military assistance, and economic aid to African nations which have been or will be targets of Soviet and Chinese attempts to extend influence in Africa. The need to combine all instruments of U.S. foreign policy is shown by Mr. McNamara's assertion on Africa:

> The objective of our aid programs...is to assist, in concert with other friendly powers, in maintaining internal security and internal stability for a long enough period of time to permit the new nations to develop their own political, economic and ideological structures. To do less is to invite a possible takeover of most of Africa.

In like manner, U.S. military and economic assistance was said to be necessary in Latin America, especially in Brazil, the Dominican Republic and Columbia.

That foreign influence is exerted in a number of ways is illustrated by the listing of sanctions requested by the OAS of its members against Cuba; "suspension of sea transportation, suspension of trade except for food, medicine and medical equipment sent to Cuba for humanitarian reasons; and the termination of all diplomatic and consular relations".[2] On the necessity of sustaining U.S. military assistance to states on the

[2] Ibid, p. 24.

periphery of the Soviet Union and China, the Secretary said:

> If I had to choose between a billion dollar reduction in military assistance, or a billion dollar reduction in remaining defense requirements, I would choose the latter.[3]

Criticism of the use of U.S. military and economic assistance has been frequent and negative. Analytically, Hans Morgenthau classifies military assistance as part of alliance relationships, a means of building power blocs. It is a division of labor, donor providing material and recipient the human resources.[4] Another category is the provision of "prestige aid" to regimes to keep them in power, a form of political bribery, according to Morgenthau. Military aid for the purpose of economic development is held to be dangerous because it merely perpetuates undemocratic rule by oligarchies and does not stimulate the needed socio-economic reforms. Senator J. W. Fulbright goes further, claiming that U.S. military assistance has perpetuated the rule of Latin American military oligarchies and made them even more capable of interfering in the political processes of their countries.[5] Worse yet, bilateral economic assistance is said to lead to military intervention by the United States, as well as to supply a "legitimate", sometimes legal, reason for U.S. military involvement.[6]

Some hold that the strategic nuclear stabilization ("mutual deterrence", "equilibrium") between the Soviet Union and the United States has changed the locale of Soviet-U.S. competition to the underdeveloped areas. In these areas it is held that there is less inhibition on the great powers in the use of military force than is the case in Europe.

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[3] U.S. Congress, House of Representatives, Committee on Appropriations, Hearings on Department of Defense Appropriations for 1964, Part I, p. 236.

[4] In M. Goldman, Why Foreign Aid (Rand McNally: Chicago, 1962), p. 75.

[5] J. W. Fulbright, The Arrogance of Power (Vintage Books, 1966), p. 230.

[6] Ibid, p. 232 ff.

Great Power attempts at influence in less developed countries are claimed by some to be a result of a transformation of the Cold War. This influence includes ability to affect the outcome of small wars, to apply economic, political and other instruments in a way to increase control in the less developed countries.

Technology and wealth undoubtedly have contributed to the shift of the Cold War from its European orientation. Commencing in the mid-1950's the S. U. and China began to compete with the U.S. for influence in less developed countries where decolonialization and nationalism have created conditions suitable for social revolution. The first decade of the Cold War was an era when the nuclear monopoly of the U.S. was broken but during which the European situation more or less stabilized.

> We have now passed into a stage whose main characteristic appears to be a differentiation between a limited field of maneuver in the still decisive but largely stabilized European theatre, and the trackless movement of revolutionary conflict in the underdeveloped areas, complicated by the Chinese effort to establish its influence by militant policies.[7]

Shulman sees a shift in Soviet thinking from an essentially bipolar nuclear stand-off to the concept of "troika", or third world. This was a major change in the scope of Soviet foreign policy[8] and it occurred in the mid-1960's. It was then that serious efforts began to use Soviet economic, military and cultural means to increase Soviet influence.

Ideologically oriented observers see the Cold War as a clash of incompatible messianic world powers both dedicated to the overturn of the traditional world order. Gradually, the technical-economic and political developments nullified much of ideological rationale for the Cold War, but its rhetoric remained.[9] Gradually, the Soviets took on the objective of achieving hegemony in remote areas.

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[7] M. Shulman, Beyond the Cold War (New Haven: Yale University Press, 1966), p. 32

[8] M. Shulman, Stalin's Foreign Policy Reappraised (Harvard University Press, 1963)

[9] See C. O. Lerche, Jr., The Cold War and After (Englewood Cliffs, N. J., 1965)

In the post-Khrushchev era the internal debate on the inevitability, justice, and nature of war has continued within the Soviet Union. There is, perhaps, less dispute in the Soviet Union over wars of national liberation and the need to support them than over the grand issues of general nuclear war, limited nuclear war, escalation, and Khrushchev's notion of "local wars". The build-up of Soviet sea and airlift capability, amphibious and marine forces and the securing of basing rights has been observed in the West.[10]

After Stalin's death Soviet policy changed from an essentially bipolar worldview with total control within a bloc to a more flexible, persuasive policy.[11] It has also been argued that the Soviets will continue to increase their influence in less developed countries and particularly to assist Socialist revolutions.[12]

The American counter to these perceptions and events is the policy of containment. However, it is worth noting that the originator of that policy had in mind a political barrier, not merely the use or threatened use of force. Furthermore, as originally conceived, containment was European oriented and said little about the underdeveloped states or dependencies.[13]

One able scholar of Soviet military policy and strategy has summarized the post-Khrushchev developments as follows:

1. Maintenance of primary emphasis on strategic nuclear offense and active defense.

2. A search for options and capabilities short of general nuclear war.

3. Continuance of the struggle within the Soviet government over military-civil resource allocation.

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[10] See T. W. Wolfe, "Trends in Soviet Thinking in Theatre Warfare, Conventional Operations and Limited Warfare," (RAND corp.: Santa Monica, 1964)

[11] R. A. Tucker in A. Dallin (ed.), Soviet Conduct in World Affairs (Columbia University Press: N. Y., 1960)

[12] Ibid., Alex Inkeles

[13] G. F. Kennan, Memoirs, 1925-1950 (Boston, 1957)

4. Continuance of the dispute over the "inevitability," justice and nature of future wars.[14]

On the augmentation of conventional forces to project Soviet power into "local wars" and "wars of national liberation," Wolfe notes that the current Soviet regime has continued Khrushchev's policies of strengthening air and sea lift, improving amphibious and marine forces, and securing foreign basing agreements through Soviet military aid programs. These trends have obvious implications for U.S. Navy and Marine Corps planners concerned with countering Soviet influence, with military means.

The dilemmas of the Soviet strategists have been an issue since the founding of the Soviet Union. The question has been whether Soviet energies and resources should be devoted to the promotion of Communist (and supposedly obedient) regimes abroad or whether the Soviet Union's interests were better served by backing nationalistic bourgeois revolutions against the Western colonial powers. Essentially, the debate reduces to that of world revolution vs. a policy of promoting a two-step process of slower change toward socialism.

Khruschev began his world-wide travels in 1955 with first visits to India, Burma, and Indonesia which had recently attained independence. Soviet policy proclaimed that there were many paths to socialism including that of collaboration with bourgeois nationalists.

The Soviet recipe hasn't worked well because numerous nationalistic regimes have eagerly sought Soviet aid but have simultaneously received assistance (and presumably influence) from the U.S. Western Europe, and international institutions.[15] That Soviet policy has been influenced by conflicting interest groups within the Soviet Union has also been suggested.[16]

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[14] T. W. Wolfe, Soviet Military Policy at the Fifty-Year Mark, RM-5443-PR, September, 1967 (Santa Monica, RAND Corp.)

[15] P. E. Mosely, "The Kremlin and the Third World," Foreign Affairs, Oct. 1967, Vol. 46, No. 1.

[16] V. V. Aspaturian, "Internal Politics and Foreign Policy in the Soviet Union," in R. B. Farrell (ed.) Approaches to Comparative and International Politics (Northwestern University Press: Evanston, 1966), p. 318 ff.

Whatever the perception of policy one accepts for the Soviet Union and China, and whatever the appropriate U.S. response, there is a need to form an empirical description of how the great powers attempt to exert "influence" in less-developed countries. One can pick or choose from the grab-gab of official Soviet and Chinese doctrine,[17] and he can set up certain U.S. policies as hypotheses. But the more important first task is to research the behavior of the major actors toward less developed countries.

The pay-off for a multivariate analysis of Soviet, Chinese, East European and U.S. behavior toward third world countries is the derivation of quantitative indicators of attempts at influence. These indicators might then be used as independent or "predictor" variables in an explanatory model of low-level conflict within the target countries. During the first phase of the study only Soviet and Chinese behavior was analyzed for the year 1963. A number of interesting patterns emerged and it became apparent that more actors (U.S. and Eastern Europe) and more observations (1959, 1961, 1965) should be added to broaden and deepen the analysis.

PRIOR STUDIES

The literature on revolution and the use of instruments of national power in less-developed countries is voluminous, largely non-quantitative and often highly conjectual. A comprehensive study of revolution which suggests a mediated stimulus-response model of revolution was performed as a part of the ONR-NRL Special Warfare program.[18] Another government-

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[17] To this end two essays on Soviet and Chinese doctrine on revolution were prepared for the annual report on this study. See Bendix Aerospace Systems Division, BSR-2198, Sept. 1967 (S-NF) and the bibliography in Appendix E, Vol II of this report. In addition, a case study was made to investigate the differences in behavior of the Communists Party in the two Indoensian revolts. Prior to the Madiun rebellion of 1948 in Indonesia Soviet influence in the Indonesian Communist Party (PKI) may have been dominant, whereas abortive attempts to eliminate Army influence in 1965 occurred when Chinese influence appears to have been strongest in the PKI. This case study is reported in BSR-2198.

[18] University of Pennsylvania, Foreign Policy Research Institute, "The Challenge of Revolutionary Insurgency to United States Security," Final Report, Contract Nonr-551(60), Apr 1968.

sponsored study is addressing the question of "alignment" of nation-states as the dependent variable. It will employ cross-national attribute and interaction data in causal inference techniques to test the ability of various models to predict to alignment.[19] A third study, conceptually similar to the work reported herein, also treats alignment as the dependent variable through the use of factor analysis of data on interaction of the states of the world with the U.S. and the Soviet Union. Although it is unnecessarily encumbered with the game-theoretic concept of "zero-sumism," the results demonstrate clearly that bipolarity was not dominant in the international system in 1963 and that Soviet and U.S. relations with other nations are more complex and qualitatively different from the simple bipolar model.[20]

On a more general basis and methodologically similar to the Bendix study is the work of R. J. Rummel and his colleagues in the ARPA-sponsored Dimensionality of Nations Project at the University of Hawaii. The factor analysis of interstate relations on both a selected and a random sample of the several thousand possible dyadic relationships in the international system for 1955 has yielded ten essentially uncorrelated patterns of behavior. In addition, basic indicators of these multivariate patterns as well has nation scores on the patterns are available from Rummel's analysis.[21]

Causal inference on revolution is of increasing concern to quantitatively oriented social scientists. Building on a model advanced by Davies,[22] Tanter and Midlarsky have developed a plausible and operational typology

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[19] GE-TEMPO, Projected International Patterns, 67TMP-79A, Sept. 1967, prepared for Hq., USAF, AFXDOC.

[20] Levine, M. and Sandstrom, H. M., Patterns of International Alignment (University of Pennsylvania, Foreign Policy Research Institute, Aug. 1968) draft, mimeo.

[21] R. J. Rummel, "Indicators of Cross-National and International Patterns," American Political Science Review, LXIII, 1, March, 1969, pp. 127-147. Earlier research reports from the DON project plus advice by Prof. Rummel influenced the choice of variables and the techniques used in this report.

[22] "Toward a theory of Revolution," The American Sociological Review, 27 Feb. 1962.

of revolution, and employed three predictor variables to revolutionary intensity.[23] This work was closely related to the general problem of predicting revolution which was pursued by FPRI for NRL. Moreover, it employed correlation techniques which have been used by Bendix in its study of conflict (Section III of this report), is set largely in the post World War II era, and did not employ sampling.

The Department of Defense, JCS (SACSA), publishes a "criticality index" of supposedly insurgency-prone nation-states and dependencies on an annual basis.[24] This index has been made on the basis of DIA estimates of: (1) the proximity of "crisis", (2) the orientation on an East-West spectrum; and (3) the "power influence" of the particular country. It is impossible to compare the method used by SACSA with the factor analysis of various indicators of Soviet and Chinese behavior because SACSA's techniques and data are unspecified. However, a comparison of factor scores on the dimensions derived herein and, more importantly, the relationship of "criticality" to subsequent conflict, could provide a useful basis for comparison of results from the intuitive, traditional methods and an explicit, systematic approach.

None of the research reports referred to above treat the same populations, the same variables and at the same time-periods as those included in this project. Hence, it is not possible to cumulate research results at this time or to say that there is a convergence of findings. What is most important about the prior work is that the factor analytic technique has resulted in parsimonious, stable findings in other similar investigations. On a substantive basis, the related work of Rummel and Russett has influenced the choice of indicators used in this study.

RESEARCH DESIGN AND METHOD

A technique like that employed in the analysis of conflict and Navy operations (see Sections III and IV, above) was used for the analysis of Great Power interaction with less developed countries. This was the

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[23] R. Tanter and M. Midlarsky, "A Theory of Revolution," The Journal of Conflict Resolution, XI, 3, Sept. 1967, pp. 265-280.

[24] See, for example, Section VI of "Development Status of Military Counter-insurgency Programs, including Counterguerrilla Forces, as of 1 August 1965," (U) (SECRET-NOFORN), often referred to as the JCS COIN Bluebook.

factor analysis of correlations of variables which measure the strength and direction of the interactions. The choice of variables was a function of the following criteria: (1) policy and theoretical relevance (see Introduction, above); (2) whether a particular phenomenon or concept was, in fact, measurable ("operational"); (3) the availability of data and/or information; (4) the results of the analysis of data for 1963 study of interaction conducted in the first phase of this study; and (5) the findings of other studies (see Prior Studies, above).

The data-making procedures and sources are discussed in Vol. II, Appendix A of this report. The population of countries is found in Table A-3, Vol. II. Authoritative U.S. government sources were used in lieu of open sources so that questions would not be raised within the government about the bias or incompleteness of open sources. There were no missing data in the final analysis because one of the primary objectives was the computation of exact factor scores for each country on the dimensions of foreign influence.

It was necessary to select four years for analysis because of the prohibitive costs of collecting data for 1955-1965, as originally planned.

The steps in analysis are shown in Figure V-1. The "four raw data matrices" refers to arrays of data for the years 1959, 1961, 1963, 1965. In each of these matrices 76 variables were included which measure the political economic and military interaction of the Soviet Union, China, Eastern Europe and the United States with "less-developed countries." Included within the 76 variables were a random number and an index of press censorship for the purposes of testing, respectively, for <u>random</u> and <u>systematic</u> error in the factor analytic results.

Two sets of factor analyses were performed. In the first, the minimun eigenvalue was set at 0.5, and the analysis extracted twenty factors for each year. While this gave a substantial simplification, it yielded so many factors that it was thought desirable to attempt a more general solution by increasing the minimum eigenvalues to 2.0, 2.5, 3.0, and 3.5. These results gave the expected <u>fewer</u> number of factors but the substantive meaning of them was ambigious. Hence, the results of the twenty-factor solutions were interpreted instead and scores for each country were calculated on the important dimensions. Technical Appendix B, in Volume II contains details on procedures, terminology and the reproductions of the factor tables.

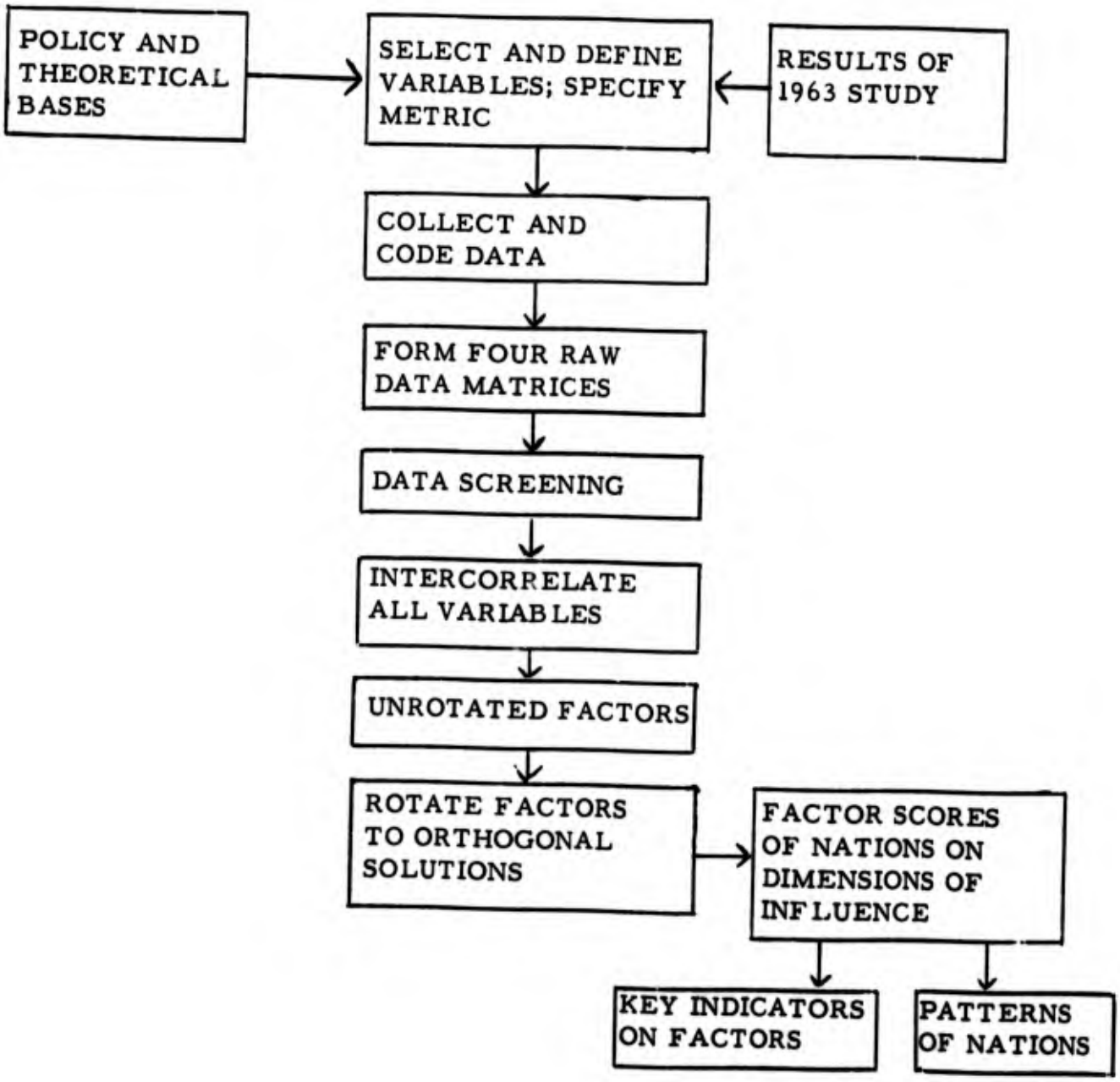


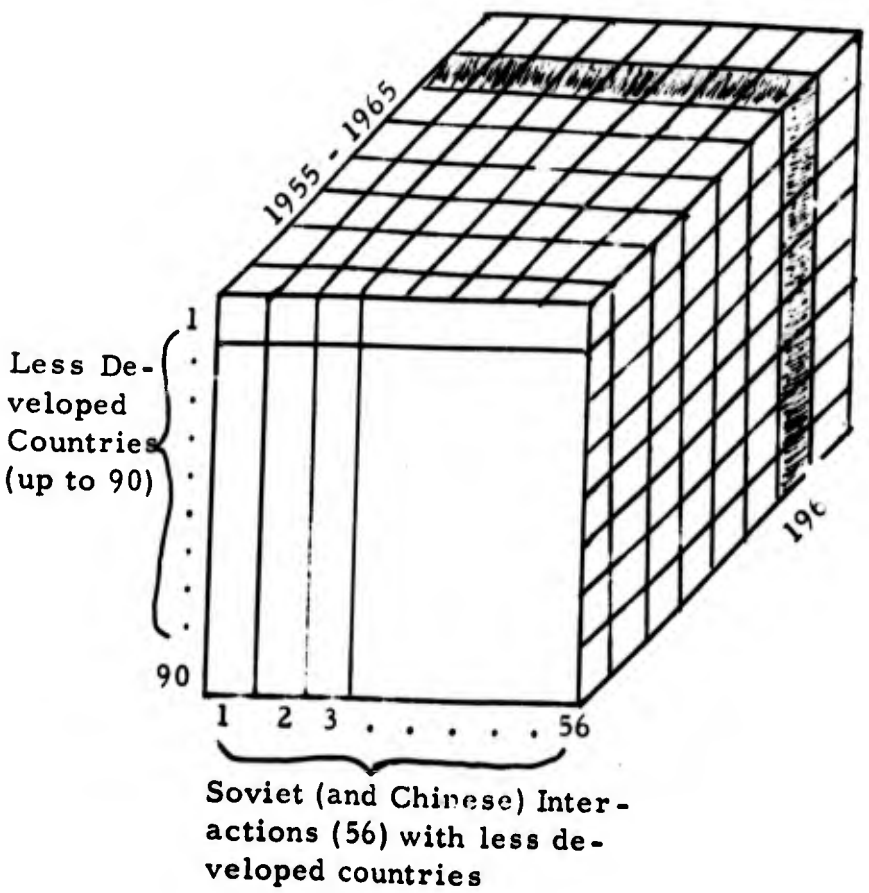
Figure V-1

STEPS IN ANALYSIS
GREAT POWER
INFLUENCE IN LESS DEVELOPED COUNTRIES,
1959 - 1965

FINDINGS,

The 1963 Study - Soviet and Chinese Influence

In the first phase of work on great power influence in less-developed countries, an analysis was made of Chinese and Soviet interaction with the countries of Asia, the Middle East, Africa and Latin America. Initially, it appeared that data for the years 1955-1965 could be collected, analyzed by year, and the resulting patterns examined for shifts over time as the Chinese-Soviet rift developed and widened and as low-level conflict occurred on a world-wide basis. Accordingly, two data boxes were established, one for Chinese and one for Soviet interaction with the 90-odd less developed countries (LDC's). Data was collected on 56 types of interactions between the two major Communist powers and the LDC's under five broad categories: economic, military, diplomatic, paramilitary, and information-culture.



Limitations on the amount and quality of the data led to a decision to analyze only the 1963 matrices. Soviet and Chinese interactions with the LDC's were intercorrelated, factored to an orthogonally-rotated 20 factor solution and interpreted.

The twenty-factor solution extracted 86% of the total variance from the correlation matrix and yielded the following main factors:

FACTOR NUMBER	FACTOR NAME	COMMON VARIANCE	INDEXING VARIABLE(S)
1	Strong Soviet and Chinese Diplomatic Ties	21.5%	Diplomatic Recognition
2	Soviet Technical and Military Support to Populous Countries	9.7%	Population, or Total Imports, or Soviet Military Grants
3	Strong Soviet and Chinese Economic Ties	8.1%	Percentage of Exports to Soviet Union
4	Targets of Soviet and Chinese Subversion	7.0%	Soviet Support to Insurgents
5	Targets of Competing Soviet and Chinese Influence	5.9%	Size of Communist Party
6	Exclusion of Soviet and Chinese Influence	5.3%	Soviet Economic Aid Extended (negative correlation)

These factors have been named descriptively on the basis of the size, composition and signs of the factor loadings. Because each factor can be thought of as a basis dimension in the space defining the location of LDC's, one may choose either end of the dimension for labelling. Except for factor 6, the positive pole of the factor has been chosen because of the ease in ascribing common-sense meanings to these patterns of behavior. Alternatively, the factors might be more generally labelled, as follows:

FACTOR	NAME
1	Diplomatic-Cultural
2	Technical-Military
3	Economic
4	Subversive
5	Local Communist Party
6	Western Orientation

SUMMARY OF FINDINGS, 1963 STUDY

1. Soviet and Chinese interaction with LDC's in 1963 was highly patterned. This implies a selective application of scarce national resources by the two communist regimes.

2. The substantial variance accounted for by Factor 1 indicates that much Soviet and Chinese interaction was neither subversive nor economically exploitive in character.

3. In terms of revolutionary tactics, the "United Front from Below" appears as Factor 4 and "United Front from Above" as Factors 2 and 5.

4. Assuming that Chinese and Soviet attempts at influencing less developed countries were validly tapped by the measures used herein, e.g., trade, military aid, etc., then the movement of "target countries" in the space defined by the dimensions of influence could be tracked over time. This would provide a scalar basis for shifts in location of target countries over time and their relative importance as targets of Chinese and Soviet attempts at influence.

5. If these patterns of influence were found to recur over time, it would be possible to index Chinese and Soviet behavior by means of a few primary indicators which are highly correlated with the factors.

6. Another use of the factor analytic results would be to explain the variation in a phenomenon of particular interest as the weighted linear addition of several factors. This allows the policy planner to concentrate on one of the input variables of special interest to him.

Examples:

a. 83% of variation in the POPULATION in less developed countries subject to Soviet Union and Chinese influence. =
4% of Soviet and Chinese Diplomatic and Cultural Ties (Factor 1)
- plus -
74% of Soviet Technical and Military Support (Factor 2)
- etc. -

Thus, Soviet technical and military support is approximately 20 times as important as any other pattern of behavior in accounting for variation in the population of recipient LDC's.

b. 84% of variation in TRAINING OF CADRE from LDC's by the Soviet Union =
1.7% of Soviet Technical and Military Support (Factor 2)
- plus -
2% of Soviet and Chinese Economic Ties (Factor 3)
- plus -
65% of Soviet and Chinese subversion (Factor 4)
- etc. -

Thus, most of the training of revolutionary cadre by the Soviet Union is associated with a unique pattern of subversive activity.

The 1959, 1961, 1963, 1965 Study

The second phase of work differed from the study of data on interactions in 1963 in several ways. The number of "major actors" was expanded to include the United States and Eastern Europe (aggregated). Data were included on three additional years to discern changes in behavior toward less developed countries over time, particularly during the period of the open rift between China and the Soviet Union. In addition, variables to index interaction were chosen to increase the number of interval or ratio measurement scales. Some of the variables from the 1963 study were eliminated due to their redundancy and their low correlations with the factors. Finally, variables with missing data were eliminated because of the requirement to calculate exact factor scores.

The data were arrayed in four sets representing the years studied. The "cases", or observations, were the same less-developed countries in Latin America, Asia, the Middle East and Africa as were included in the 1963 study. The variables indexed political, economic, military, technical and cultural interaction between the four major actors and the less-developed states. The data on the variables were intercorrelated and the resulting correlation matrix factored to a 20-factor orthogonally rotated solution. Exact factor scores were calculated and plotted on cartesian coordinates. The results were compared across the four years for factor structure and consistency.

It is important to bear in mind the overall research strategy in this study in order to understand why the "foreign influence" factors were sought. The objective of the project was an empirical description and explanation of low-level conflict. Because of variance in conflict across nations, the non-experimental nature of the research, and the numerous plausible explanatory variables, a multiple regression model was thought best as an analytical technique. Had the work been continued, country scores on the "foreign influence" factors would have been used as independent variables (along with national attributes) to account for variance in national conflict scores as the dependent variable.

A side benefit of the "foreign influence" factors is that one can discern a small number of statistically independent indexing variables. These should be helpful to those who collect and analyze data on great power interaction with less developed countries. They can be thought of as "prime parameters" derived from a factor analytic model of reality.

Finally, the orthogonally rotated factors can be interpreted as a multiple linear regression model. The factor loadings are equivalent to partial correlation coefficients, and the communality of a variable is equivalent to explained variance in the dependent variable.

The overall results are shown in Figure V-2. Note that only the first three and the eighth factors appear in 3 or 4 of the annual periods examined. This indicates changes in behavior of the major actors with the less developed countries in the period under analysis. Factor one, U. S. Military, Economic and Technical Aid, is clearly a manifestation of the U.S. policy of containment. This is even more evident when one examines the scores for countries on this factor: the countries having high scores are on the rimland of the Soviet Union and China.

Factor two represents a U.S. trade pattern with less-developed countries. The factor scores show the consistent strong economic ties between the U.S. and Latin America.

Factor three is, perhaps, the Sino-Soviet counterpart of U.S. containment, but it would be improper to label it "penetration" or even "influence" without evidence of political change, subversion or conflict within the states which are high on this factor.

Another general finding is that Soviet behavior is much more complex than is that of the U.S. This is indicated by the larger number of independent Soviet factors and confirms the findings of the 1963 analysis.

A simplified illustration of the results is shown in Tables V-1, V-2, V-3, V-4 where the columns are independent factors and the rows are the correlations of the variables with the factors. Values less than $\pm$ 0.7 have been eliminated to emphasize the prime indicators for each factor. Note that the random number, which was introduced as a means of data quality control, correlates at not more than .17 on any of the factors. This means that 3% or less of the random variance introduced is subsumed on any factor. Not shown is the "random number factor" which emerged for each year. These values give validity to the factors, i.e., they are not artifacts of the analytical technique.

FIGURE V-2

MAJOR ACTOR INVOLVEMENT IN LESS DEVELOPED COUNTRIES INDEPENDENT FACTORS

Factors	Years 1959	1961	1963	1965
1. US Military, Economic and Technical Aid (Containment)	X * Middle East and Asia	X Middle East and Asia	X Middle East and Asia	X Asia
2. US Trade with Latin America	X	X	X	X (technical)
3. Sino-Soviet Economic, Military and Technical	X (without military)	X	X	
4. Soviet Military and Chinese non-military influence				X Middle East and Africa
5. Sino-Soviet Economic and Diplomatic Interaction (Africa and Asia vs. Latin America)				X
6. Soviet and Chinese Subversive Influence			X	
7. Chinese Subversive Influence	X Southeast Asia			
8. Chinese & Soviet Technical & Military Training		X Peripheral States to China	X Asian States	X
9. Soviet and East European Economic and Military Interaction	X Middle East		X	X
10. Soviet and East European Military Involvement		X		
11. Soviet and East European Economic Interaction		X		
12. Soviet, East European and US Economic Interaction (Populous vs. Nonpopulous)	X			X
13. US Economic Interaction (Populous vs. Nonpopulous		X		
14. US, East European Economic Interaction (populous vs. nonpopulous)			X	

* Regional Designations are those having high positive factor scores.

Variables	SOVIET AND EE MILITARY AND TECHNICAL ASSISTANCE 1	US TRADE WITH LATIN AMERICA 2
Soviet Union Military Personnel in a State	89	
Percentage of Imports from the Soviet Union	93	
Total Imports from the Soviet Union	83	
Percentage of Exports to Communist China	77	
East European Military Personnel in a State	83	
East European Civil Technicians in a State	82	
Civil Technicians Trained in Eastern Europe	92	
Percentage of Exports to Eastern Europe	75	
Total Imports from Eastern Europe	85	
Total Exports to Eastern Europe	89	
Years in the U.N.		79
Percentage of Imports from the U.S.		94
Percentage of Exports to the U.S.		87
Students in the Soviet Union		
Civil Technicians Trained in Communist China		
Chinese Economic Aid Extended		
Students in China		
Students in Eastern Europe		
Diplomatic U.S.		
Population		
Soviet Union Civil Technicians in a State		
Civil Technicians Trained in the Soviet Union		
Soviet Economic Aid Extended		
Eastern Europe Economic Aid Extended		
Communist Party Membership		
Percentage of Imports from China		
Total Imports from China		
Total Exports to China		
Military Personnel Trained in Eastern Europe		
Communist Party Split		
Border Eastern Europe		
Military Personnel Trained in US		
U.S. Military Grants		
Random Number	05	13

Loadings $\geq \pm 0.7$
Eigenvalue ≥ 0.5
20 Factor Solution
89% of Communality

DE A	FACTORS SOVIET AND CHINESE TECHNICAL ASSISTANCE 3	SOVIET, EE, AND U.S. TRADE AND AID WITH POPULOUS STATES 4	CHINESE TRADE WITH STATES HAVING LARGE COMMUNIST PARTY MEMBERSHIPS 5	US MILITARY AND TECHNICAL AID: CONTAINMENT 6
	99			
	87			
	98			
	96			
	86			
	-98			
		92		
		74		
		70		
		79		
		95		
			80	
			84	
			96	
			86	
			90	
			87	
				85
				74
				95
	02	17	-08	10

2

TABLE V-I

1959 MAJOR ACTOR INFLUENCE: 6 PRINCIPAL ORTHOGONAL FACTORS

Variables	SOVIET, CHINESE AND EE TRADE, MILITARY AND TECHNICAL ASSISTANCE	US TRADE AND AID, AN EE TRADE WI POPULOUS STATES
	1	2
Civil Technicians Trained in the Soviet Union	95	
Percentage of Imports from the Soviet Union	73	
Total Imports from the Soviet Union	99	
Total Exports to the Soviet Union	99	
Chinese Military Personnel in a State	84	
Chinese Military Grants	95	
Civil Technicians Trained in China	88	
Total Imports from China	84	
Total Exports to China	71	
Civil Technicians Trained in Eastern Europe	83	
Students in Eastern Europe	74	
Diplomatic Relations with U. S.	-84	
Population		
Total Imports from Eastern Europe		85
Civil Technicians Trained in the U. S.		72
U. S. Economic Aid Extended		81
Students in the U. S.		91
		82
Years in the United Nation		
Percentage of Imports from the U. S.		
Percentage of Exports to the U. S.		
Communist Party Membership		
Soviet Union Military Grants		
Military Personnel Trained in Eastern Europe		
Eastern European Military Grants		
Soviet Union Civil Technicians in a State		
Percentage of Exports to the Soviet Union		
Soviet Union Economic Aid Extended		
Eastern European Military Personnel in a State		
Soviet News Service		
Diplomatic Relations with the Soviet Union		
Random Number	03	01

Loadings > ±
Eigen
89% c
20 Fa

1

ADE D, AND ADE WITH OUS S	FACTORS US TRADE WITH LATIN AMERICA	EAST EUROPEAN AND SOVIET MILITARY ASSISTANCE; EE ECONOMIC AID TO STATES WITH A LARGE COMMUNIST PARTY	SOVIET NON-MILITARY ASSISTANCE	COMMUNIST FORMAL RELATIONS
	3	5	7	8
	86			
	85			
	78			
		76		
		90		
		87		
		93		
			81	
			90	
			79	
			76	
				77
				81
	-08	-02	09	-10

gs ≥ ± .7
alue ≥ .5
Communality
tor Solution

TABLE V-2

1961 MAJOR ACTOR INFLUENCE: 6 PRINCIPAL ORTHOGONAL FACTORS

Variables	SOVIET, CHINESE AND EE TRADE, MILITARY AND TECHNICAL ASSISTANCE 1	SOVIET, EE AND U.S. TRADE AND AID WITH POPULOUS STATES 2	U. TI W LA AI
Soviet Union Military Personnel in a State	95		
Soviet Union Civil Technicians in a State	77		
Civil Technicians Trained in the Soviet Union	77		
Percentage of Imports from the Soviet Union	79		
Percentage of Exports to the Soviet Union	73		
Total Imports from the Soviet Union	99		
Total Exports to the Soviet Union	80		
Chinese Communist Military Grants	97		
Total Imports from Communist China	73		
Total Exports to Communist China	87		
EE Civil Technicians in a State	82		
Civil Technicians Trained in Eastern Europe	86		
Population		93	
Total Imports from Eastern Europe		81	
Total Exports to Eastern Europe		75	
U.S. Economic Aid Extended		86	
Students in the U.S.		82	
Total Imports from the U.S.		70	
Years in the United Nations			
Percentage of Imports to the U.S.			
Percentage of Exports to the U.S.			
Students in the Soviet Union			
Chinese Communist Military Personnel in a State			
Chinese Communist Civil Technicians in a State			
Students in Communist China			
Military Personnel Trained in the U.S.			
U.S. Military Personnel in a State			
U.S. Civil Technicians in a State			
U.S. Military Grants			
Soviet Union News Service			
Diplomatic Relations with the Soviet Union			
Random Number	-02	-09	0

EE / ND / JS	FACTORS: U.S. TRADE WITH LATIN AMERICA	CHINESE MILITARY AND TECHNICAL AID TO PHERIPHERAL AREAS HAVING LARGE COMMUNIST PARTIES	U.S. MILITARY AND TECHNICAL AID: CONTAINMENT	COMMUNIST FORMAL RELATIONS
	3	4	5	11
	70			
	81			
	83			
		72		
		99		
		98		
		90		
			89	
			78	
			74	
			90	
				76
				77
	04	01	06	07

Loadings ≥ ± .7
Eigenvalue ≥ .5
87% of Communality
20 Factor Solution

TABLE V-3
1963 MAJOR ACTOR INFLUENCE:
6 PRINCIPAL ORTHOGONAL FACTORS

Variables	SOVIET AND EE TRADE AND TECHNICAL AID AND SOVIET MILITARY ASSISTANCE 1	SOVIET, EE AND U.S. TRADE AND AID WITH POPULOUS STATES 2	C S A A W C
Soviet Union Military Personnel in a State	85		
Percentage of Imports from the Soviet Union	91		
Percentage of Exports to the Soviet Union	95		
Total Imports from the Soviet Union	95		
Total Exports to the Soviet Union	93		
Population		96	
East European Military Grants		92	
Students in the U.S.		79	
Communist Party Membership			
Military Personnel Trained in Communist China			
Chinese Communist Civil Technicians in a State			
Civil Technicians Trained in Communist China			
Students in Communist China			
Years in the United Nations			
Percentage of Imports from the U.S.			
Percentage of Exports to the U.S.			
U.S. Military Personnel in a State			
U.S. Civil Technicians in a State			
U.S. Military Grants			
Percentage of Exports to Eastern Europe			
E.E. Economic Aid			
Random Number	-02	04	

Lo
Ei
84
20

	FACTORS			
EE ND S	CHINESE AND SOVIET MILITARY AND TECHNICAL AID TO STATES WITH LARGE COMMUNIST PARTIES	U.S. TRADE WITH LATIN AMERICA	U.S. MILITARY AND TECHNICAL AID: CONTAINMENT	EE ECONOMIC AID AND TRADE
	3	4	7	10
	95			
	75			
	88			
	99			
	96			
		75		
		83		
		80		
			96	
			91	
			94	
				76
				92
	-01	00	-08	03

Loadings $\geq \pm .7$
Eigenvalue $\geq .5$
84% of Communality
20 Factor Solution

2

TABLE V-4
1965 MAJOR ACTOR INFLUENCE: 6 PRINCIPAL ORTHOGONAL FACTORS

Another way of viewing the structure of the data is to construct a profile of factor loadings to see what is highly correlated with a factor and what is not. This is illustrated for factor three in Figure V-3 where Chinese and Soviet behaviors have high positive correlations and U. S. behaviors with a very low correlation. For this reason factor three was interpreted as representing the Chinese and Soviet Technical and Military Training dimension.

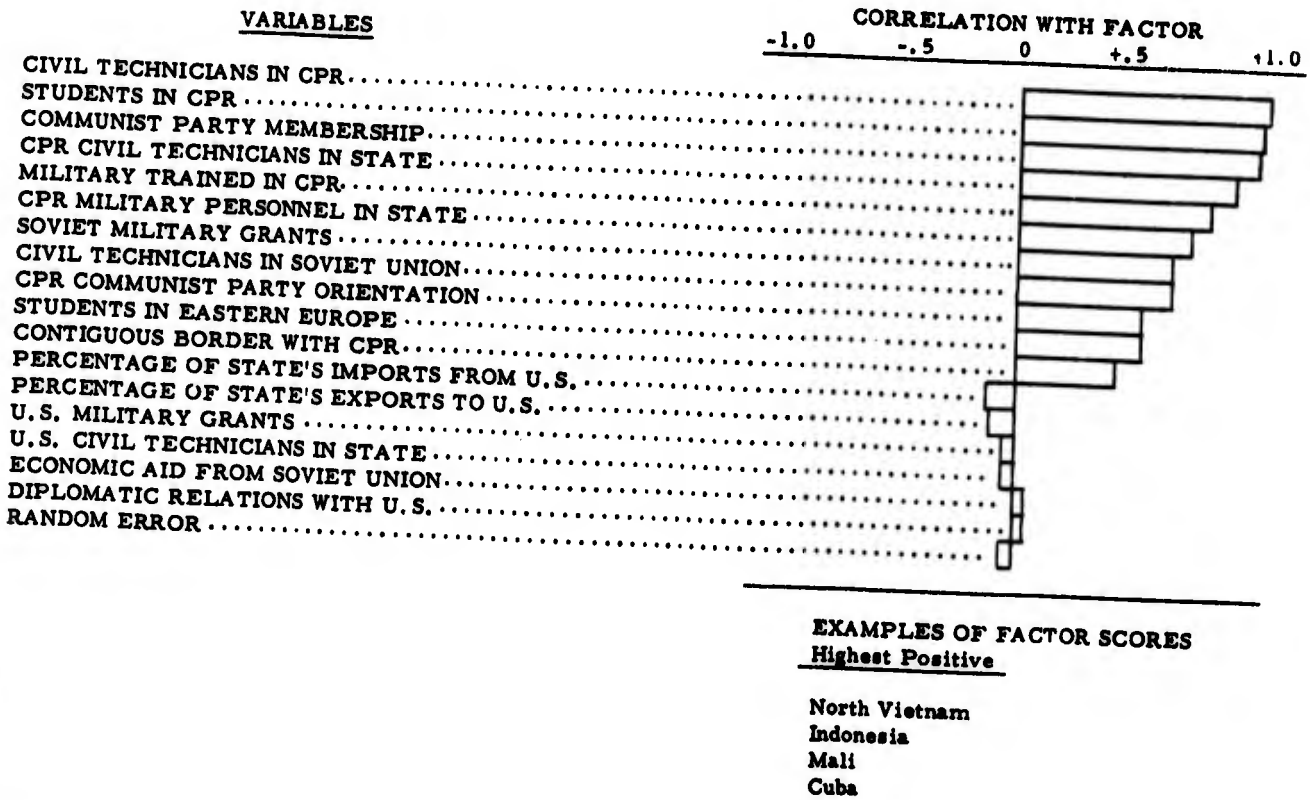


FIGURE V-3
CHINESE AND SOVIET TECHNICAL
AND MILITARY TRAINING: 1965

To gain more information on how the nations score on the factors, examine Figures V-4, V-5, V-6, V-7, and V-8 which illustrate once again the four years of interaction data but this time for two independent factors on each figure. Figure V-4 compares country scores for two independent trade patterns identified by the factor analytic model. Figures V-5 through V-8 show the U.S. "containment" factor on the abscissa while the ordinate is the analogous pattern for the Communist countries. The units are standard deviations which means that values above ± 2.0 are extremes. Because only a few of the 84-86 countries stand away from the origin any substantial distance, we may conclude that great power influence (as defined herein) is highly selective and that many countries in our sample fall into a zone of indifference (near the origin) via-à-vis the four major actors.

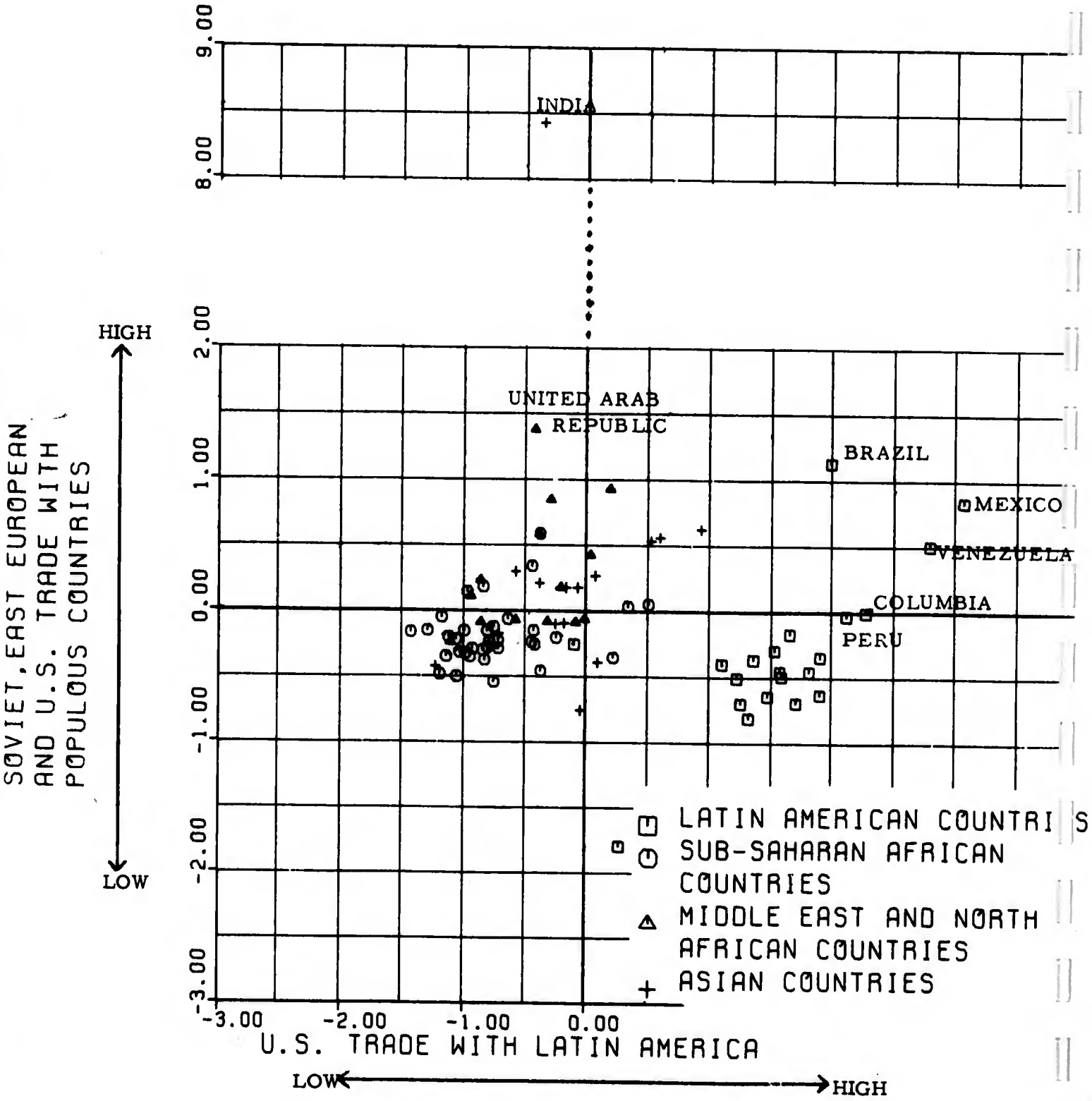


FIGURE V-4
SOVIET, EAST EUROPEAN AND U.S. TRADE AND AID WITH POPULOUS COUNTRIES VS. U.S. TRADE WITH LATIN AMERICA

COUNTRY SCORES 1965 n = 86

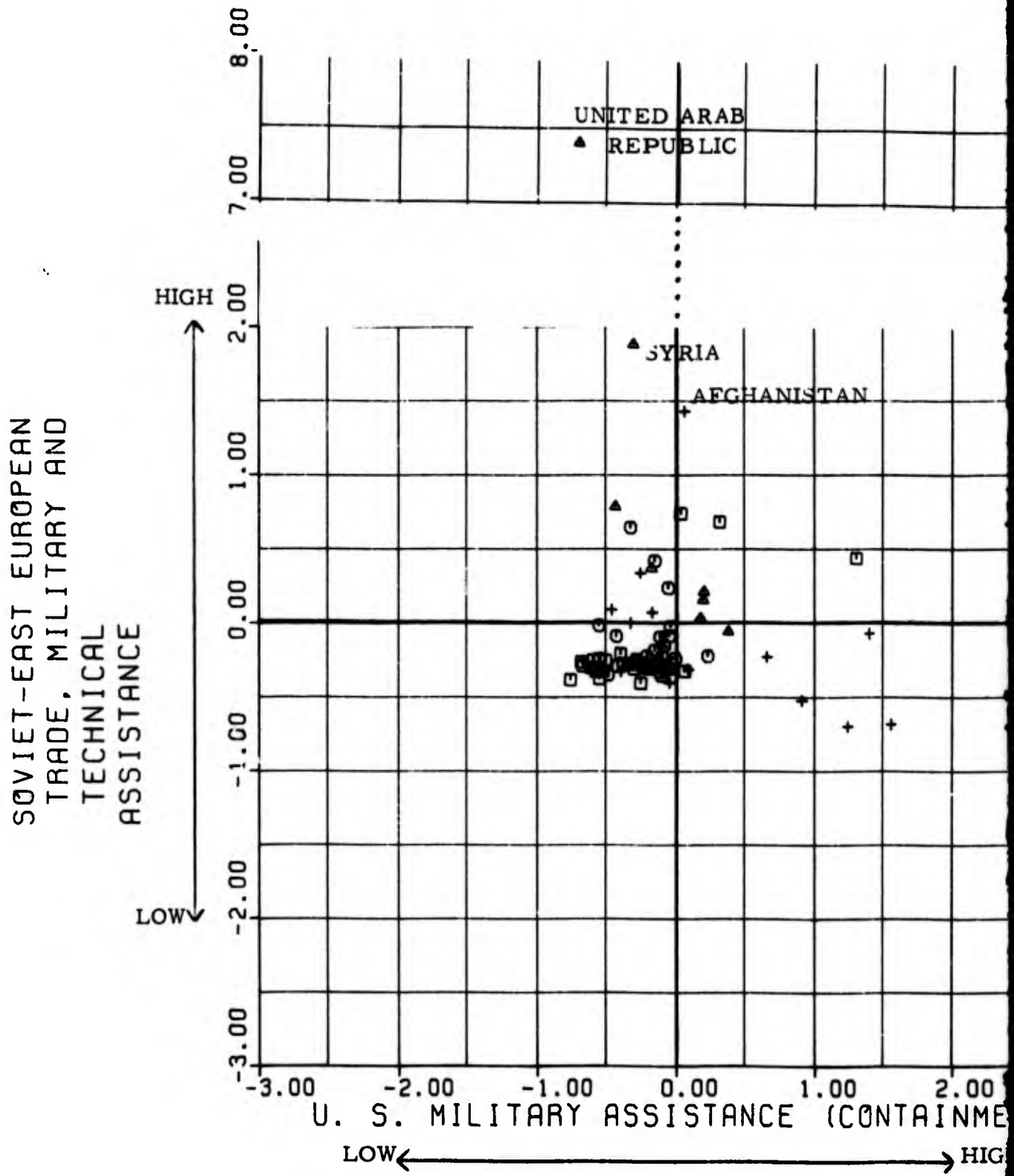
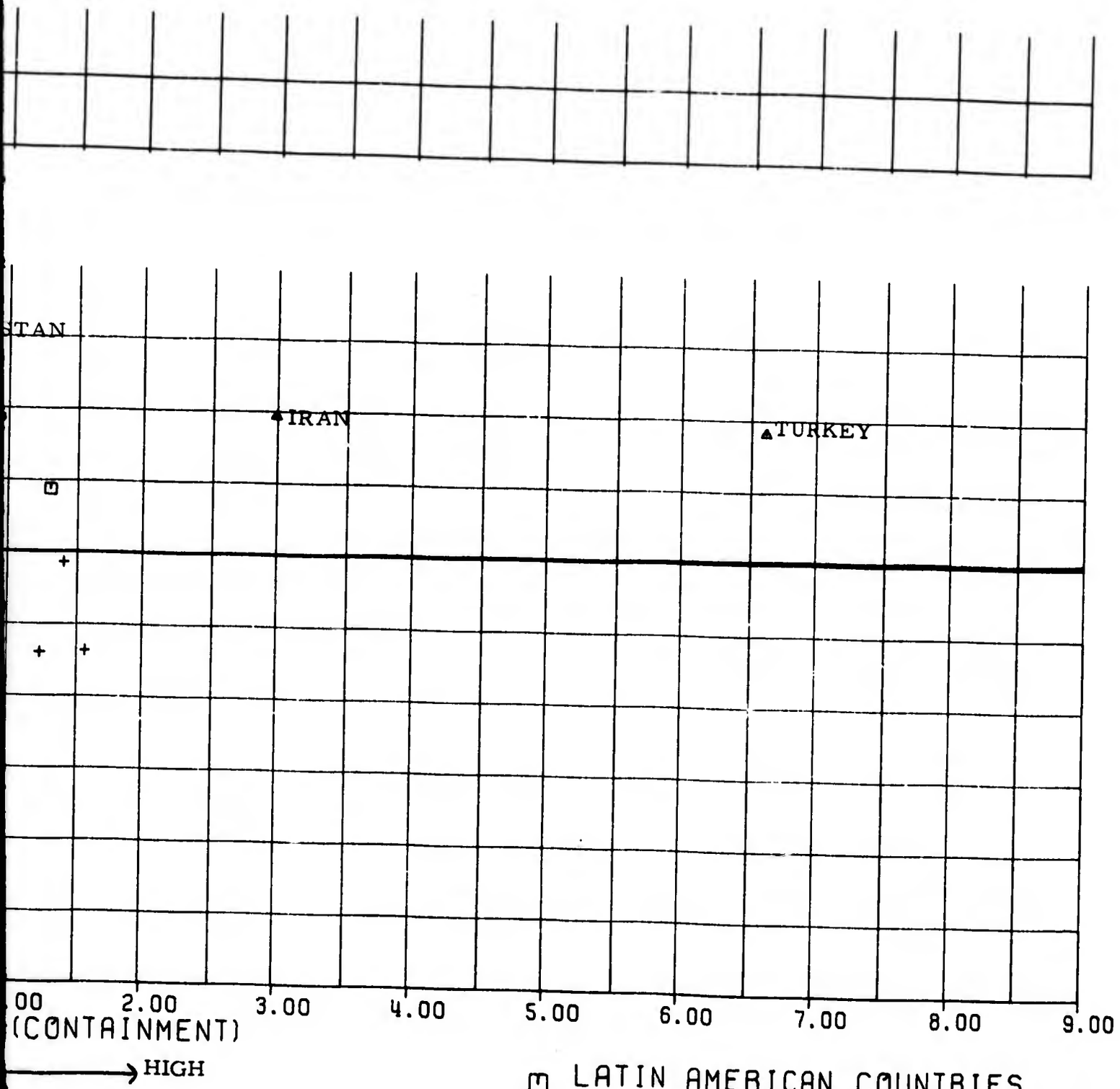


FIGURE
SOVIET-EAST EUROPEAN TRADE, MILITARY AND
TECHNICAL ASSISTANCE VS. U.S. MILITARY ASSISTANCE (CONTAINMENT)

COUNTRY SCORES 1959 n = 84



- LATIN AMERICAN COUNTRIES
- SUB-SAHARAN AFRICAN COUNTRIES
- MIDDLE EAST AND NORTH AFRICAN COUNTRIES
- ASIAN COUNTRIES

2

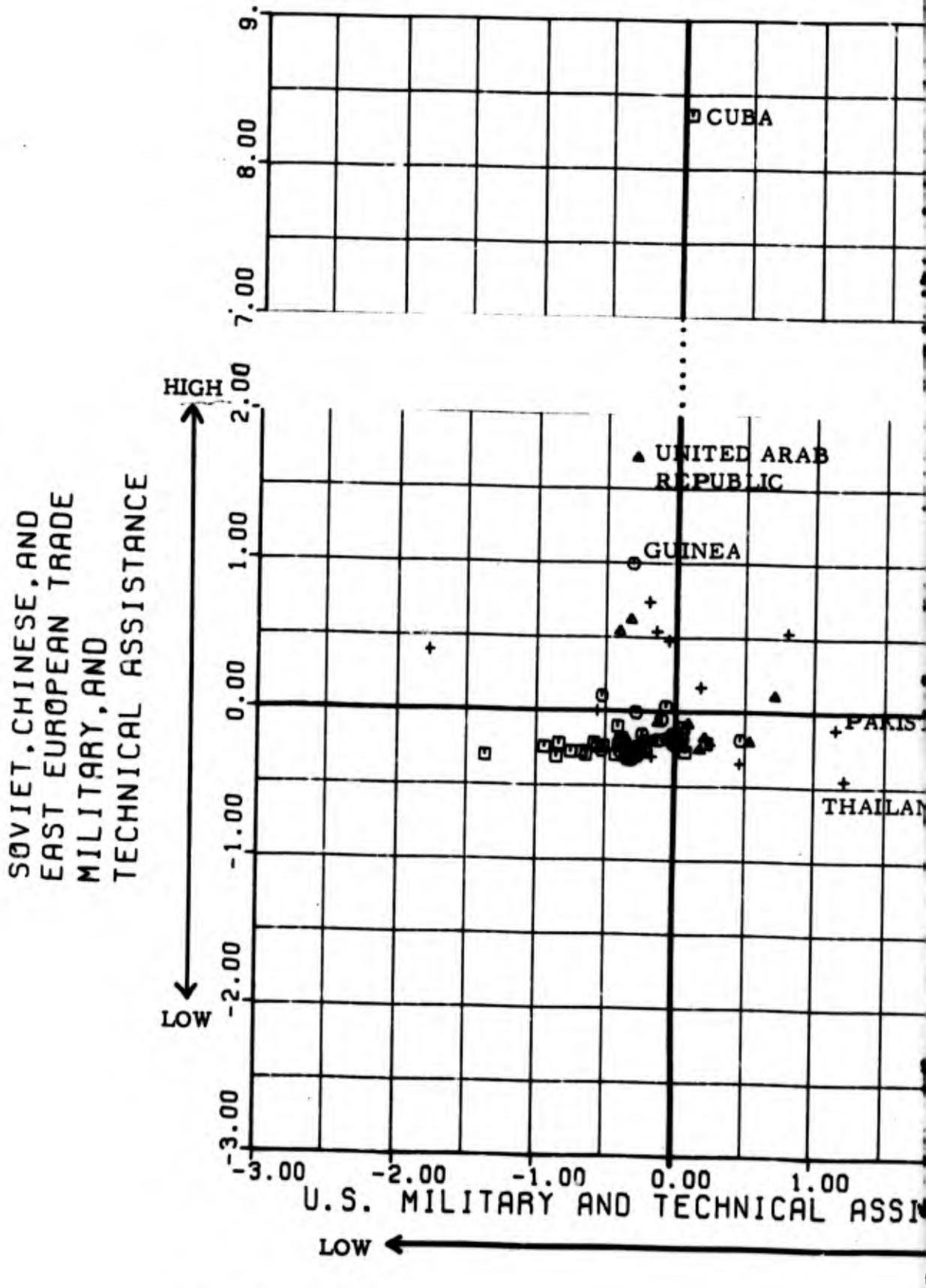
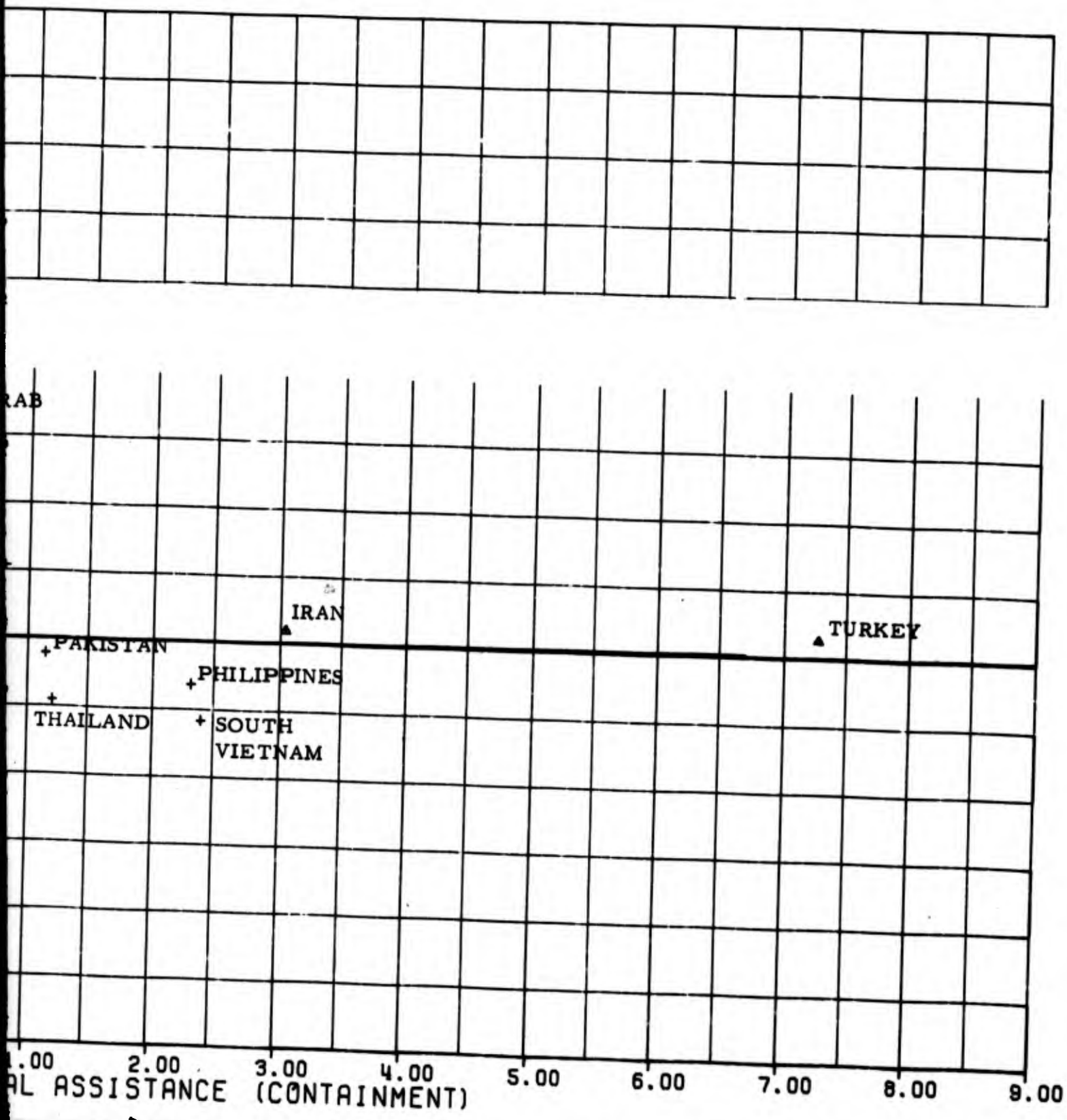


FIGURE
SOVIET, CHINESE, AND EAST EUROPEAN TRADE, MILITARY AND TECHNICAL ASSISTANCE VS. U.S. MILITARY ASSISTANCE (CONTAINMENT)

COUNTRY SCORES 1961 n = 84


RAB
IRAN
TURKEY
PAKISTAN
PHILIPPINES
THAILAND
SOUTH VIETNAM
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
AL ASSISTANCE (CONTAINMENT)
HIGH
LATIN AMERICAN COUNTRIES
SUB-SAHARAN AFRICAN COUNTRIES
MIDDLE EAST AND NORTH AFRICAN COUNTRIES
ASIAN COUNTRIES

2

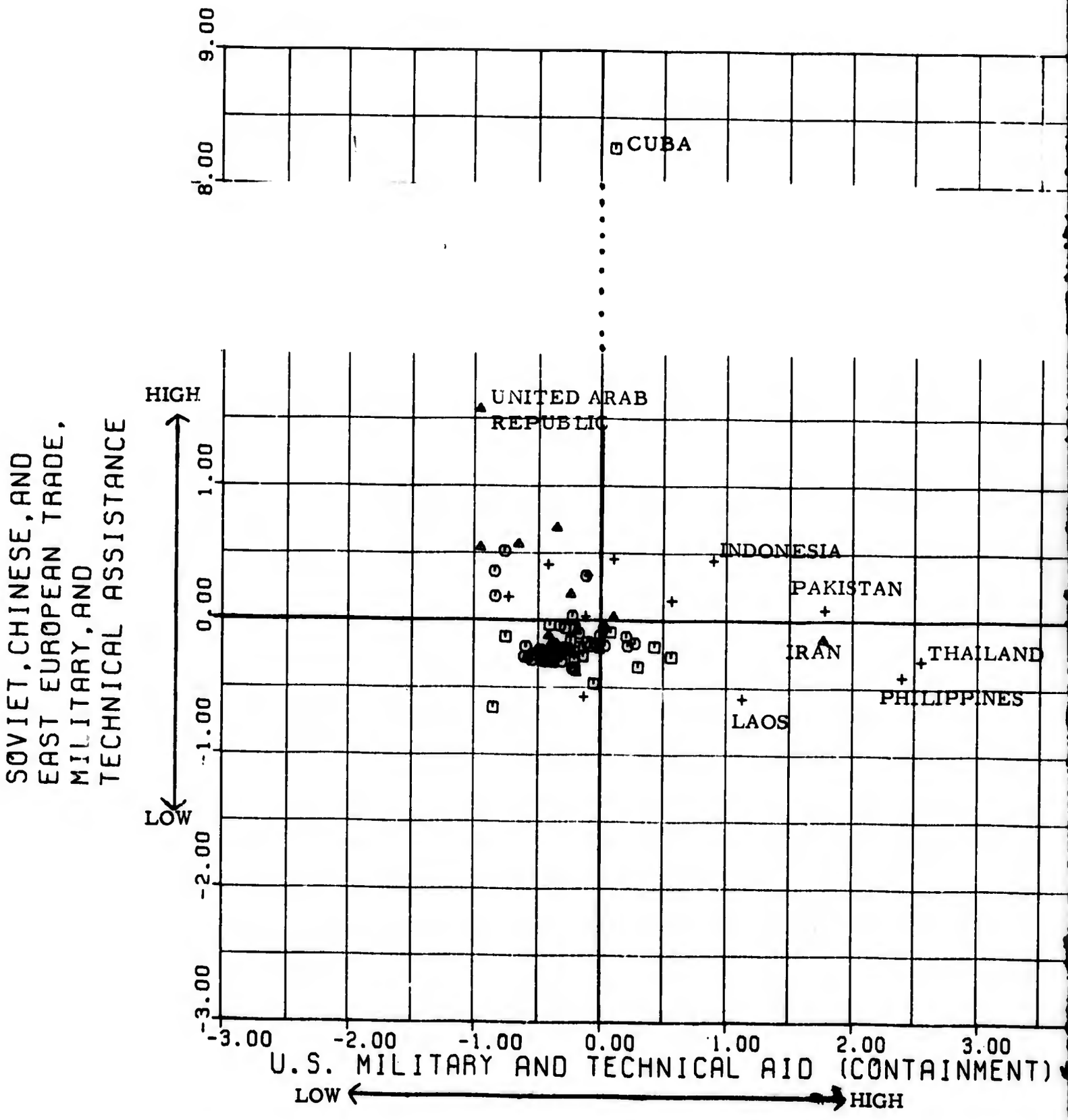
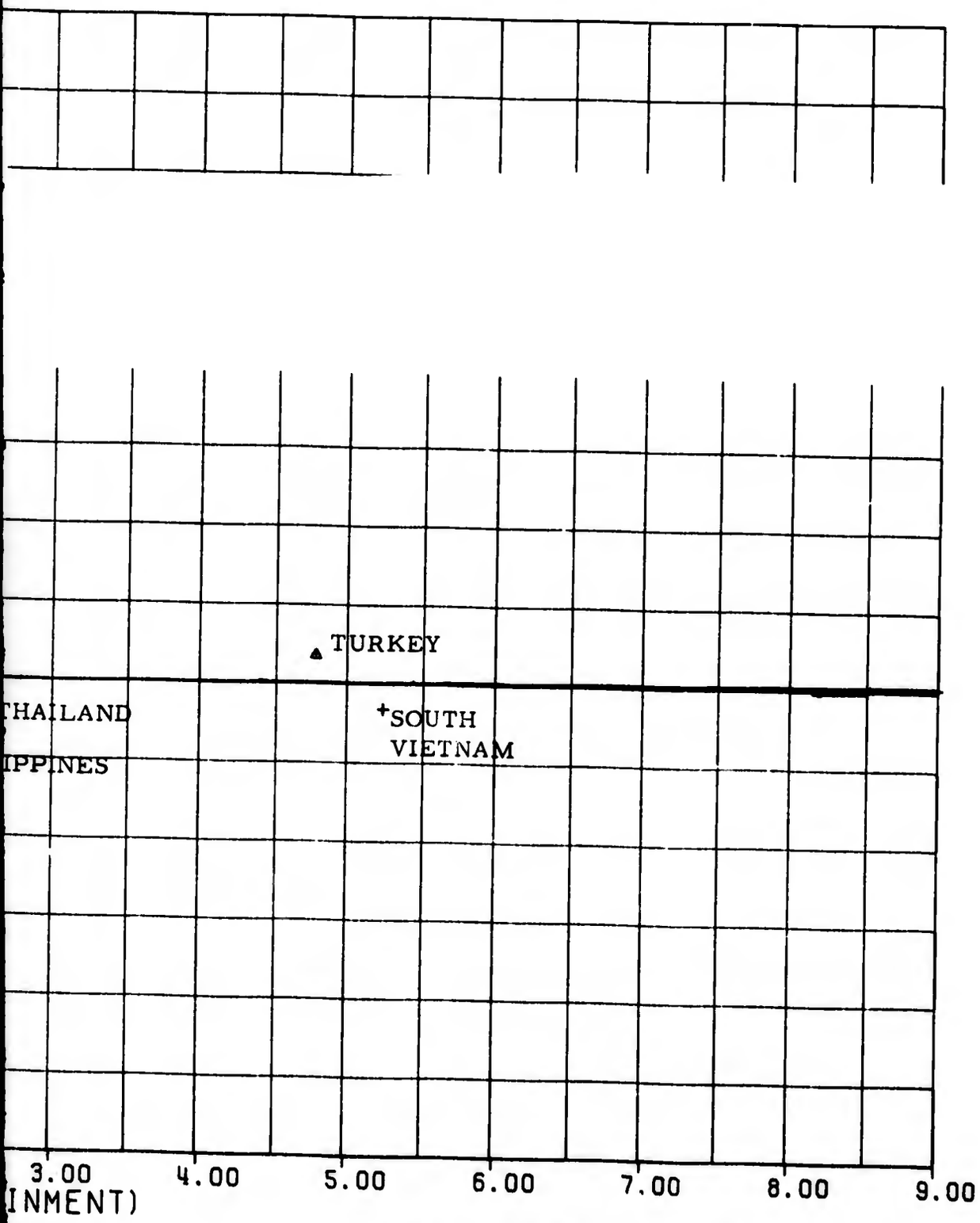


FIGURE
SOVIET, CHINESE AND EAST EUROPEAN TRADE, MILITARY AND TECHNICAL ASSISTANCE VS. U.S. MILITARY AND TECHNICAL AID (CONTAINMENT)

COUNTRY SCORES 1963 n = 85



□ LATIN AMERICAN COUNTRIES
○ SUB-SAHARAN AFRICAN COUNTRIES
△ MIDDLE EAST AND NORTH AFRICAN COUNTRIES
+ ASIAN COUNTRIES

2

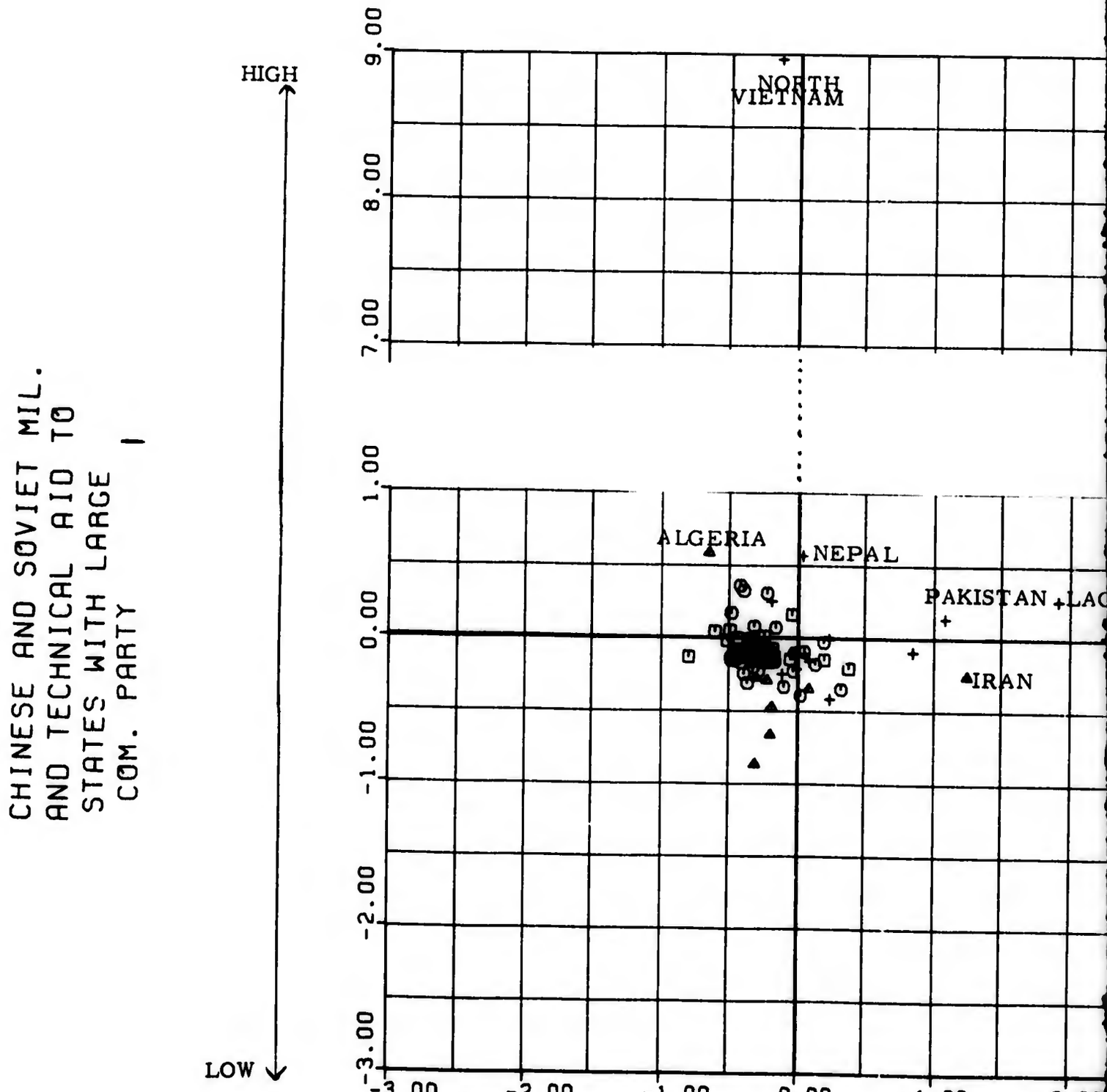
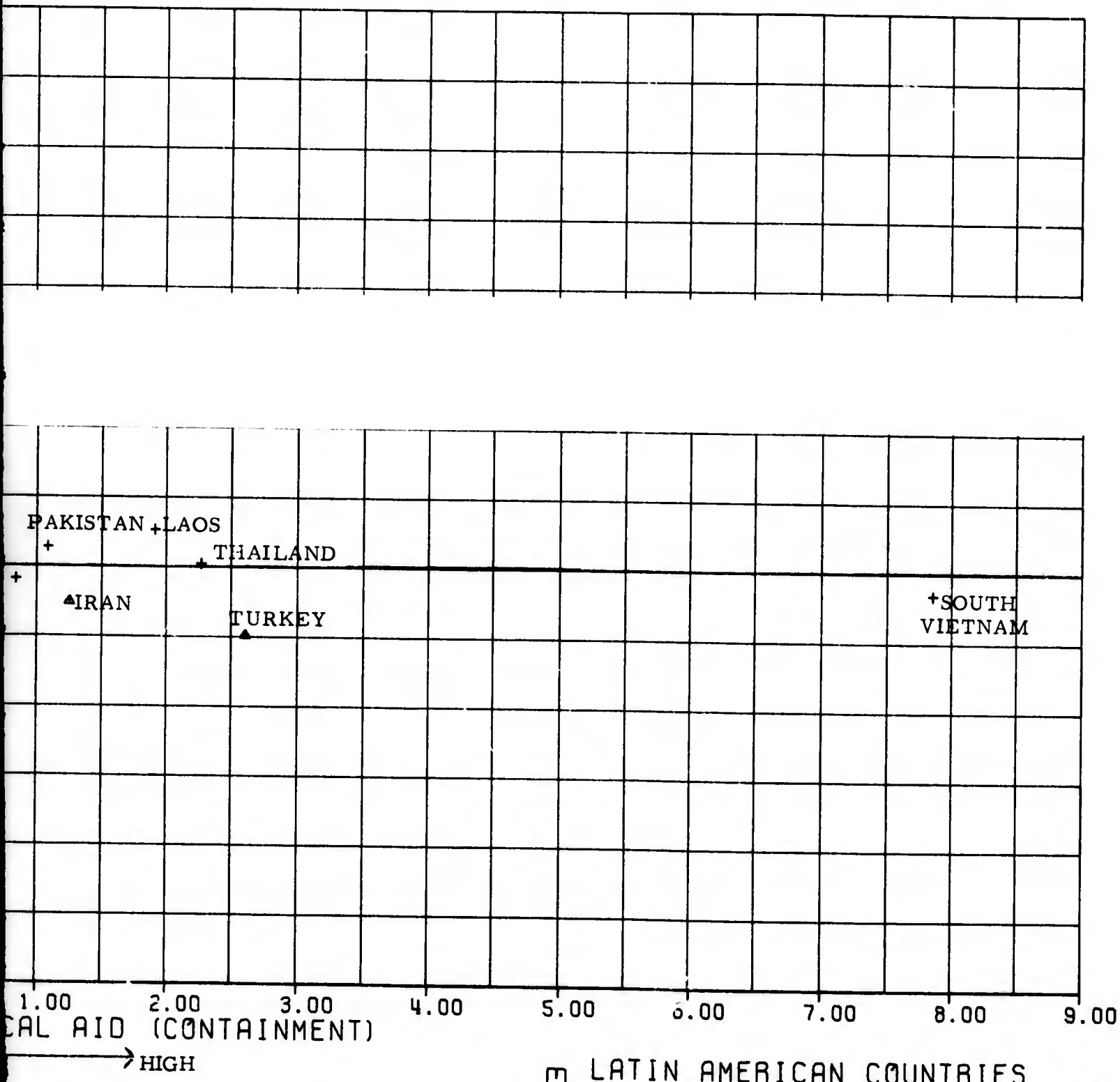


FIGURE
CHINESE AND SOVIET MILITARY AND TECHNICAL AID TO STATES WITH LARGE COMMUNIST PARTY VS. U.S. MILITARY AND TECHNICAL AID (CONTAINMENT)

COUNTRY SCORES 1965 n = 86


PAKISTAN
LAOS
THAILAND
IRAN
TURKEY
SOUTH VIETNAM
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
CAL AID (CONTAINMENT)
HIGH
LATIN AMERICAN COUNTRIES
SUB-SAHARAN AFRICAN COUNTRIES
MIDDLE EAST AND NORTH AFRICAN COUNTRIES
ASIAN COUNTRIES

2

Summary of Findings, 1959-1965 Study

1. Three major factors, each accounting for substantial variance, emerged from the data. They define the U.S. policy of containment, Sino-Soviet economic, military and technical interaction, and U.S. trade with Latin America.

2. Soviet behavior is much more complex than is Chinese, U.S., or Eastern European toward less-developed countries.

3. Much Soviet and Chinese interaction with less developed countries is neither subversive nor economically exploitive. The strongest pattern is one of trade, aid, and technical assistance.

4. The primary indicators of major power interaction with less-developed countries are:

Patterns (Factors)	Indicator(s)
Soviet and East European Military and Technical Assistance	Percent of imports from the Soviet Union
U. S. Containment Policy	U. S. military grants
U. S. trade with Latin America	Percent imports from the U.S.

5. A relatively small number of less-developed countries have high scores on the patterns of great power involvement. While this implies a selective allocation of scarce resources by the four major actors, there are strong regional groupings and a greater number of countries appearing as targets of U.S. efforts than there are for the Soviet Union or China. This highly selective behavior of the major actors is further illustrated by the year to year stability shown by the strongest factors and the consistent high scores of the "target" countries on these factors.

SECTION VI

RESEARCH ON PROBLEMS OF POLITICAL INSTABILITY AND VIOLENCE

Introduction

Political instability and the outbreak of violence in the underdeveloped parts of the world seem certain to pose policy problems for the U.S. There may be calls for American aid, economic or military, from governments threatened by internal or foreign warfare. An intelligent U.S. response to instability requires knowledge about types of situations and conditions most likely to produce violence and threats to U.S. interests. We need to know the expected frequency and magnitude of political violence and the likely effect of alternative policies on it. More knowledge is needed on the extent and effect of outside influence on violent upheavals in poor areas. Response with economic, technical, or military means requires knowledge about the types of governments which are likely to withstand the rigors of the development process and to be able to provide necessary and reasonably efficient social services for their populations. American commitments to governments unable to cope with the demands of social change and economic development should be commitments which are commensurate with a true capability to help maintain stability and to foster democratic change.

Social science empirical research has treated these questions and, though answers vary with peculiar local conditions, there is a body of useful information about the kinds of socio-economic trends that accompany both instability and upheaval in developing states and the kinds of institutions necessary to manage these trends. This literature has been surveyed and digested in Appendix C. This section contains a summary of the most relevant findings for the Navy as it makes long-range plans for the assistance of challenged governments or for the direct use of U.S. forces to prevent or defeat political violence. The characteristics of a typical developing state which is prone to internal and foreign war are also suggested. Some indices of instability are compared and related to those countries chosen for in-depth study by the NRL group on Special Warfare requirements. The relevance of these findings and projections to the U.S. Navy and other Government agencies are summarized at the end of this section.

Statement of the Problem

Several studies have attempted to account in some way for the outbreak of conflict by studying the relationship of a nation's characteristics to the conflict it experiences. Some research has attempted to relate certain national attributes to the type, frequency, and magnitude of conflict. Was the presence or absence or the degree of presence of a certain national characteristic necessary and sufficient for the outbreak of conflict?

In order to make meaningful and broad comparisons across several nations one must examine a representative number of countries in sufficient detail. Individual case studies (country by country) of national attributes and conflict and an overall comparison and summary of these can create an unmanageable and complex mass of anecdotal information with too small a population from which to generalize. The solution used by most investigators whose work is cited in this report is the collection and analysis of aggregate data* describing attributes across nations and relationship of this data to quantitative data on conflict. Despite some similarities, the studies differ in the problem under study (some studies are concerned only with foreign conflict, others with internal conflict), the variables (attributes) chosen, and the methods of analysis used.

We will be concerned with conditions of instability in the world that have implications for future violent upheaval. Since much traditional international relations literature has concerned conflict situations among great powers, along with their alliance-building and military power capabilities, there is a dearth of useful information and conclusions about conflicts in and among and within poor or developing states. Many social scientists are beginning to meet the need for rigorous study of the correlates of violence. This research seeks valid generalizations and predictions wherever possible, and often produces or implies policy prescriptions of use to the Navy and other government agencies. It also suggests areas of research crucial to a better understanding of the causes of violence.

Several investigators have speculated about the world as we approach the year 2000. Great conflict potential will exist. Newly established states will still be fighting the battle of nationhood--the battle to unite diverse ethnic, linguistic, and religious factions. New states may fight between themselves over racial, ethnic, territorial, or financial disputes--just as their predecessors, the "established" states, have done. Their weakness will continue to tempt great and medium powers to intervene in their internal affairs.

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* See the Technical Note on aggregate data, appended.

Russett (1966)* has projected trends of economic growth to the year 1975, and finds that although more states will be richer in media and educated elites, the gap between the few economically wealthy great powers and the multitude of poor states will widen. This means that the rich will get richer and the poor will know about it.

It would be easy to conclude that all of this carries grave threats to the United States and affords great opportunities for states interested in fomenting insurrection within the poorer states and welding them into an anti-Western alliance system. Before drawing such conclusions, however, one should examine very carefully the findings of recent studies dealing with the relationship of socio-economic conditions and violence. We must seek evidence about the disputes over wealth or status that make violence likely to occur, and test for the likely extent of such violence, the degree of instigation of such violence coming from outside the country, and the likely involvement of U.S. interests in such violence. We must also be conscious of the shortcomings of the studies themselves and the questions they leave for further study. Hopefully, we will obtain a better understanding of conditions which allow or lead to violence, and thus a better understanding of the type of resources the U.S. might allocate to prevent or halt such violence.

The importance of economic conditions will be reviewed to assess the effects of this potentially important predictor to internal war. Perhaps violence is most likely where poverty is worst,** or perhaps a curvilinear relationship holds between economic development and violence in which domestic or foreign violence reaches a maximum in states at the midpoint of political and economic development. U.S. policy in the latter case might stress economic help for states going through the crucial transitional period. The U.S. might also have to come to expect a certain level of violence to be associated with this stage, rather than view such violence as unusual and a lasting danger to American security. The proper American response in socio-economic terms could help prevent the necessity for subsequent American military involvement.

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* The full references for the sources cited in this section are listed in Appendix E, pp. E-33 to E-37.

** This was said by Secretary of Defense McNamara in an address before the American Society of Newspaper Editors, Montreal, Canada, May 18, 1966.

Besides the domestic economic determinants of internal instability and violence, there are other candidate predictors which have been tested. These include: the legitimacy of the regime; its coercive potential; the change in aspirations of peoples; deprivation; the effects of foreign conflict; the effects of foreign economic penetration into a state; degree of political mobilization within a state; the effects of unequal land distribution; and popular attitudes toward the government. All these variables have been related by researchers, either directly or in combinations involving intervening variables, to various indices of political instability and violence. The reliability of these indices (e.g., "turmoil," "revolution," "conspiracy") as suitable independent variables has been adequately established by several studies.

Method of Analysis

Though internal and interstate warfare may be similar in that there are often low levels of military involvement, there are other key differences. Most importantly, the political differences between states are fundamentally different than those between governments and insurrectionary groups. From a U.S. security viewpoint, the distinction is also very important because U.S. commitments are, for the most part, guarantees to resist foreign aggression. The case of SEATO, where U.S. policy has been to engage in active military operations during an insurgent challenge, is an exception. In Europe and Latin America, U.S. policy has tended to draw a distinction between internal war and actual or threatened aggression across borders or at sea, though increasingly this distinction is difficult to show clearly.

With this distinction in mind, the relevant empirical research was divided into that dealing mainly with intra-state political instability and violence and interstate war. Both kinds of events could have seriously destabilizing effects within regions, upon the credibility of U.S. commitments, and upon the accomplishment of peaceful, democratic change.

The basic purpose in reviewing these studies was to derive knowledge on the state of predictive capability for military contingency planning. From the analysis of conflicts (Section III) and the dimensions of foreign influence (Section V) it should be possible, in the light of findings of other studies, to proceed with tests of causal models applied to low-level conflict.

The criteria applied in the review of nineteen research reports were as follows:

- there must be some theoretical structure or suppositions behind the study;
- the variables must be defined;
- method of measurement must be explicit;
- hypotheses or propositions tested or derived must be stated;
- the analytical procedures must be described;
- the major findings must be stated.

In addition, a critical evaluation of each research report and its relevance (if any) to Navy operations was made.

Findings

Several notable substantive findings emerge from these studies. They are tentative but useful guides into possible causes and effects of violent upheaval in the less-developed world.

1. Rummel's work points to the basic difference between intra-national and international conflict behavior. The two do not seem to occur simultaneously with any degree of regularity. The important tentative conclusion is that states are unlikely to fight while undergoing domestic upheaval and turmoil. This goes along with the theory that few leaders will risk international war when they are unsure of the loyalty of key societal groups (such as the military, students or bureaucracy). It contradicts the notion that leaders are likely to seek an outlet for domestic popular frustration in foreign war. It is also useful to note that few measures of economic well-being or privation are associated with foreign conflict. Absolute levels of economic development seem to have little bearing on the likelihood of inter-state war. The importance of relative levels of economic development, i.e., relative to other states, has not been sufficiently researched.

2. For certain types of countries, various kinds of internal conflict may indeed lead to external reaction and even war. Though few new African states were included in these studies, there is some evidence that in Latin America foreign war is not a likely product of domestic strife--rather diplomatic sanctions are. In Socialist or Middle Eastern countries, on the other hand, internal revolution may lead to war. Nesvold also points to relatively high scores for political violence in those Latin American states having authoritarian regimes during the period 1948-1961.

3. Russett provides evidence of the importance of regional ties in lessening interstate conflict. Trade ties and geographical proximity may increase chances for war by increasing the number of potential conflicts. If organizational ties have developed (such as the OAS), and if countries are at roughly the same stage of development, there is much better chance for management of these conflicts than if ties are loose, development uneven.

4. The importance of "relative deprivation"* as a possible cause of internal war is highlighted by several of the studies. Though the Feierabend's deal with a very general definition of conflict, their findings generally agree with Gurr's. Although neither study directly uses attitudes of citizens to measure feelings of deprivation, they provide inferential evidence that those citizens perceiving themselves disinherited by the political system tend to react violently. Russett's finding of a close correlation between unequal land distribution and violent politically-related deaths seems to point to a range of specific types of deprivation most resented. Gurr indicates a near certainty of strife accompanying persistent deprivation.

5. The coercive potential of a government does not, in the long run, inhibit the emergence of violent reaction to persistent deprivation. A ready government force does, however, seem to be effective in reducing the violence-producing effect of short-term deprivation. Moderate levels of government force may, however, increase strife-producing popular resentment without being able to put down the violence. The socio-economic source of persisting deprivation must be erased for effective long-term insurance against insurrection; applications of force should be firm enough to contain reactions to specific or short-term grievances.

6. The terrain and transportation network of a country, the relative strength of Communist Party organizations, and the extent of external support for initiators of strife also may be very important conditions affecting violent uprising. Anti-U.S. feeling in the country, while unlikely to cause violent strife, seems to be a key warning sign that discontent in the country is widespread on other issues.

7. It is likely that moderate to high levels of violence are an inevitable consequence of the process of development. In developing societies, individual acts of violence may be perceived by the population as less significant politically than they would be in western democratic societies. The

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* Relative deprivation is defined as the difference between what people expect to get and their capability to satisfy such expectations. Deprivation is usually measured in terms of a value which can be quantified and upon which measurements are available, e.g., economic wealth, political participation, educational opportunity, religious discrimination, etc.

proper type of response in such situations is not clear-cut, and the possibility of over-response by the government involved or by its allies is great. The weak relationship noted by Gurr between past and present levels of civil violence should cause second thoughts about attributing great future importance to present and past levels of civil violence. More study of this relationship may indeed show a "violence syndrome" in developing states lasting for a few years and then quieting for a period, possibly reappearing if grievances grow. Nesvold and others have found a "development syndrome" in the curvilinear relationship between economic development and violence experienced at each level of development. Greatest amounts of internal violence occurred at the middle levels of development.

8. The findings of Gurr, Nesvold, Rummel, and the Feierabends indicate that there are distinct types of internal violence. Generally these types may be classified as: (1) "turmoil" (i.e., mass strikes, revolts, riots, etc., of a spontaneous nature); (2) attempts to change ruling groups (palace coups, revolts, purges, and other types of conspiracy); (3) guerrilla war, politically motivated assassinations, etc., involving much bloodshed and organization, civil war and political executions. These may be termed "internal war," borrowing Eckstein's phrase.*

* In providing these labels we have combined the categories of Gurr, Nesvold, Rummel, and the Feierabends. Necessarily there has been some distortion. While they all agree on a "turmoil" designation as the lowest level of violence, the authors disagree over the labels given to the other forms, and over the placement of guerrilla war on the conflict spectrum: Gurr puts guerrilla war with political executions and civil war in an "internal war" category; Nesvold puts it with political assassinations in the third level of violence on a continuum--above coups but below civil war; and Rummel seems to agree that it belongs with assassinations in a "subversive" category (but he does not include civil war and political executions among the variables he considers). We adopt Gurr's terminology because he has combined both Rummel's and Tanter's factor analysis results. He renamed Rummel's "revolution" category "conspiracy" (to include coups, plots, and purges); and renamed the "subversive" dimension "internal war" (so that guerrilla war might be combined with civil war, executions, and assassinations). This makes intuitive sense, since guerrilla war may well have taken the place of conventional civil war in many new states, or the two may alternate. Thus, they seem to have much in common in terms of high levels of deaths and destruction, and strong organizational leadership. The Gurr types also avoid the confusion involved in the term "subversive," since none of his categories necessarily imply foreign support or interference. Such outside intervention may or may not be involved in any of the types of violence: turmoil, conspiracy, or internal war.

Rummel and the Feierabends, however, fail to test for possible relationships between these types of violence (they stop with a factor analysis designed to identify only "unrelated" dimensions). Nesvold goes on to find that these types seem to fit a single continuum from low to high magnitude of violence. States having violence at the level of political assassinations, for instance, also are likely to have less lethal forms of upheaval like coups d'etat and riots. We might add that there may be a range from low to high at each of these levels as well; i.e., riots may vary in magnitude, coups may be violent or not, guerrilla war might be sporadic or severe. The implications of these findings are:

(a) that violence tends to be a societal pattern - many kinds of violence are likely to occur in the most unstable societies;
(b) there are distinct types of violence, and the immediate causes of each may vary even though they are related by underlying psychological motivations;
(c) certain countries may be more prone to violence of a certain type than are others.

The Society Prone to Low-Level Warfare

It is possible to construct, from the various studies, a composite model of the underdeveloped state subject to internal and/or foreign conflict. The studies most applicable here are those of Russett (Handbook), Tanter and Midlarsky, the Feierabends, Nesvold, and Gurr.

First, a statistical description of the "unstable society" will be presented. Because it seems that countries in transitional stages of development are more subject to domestic violence than those at the lowest and highest stages, we will present a composite of what Russett calls "traditional civilizations" and "transitional societies." (These are the second and third of his five development stages.) The typical society subject to domestic upheaval would have the features shown in Table VI-1 (see Page VI-9).

As the opposite end of the spectrum of stability, the Feierabends (1966, p. 261) posit as a stable society one which has over 90% literate; 65 or more radios and 120 or more newspapers per 1000 population; 2% of the population having telephones; 2525 or more calories per day per person; not more than 1900 persons per physician; GNP/capita at least

TABLE VI-1

TENTATIVE INDICATORS OF POLITICAL INSTABILITY

Indicator:	GNP/ Capita	% Urban	% Adult Literate	Higher Education/ 100,000	Inhabitants Per Physician	Radios/ 1000 pop.	% Voting	% Military	% Expenditure of Central Government
Range:	$70 - $239	0-72%	1-91%	3 - 976	1394 - 95,000	3 - 161	0 - 95%	.05 - 11%	9 - 48%
Adjusted Mean*	$145	17%	35.8%	140	10,840	45	44%	1.39%	23.2%

* Adjusted mean is the mean of this grouping which combines Russett's stages II and III (1963, pp. 294-95).

$300; and 45% or more of the population living in cities. One might add that the government of a developing country must be spending considerably more than 23% of its GNP to have practical hope of keeping pace with growing demands.

Nesvold (1967, p. 10) states that there is a clear tendency for the most industrialized nations to be the most internally peaceful, though there are many exceptions. For the period 1949-62, the United States is in the center of the instability spectrum, France on the high end, and Saudi Arabia, Afghanistan, Ethiopia, Liberia and Cambodia on the low end. Within a typically "developing" society subject to instability, one finds large numbers of persons forming an urban labor pool as they move to the cities and the developing factory system and service trades. The frustrations of this new existence are great and may send many into the vicious circle of alternative moves back to the countryside and back again to the city. Citizens may begin to organize interest groups and to look increasingly to the government for needed benefits.

The unstable society is likely to have a corrupt or weak civil bureaucracy unable to respond effectively. The government will have to rely on the army to hold power, and therefore the political system is vulnerable to military coups or popular revolution, depending on the army's position and strength. There is likely to be widespread discontent which may be reflected in anti-Americanism. If the road system is poor and there are rural areas in the midst of mountains or jungles, there may be a good basis for a guerrilla movement, either indigenous or foreign supported. Finally, if the urbanization process is leading to greater literacy, the prospects for eventual democracy and an elective political system are greater, but so are the prospects of domestic turmoil (strikes, mass revolt, etc.) if the institutions (bureaucracy, political parties, interest groups) are not developed rapidly and efficiently enough to satisfy the growing demands.

It is also useful to relate the strength of the communist party to the projected unstable society and the process of development. Roger Benjamin and John Kautsky (1968) have made such an assessment, finding a curvilinear relationship between communist party strength and level of economic development. At the very lowest levels of development, where there has been virtually no move toward modernization, the communist Party is likely to be weak, since communism is essentially a product of the industrialization process and its impact on dislocated masses of people.

It has been noted that such traditional societies as Afghanistan, Saudi Arabia, Libya, Ethiopia and Liberia are relatively stable, in a stagnant sense. At the stage of development where agricultural population has gone below 50% and GNP/capita has risen above $300, however, the strength of the communist party tends to increase greatly. The reasons for this increase may be: (1) in these semi-developed countries, interest groups in general are starting to develop; mobilization of people for abstract political and economic reasons is now possible; (2) the industrialization process creates large blocs of disillusioned and dislocated people--including workers, artisans, and peasants. Countries at this GNP and urbanization level tend to be moderately volatile but beginning to stabilize. Therefore, we may tentatively conclude that states at middle levels of development may have the best supported (in terms of formal membership) communist parties. It should be noted that there is no convincing proof that communists, rather than merely the social pressures of development, are primarily responsible for intrastate upheaval. As we progress up the economic development ladder, communist party strength tends to fall off as peasants and workers are satisfactorily absorbed into the economic system.

It is useful also to distinguish, as Benjamin and Kautsky do, between states developing because of outside aid and the Western example, and those developing through a largely indigenous process of change. Those experiencing outside impact tend to have more militant communist parties because there is likely to be considerable nationalistic reaction against foreign and, particularly, Western influence. Those developing more indigenously are likely to have strong Communist movements if there is at least one of the following social strata present: (1) an industrial labor class that remains a minority in the population, which has weak organized trade unions, and confronting a seemingly permanent strong anti-labor majority; or (2) propertyless or propertied but relatively poor peasants, and an old middle class of shopkeepers and artisans; or (3) alienated and influential intellectuals ideologically associating themselves not merely with nationalism but with orthodox Marxism-Leninism.

It is useful to speculate on possible ways of predicting which countries will enter various stages of economic development and hence be subject to instability. Here Berry's (1966) findings are helpful. He was able to account for over 85% of the variance in economic development by merely using the region of the country and its type of economy as independent variables in a regression equation. Thus, for example, the technological level (including its industrialization, transportation, trade, organization

of population, etc.) of a country like Nepal can be quite accurately predicted by knowing only that it has a subsistence economy and is in Asia.

Lower levels of technology are associated with location in Sub-Saharan or North Africa, Asia, or Central America. Yet, as we have said, these may not be the most volatile states, being too early in the process of development for great social dislocation to obtain. We must also note, as well, that Berry's finding may not be as impressive predictively as it first seems. By using subsistence economy as one of the variables predicting technology, he is in a sense measuring something with itself. If we know a country is at subsistence levels, we already know a great deal about its economic development. In addition, while the predictive ability gained from knowing a country's region is indeed interesting and important, it does not tell us what it is about regions that influences economic development. We need further research to point up regional traits, such as the amount of wealth involved in intra-regional trade that might predict to the technological levels of states within the regions and thus to instability.

Countries Selected for the Analysis of Naval Low-Level Warfare Requirements

Despite the fact that the various investigators differ in their operational definitions, their ranking of countries of possible concern to the United States and the Navy along the violence dimensions is similar. Seven countries have been selected for detailed examination by USNRL: Indonesia, Malaysia, Burma, Congo (Kinshasa), Colombia, Nigeria, and Nicaragua.* The various studies rank these countries on political instability and violence as shown in Table VI-2, p. VI-13.

The rankings of these studies** show that Indonesia has been extremely high in terms of total magnitude of violence. It ranks first for Feierabend

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See footnotes on following page.

* These countries were chosen by NRL for study with additional criteria other than their proneness to insurgent warfare in which U.S. forces may be required to operate. First, is geographical distribution: two in Latin America; three in Asia; two in Africa. Second, comes the "large" and "small" continuum in terms of area and population: Indonesia vs Nicaragua. Third, note that all have coasts, rivers and/or lakes and are thus locations where maritime special warfare may be conducted. This criterion signifies a recognition of the maritime exposure of the country. A fourth is the fact that while all are in tropical and sub-tropical latitudes, there is enough topographical variation to yield a variety of climatological phenomena. Thus, it is apparent that the choices are not rationalized alone on the basis of proneness to political instability or in differing social, economic and political conditions.

** We should bear in mind the crucial difference between these studies. Gurr studied 1961-65 data, confined mainly to overt acts of civil (internal) violence. The Feierabends and Nesvold studied all types of politically relevant "aggressive behaviors" from 1948-1962. Gurr had the benefit of including many of the new states in a much larger study. Yet, despite these differences, the findings seem to reflect much the same phenomena across nations.

TABLE VI-2

Political Instability Ratings: Seven Countries, Three Indices

	GURR 114 Countries (1961-65)		FEIERABENDS 83 Countries (1949-62)		NESVOLD 71 Countries (1949-62)	
	Rank	Score	Rank	Score	Rank	Score
Burma	22	13.9	42	427	21	50
Colombia	13	16.9	3	681	5	80
Congo	1	48.7	--	--	--	---
Indonesia	2	33.7	1	699	1	113
Malaysia (Malaya)	84	4.5	50	413	--	---
Nicaragua	47	9.4	40	430	25	44
Nigeria	23	13.8	--	---	--	---
Mean:		9.08		403		35.7

and Nesvold, and where the Congo is added after 1960 by Gurr, they rank first and second. Colombia also ranks high in all three studies. Malaya was near the mean score in both studies in which it appeared--below the mean in the larger Gurr population and slightly above average in the smaller Feierabend population. Nicaragua is near the mean on the Gurr violence score and slightly further above the mean in the Feierabend spectrum than Malaya. Nicaragua is also slightly above the mean in Nesvold's rating. Nicaragua and Burma seem to have much in common in their level of violence scores on all three rankings--though Nicaragua seems to rank below many of the newer states included in the Gurr study. Burma is within a large group of states fairly close to the mean of the Gurr study, but nevertheless has a high rank of 22 out of 114. It is well above the mean in violence in Nesvold's study, ranking 21 out of 71. Nigeria appears only in the Gurr study and ranks very close to Burma in the upper middle range of violence. Therefore, we find three countries of relatively high past violence: Congo (K), Indonesia, and Colombia; two of upper middle violence: Burma and Nigeria; and two of average total violence magnitude: Nicaragua and Malaya.

We can carry the analysis further using ratings by Gurr, Rummel, and Wilkenfeld (1968) to evaluate the countries in terms of the kind of violence they are most likely to have. Wilkenfeld, using combined Rummel-Tanter findings, shows that from 1955-60 Colombia was highly prone to what we have called "turmoil" and "conspiracy"---and much less prone to "internal war."* Indonesia had much the same pattern--very prone to conspiracy and to "turmoil," and much less so to "internal war." Nicaragua is, in general, at a much lower level of internal violence than either of the other two (about one third as much violence as Indonesia), and generally scores about equally in "turmoil," "conspiracy," and "internal war." Burma scores very high in conspiratorial type violence, very low in turmoil, and moderately low in internal war.

Rummel (1963a) computes factor scores for each country. These are a composite score of that country on the variables that have the closest relationship to each violence dimension rather than raw scores of the frequency of each type of act (as Wilkenfeld uses). Some differences emerge when Wilkenfeld combined data for 1955-60 are compared to Rummel's 1955-57 findings. Burma scores highest on variables indicating "internal war," with its "conspiracy" score dropping to second place. "Turmoil" remains a rarity in Burma. Colombia now shows higher scores in "conspiracy" and "internal war" than "turmoil." Despite the frequency of many small acts which constitute the "turmoil" dimension, evidently Colombia had few of the really important acts that constitute turmoil. Indonesia has high factor scores in "turmoil" and "internal war," and somewhat lower in revolution. Nicaragua holds much the same pattern it had in the Wilkenfeld study--low in all three categories. The differences between Rummel and Wilkenfeld, then, can perhaps be explained by the two extra years in Wilkenfeld's study and Rummel's emphasis on the key variables of each factor of internal conflict.

Gurr covers more nations and the years 1961-65. His scores for our 7 countries remain interesting, however. The Congo has had much more "internal war" than either "conspiracy" or "turmoil." Thus the Congo situation consisted of mobilized, large-scale, and bloody fighting. The same pattern prevailed from 1961-65 in Indonesia. Colombia had a much lower level of violence than these two, but still had more "internal war" than anything else. Burma had very similar scores to Colombia. Nigeria, however, had twice as much turmoil as internal war. Nicaragua had no internal war, and about equal and fairly average levels of conspiracy and turmoil. Finally, Malaya had no conspiracy or internal war, and below

* All results reported in this section will have the author's terminology modified to fit the combined terminology outlined above.

average turmoil. Thus if we take the consensus of these three studies and indicate the type of violence more likely and less likely for each country, we would have the estimates shown in Table VI-3.

TABLE VI-3

Types and Expectations of Internal Conflict, Seven Countries

Country	More Likely	Less Likely
1. Burma	Internal War - Conspiracy	Turmoil
2. Congo (Kinshasa)	Internal War	Conspiracy*
3. Colombia	Internal War - Conspiracy+	Turmoil*
4. Indonesia	Internal War - Conspiracy	Turmoil*
5. Malaya	Turmoil+	Internal War - Conspiracy
6. Nicaragua	Turmoil	Internal War
7. Nigeria	Turmoil - Internal War	Conspiracy

* Signifies that, although there is less likelihood of this type of violence than the others, the country still scores significantly relative to other countries in this type of violence in at least one study.

\+ Signifies that although this is the most likely form of violence, it is still a low score relative to other states in at least one study.

We must remember, however, that these are merely consensus rankings culled from three studies using very general, and sometimes arbitrary, aggregate data methods.* We cannot reliably predict the future on the basis of the type of violence that has characterized these countries in the past. For instance, Nigeria is presently racked by civil war; yet Gurr's 1961-65 data characterized Nigeria as subject mainly to "turmoil." It is interesting to note, however, that many of Nigeria's current problems seem to stem from turmoil-type activities which preceded the civil war and in which certain tribes brutalized other tribes. (See, for instance, John D. Chick, "Nigeria at War," Current History, 54, February 1968; and W. A. E. Skurnik, "Nigeria in Crisis," Current History, 52, March, 1967.) We also find from a review of the Nigerian record that violence of the

* It must also be remembered that we do not have countries' scores on specific types of violence (such as coups or mass protests or executions) but rather scores on the factors these types of violence are associated with. No inference about specific violent acts can be made on the basis of this evidence.

different types does not occur in any neat order. Coups may follow mass civil disorders, or they may precede them. Civil war may follow either or both coups and turmoil. Patterns of various types of internal violence are complex, and thus the above estimates of "more likely" and "less likely" are meant merely to give a rough approximation of the type of violence that has gone on in the past and may be repeated.

It should also be noted that several of the countries discussed here have been independent for only a short period of time and have not yet established their "style of violence." It is possible that countries progressing economically become subject to different types of violence as they advance to different economic levels. The great dislocation which occurs in countries fully involved in industrialization and national integration is most associated with mass protest ("turmoil") and internal warfare at a higher level, whereas political conflict may be more likely to take place between elites and military cliques in the poorer countries.

To check on these latter possibilities, we have rated each of our seven countries on the basis of the development "thresholds" in GNP/capita and other variables outlined earlier in this section. According to Russett (1964, pp. 295-97), the seven countries fit the following socio-economic development levels:

TABLE VI-4

Seven Country Scores on Russett's Indicators of Development

	GNP/Cap.	% Urban (20,000)	% Adult Literate	Higher Educ. per 100,000	Inhabitants per Physician	Radios per 1,000	% Vote	% Military	% Expenditure of Central Government
Burma	$ 57	10.0	47.5	63	15,000	5.6	54.5	.49	29.1
Nigeria	$ 78	10.5	10.0	4	32,000	4.0	40.0	--	----
Congo (K)	92	9.1	37.5	4	63,000	2.5	--	--	----
Indonesia	131	4.1	17.5	62	48,000	7.4	92.0	.24	----
Nicaragua	160	20.1	38.4	110	2,800	65.5	92.7	.43	----
Colombia	263	22.4	62.0	296	2,400	139.5	40.2	.27	----
Malaya	356	22.7	38.4	475	6,400	36.5	54.8	1.37	----

We find that the three most internally violent states--the Congo, Indonesia, and Colombia--are all below the $300 GNP/capita stability threshold, and that the Congo and Indonesia are in the transitional stages of Russett's analysis (stages II and III). These three countries experienced significant amounts of internal war. Nicaragua is also in this GNP range, and yet has about average and largely unorganized violence. Nicaragua is closest in all its scores (except GNP/capita) to Malaysia, and we found that these two are also closest in violence levels. Evidently here the GNP level differences between the two do not reflect what essentially may be similar development levels--especially in the level of urban development. Thus, it is evident that no single indicator can tell the whole development story for every society, nor can one be used as a single predictor to internal war.

Burma seems not to have really entered the development process as yet; yet it does have more than the average literacy for unstable societies. Thus, there is a danger that if economic benefits cannot be increased, the demands created by a literate population will run away, and the "upper middle" level of Burmese violence may increase. Nigeria in 1961 was only beginning development, but we have since seen the "internal warfare" accompanying the process. In 1961 we would have predicted little overt violence, since the middle range of development had not yet been reached. But Nigeria was a new state in 1960, and it is possible that the likelihood of violence in such disunited entities is much greater than for traditional but more homogeneous states at the same level of economic development. The same might be said of the very rural Congo--although here a segment of the population--the miners--was economically better-off than the average tribesman.

Colombia and Malaya are both what Russett calls "industrial revolution societies"; i.e., approaching the $300 GNP/capita level and with significant industry. Yet we must note that both of these remain more rural (22% urban) than other countries in this category. Malaya is relatively low on violence, but Colombia remains violence-prone and has the highest literacy level of any of the seven states. The state with scores most nearly fitting the composite picture of an unstable society is Nicaragua--coming very close to the adjusted mean for the unstable society in GNP, urbanization, literacy and higher education. We can only conclude that there is potential in the Nicaraguan context for more violence than has been shown so far.

Thus we see that among the few countries chosen for study, those most likely to experience disruptive internal war are at the transitional or the lower end of economic development. This includes Burma, the Congo, Colombia, Indonesia, and Colombia--plus, as recent events have indicated, Nigeria. Malaya seems somewhat better off in wealth and displays only turmoil-type events. Nicaragua also displays mainly turmoil, although it is firmly within the "transitional stage."

It is likely that we are only touching the surface in this analysis; we will need to know about many cultural variables specific to each society to provide more accurate specification of likely violence. It could be that Nicaragua is more racially or ethnically homogeneous than the rest and probably less prone to high levels of internal war.

Relevance of Findings for Navy and Other Government Agencies

A number of findings emerged from this survey of research on instability and violence. They should help define American policies in dealing with the less-developed world.

1. The poorest countries are unlikely to undergo domestic violence as long as developmental efforts lag. American economic aid may spur development, and with it may come a certain inevitable violence. America should expect this, and beware of the fact that a quick military over-reaction may strengthen the hand to those who charge the United States with interference in and control of the aid recipient.

2. American aid to governments being troubled by civil unrest should depend in large part on the degree of institutional development within the society. Gurr has shown that well-organized unions, interest groups, and political parties, together with efficient government bureaucracy, afford non-violent means of protest and also make the governments' law enforcement task easier. Gurr (1967, p. 37) asserts that, "Politics with high levels of institutionalization tend to have high coercive potential and to have few of the conditions that facilitate strife."

3. Popular attitudes toward the government and the political system in general should be assessed, as Almond and Verba have done. This may afford an idea of the pervasiveness of anti-government sentiment. Tanter's study indicates the importance of popular reaction to the United States as a barometer of civil unrest in a society whose government is closely aligned with the United States.

4. Tanter and Midlarsky's work shows that American aid and economic presence may spur economic development, but in the process violence might erupt. Periodic threats to American enterprise abroad are a "normal" by-product of the development process. Over-reaction to such threats may exacerbate anti-U.S. resentment, and thus may lead to greater civil violence, even overthrow of the government.

5. There are certain key barometers of political friction between countries. Smoker suggests that periodic checks of the frequency of inter-governmental communications be made to identify periods of potential crisis. Russett, Rummel and Brams all point to the importance of trade as a barometer. Trade, it appears to Rummel, seems to be a distinct (uncorrelated) form of interstate behavior, relatively little affected by other types of political or military relationships between states (such as student exchanges or protests, etc.). To the contrary, Russett finds that states involved in much trade have greater opportunity for conflict and, hence, more likelihood of war than states which have no contact and are too poor to impinge on each others' interests. Finally, Brams adds that trade is the most sensitive indicator of friendliness vs. hostility between states. Few states will break diplomatic relations in any situation short of a crisis. But trade is soon interrupted by a state of political hostility. Therefore, periodic examinations of world trade patterns might help assess the probabilities of interstate conflict.

6. Communist party strength is not likely to be great in the poorest countries. It tends to be stronger in countries at middle levels of development--but here American efforts to counter communist strength must depend on: (1) the viability of the government in question--i.e., its ability to effectively reach people and to gain legitimacy throughout the country; (2) the efficiency and incorruptibility of both the bureaucracy and the army (lack of corruption is a rarity in countries going through the crucial phases of industrialization); (3) the strength and popularity of non-communist mass parties as opposed to communist-oriented nationalism. Communist party strength is likely to fall as the country successfully pulls through the development process. Thus, if development brings with it inevitable pressures, firstly, for predictable amounts of upheaval and violence, and, secondly, for the rationalization of technology and removal of ideology from the economic sphere, communist control of developing states may be very difficult whether or not the U.S. intervenes.

7. Police (or military) action in states undergoing civil insurrection must be: (1) swift and firm enough to avoid exacerbating the degree of resentment of authority; (2) not so strong as to engender permanent popular bitterness and long-run retaliation. This "line of proper response" is so thin, and forceful response is so unlikely to inhibit the effects of long-term deprivation, that, on the whole, police action is not a long-range solution to the violence accompanying development. It may, however, be very necessary in the short run.

8. If coercion is necessary, it is necessary to know what kinds of violence are likely to be confronted. The types of violence most likely in countries in the most rapid stages of development (the stage of Indonesia or Colombia) are internal (of a guerrilla-warfare or organized nature) and "conspiracy" (centering on military coups d'etat). As more people are mobilized into the political system, however, mass turmoil (protest and riot) becomes more likely. Much depends on the context and degree of homogeneity of the country in question. Any of the three types of internal violence may follow any of the other two in time. Newly independent states may be very prone to internal war soon after either mass protests or military coups, since tribal or parochial loyalties and passions are easily inflamed. In addition, when the new state is large, as are Nigeria or Indonesia, it is difficult to see how violence can be kept at a low level.

9. It should be remembered that, on the whole, intrastate instability is not likely to bring about violent regional instability.

TECHNICAL NOTE

THE USE OF AGGREGATE DATA IN INTERNATIONAL POLITICAL AND CONFLICT RESEARCH

In order to generalize about trends in the relationships between national characteristics and intra-state and international conflict, aggregate data on many countries over time are necessary. These may be obtained by interviews of large public samples or elites and by analysis of media. The investigator may also make use of aggregated economic, demographic, and military data reported by national political units or international organizations. We must first compile many aggregate indicators and then closely study their inter-relationships to derive empirically substantiated descriptive and causal generalizations. Such aggregate indicators in the various studies reviewed here and in other studies* seek to measure both possible causes of violence (such as discontent over distribution of wealth) and levels of interstate or intrastate violence itself (including magnitude--number killed--duration, and consequences). Unfortunately, there are several problems in the use of aggregate cross-national data. These must be recognized in evaluating the findings of studies which use such data.

CRITICISMS

Universality

Critics cite several main weaknesses in the use of mathematical models and aggregate data in international relations. One argument is essentially that there is a danger of "dismembering reality" by using aggregate indicators--that while relationships between indicators may apply in one region of the world, they may be invalid for others.* For instance, the effect of race on relationships between income and domestic violence may vary across world regions. Alker calls this problem one of "non-universality."

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* See, for example, J. David Singer and Melvin Small, "National Alliance Commitments and War Involvement, 1851-1945," Peace Research Society Papers, 5, 1965; Lewis F. Richardson, Statistics of Deadly Quarrels, ed. by Q. Wright and C. C. Lieman, Pittsburgh, Boxwood Press, 1960; and Quincy Wright, A Study of War, Chicago, University of Chicago Press, 1965.

* See, for example, Hayward R. Alker, Jr., "The Long Road to International Theory - Problems of Statistical Additivity," World Politics, 18, 1966.

Additivity and Interdependency

A second criticism is that aggregate measures of social variables cannot be meaningfully combined. (Hoffman, pp. 357-59). The question of "additivity" is important because the basis of seeking predictions about any dependent variable lies in being able to combine the effects of the independent variables influencing it. Violence levels may be predicted, as Russett attempted to do for example, by adding the separate effects of GNP per capita, GNP growth rate, voting turnout, life expectancy increase, agricultural labor force, and land distribution inequality. The applicability of addition of social variables is not always clear-cut, however. We may wonder whether adding the separate effects of socio-logical background factors pertaining to international "integration" (such as the European Economic Community) is a distortion of their separate effects. Or we might ask whether foreign policies of nations can be predicted from mere addition of domestic or international factors? (Alker, 1966b) How do we add such factors as individual decision-making?

Thirdly, as Hoffman and others argue, it is possible that many useful and important social variables cannot be measured, or that much relevant information may be missed by confining ourselves to the quantifiable.

Regional Differences

Fourthly, we may find that not only do relationships between aggregate data variables change from region to region, but the meaning of the variables themselves may vary from country to country. It is not sufficient to index wealth in a nation by ascertaining GNP/capita because the distribution of wealth within the nation may be equally important. A figure for Kuwait means something far different than one for Switzerland. The indicator may also mean various things in different parts of a nation (vis., Mississippi's product per capita vs. New York's, and the degree of urbanization occurring in the two).

Cross-national data may lose accuracy when we try to equate totals given in various rates of monetary exchange. A low dollar GNP per capita level in the Soviet Union may be perceived by Russians as high in the context of the monetary system they are used to. This goes even more for underdeveloped states. Also, GNP figures are notoriously unreliable because they contain estimates of the non-monetary sector. The subsistence agriculture of underdeveloped states, for instance, can only be estimated.

Time

There is also the criticism that too much inference about "development" of economies and political systems is based on data from only one time period. Thus, there is a lack of good "longitudinal" data and studies of

nations going through the process of development. Instead,many countries, in various stages, are studied at one or a few time periods with inferences then made about "normal development types."

Added to these substantive criticisms of the uses of aggregate data are those dealing with the procedural aspects of its collection. One criterion cited by Michael Haas (1966) is that of "reliability." The reliability of such data often depends upon the degree of political development of the country--since census and governmental statistics are often involved. This creates sampling error since a particular portion of some countries may be systematically excluded from the sample for lack of data. Therefore, as Haas points out, inferences drawn from such data can be interpreted as representative only of a group of countries heavily skewed toward the Westernized, developed portion of the world.

EVALUATION OF CRITICISMS

1. The "non-universality" criticism may be a valid one and should be tested thoroughly. For instance, Alker has developed at least two means of examining regional effects on social relationships. One method (Alker, 1966b) employes factor analysis--first of the entire universe of nations, and then separately for each region or for groups of nations (such as "developed" vs. "under-developed"). His analysis of U. N. voting, while subject to methodological criticisms itself, shows that different factors emerge for developed as opposed to underdeveloped countries. For example, the voting behavior of underdeveloped states emphasize anti-colonial issues far more intensely than do the developed states' voting behavior. Alker (1966a, p. 5) also employs co-variance analysis to find the amount of total variance in a relationship between two or more variables attributable to regional influences. He reports that some variables that were universally uncorrelated had significant regional associations while other universal relationships had little meaning in various regions (such as the connection between Catholicism and the proportion of the labor force in agriculture in Asia as opposed to Latin America).

2. The "non-additivity" problem can also be treated through covariance analysis. Alker (1966b) states that, "Covariance analysis tests whether regression relationships between two or more variables change when the effect of other (regional or contextual) variables is taken into account." The procedure tests whether the effect of some variable, such as, a state's

trade and its effect on other states' UN voting, for all the nations in the world is the same as that variable's effect among states of a certain region or grouping, such as, the European Common Market states. Alker also points out that we should be alerted to the possibility of curvilinear (rather than simple linear) relationships, as some influences (such as regionalism) may have a multiplier effect on the dependent variable. This might mean, for instance, that violence increases geometrically as wealth inequality increases arithmetically.**

3. Rummel (1968, p. 77) and others say that the argument that many variables cannot be quantified is overplayed. Rummel claims to have successfully quantified such phenomena as freedom from restriction on divorce and the extent of polygamy in marriage customs. Alker also offers us a replication technique to help determine the accuracy of our measurement. He points out that often several measurements of a variable such as GNP are available (such as estimates of "real" private consumption by economists, index of private consumption of official exchange rates, economists' estimates of "real" GNP/capita, etc.) and that by intercorrelating these we can tell how closely they measure the same thing. Also, by correlating domestic groups violence or other variables to each of these estimates of GNP/capita separately, we can tell if the relationship is consistent. Alker found domestic violence correlating -.45, -.51, -.50 with three of these estimates, but found a "discrepancy" in a .23 correlation with the index of private consumption of official exchange rates. Extending his analysis to economically developed vs. non-developed subpopulations, Alker also found significant change in the violence-GNP/capita relationship for the various estimates. For instance, for "underdeveloped" countries he found correlations of .09, .02, .39 and .33; while for developed countries he found -.36, -.47, and -.16, and -.68. Thus, through efforts for more refined study, Alker is able to tentatively conclude that violence may be negatively related to wealth levels in "developed" countries while there may be a positive (though weak) relationship in "underdeveloped" countries (Alker, 1966a, pp. 7 and 10).

4. To deal with the problem of within-nation maldistribution of things of value, and the resulting distortion of gross aggregate indicators, closer study of regions within countries should be made and compared to differences between countries or international regions. Russett et al.,* found

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* World Handbook of Political and Social Indicators, New Haven, Yale University Press, 1964, pp. 237-38.

** See also Alker's explanation and evaluation of the efficiency and applicability of many multivariate causal models in "Statistics and Politics: The Need for Causal Data Analysis," Yale University, 1967 (mimeo).

inequalities in economic distribution to be larger between countries than within countries. Measures of inequality of distribution of things of value could be used to determine whether land distribution, for example, keeps pace with economic development within and between countries.

5. "Longitudinal data" (covering a number of time periods) offers the advantage of allowing examination of trends in causative relationships over time. We can more easily determine whether trends in postulated independent variables consistently precede those in the hypothesized dependent variable. Unfortunately, though Haas (1966) claims the data are available for longitudinal studies, he does not say where to find them. However, studies by Cattell (1949) and Denton and Phillips (1966) do assess long-term trends in conflict behavior.

6. Finally, regarding problems in data reliability, we should be very conscious of the data-gathering and analysis techniques of the various works using aggregate data. Haas (1966) points out that both Banks and Textor's Cross Polity Survey and Russett et al.'s Handbook* have much more reliable and complete data for Westernized developed countries.

In addition, we should be conscious of the error problem. There are essentially two types of error; one type ("systematic error") tends to confuse statistical relationships, while the other ("random error") does not. As Rummel (1965, p. 6) points out that random error, overstatement or understatement of values with equal probability that any single

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* Haas also goes on to usefully point out further weaknesses in these studies, such as the non-comparability of time periods in the Handbook which seeks to intercorrelate data from 1920 to 1961. Many such data collections sacrifice reliability to achieve complete coverage. U.N. statistics are often accepted uncritically. Banks and Russett, according to Haas, also run into the "non-universality" problem in comparing votes for particular types of political parties without controlling for the effects of religion, history, etc.

value might be inaccurate, allows us to assume that the direction of the error coming into correlations does not point consistently to any single variable. Thus, the effect of random error, if any existed, would be merely to decrease the strength of relationships between any two variables as reflected, for instance, in the correlation coefficient. The error will not basically change the relationship itself, since in the long run, values are both overstated and understated.

"Systematic error" causes values for a certain variable to be consistently overstated or understated, and such unaccounted-for effects on different variables may themselves be interrelated. Thus, some outside variable could have unspecified effects on a number of variables in the study. This will distort the relationships between the variables of the study. We must test for such consistent overstatement or understatement. A country may understate its internal violence, for example, to avoid bad publicity. Thus, we may have to assess the degree of censorship present in the country. We then check to see if countries with great censorship also consistently have low violence. If so, the violence reports are suspect. The "systematic error" problem can only be treated by hard work designed to discover and test as many potential causes of distortion in a certain key variable as possible. Variables subject to systematic distortion should be discarded or measured another way.*

SUMMARY:

Aggregate data can be extremely flexible and can provide first approximations of concepts very difficult to measure. This type of data may in many circumstances be more reliable than the statements of national governments or leaders, and may allow us to deal with relationships at a high level of generality. There are weaknesses which we should

* See R. J. Rummel, "Dimensions of Error in Cross-National Data," Dimensionality of Nations Project, 21 December 1964 (mimeo). Rummel shows that the two main sources of cross-national data error are economic development and totalitarianism which cause about one-third of the variance in demographic data error and three-fourths of the error in economic welfare data error, respectively.

be aware of when confronting studies using such data, however. General aggregate trends may not apply in specific countries or specific parts of countries. At the same time, the analysis should test relationships in as many specific contexts as possible. Sources of information and the strength and accuracy of measures should be carefully evaluated and, if possible, cross-checked. Time periods and the population of countries studied should also be specifically and clearly reported.

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13. ABSTRACT

The concept of low-level warfare is tested empirically by a factor analysis of 37 attributes on 309 politically significant violent conflicts, 1944-1966. Data on U.S. Navy operations in 94 conflicts, indexed by 52 attributes, were also factor analyzed. Major power interaction with less-developed countries (76 attributes, 90 countries) was also studied for the years 1959, 1961, 1963, 1965. The results of these three analyses provide: (1) major orthogonal dimensions of variation, indexing variables, and factor scores of conflicts, Navy operations and great power influence. Conclusions are drawn on the concept of "low-level" warfare and Navy roles and missions in it.

Also included are essays on national security planning for low-level warfare, U.S. Navy civic action, and quantitative research on politically significant violent conflict. Data-making procedures and technical details on the factor analyses are in Volume II.

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