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INTERNATIONAL MILITARY COMMITMENT
INDICATORS: OPERATIONAL DEFINITIONS

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July 1975

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Presents operational definitions for selected international military commitment indicators. Describes the empirical components of a procedure for measuring international commitments. Identifies sources of commitment data and lists the national actors and targets for which commitment data are being collected.		

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INTRODUCTION

This paper is the second in a series intended to describe the development of a systematic and empirical procedure for keeping account of international activities which raise the likelihood that one nation will come to the military aid of another. The conceptual basis of international military commitment has been presented, and the focus now is to provide an explanation of how international commitment can be defined as a measurable construct. In future papers tests on the reliability and validity of the measurement device will be given along with analysis and examples of how international military commitments can be monitored over time for several different actor nations.

In a previous report (Martin, January, 1975), the concept of international commitment was defined. The assumptions basic to that definition are the following. 1.) An international commitment is an independent construct which can be related theoretically to others. 2.) International commitments are variable, have empirical manifestations, and can be found to exist in a number of different types of global relationships. 3.) The best way to identify a commitment relationship is to locate those situations where a condition of forced behavior or a "sidebet" obligates nations to consistent behavior. Obligatory types of international behavior are better indicators of commitment relationships than assumed national goals or objectives. 4.) Important characteristics for identifying and measuring the intensity of commitments are: independent states, explicit or public evidence, the degree of irrevocability, the degree of volition perceived by the actor, the importance of the act to the actor, and the frequency of action by the actor. 5.) Commitments are dynamic and they are created and extended as well as diminished by cumulative actions. Indicators of commitment must be monitored over time to establish their existence, degree of intensity, and propensity to change. 6.) There may be a number of possible procedures for measuring international military commitments, and before a general theory of international commitment can be developed various procedures which investigate both the direct and indirect influences on commitment relationships will have to be examined. At this time it is important that steps be taken to begin rigorous descriptions and measurement of international commitments. 7.) The "best indicator of international military commitment is one that gives the

fullest meaning to the concept, and it seems that a multiple indicator comes closest to this criterion.

These seven assumptions provide a major part of the foundation on which the measuring instrument for international military commitment is based. The remainder of that foundation includes the identification of the actual indicators, their operational definitions, the technique for combining the indicators into a single overall measure of commitment, and estimates of the reliability and validity of the measuring device. The provision of operational definitions follows below.

COMMITMENT INDICATORS

The conceptual definition of international military commitment provided does not translate directly into a measure of commitment. In order to measure commitment phenomena an operational definition must be established which specifies exactly how it can be measured. As noted in the assumptions provided above, an international commitment may be manifested in several different ways. Six different indicators of international military commitment have been identified in this project, and an operational definition for each one is given below. The understanding of international commitment offered here is that each one of these indicators describes a commitment relationship, but to give full meaning to the term all of the indicators should be used together as a composite indicator of international commitment.

The main considerations for selecting commitment indicators are that the indicators are representative, consistent, and directly observable. The determination of the degree to which each indicator meets these requirements can be made only after considerable testing. The original selection of pre-tested indicators must proceed, therefore, within a framework of limited information and with the recognition that the preliminary indicators selected may prove to be incomplete, unreliable, or invalid. Given these considerations, the selection of commitment indicators can be guided by historical insight, conceptual direction, and assumed practical evidence. While a general theory of international commitment is lacking, there is, nevertheless, a rich and extensive literature on international commitment phenomena which can be used effectively to select preliminary indicators.

There are three main criteria which have been established for the selection of the indicators. The first

is that the indicators must be public international activities that are open to general review. A major assumption in this study is that commitments are truly binding when they create obvious stakes for the actor in a target nation. Secret or anonymously made commitments are real and important too, but there is insufficient evidence available to show that such commitments are as binding as publicly made commitments (Hovland, et al, 1957). While all committing decisions may receive special attention about their probable consequences before they are made, only public commitments are open to evaluation and judgment for credibility by all members of the international system.

Public images of reliability and consistency are relevant political/military considerations especially in terms of effective deterrent policies at both the strategic and limited war levels (George and Smoke, 1974). Apparently unreliable or inconsistent behavior is an image that is an anathema to the decision-makers of major committing nations because it reflects on decision-making credibility. Publicly made commitments are not disregarded casually.

Kissinger explains it the following way (April 21, 1975):

Let us understand, too, the nature of our commitments. We have an obligation of steadfastness simply by virtue of our position as a great power upon which many others depend. Thus our actions and policies over time embody their own commitments whether or not they are enshrined in legal documents. Indeed our actions and the perception of them by other countries may represent our most important commitments.

One lesson we must surely learn from Vietnam is that new commitments of our nation's honor and prestige must be carefully weighed. But after our recent experiences we have a special obligation to make certain that commitments we have made will be rigorously kept--and that this is understood by all concerned. Let no ally doubt our steadfastness. Let no nation ever believe again that it can tear up with impunity a solemn agreement with the United States.

Each of the indicators selected is then a highly visible relationship. They are public activities which create assumed stakes and obligations, and they force upon decision-makers the consideration that inconsistent behavior will result in a loss of international prestige,

credibility, or investment.

The second criteria for selection is that an indicator must be recognized by foreign policy decision-makers and analysts as a manifestation of international military commitment. A review of the international relations literature on commitment, alliance, and alignment has been conducted to search out what decision-makers and analysts suggest are the best military commitment indicators. This review has shown that while there is not perfect agreement there is considerable overlap among experts on what constitutes a commitment indicator, and that relatively few types of public international interaction are perceived to be committing behavior. Included in each operational definition which follows are example summary statements by experts on their views of the indicator.

The third criterion is both a practical and methodological concern. The measurement of any complex and commonly but nonscientifically used concept is not easy nor direct. There is no "ready-made" measure of international military commitment, and relevant indicators must be identified and rigorously defined in terms of observable data if they are to be accounted for. The experience in this project while searching for useful operational definitions has been that even when a commitment indicator has been identified there may be more than one way to operationally define the indicator. This means that the particular operational definition used here for each of the indicators IS NOT NECESSARILY THE ONLY POSSIBLE operational definition.

The cumulation of research findings from this and other quantitative studies of foreign involvement and commitment should help to locate the best operational definitions for commitment indicators, and until further evidence and test results are available the definitions provided should be considered tentative and preliminary. Included in the discussion of each indicator given in this paper is an explanation for why a particular definition was used. The basis for selection included expert advice, previous research findings, and data availability. Examples of other possible operational definitions are also given for each indicator.

The indicators which have been identified are: Security Defense Treaty, Foreign Area Troop Deployment, Military and Economic Aid and Assistance, Arms Transfers, Policy Support Statements and Actions, and Trade.

The indicators are assumed to be applicable to the

modern state system, and data are being collected for each indicator for the United States, United Kingdom, France, West Germany, Soviet Union, China, and Japan as the committing nations and 133 target nations.* The data set covers the commitment years 1968-1974. The final determination of the reliability and validity of the indicators will come, of course, after these data have been tested fully.

1. SECURITY DEFENSE TREATY**

Alliances and defense treaties are fundamental features of international politics. Liska has stated that "it is impossible to speak of international relations without referring to alliances, the two often merge in all but name" (1962, p.3), and Russett has supported this by noting that "explaining or predicting patterns of alliance among nations has long been a central concern in the study of international politics and organization" (1968, p. 284). The centrality of alliances is accepted by foreign policy analysts, but there is not general agreement on either how alliances are formed and maintained or how they depend upon or influence other international processes (Modelski, 1963; Russett, 1968; and Holsti, Hopmann, and Sullivan, 1973). The insights and evidence available about international alliances and defense treaties are developed enough, however, to provide for an operational definition of security defense treaties as an indicator of international military commitment.

Alliances are formal agreements among states for collaboration on national security issues. Alliances generally can be assumed to be associated with certain factors unique to other forms of international cooperation. These include 1.) the existence of a perceived common threat, 2.) consideration of military engagement and a risk of war, and 3.) mutual interest in either the preservation or change in the status quo (Friedman, 1970, p. 5). An open and publicly agreed upon alliance is credited generally as a particularly binding type of international arrangement which raises a general expectation of shared international interests and military cooperation among the signatories (Modelski, 1963, p. 773; Osgood, 1968, p. 20; and Wolfers, 1968, p.268).

* See Appendix A for a list of both actor and target nations

** See Appendix B for a list of data sources.

Alliances which promise mutual or unilateral defense obligate at least one of the signatories to consider the use of military force. This is illustrated in Robert Osgood's 1968 definition of the term: "...an alliance is defined as a formal agreement that pledges states to cooperate in using their military resources against a specific state and usually obligates one or more of the signatories to use force, or to consider (unilaterally or in consultation with allies) the use of force, in specified circumstances" (Osgood, 1968, p. 17). A publicly agreed upon alliance is then a very obvious commitment indicator. It identifies clearly the common interests and obligations of nations, and records explicitly the values and interests to which the commitment is attached (Modelski, 1963).

Alliances in the contemporary international system have tended to become long-lasting indicators of fundamental political-military interests. Although alliances generally have been recognized as particularistic, and specific and, therefore, temporary and dynamic (Modelski, 1963 and Friedman, 1970); they are not terminated easily. Holsti suggests that as alliances have taken on a greater deterrence function, alliance systems have become "less flexible, more permanent, and more highly organized" (Holsti, 1967, p. 115). Russett also has pointed out that alliances are stable phenomena in international politics. He explains that shifts in alliance relations tend to be slow and "rooted in long term influences and in environmental factors over which politics does have some control, but only over the passage of substantial periods of time" (1972, p. 115). Evidence of the tenacity of contemporary alliances and commitment phenomena in general can be seen in policy statements made by decision-makers. United States Deputy Secretary of State Kenneth Rush stated recently, for example, that "the United States reputation for stable, reliable commitments has been built up over many years and at a great cost. We cannot and we will not allow this precious asset to be frittered away by those who believe that our commitments can be put behind us now that the apparent threat to our security has been reduced" (Rush, 1973, p. 3).

The public, formal, and fundamental nature of security defense agreements make them particularly good indicators of international military commitments. They are created and maintained at great monetary and policy costs, and should be viewed for the major contributing members of an alliance as evidence of a large stake in other partner nations. Military treaty commitments contribute to the signaling of

collaborative defense activities, and they clearly obligate national leaders to recognize and respond to this relationship.

For the purposes of this study alliances are limited to those formally agreed upon Multilateral and Bilateral Mutual Defense Treaties in force during the year of the data set where at least one signatory is obligated to consider intervention with military force on behalf of the other(s). The definition is similar to the "Class I" alliance used in the correlates of War Project (Singer and Small, 1968), as modified by Bruce Russett (1971). The security defense treaty information is coded as dichotomous data to indicate the presence or absence of a formal military tie.

Other treaty data collection, coding, and weighting schemes for measuring security defense agreements are possible. The use of all three classes of alliances as defined in the Correlates of War Project might serve, for example, as another approach for both the collection and weighting of treaty types. The complete list of all treaties in force among nations is another possible measurement approach. The definition followed here is conservative and measures only those agreements where intervention with the use of force is to be considered explicitly by the committing nations. As will be shown below, the other commitment indicators are less restrictive and complement the definition of security defense treaty.

There are a number of ways in which a nation may become militarily committed to another with or without an accompanying alliance (Russett, 1963 and Kissinger, 1975). In fact, a formal military commitment "may be difficult to distinguish from other kinds of military contracts such as military subsidies, military assistance agreements, or military base agreements" (Osgood, 1968, p. 19). Less formal relations are equally important as commitment mechanisms. Osgood explains (p.19):

Even in the absence of formal contracts for military cooperation, unilateral declarations of intentions can go far to commit states to the use of force in behalf of other states. Such declarations are particularly important now that the communication of military intentions for the sake of deterrence plays such a prominent role in international politics. Their importance is indicated by their extensive use to reinforce and refine formal reciprocal commitments.

But military commitments need not depend even on unilateral declarations. They are often established and conveyed indirectly by countless official and unofficial words and actions, creating understandings and expectations that are no less significant for being implicit. These understandings and expectations are the substance of alignments of power and interest, and alliances and other explicit commitments would be useless without them.

Senator Stuart Symington, when chairman of the Subcommittee on U.S. Security Agreements and Commitments Abroad, called non-formal defense agreements "de facto commitments." Symington concluded that 'de facto' commitments "represent to host governments more valid assurances of U.S. commitment than any treaty or agreement" (Symington, 1970, p. 20). An alliance, while generally considered to be a more formal, precise, and obligatory type of commitment (Osgood, 1968 pp. 19-20) is, then, only one of a group of relations that indicates the existence of an international military commitment. Policy support statements; the physical maintenance of troops on the soil of a foreign nation; military aid assistance in the form of equipment, technical advice, or training; arms transfers; and perhaps other similar relations are based upon definite understandings between the engaged parties. These activities create general images and expectations of international obligation and commitment. How each one of these relationships can be considered as an indication of international military commitment is discussed below.

2. POLICY SUPPORT STATEMENTS AND ACTIONS

Unilateral statements of policy support and cooperative military exercises are important indicators of commitment. Statements made in support of another nation's policy are committable actions which demonstrate in public similar national interests and widely register intentions of support. Policy support actions and statements are political involvements which bind diplomatic prestige and national honor (Schelling, 1966). Aron suggests that policy support behavior along with treaties, foreign troop deployment, and other similar relationships create stakes for committing nations in target nations that are difficult to break. According to Aron, "the more solemn the promise, the more humiliating capitulation would be" (1973, p. 199). Senator Symington, too, has noted that joint military planning and exercises along with overseas bases and military assistance "represent to host governments more valid assurances of U.S.

commitment than any treaty or agreement" (1970, p. 20).

Policy support activities are very often made to maintain or enhance the credibility of a deterrence policy. As such, their purpose is to make clear intended obligations to both adversaries and allies. The absence of support statements and actions may even be viewed as a signal of non-commitment as some analysts have suggested in regard to the North Korea attack on South Korea in June 1950. George and Smoke in commenting on similar views have noted that Syngman Rhee in May 1949 feared that without clear policy support from the United States, South Korean security was endangered (1974, pp. 141-142). Rhee was quoted at that time as warning:

Whether the American soldiers go or stay does not matter very much. What is important is the policy of the United States towards the security of Korea. What I want is a statement by President Truman that the United States would consider an attack against South Korea to be the same as an attack against itself.

National leaders indeed continue to place high value on policy statements and actions. Ambassador James Chen from the Republic of China recently noted that the leaders of his nation continue to believe in the American commitment to their nation because of the 1954 Mutual Defense Treaty and because (April 28, 1975):

...during the last two or three years your President and Secretary of State assured us and reassured us that the United States stands by its treaty commitment with us in joint defense.

Chen explained further that "promises made, commitments undertaken by a government are as valid as they are supposed to be. We have no reason to question the validity of your commitment."

Policy support statements and actions intended to make more firm a deterrent policy are given to both members as well as non-members of formal defense organizations. The United States since the creation of the Central Treaty Organizations has been involved, for example, in CENTO military planning. The most recent example of American support activity with this defense arrangement was last November when the United States participated in CENTO naval exercises which were called the largest ever held in the Indian Ocean (November 20, 1974). United States policy

toward israel provides another example of support from one nation toward another with which it does not have a defense treaty. In early March 1975 when Kissinger was involved in Middle East negotiations, President Ford, while meeting with israeli President Ephraim Katzer, reaffirmed "America's commitment to Israel" (March 4, 1975). Later that same month after the death of King Faisal of Saudia Arabia, Kissinger stated that "Israel cannot possibly have anything to fear from an attempt to bring peace...the United States will stand by its commitment" (Reston, March 26, 1975). Thus while verbal and physical acts of support very often are associated with the existence of a security defense treaty they need not be, and they may even occur more frequently where active threats are recognized and formal treaty agreements are absent.

Policy support statements are not made solely for the purpose of enhancing or making more credible a deterrence threat. Nations with mutual foreign policy interests commonly make note of their common concerns. It is the accumulation and periodic reiteration of these behaviors which commit nations. Support activities raise general expectations of international obligation and they tie national honor to the obligation. Whether these ties are created purposefully or by default, they constitute a side-bet for the actor and commit the nation to consistent behavior. Recent and frequently made policy support activities focus international attention on the tie and cumulatively act to bind tighter the actor to the target nation.

The operational definition for this indicator is the frequency of policy approvals and promises of support by the national decision-makers of a committing nation to a target nation plus the frequency of joint military activities. The frequency of occurrences of these activities is accounted for for the year of the data set and the preceding two years. These three years of data describe the direction and recent cumulative intensity of support activities from a committing nation to a target nation.

The formal definition for these data has been taken from the World Event Interaction Survey (Fitzsimmons, et al 1969). Policy approvals are endorsements or the praising and hailing of the policies or positions of target nations (see applicable sections of WEIS categories 041 and 042, in Appendix C). Policy support promises are the promise of

policy support and the assurance or reassurance of promises or earlier pledges (see applicable sections of WEIS categories 051, 053, and 054, in Appendix C). The only modification of the WEIS definitions used here is that policy support statements must imply or state directly intended support for the political/military security of the target nation. Policy approvals and assurances of other subject areas are not included in the data set. Joint military activities are those events where the armed forces of the committing nation and target nation jointly participate in training exercises or the establishment or reestablishment of joint military facilities and formal agreements (see the applicable part of WEIS category 072, in Appendix C).

The sources of data for this indicator are the descriptive data banks of the WORLD EVENT INTERACTION SURVEY, and DEADLINE DATA. The descriptive files of WEIS data are available as a daily summary record of international events from January 1, 1966 to the present. This data set has been collected from the daily edition of the NEW YORK TIMES (1966-Present) and the TIMES OF LONDON (1969-Present), coded into a set of mutually exclusive and exhaustive categories, and stored conveniently on machine readable magnetic tape in both a numerically coded format and in a summary "in English" event description (for a complete explanation of the WEIS data set see the reference noted above). Policy support statements and actions were collected from the "in English" event descriptions. Information from DEADLINE DATA has been included to extend the record of events beyond a single data source. DEADLINE DATA is a record of important world events collected from multiple news services. The additional information taken from DEADLINE DATA was not very great, however. The improvement in coverage was about 10 percent.

The WEIS information collected from the NEW YORK TIMES and the TIMES OF LONDON provides the basic data for this indicator. For the period January 1966 through December 1968 only the NEW YORK TIMES is used as the basic information source. TIMES OF LONDON data are not available in the WEIS format for this period and their collection was not possible for this project. The addition of the TIMES OF LONDON for the later period is significant, however. The TIMES OF LONDON accounts for about 25 percent of the total number of unique events described for the period after January 1969.

These data sources were selected for this study because they are used commonly in event analyses and thus their scientific strengths and weaknesses are well known. They are

also available in formats which are relatively easy to access. The WEIS data are especially useful since they are coded and machine readable. Both the WEIS and DEADLINE DATA information sources key on major non-routine news events, and they consistently track these events over time. There are, of course, other possible approaches for collecting policy support statements, including direct content analysis of all or a sample of official verbal and written policy statements or the collection of news events from a great many news sources. These other alternatives are very expensive to pursue, and there is no evidence that they are better or more reliable sources of policy support information than the WEIS data collection and DEADLINE DATA.

3. FOREIGN AREA TROOP DEPLOYMENT

The maintenance of Foreign Area Bases and/or Troops may be for three basic reasons. The first is for the enhancement of local military capabilities. The second is for the enhancement of the major nation's military strength (Osgood, 1968 p. 92). The third is for the purpose of demonstrating a willingness or the necessity of a major nation to defend an ally (Schelling, 1966, p. 47). Whatever the stated intentions for maintaining foreign area bases or deploying troops in foreign areas, the action raises the expectation of a commitment. Analysts for the Stockholm International Peace Research Institute suggest that such foreign military presence "clearly indicates which third world regions are of special interest to big powers." (SIPRI, 1972, p. 243)

The deployment of troops in both NATO and non-NATO European nations, for example, has often been cited as an obvious indication and perhaps a signal of United States willingness to defend those nations where the troops are deployed. General Earle Wheeler has suggested that "by the presence on U.S. forces in Spain, the U.S. gives Spain a far more visible and credible security guarantee than any written document" (Global Defense, 1969, p. 22). The United States Secretary for European Affairs, Arthur A. Hartman, recently noted, too, that he considers the presence of United States troops in Europe to be a very important demonstration of the American intent to come to the military aid of Western European nations. He argues that a moderate reduction in United States forces would have an adverse psychological impact of Europeans even more important than the actual military effect of such a reduction (1974, p. 224).

The application of this logic is not limited, of course, to Europe. Senator Symington has offered the view

that "the government of South Korea has recognized the principle of the presence of United States forces being (sic) more important than treaty language itself" (1970, p. 21). More recently, retired United States Navy Rear Admiral Gene La Rocque explained that just the presence of American troops in South Korea "could cause our automatic involvement....Our 38,000 troops, in short, would be hostages requiring help from other U.S. forces to prevent their capture" (December, 1974).

Strategic theorists too have recognized the importance of foreign troop basing as a signal of military commitment. Schelling has explained that the deployment of troops in foreign areas not only signals a commitment, but also reduces the likelihood of easy withdrawal from the situation by the committing nation because the escape bridges have been burned. In other words, a side-bet, difficult to revoke, is made for the actor as well as perhaps by the actor when troops are deployed overseas. Whether by inadvertency or decision, the foreign deployment of troops is explicit and involves clearly and directly the committing nation's honor and reputation. It obligates the committing nation to act in the name of those troops held hostage if they should be put upon by an adversary.

For this study, Foreign Area Troop Deployment is defined according to its use by the Stockholm International Peace Research Institute. No attempt has been made to distinguish among the different definitions, histories, or justifications for foreign area basing provided by the deploying nations. Rather, the number of deployed military personnel of a committing nation in a target nation for the commitment year has been accounted. Where information was available on the presence of foreign based troops by the committing nations but not the actual number of troops deployed, an arbitrary score of 100 was given to these cases. The SIPRI definition:

The concept of foreign military presence, as used here, refers to: (a) the actual access by a foreign power to, and the use of military facilities, usually provided by what is commonly called a military "base"; or (b) the actual presence of organized units of soldiers, sailors, marines or airmen in foreign territories; or (c) the actual deployment and permanent activities of fleets outside their own territorial waters. In this way, controversial questions, such as the formal status of military bases (whether they are under foreign or local jurisdiction, etc.), the

legal basis for the presence of naval activities, are avoided. The criterion used for determining the existence of a military presence in foreign territories is thus actual physical presence rather than formalities regulating this presence (SIPRI, 1972 p. 241).

Other possible operational definitions for foreign military presence might include for example, (1) the number of foreign based troops divided by the population size of the target nation, (2) the number of foreign based troops divided by the number of military personnel in the committing nation, (3) the physical area of the target nation under the military control of the committing nation, etc. The use of the absolute number of foreign deployed military personnel provides a direct measure of the size of involvement, and gives the best indication of the amount of relative foreign military involvement for the committing nation. In tests of the data, several weighting variations for this indicator are being examined.

4. MILITARY AND ECONOMIC AID AND ASSISTANCE

Military and economic aid and assistance are transferred between nations for a variety of reasons. These include the building up of indigenous national forces against internal and external threats, the gaining of international political support from the receiver, the affecting of internal policies within the recipient nation, and the possible denial of access to other foreign donor nations, although there is not sufficient empirical evidence to support well the notion that any of these reasons explain very completely and consistently all aid programs (Wittkopf, 1972). Whatever benefits may accrue to the recipient or donor of foreign aid, aid programs create for the donor-target relationship an image of mutual interest. The authors of GLOBAL DEFENSE have noted that "foreign aid, whether economic or military, has been regarded since the early post-war period as a bulwark to allied and friendly countries against potential enemies. As such, it has been an important element in the total picture of U.S. global commitments" (1969, p. 39). Another analyst has supported this view explaining that "common interests -- in bases, military strength, aid programs or intelligence information -- are the ties that bind" (Keohane, 1971, p. 165).

The existence of large and highly visible aid programs raises the expectation of common interests among the nations involved in the relationship and is regarded generally as a sign of international commitment. In August 1974 in

testimony before the House Asian and Pacific Affairs subcommittee, for example, U.S. Representatives Morris Udall and Lloyd Meeds warned that continued U.S. military aid to South Korea implied a commitment to the South Korean government. According to Representative Meeds, Congressional concern over the belief that U.S. aid to South Korea committed the U.S. to a repressive government led to a Congressional decision to limit the amount of aid sent to Korea until it made progress in improving standards of human rights (Meeds, February 1975). Senator Symington also has noted that "by the very nature of these activities (military assistance programs), the U.S. has become closely identified with the existing governments, and oftentimes its materials are used to suppress insurgents whether or not they are Communists" (1970, p. 23). From this perspective, foreign aid not only commits one nation to protect the national security of another nation from external aggression but sometimes also to the support of a particular regime from domestic threats.

The provision and promise of large amounts of foreign aid creates, then, for the donor a situation where the national reputation of the committing nation is placed at stake. Aid promises and provision create images and investments which may be too costly to lose both in terms of the actual relationship and in terms of the national foreign policy of the committing nation in general. This seems to be part of the reasoning behind Kissinger's recent warning that the United States should support a supplementary aid package for South Vietnam and Cambodia. Kissinger was quoted as telling Administration and Congressional leaders that anything less than the amount requested by the Administration would be seen globally "as a U.S. scuttling of a country...to whom we made commitments following the signing of the (Paris) treaty. If you don't give enough, there is a question whether you should give anything at all" (Matthews, et al, February 10, 1975). Kissinger explained further his views in March when he warned Congress that if the United States fails to continue to give aid to South Vietnam "we are likely to find a massive shift in the foreign policies of many countries, and a fundamental threat over a period of time to the security of the United States" (Johnson, March 27, 1975).

While foreign aid is used here as an indicator of international commitment, there are several possible operational definitions for the indicator. For this study, military and economic aid are used together as a single commitment indicator. Often in statements given by national decision-makers and policy analysts both types of aid are

discussed as complementary and as intended for similar policy goals. The authors of GLOBAL DEFENSE have noted, for example, that "the distinction between economic and military assistance, according to an (American) aid official, has sometimes been more apparent than real" (1969, p. 39). Furthermore, McGowan has found in empirical investigations that the two variables are closely associated (1968, p. 273), and there is some evidence which suggests that economic and military aid funds and assistance received are related indirectly and can be traded-off between defense and non-defense needs (Joshua and Gilbert, 1969, pp. 105-108, and Hovey, 1966, pp. 113-131). Hovey has stated, for example, that while the direct relationship between economic and military aid programs is becoming less significant, a general observation is "that any United States economic contribution will free resources for defense purposes whether or not this is the objective of the contribution" (1966, p. 121). Joshua and Gilbert have found that for the Soviet Union the criteria for determining which nations are to receive either economic or military aid are linked closely. They explain (1969, p. 101):

A key factor in determining whether recipients receive military or economic aid seems to be the position of the aid recipients in international affairs. It appears that the Soviet government ranks aid recipients with respect to their degree of identification with Soviet foreign policy positions in world politics. Those nations most closely associated with the Soviet Union, or most hostile to the United States, receive Soviet approval in the form of both economic and military aid. Countries which are less closely associated with Soviet views on world politics, but which are nevertheless considered potential targets for Soviet influence, tend to receive economic aid only whereas most countries hostile to the Soviet Union or in military alliance with the United States are likely to obtain neither military nor economic aid.

There probably is no perfectly consistent way to determine either how much obligation can be expected from the provision of military and economic aid or how closely these two aid categories match conceptually. It does seem reasonable, however, to combine tentatively and until more conceptual and empirical evidence is available these two types of transactions into a single comprehensive aid indicator. This assumption has been followed here.

A number of variables could be used as indicators of military and economic aid and assistance. One such indicator might be the actual aid amounts transferred from donor to recipient in dollars or some other similar quantitative unit. The main problem with this is that it is difficult to collect such information for nations since much of the data either is kept secret or is not published completely or systematically across nations and time. The variable that is used in the current investigation measures economic aid and assistance, but in a somewhat different manner. Data have been collected for the frequency of foreign economic and military aid promises, rewards, and agreements (see Appendix C for WEIS categories 052,071,072,073,081,082) between the actor and target nations as recorded in the WEIS data set and DEADLINE DATA for the commitment year of the data set and the two preceding years.

Aid promises, grants and agreements are accounted for here rather than the total amount of aid promised or given in monetary units in part because these data are somewhat easier to collect. But more importantly, these data are collected because they are especially visible actions to other members of the international system. The public nature of verbal promises and notices of aid grants may make them better indicators of commitment than the record of the monetary amount of aid given. This is, of course, an empirical question and no claim is made here that the information sources used provide the best or most complete collection of data on aid or assistance. The assumptions followed do seem to be appropriate, nevertheless, for the data set sought.

Three years of aid promise and reward information are collected for each commitment data set for one main reason. Three years of data show the recent cumulative effective of public aid transactions. Aid that is provided regularly and consistently suggests serious involvement whereas more sporadic assistance may only be related spuriously to serious interests. Aid given in response to a particular environmental disaster, for example, is not likely to obligate donor nations to anything, and such aid must be discounted as a commitment indicator. These considerations led to the arbitrary and intuitive decision to use three years of information for this variable, but more rigorous testing of this assumption is warranted.

The WEIS data set and DEADLINE DATA were selected as the sources of information because they provide reliable and regular reports of important international events. Economic and military aid data for nations are difficult to collect

systematically in any form, and, as noted above, both the WEIS data and DEADLINE DATA are acceptable and commonly used sources of international event data. The two sources, one of which depends upon multiple news services, are used to reduce the likelihood of systematic reporting bias.

5. ARMS TRANSFERS

Arms are transferred from one nation to another for many foreign policy reasons (SIPRI, 1971, pp. 17-41; Kemp, 1970, p. 12; and U.S. Senate Staff Study, ARMS STUDIES AND FOREIGN POLICY, 1967). The main purpose of such support appears to be to improve the military capabilities of the recipient against commonly received threats, although direct policy influence and improved balance of payments goals also affect international arms transfer decisions. Secretary of State Schlesinger has explained that for the United States, for example, each American arms transfer decision "is carefully reviewed in terms of its potential contribution to our domestic, foreign policy and mutual security interest's," and that the fundamental objective of American arms transfers is to strengthen the "shared security interests of our friends and allies" (1975, p. IV-7).

Arms transfers generally are considered to be an extension of a nation's defense posture to other nations (GLOBAL DEFENSE, p. 43 and Frank, 1969). Stanley and Pearton suggest that in the contemporary international system alliances are especially "brittle" and arms sales are perhaps a better means for a nation to further its military objectives abroad. They note that "arms sales are now regarded as the most significant diplomatic currency of all. More valuable than ties of history, or culture, or treaty, or even of investment and non-military trade" (1972, p. 9). Furthermore, according to SIPRI analysts, "all military exports require government permission" (1971, p. 4), and Kemp agrees that "since 1945, the vast majority of arms delivered to the Third World have been transferred with the full approval of the governments of the industrial powers" (1970, p. 11). The international transfer of arms occurs, therefore, within the framework of particular national foreign military policies. The act of transferring arms internationally is a clear indicator of foreign military support.

When one nation supplies another with arms it becomes involved with the military policies and reputation of the recipient nation as well as with the successes and failures of those policies. As such, arms transfer relationships create images of interest and obligation for the arms

transferer to continue support. SIPRI analysts have explained this condition in the following way (1970, pp. 13-14):

The supply of weapons to one side or another should in many cases be seen as an indirect use of force in a conflict; the supplying country becomes identified with that side and vitally concerned with its success or failure. This occurs in two quite different ways. In one case, as in South East Asia, participation in the conflict was intended. President Nixon's policy of Vietnamization is an explicit attempt to substitute the supply of weapons for the more unpleasant and politically unpopular task of supplying troops. In this situation, the supply of weapons is a consequence of identification with one party to a conflict. In other cases, this identification may be a consequence of supplying weapons for political gain. Once a supplying country has become identified with one side in a conflict, then it may become necessary to supply manpower as well as weapons to ensure that its side does not lose. Such a defeat might involve the loss of all the political capital gained through supplying weapons.

Arms transfers identify military support and commitment especially well during a period of overt conflict, but these relationships create expectations of obligation even when there is no overt conflict extant between the arms recipient and some other nation. The main reason for this relationship is that the transfer of major weapons systems is a public, obvious, and physical event. The unambiguousness of the transfer links for the observer the foreign policy of the sender nation to the receiver nation. Stanley and Pearton explain this consideration in the following way (1972, p. 17):

A measure of secrecy and ambiguity are inevitable ingredients of foreign policy, but arms sales have the unruly habit of shattering both secrecy and ambiguity. It is difficult to keep an order for even a dozen supersonic aircraft much of a secret, and the scope for diplomatic ambiguity about the supplier country's relations with the purchasing country vanishes the moment the aircraft are delivered to the latter's airfields... Thus the fact that arms sales reveal, or will certainly be interpreted as revealing, foreign policy very

publicly is another reason why Foreign Office officials must at least tread warily before sanctioning sales.

Arms are transferred among nations through sales and grant aid programs, and although most of the major nations supply some military grant aid only the United States has provided in recent years large-scale military assistance programs. Furthermore there is not a very clear distinction between arms sales and arms aid. American arms transfers, according to Secretary of Defense Schlesinger, are made, for example, by the following formula. Nations which "have the financial but not the industrial capability to provide for their own defense...are sold military material on a cash basis...(To nations which) have the economic capacity to purchase the military material they need, but lack the cash reserves...we sell military material on a credit basis...(For) friends and allies (that) lack even the economic capacity to purchase the military items they legitimately need...defense articles and services (are provided) on a grant aid basis" (1975, p.IV-28). Soviet weapons transfers, which when combined with United States arms transfers account for two-thirds of all international arms transfers (SIPRI, 1971, p. 9), are rarely given as grant aid. Instead the Soviets supply arms to those who support USSR foreign policy primarily on the basis of long-term, low interest loans (Joshua and Gilbert, 1969, p. 6).

Since arms are provided through both sales and aid programs and since there is not always a clear dividing line between these two methods of transferring arms, the data collected here for arms transfers include all major weapons transferred without regard to whether they are or are not part of a grant aid program. Furthermore, because it is very difficult to collect information systematically on the monetary amounts of international arms transferred, the data collected are for the numbers of different types of major weapons systems delivered. This follows the advise of Kemp, who has worked with arms transfer data for many years. Kemp notes (1970, p. 14):

Because accurate data on the comparative monetary values of arms sales and aid is so difficult to come by, one may more accurately measure the magnitude of the arms traffic by using the units of the arms themselves, irrespective of whether these arms have been transferred for sale or trade.

The variable used to measure military arms transfers is then the numbers of different types of major weapon systems delivered during the year of the data set and the preceding year. The two year period provides current information and a relatively large number of data entries. The data sources for this information are the STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE YEARBOOK OF WORLD ARMAMENTS AND DISARMAMENTS and the International Institute of Strategic Studies' MILITARY BALANCE. The issues of these record books for the appropriate years were used.

The indicators -- Arms Transfers and Economic and Military Aid and Assistance -- are somewhat similar. They are not, however, the same indicators. The economic and military aid indicator accounts for all aid promises, agreements, and grants made during the period identified between the donor and the recipient. The arms transfer indicator accounts for the number of major weapons systems delivered between provider and recipient. Different things are measured by these two variables. Both types of information are public, but each presents a different image to the observer. The military and economic aid indicator is a record of major decision-making EVENTS that have received the direct attention of the news media. The arms transfer indicator is a statistical record collected by specialized data collectors of the number of different types of weapons systems sent to receiving nations. While these two variables are conceptually distinct, careful attention is being given to the empirical correlation between these two indicators whenever they are used together for measurement.

6. TRADE

The final commitment indicator presented in this paper is the indicator Trade. International trade relationships clearly are not primarily or even basically military activities. International trade relationships clearly are not primarily or even basically military activities. International trade relationships represent the gross amount of economic interaction and interdependence among nations. In the highly interdependent contemporary international system, economic interactions effect directly and importantly, however, all foreign policy interactions. This is especially true for the international relations of the industrialized nations (Rosecrance and Stein, 1973). The assumptions followed here are 1) that international economic relationships are so closely related to most international relationships, including military relationships, that they can contribute to the identification and tracking of international military commitments, and 2) that trade data

represent well the overall direction and intensity of international economic relationships.

International trade relationships have been shown to be related empirically to other types of international relationships. McGowan and Shapiro suggest, for example, that an important series of hypotheses exist in the international relations literature which offer that economic variables are related to international behavior. McGowan and Shapiro state one proposition for trade that is especially relevant to this research. They propose that "the greater a nation's trade, the more ties of other kinds it will have with other nations" (1973, p. 115). The main empirical support for this proposition, is based upon tests of data for system participation rather than for behavior between nations (Rummel, 1966, p. 211, and Chadwick, 1969, p. 202), but Chadwick suggests, nevertheless, that these data analyses may still be useful for indicating the "propensities" of individual nations.

Chadwick has found, for example, that economic cooperation (trade and economic agreements) can be shown to be "linked with a propensity to enter into military agreements." Chadwick has provided several possible answers for this association. The first is drawn from Deutsch (1954) and is reasoned as follows (Chadwick, p. 204):

One of the ways Deutsch suggests for attaining a security community is through the development of ties of mutual interdependence, either in terms of military or economic needs (Deutsch, p. 37). Thus, if economic cooperation and interdependence -- as indicated by trade -- induces both the need and, perhaps, the expectation of peaceful change, the general desire for security might precipitate successful efforts to formalize these expectations through military agreements.

Chadwick's second possible and "slightly different but compatible explanation" comes from Wright (1955, p.254):

Economic barriers increase political tension, and political tension increases economic barriers. Thus once a process of building tension is started, it tends to increase cumulatively ending in war. If the opposite process of diminishing political tensions and diminishing economic barriers is started, it also may develop, cumulatively, ending in federation or union.

Finally Chadwick provided a third and still compatible possible explanation from Russett (1965, p.33) which suggests that trade may help to induce and strengthen military agreements.

Trade also plays a major role as a capability for responsiveness, as a force making closer political ties possible. A person engaged in international commerce is exposed to a wide variety of information and ideas that would otherwise never reach him...An exporter is likely to have a general interest in the well-being of his market, an interest that transcends the marketing conditions, narrowly defined, for his product. But it is essential to understand that the effect is not limited to economic interests; an exporter may become attuned to the needs of the importing country over a great range of non-economic matters.

Russett's work is perhaps especially relevant. In an early analysis of major nation deterrence policies in support of allies, Russett found that the credibility of a military commitment apparently can be strengthened by non-military activities. Russett noted that "a nation might even deliberately increase its economic dependence upon supplies from a certain area, the better to enhance the credibility of a promise to defend it" (1963, p. 98). Russett's main point was that formal agreements or arms capabilities alone do not explain completely apparently effective deterrence postures. Russett explains (p. 107):

If other factors are equal, an attacker will regard a military response by the defender as more probable the greater the number of military, political, and economic ties between pawn and defender. No aggressor is likely to measure these bonds, as commercial ties, in just the way we have sketched them here, but he is most unlikely to be insensitive to their existence.

Strengthening these bonds is, in effect, a strategy of raising the credibility of deterrence by increasing the loss one would suffer by not fulfilling a pledge.

Russett concluded in the article that while interdependence does not provide a guarantee that the aggressor will believe the defender, it will be difficult to create a credible image if interdependent bonds do not exist between the defender and the pawn. Russett even offers a possible policy

choice for increasing the credibility of a military commitment. He suggests (p. 108):

Because the strength of international ties is to some degree controllable, certain policy choices, not immediately relevant to this problem, in fact take on special urgency. Implementation of the Trade Expansion Act, allowing the American government to eliminate tariffs on much of United States trade with Western Europe, will have more than an economic significance. By increasing America's apparent, and actual, economic dependence on Europe it will make more credible America's promise to defend it from attack.

Russett did not limit his conclusions about important interdependent ties to economic relationships. He noted that various political, cultural, and military ties are also important relationships that may increase the credibility of an international commitment. Chadwick, too, found a positive relationship between military and economic/cultural agreements, but for this study, in addition to the political-military indicators already presented, only economic ties are included although other types of relationships have received some attention. A preliminary analysis has shown, for example, that reliable data which represent dyadic cultural ties are especially difficult to collect. Furthermore some tests have been made on data which represent general but common international political interests. Insufficient evidence has been found to show which of these relationships such as official and unofficial visits and bi-lateral agreements represent important international investments and obligations.

Analyses have been performed, for example, on data collected on international agreements made during the year 1971 between the seven major actor nations and all other nations. The data showed that the United States and the Soviet Union made more major international agreements with each other than any other international dyad examined. This tends to support the hypothesis that international participation as measured by political agreements is associated with economic development and size (McGowan, 1968 and Rummel, 1969, p. 274), and not the hypothesis that participation is related necessarily to commitment or alignment. Some event and interaction data may represent well the fact that major global actors participate actively in international politics, but such interaction is not necessarily an indicator of specific international obligations and commitments.

Data for the trade indicator are collected for total trade (exports plus imports) between the actor and target nation in current United States dollar amounts for the year of each data set in order to measure the gross size of the relationship. There are variations for accounting for this variable including measures of trade concentration (see, for example, Caporaso, 1973). The proportion of trade between the actor and the target nation and total trade of either is, for example, a measurement option, and as Caporaso explains, there are several other options which offer somewhat different relative measures of international trade. Some of these measurement approaches will be discussed further where applicable in future reports. At his time, the most important consideration is, however, the assumption that trade involves a public investment of one nation in another and the larger and more visible this tie, the greater the dependence and commitment of an actor nation to maintain the relationship. The loss of such an investment may entail a loss of prestige, a loss of tangible assets, and the weakening of a deterrent posture.

FINAL CONSIDERATIONS

The six indicators reviewed above are types of international transactions. Each is a visible and public relationship made up on one or more discrete events, and all are believed to be associated with expected military commitment relationships between major actor nations and other target nations. The completeness of these indicators as representative of international military commitments is unknown and more research must be completed before anything more than tentative assumptions can be made about how well this or any other set of indicators monitors international military commitments. There are, nevertheless, several statements that can be made about the indicators, and how they might be used to help analysts locate and monitor military ties among nations.

The indicators should not be considered to be the "causes" of international military commitments. Such causes can be attributed to a myriad of factors including national historical traditions, past and current strategic policies, decision-making capabilities and processes, situational events, and the idiosyncrasies of particular national leaders. Why and how a specific international commitment is created are not questions for which the data set described here can provide direct and clear answers. The six indicators presented above can show, however, the direction of international military commitments and their intensities

and propensities to change over time.

A comparative analysis of the data for the behavior of the actor-target dyads shows which dyads have active ties for each indicator at any particular data point. The intensity of these relationships is accounted for by the frequency of interaction for each indicator (except defense treaty which is a dichotomous variable). Intensity scores may be measured independently for each indicator or as a composite score (a technique for composite construction will be discussed in another paper). Finally since the data are collected for several data points (1968-1974), the propensities for commitments to change over time can be measured.

The indicators selected are believed to show international military relationships. As noted above the particular operational definitions selected should enable reliable and valid measurement, and tests are being conducted to determine indicator representativeness and reliability. How effective these indicators are as generally applicable measures is unknown. The international system is not static, however, and it must be assumed that as political structures and processes change so too will the indicators of those processes. In other words, these indicators should work well as descriptors and monitors of contemporary international military commitments, but they should be modified and replaced as future research insight recommends and real world conditions change.

Appendix A: Actors* and Targets

Afghanistan	Gabon
Albania	Gambia
Algeria	Germany/Democratic Rep.
Argentina	GERMANY/FEDERAL REP.
Australia	Ghana
Austria	Greece
Barbados	Guatemala
Belgium	Guinea
Bolivia	Guyana
Botswana	Haiti
Brazil	Honduras
Bulgaria	Hungary
Burma	Hong Kong
Burundi	Iceland
Cambodia	India
Cameroun	Indonesia
Canada	Iran
Central African Republic	Iraq
Ceylon	Ireland
Chad	Israel
Chile	Italy
CHINA, PEOPLES REPUBLIC	Ivory Coast
China, Republic of	Jamaica
Columbia	JAPAN
Congo (Brazzaville)	Jordan
Congo (Kinshasa)	Kenya
Costa Rica	Korea/North
Cuba	Korea/South
Cyprus	Kuwait
Czechoslovakia	Laos
Dahomey	Lebanon
Denmark	Lesotho
Dominican Republic	Liberia
Ecuador	Libya
El Salvador	Liechtenstein
Equitorial Guinea	Luxemburg
(Fernando Po)	Macao
Ethiopia	Malagasy
Finland	Malawi
FRANCE	Malaysia

* Nations which are both Actors and Targets are capitalized.
All others are Targets only.

Actors and Targets

Maldive	Singapore
Mali	Somalia
Malta	South Africa
Mauritius	South Yemen
Mauritania	Spain
Mexico	Sudan
Monaco	Swaziland
Mongolia	Sweden
Morocco	Switzerland
Muscat and Oman	Syria
Nauru	Tanzania
Nepal	Thailand
Netherlands	Togo
New Zealand	Trinidad-Tobago
Nicaragua	Tunisia
Niger	Turkey
Nigeria	Tibet
Norway	Uganda
Pakistan	USSR
Panama	UAR (Egypt)
Paraguay	UNITED KINGDOM
Peru	UNITED STATES
Philippines	Upper Volta
Poland	Uruguay
Portugal	Venezuela
Rhodesia	Vietnam/South
Rumania	Vietnam/North
Rwanda	Western Samoa
Saudi Arabia	Yemen
Senegal	Yemen/South
Sierra Leone	Yugoslavia
	Zambia

Appendix B: Data Sources*

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* The principal data sources are listed here. Other sources of information are under review.

Appendix C: WEIS Categories*

04 APPROVE

041 (praise, hail)

Example: North Vietnam expresses gratitude to China
for its aid.

Comment: This category includes the "politeness" events
such as expressions of gratitude, condolences,
and ceremonial salutations.

042 (endorse other policy or position)

Example: China backs North Vietnam's role in the war.

05 PROMISE

051 (promise own policy support)

Example: The U.S. pledges to help the British in mission
for Vietnam peace.

052 (promise material support)

Example: The Soviet Union promises wheat to the U.A.R.

Comment: This category specifies men and/or resource aid
forthcoming.

*Taken from Fitzsimmons, Barbara, Gary Hoggard, Charles
McClelland, Wayne Martin, and Robert Young, "World
Event/Interaction Survey Handbook and Codebook." January,
1969.

053 (promise other future support action)

Example: Britain emphasized its determination to fulfill defense commitments in Southeast Asia.

054 (assure, reassure)

Example: China assures North Vietnam of help against U.S. aggression.

Comment: This category is used for expressions or reiterations of promises or earlier pledges.

07 REWARD

A "reward" act is an announcement of a decision to give (or lend) aid to a second nation. The act of RECEIVING a reward is not coded.

071 (extend economic aid)

Example: The World Bank awards Brazil \$49 million.

072 (extend military aid)

Example: The USA extends additional military aid to South Korea.

Comment: This category includes both men and material; in addition, joint military training exercises are coded in this category.

073 (extend other assistance)

Example: Bulgaria agrees to send biological and agricultural scientists to Cuba.

08 AGREE

The "agree" category is normally "double-coded" because when party A reaches an agreement with party B, B also agrees with A. Thus an agreement is a joint decision on some issue of mutual interest.

081 (make substantive agreement)

Example: China and the Netherlands agree to exchange captive nationals.

082 (agree to future action or procedure)

Example: the Soviet Union and West Germany agree to talk on expanding trade between them.

Comment: This category includes also the acceptance of invitations from other states.

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