

AD/A-005 356

SEMI-ANNUAL TECHNICAL REPORT

Gary A. Hill

University of Southern California

Prepared for:

Office of Naval Research  
Advanced Research Projects Agency

January 1975

DISTRIBUTED BY:

**NTIS**

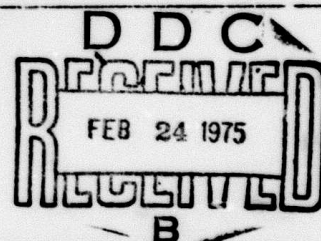
National Technical Information Service  
U. S. DEPARTMENT OF COMMERCE

062096

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

| REPORT DOCUMENTATION PAGE                                                                                                                                                                                                                     |                       | READ INSTRUCTIONS<br>BEFORE COMPLETING FORM                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------|
| 1. REPORT NUMBER<br><b>TR&amp;A TECHNICAL PAPER #27</b>                                                                                                                                                                                       | 2. GOVT ACCESSION NO. | 3. RECIPIENT'S CATALOG NUMBER                                                                |
| 4. TITLE (and Subtitle)<br><b>SEMI-ANNUAL TECHNICAL REPORT</b>                                                                                                                                                                                |                       | 5. TYPE OF REPORT & PERIOD COVERED<br><b>7-1-74 to 12-31-74<br/>INTERIM TECHNICAL REPORT</b> |
| 7. AUTHOR(s)<br><b>GARY A. HILL</b>                                                                                                                                                                                                           |                       | 6. PERFORMING ORG. REPORT NUMBER<br><b>#27</b>                                               |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS<br><b>DEPARTMENT OF INTERNATIONAL RELATIONS<br/>University of Southern California<br/>University Park, Los Angeles, CA 90007</b>                                                                  |                       | 8. CONTRACT OR GRANT NUMBER(s)<br><b>ARPA #2518<br/>N00014-67-A-0269-0029</b>                |
| 11. CONTROLLING OFFICE NAME AND ADDRESS<br><b>Organizational Effectiveness Research<br/>Office of Naval Research (Code 452)<br/>800 No. Quincy St., Arlington, VA 22217</b>                                                                   |                       | 10. PROGRAM ELEMENT, PROJECT, TASK<br>AREA & WORK UNIT NUMBERS<br><b>NR 177-952</b>          |
| 14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)<br><b>Office of Naval Research Branch<br/>1030 E. Green Street<br/>Pasadena, California 91101</b>                                                                 |                       | 12. REPORT DATE<br><b>January, 1975</b>                                                      |
|                                                                                                                                                                                                                                               |                       | 13. NUMBER OF PAGES<br><b>14</b>                                                             |
|                                                                                                                                                                                                                                               |                       | 15. SECURITY CLASS. (of this report)<br><b>UNCLASSIFIED</b>                                  |
|                                                                                                                                                                                                                                               |                       | 15a. DECLASSIFICATION/DOWNGRADING<br>SCHEDULE                                                |
| 16. DISTRIBUTION STATEMENT (of this Report)<br><br><b>"Approved for public release; distribution unlimited."</b>                                                                                                                              |                       |                                                                                              |
| 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)<br><br><b>"Approved for public release; distribution unlimited."</b>                                                                               |                       |                                                                                              |
| 18. SUPPLEMENTARY NOTES                                                                                                                                                                                                                       |                       |                                                                                              |
| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number)<br><b>Threat Recognition, International Relations, Commitment,<br/>Southern Africa Subsystem, Stress and Coping, Event<br/>Sequence, Natural Resources</b> |                       |                                                                                              |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number)<br><br><b>See the following page.</b>                                                                                                                       |                       |                                                                                              |

Reproduced by  
NATIONAL TECHNICAL  
INFORMATION SERVICE  
US Department of Commerce  
Springfield, VA. 22151



DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE  
S/N 0102-014-6601

PRICES SUBJECT TO CHANGE

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)  
**Unclassified**

AD A 005356

The report reviews the "Country Threat File Codebook" (Technical Report #20) which describes the variables and data used for monitoring the situational threat context of each nation. The "International Military Commitment: A Conceptual Definition" (Technical Report #22) discusses the association between international threat situations and commitment linkages. The International Stress and Coping Study encompasses three papers (Technical Reports #24, 25, 26) which discuss and analyze the pre-confrontation interaction sequences of national systems enmeshed in a crisis. The Southern African Subsystem Study (SASS) produced two Technical Reports (#19 and #21) which represent a codebook and list of keyword terms for a bibliographic compilation. The codebook defines the variables which are to be utilized in a study of threat situations in the southern Africa region. This study is described in working paper #6, "Southern African Subsystem Study (SASS): Conceptual Overview and Rational." The final paper reviewed is Technical Report #23, "Resource Diplomacy: the Role of Natural Resources in International Politics." This report examines the problem of resource shortages and national policy responses designed to cope with the problem.

-1-

SEMI-ANNUAL TECHNICAL REPORT

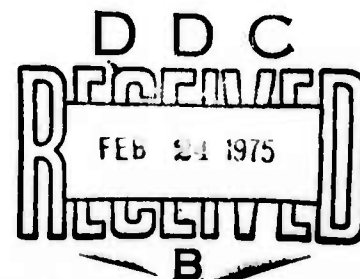
Gary A. Hill

International Relations Research Institute  
School of International Relations  
University of Southern California  
January 1975

TR&A Technical Report #27  
Threat Recognition and Analysis

"Approved for public release; Distribution Unlimited."

Reproduction in whole or in part is permitted for any purpose of the United States Government. This research was sponsored by the Organizational Effectiveness Research Programs, Office of Naval Research (Code 452), under ARPA Contract No. #2518, N00014-67-A-0269-0029; HR 177-952.



## ABSTRACT

Semi-Annual Technical Report #27 is a summary of the TR&A Technical Reports and Working Papers produced in the first six months of research effort. This review provides users of the substantive research produced by the Threat Recognition and Analysis Project (Dr. Charles A. McClelland, Principal Investigator) with a single reference to the work of the project.

Semi-Annual Technical Report  
Gary A. Hill  
International Relations Research Institute  
January, 1975

A review of the first six months activity on the Threat Recognition and Analysis Project reveals considerable progress toward meeting the research objectives described in the proposal for funding. These objectives include (1) the design of a multi-level approach for the identification and analysis of extant and potential future threats in international politics, (2) the development of computerized data files which are current and capable of being up-dated, and (3) man-machine simulations to demonstrate alternative methods of controlling the processes engendered in situational threats. Research pursuant to these objectives is being carried forth at three levels-of-analysis--global, Third World, and comparative national systems.

At the global level five technical reports have been produced. Trysha Truesdell Glaser has contributed the Country Threat File Codebook (Technical Report #20) describing the relevant categories of data collection. As described in the report, the Country Threat File is a concise computer data file which monitors each nation's domestic and international setting thereby providing the context for significant policy changes, policy problems, active and growing threats to that state and the international system. The file for each of the 140 nations contains various data such as populations, gross national product, memberships in international organizations and military alliance, raw material resources, military size and expenditures, economic and military aid, trade, raw material trade flows, and important domestic and international events.

The Country Threat File has gone through various stages in the past months. During September through early November the specific coding variables and data sources were investigated and refined so that by late November an initial coding scheme was developed and a codebook was produced which details the exact coding procedures. In December a team of seven coders was selected, trained, and intensively checked for coding reliability. Data collection and coding have been completed for the first quarter of 1974. These data are currently being entered into computerized files which will be updated quarterly in order to trace the rapidly evolving context of each nation's domestic and international situations.

The importance of this type of data file lies in its compact coverage of critical information in the policy-making process, such as a nation's active and latent threats, those resources and strengths which enable a nation to withstand or carry out threats and major policy shifts, dependencies that restrict policy actions and make nations economically and politically vulnerable, and the group of nations and organizations that might support and aid a specific nation. Additionally, we are tracing each state's significant domestic and international events such as agreements, new inter-nation pacts, support statements, criticisms, sanctions, verbal warnings and threats, and military activities.

From the recording and monitoring of this information we expect to be able to detect policy shifts and emerging threats from recent events and stated national objectives and then to refer to such Country Threat File variables as trade, raw material resources and trade flows, military and economic aid, defense pacts, arm sales, and so forth, to propose a repertoire of responses and consequences for those nations involved. In addition, we expect to pinpoint where the active "hot spots" are in the international system. Particularly important are those issues involving actual military hostilities, issues that appear to be on the verge of breaking into military hostilities, or issues that are beginning to involve intense non-military pressures such as economic or organizational sanctions. Other possibilities for analysis include tracing the development and handling of threats by states, the commonly-used strategies and their results, potential threat arenas, types of threats common to particular types of nations, and the types of threats which are either increasing or decreasing in national domestic or the international environment.

The International Commitment Study by Wayne Martin represents the second report, "International Military Commitment: A Conceptual Definition" (Technical Report #22), produced for the global level study. In this report, the study of who is committed to whom is identified as being central to international relations analysis. Commitments bind nations and obligate them to support others. They are often created by nations seeking association in defense of perceived threats, and therefore, are important to deterrence policies and war prevention. Commitments obligate nations to consistent activities, and they tend to reduce or constrain policy choice. Commitments both affect and are affected by many different international relations

phenomenon.

The extant knowledge available about the concept of commitment and its use in the analysis of international relations is not, however, very complete. There is a real need to better understand how commitments are associated with other international relations concepts. The intent of the Commitment Study is to provide an operational definition of the concept, and examine procedures for measuring and monitoring international commitments.

In order to develop a better understanding of international commitment, several tasks must be completed. The needs include: (1) a list of the assumptions necessary to provide an operational definition of the concept, (2) an identification of the indicators of international commitment, and (3) a procedure for measuring commitments. Research conducted thus far in the Commitment Study has provided a list of basic assumptions necessary for the measurement of international commitment and several commitment indicators. Tests are now being conducted to determine the usefulness and reliability of these indicators. An approach for measuring degrees of commitment among nations is also being examined.

It is expected that a procedure for measuring international commitments will be developed successfully. The procedure should be capable of identifying commitment relationships and monitoring such relationships over time. The identification of change sequences in commitment relationships should also be possible.

The measurement of international commitments will be explored in detail in the Commitment Study. One important goal is to examine the association between international threat situations and commitment linkages. International threats are thought to be a major reason why international commitments are formed as well as terminated. Some consider commitments as threat inducements. These and other propositions about the relationship between international commitments and other international phenomenon shall be investigated in the Commitment Study.

Finally, a set of three papers has been produced by Richard Smith Beal (TEchnical Papers #24-#26) for the International Stress and Coping Study (ISCS). The ISCS is designed to analyze in detail the pre-confrontation interaction sequences of national systems enmeshed in a crisis. International crises are viewed as a special class

of threat situation. A crisis is the most dramatic clue in the flow of international events that anticipates a future condition of more universal conflict. It specifically foreshadows a conflict, currently not present, at some indefinite time in the future which is more violent and more all encompassing. Crises are, therefore, threat situations in that they generate stresses with which national decision-makers must cope in order to avert the anticipated state of comprehensive violence. The study's primary aim is to monitor how national systems cope with the stresses produced in the pre-confrontation phase of an international crises.

The problem of tracking a dynamic conflict situation like a crisis is approached with a modified event-interaction scheme which emphasizes: (1) the sequences of inter-state interaction, (2) the coping strategies national systems adopt to control the escalatory dynamic of a crisis to avert an undesirable future, and (3) the cognitive evaluation of the threat potential of a crisis situation by national elites. The idea of sequential interaction and cognitive appraisal of the situation are central to the monitoring approach. It is extremely important in tracing an escalating conflict to know who is doing what to whom, when, with what response and followed by what. This is not a mere chronology of events; rather it is matching actions with reactions and linking them together in a vector to facilitate measuring the change dynamic of the process. The cognitive appraisal by elites of the interaction sequences is used as a technique to measure the importance of sequences or isolated events, and to know what the level of anticipated danger is in the minds of prominent political leaders.

The critical variable groupings in the study are event-interactions, interaction sequences, coping strategies and cognitive appraisal of the situational threat. Within the event-interaction cluster are the standard WEIS type variables. The interaction sequences consist of action-reaction (output-output) protocols. From empirical observation of several international crises, probability values will be calculated for each output-output protocol as well as which protocols are most likely to follow one another in time. The objective is to determine which protocol and sequence of protocols characterized different segments of the pre-confrontation period.

Each protocol, especially the reaction component, will be coded according to the apparent type of coping strategy it actually represents. A suggestive list of potential

coping strategies is found in Technical Report #26. The specific variables in the cognitive appraisal grouping includes elites evaluation of the situation: (1) the probability that the confrontation will occur, (2) the nature of the threatened future state, (3) the scope and/or magnitude of the anticipated deprivation if the confrontation actually occurs, (4) the estimated immensity and duration of the confrontation, (5) the possibility of avoiding or adapting to the confrontation, and (6) the ability of the system to deal adequately with the threat situation.

At present three independent, though interrelated, papers exist which spell-out in greater detail the premises of this approach to monitoring international crisis. "Crises in a Transforming International System" (Technical Report #24) accepts the argument that crises are more apt to occur under times of turbulence and political change. Consequently the expectation is advanced that international crises in the coming decade will be highly likely to occur due to the dramatic changes currently taking place in the international system. These new changes cause severe environmental turbulence and provide the necessary setting for future crises. On the basis of this transformation in the system, it is anticipated that international crises will occur with increasing frequency. Therefore, more detailed understanding of the sequential dynamic of crises is necessary if crisis management is ever to become effective.

The follow-up paper, "Phases of a Crisis" (Technical Report #25), posits that crises proceed through identifiable stages of development. The purpose of the paper is to review what other authors have suggested as the principal phases of a crisis, the thresholds and the criteria for breaching a threshold.

"Monitoring International Crises" (Technical Report #26), is the final paper. Its function is to present the sequential interaction/cognitive appraisal approach to monitoring a dynamic conflict. A treatment is presented of the meaning of a sequence, the notions of coping and stress in crises, and the cognitive evaluation dimension of the monitoring strategy.

The expected utility of this study is to increase understanding about which interaction sequences characterize the pre-confrontation period of an international crisis, and to become more familiar with the threat conditions under which national systems adopt certain coping strategies to either reduce current stresses or ward-off states of future

undesirability.

This understanding can be gained if probabilities can be attached to interaction protocols or the sequence of protocols at different periods of time in the pre-confrontation periods. The anticipated results of the study will be information which will allow analysts and decision-makers to locate the escalatory or growth phase of a given crisis.

At the level of Third World arenas, Patrick McGowan has contributed two Technical Reports (#19 and #21) as well as a working paper #6, which comprise the Southern Africa Subsystem Study (SASS). SASS derives its principal significance from the fact that it focuses on a Third World arena and that it adapts the regional subsystem concept to research on the analysis and recognition of threat situations. First, it is anticipated that threat situations and the procedures for their recognition and analysis will have both general and subsystem unique aspects. By looking at the Southern African region, one may scrutinize this expectation closely. Second, regional systems in the Third World are comprised of actors with markedly different characteristics from the actors in more developed regional systems, a factor which should affect their threat behavior. Finally, the utility of the regional subsystem concept and its empirical applicability is being investigated by SASS.

The critical variables in SASS are: time, extra-systemic events of great subsystem consequence, types of behavior exchanged among SASS actors, and perceptions of threat as articulated by leaders, elites, and mass publics. Time is operationalized by coding the date of each interaction and perception. The SASS Codebook (Technical Report #24) describes these variables explicitly. It is expected that the period 1 January 1973 to the present will reveal a dynamic threat conjuncture in this region. Events with wide consequence for the subsystem such as the Portuguese coup d'etat of April 1974 and the Mid-East war and oil embargo of October 1974 are included in this time span. Other variables and the study's research design are described in detail in TR&A Working Paper #6.

The Southern African region has been undergoing a rapid evolution since January 1973 which offers many possible critical points of change. It is anticipated that SASS will develop techniques for threat recognition and analysis of rapid change systems and point toward sociological (race) and political (status) threats operating in international politics. Because of the general low level of development in

the region, the role of political variables will be stressed while economic and ecological threats will be down-played. These findings will be integrated within the final TR&A report.

At the level of national systems Gary A. Hill has produced Technical Report #23 which examines the problem of natural resource shortages and depletion and the response of national systems. The impetus for this research stems from the observation that there appears with increasing frequency references to new conditions of interdependence and the utilization of natural resources as political weapons for furthering the foreign policy objectives of nation states. In sum, the current perspective reflects new forms of threat in international politics with which nations must now cope.

To date, evidence of national response to the new forms of threat is mixed. Cooperative actions have produced conferences on the problems of access to natural resources as well as other environmental concerns. On the other hand the national responses to the oil embargo reflected initially take-care-of-self policies. The present study is designed to demonstrate that if the existence of the new threats constitute a dilemma of choice for nations, then under what conditions will nations respond through either individual, go-it-alone policies, or policies of joint response through voluntary, cooperative associations.

# REFERENCES

- BEAL, RICHARD SMITH (1975a)  
"Crises in a Transforming International System."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #24, University of Southern  
California. Mimeo.
- BEAL, RICHARD SMITH (1975b)  
"Phases of a Crisis."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #25, University of Southern  
California. Mimeo.
- BEAL, RICHARD SMITH (1975c)  
"Monitoring International Crises."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #26, University of Southern  
California. Mimeo.
- GLASER, TRYSHA TRUESDELL (1975)  
"Country Threat File Codebook."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #20, University of Southern  
California. Mimeo.
- HILL, GARY A. (1975)  
"Resource Diplomacy: The Role of Natural Resources  
in International Politics."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #23, University of Southern  
California. Mimeo.
- MCGOWAN, PATRICK A. (1975a)  
"Southern African Subsystem Study Codebook."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #19, University of Southern  
California. Mimeo.
- MCGOWAN, PATRICK A. (1975b)  
"Southern African Subsystem Study (SASS): A  
Conceptual Overview and Rationale."  
Threat Recognition and Analysis Project,  
TR&A Working Paper #6, University of Southern  
California. Mimeo.

McGOWAN, PATRICK A. (1975c)  
"Search Codes for a Bibliography for the Study of  
African International Relations."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #21, University of Southern  
California, Mimeo.

MARTIN, WAYNE R. (1975)  
"International Military Commitment: A Conceptual  
Definition."  
Threat Recognition and Analysis Project,  
TR&A Technical Report #22, California State College,  
Dominguez Hills, Mimeo.