CHINESE
INTERNATIONAL CONFLICT BEHAVIOR
1949 - 1978

Volume II

by

AKIHIKO TANAKA

B.A., University of Tokyo
(1977)

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE
DEGREE OF
DOCTOR OF PHILOSOPHY

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

September 1981
© AKIHIKO TANAKA 1981

The author hereby grants to M.I.T. permission to reproduce
and to distribute copies of this thesis document in whole or
in part.

Signature of Author

Certified by

Accepted by

Hayward R. Alker, Jr.
Thesis Supervisor

Hayward R. Alker, Jr.
Chairman

Departmental Graduate Committee

Archives

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY

SEP 17 1981

LIBRARIES
CHINESE
INTERNATIONAL CONFLICT BEHAVIOR
1949 - 1978
by
AKIHlKO TANAKA

Submitted to the Department of Political Science
in September 1981 in partial fulfillment of the
requirements for the Degree of Doctor of Philosophy
in Political Science

ABSTRACT

A macro, aggregate model and several micro, process
models of Chinese international conflict behavior were
constructed. The macro model was an attempt at applying the
general linear model to represent aggregate Chinese
international conflict behavior. It was found that in
involvement mechanism, two different structures took turns
over the 30 year history. The first period is from 1950 to
1957, the second, from 1958 to 1976, and the third, from 1977
to 1978. The estimation results show that the first and the
third have the same structure. A cycle seems to have
occurred. Major changes occurred in the mode of domestic
influence on the international conflict involvement behavior;
in the first and third periods, the domestic economic
situation positively affected the level of involvement and
domestic campaign mobilization was negatively correlated with
the involvement level; in the second period, domestic campaign
mobilization had a positive correlation with the involvement
level and the domestic economic situation had no systematic
impact on it.

Several micro, process models are constructed within the
information processing tradition. We tried to represent
contending views in terms of the frame of reference (realist
vs. revolutionary), the strategy to cope with uncertainty in
evaluation (rigid vs. flexible), the strategy to cope with
uncertainty in decision (aggressive vs. cautious). Based on
their respective rules, different models predict the decisions
to be taken by the PRC in each of the 385 conflict and event
cases in the CACI data set. It was found in this exercise
that cycles involving two different models occurred over the
30 year period. The model with the revolutionary framework
and the rigid, hard-line evaluation strategy performed better
in the periods from 1949 to 1953, from 1957 to 1958, from 1968 to 1969, and from 1974 to 1976. The model with the realist framework and the mixed, pragmatic evaluation strategy performed better in the periods from 1954 to 1956, from 1959 to 1967, from 1970 to 1973, and from 1977 to 1978. But it was found that the Chinese were consistent in their aggressive strategy for taking sides and in their cautious involvement decision strategy. Finally, results derived from the macro and micro models are compared and discussed.


Title: Professor of Political Science
ACKNOWLEDGEMENT

I am indebted to many for their help with this thesis. Some of the ideas and insights in this thesis find their origins in my undergraduate studies in liberal arts at the University of Tokyo. Shinkichi Eto and Tatsumi Okabe aroused my interest in Chinese foreign policy and contemporary Chinese politics and taught me how to conduct scholarly research. I owe a great deal to Shinji Kojima for my understanding of the history of Modern China. Kenichiro Hirano always gave me balanced judgement and advice when I had trouble in clarifying the issues in my research for both my undergraduate thesis and this thesis. Takashi Inoguchi introduced me to a wide range of quantitative and mathematical researches in international relations. One of the most critical courses that I took at Tokyo, however, was Shumpei Kumon's General Systems Analysis. Kumon's thoughts and recent works inspired me to think about the question: What are the appropriate forms of representation of social systems? This thesis is an attempt, admittingly imperfect, to answer this question.

But my greatest thanks go to my thesis committee at Massachusetts Institute of Technology: Hayward R. Alker, Jr., Lucian W. Pye, and Lloyd Etheredge. My intellectual debt to Hayward R. Alker, Jr. is obvious from the design of the computer simulation programs used in the text. The key concept of "precedential logic" was derived from his works with Cheryl Christensen and William Greenberg. His recent thoughts and works on social systems, logic in political discourse, and international relations were always stimulating and useful. Lucian W. Pye, from whom I learned Chinese political culture, corrected me when I strayed from the main line of argument. In addition to his expertise in Chinese politics, his advise on prose writing in English, which is after all a foreign language to me, was very useful. (See Pye, 1978b:225 for an interesting observation of different writing habits between Americans and Japanese.) Lloyd Etheredge shared his wide knowledge in political psychology with me; I benefited greatly from conversations with him on methodology for analyzing foreign policy.

I gained a great deal from the intellectual atmosphere at the M.I.T. Political Science Department. I appreciate the following people's useful advice and suggestions: Lincoln P. Bloomfield, Peter Brecke, Nazli Choucri, Lee Farris, John Frankenstein, John Gano, Roger Hurwitz, Aykut Kansu, Dwain Mefford, Donald Morrison, Ogban Ogban-Iyam, Ithiel de Sola Pool, Richard J. Samuels, Frank Sherman, James Short, Dale Smith, Hiroshi Sugimoto, and Sophia Lu-tao Wang. I especially owe great intellectual debt to Dwain Mefford. He was patient
enough to listen to my ill worked out speculations and straightened them out for me.

Outside the Political Science Department at M.I.T., conversations on econometrics with Sadao Nagaoka and Ryohei Itoh, on artificial intelligence and computer science with Katsushi Ikeuchi and Masakazu Kuranari, on Chinese politics and history with Yukio Sunayama, on Political Science in general with Tetsuya Umemoto, and on science in general with Akihiko Okamoto were all extremely stimulating and useful.

I would like to thank Nagayo Homma for my training in the English language, without which I could not have obtained the opportunity of studying in the United States, let alone completing this thesis. It was a great privilege for an undergraduate student to take English courses from Japan's foremost specialist in American Studies.

The first two years (1977 - 1979) of studies at M.I.T. were funded by the Ishizaka Foundation (Tokyo). The researches for this thesis conducted from 1979 to 1981 were partially supported by NSF Grant #7806707 to the Center for International Studies, M.I.T. and by the Political Science Department, M.I.T. Data on Chinese foreign policy behavior, collected by CACI, Inc. have been made available by their sponsoring agency, The Defense Advanced Research Project Agency.

My four year stay in the United States has been extremely comfortable owing to the hospitality of the following people: Ann Grazewski and Elly Terlingen at the Political Science Department; Myron, Joane, and Daniel Seiden; and my roommates in Tang Hall 2B -- Athos Malliris, Mark Edwards, John Frost, Sandy Darity, Luiz Lima, David Garvey, Vince Lin, Mark Green, Mark Pomeroy, and Nancy Baldwin.

Last but not least, I am very grateful to my parents and brother for their help materially as well as spiritually.

It goes without saying that all the faults in this thesis are the sole responsibility of the author.
(3) Context Understanding and Involvement
Decision -- Overall Results of Different Models

CHAPTER 5  CONCLUSION

APPENDIX 1  CACI DATA AND CHINESE INTERNATIONAL
CONFLICT BEHAVIOR

APPENDIX 2  CODE BOOK OF CACI DATA

APPENDIX 3  LIST OF 385 CASES

APPENDIX 4  RAW DATA FOR 385 CASES

APPENDIX 5  ACTOR LISTS FOR 385 CASES

APPENDIX 6  CODE NUMBERS AND NAMES OF POSSIBLE ACTORS

APPENDIX 7  ACTORS' DATE OF INDEPENDENCE

APPENDIX 8  ACTORS' DIPLOMATIC RELATIONS WITH PRC

APPENDIX 9  ACTORS' POLITICAL ECONOMIC SYSTEM INDICES

BIBLIOGRAPHY
# LIST OF TABLES

<table>
<thead>
<tr>
<th>No.</th>
<th>Table Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>Revolutionary and Realist Frames of Reference of Foreign Policy</td>
<td>28</td>
</tr>
<tr>
<td>1-2</td>
<td>Addition Table for Relation</td>
<td>39</td>
</tr>
<tr>
<td>1-3</td>
<td>Multiplication Table for Relation</td>
<td>39</td>
</tr>
<tr>
<td>1-4</td>
<td>Rigid (Hard-line) Addition Table for Relations between Self and Others</td>
<td>43</td>
</tr>
<tr>
<td>1-5</td>
<td>Flexible (Soft-line) Addition Table for Relations between Self and Others</td>
<td>43</td>
</tr>
<tr>
<td>1-6</td>
<td>Addition Tables for Relations between Others</td>
<td>44</td>
</tr>
<tr>
<td>2-1</td>
<td>The Concept-to-Measure Links (Ashley Model)</td>
<td>83</td>
</tr>
<tr>
<td>2-2</td>
<td>Notation: Symbols Used in the Ashley Model</td>
<td>86</td>
</tr>
<tr>
<td>2-3</td>
<td>Summary of Belief Systems about the Cold War (Gamson and Modigliani Model)</td>
<td>101</td>
</tr>
<tr>
<td>3-1</td>
<td>Perception: Results of 2SLS Estimation</td>
<td>144</td>
</tr>
<tr>
<td>3-2</td>
<td>Perception: Results of OLS Estimation</td>
<td>145</td>
</tr>
<tr>
<td>3-3</td>
<td>Involvement: Results of 2SLS Estimation</td>
<td>146</td>
</tr>
<tr>
<td>3-4</td>
<td>Involvement: Results of OLS Estimation</td>
<td>147</td>
</tr>
<tr>
<td>3-5</td>
<td>Perception: Results of OLS and 2SLS Estimation of Alternative Equation (Dummy Variable Model)</td>
<td>151</td>
</tr>
<tr>
<td>3-6</td>
<td>Involvement: Results of OLS and 2SLS Estimation of Alternative Equation (Dummy Variable Model)</td>
<td>155</td>
</tr>
<tr>
<td>4-1</td>
<td>Possible Selections of Frames and Strategies</td>
<td>175</td>
</tr>
<tr>
<td>4-2</td>
<td>Scoring Criteria of Eto, et. al.'s Data of Political Economic System</td>
<td>179</td>
</tr>
<tr>
<td>4-3</td>
<td>Possible Party Configuration (ASSESS) of Conflict/Crisis/Event</td>
<td>187</td>
</tr>
<tr>
<td>4-4</td>
<td>Accuracy of Ten Models in Prediction of the Side to be Supported</td>
<td>211</td>
</tr>
<tr>
<td>4-5</td>
<td>Accuracy of Four Models in Prediction of Verbal Involvement and Physical Involvement</td>
<td>236</td>
</tr>
<tr>
<td>4-6</td>
<td>Performance of Model REAL/MIX/AG-CAU and Model REV/RIIG/AG-CAU over Different Periods</td>
<td>238</td>
</tr>
<tr>
<td>A1-1</td>
<td>Descriptors Characterizing Cases in the CACI Data Set</td>
<td>260</td>
</tr>
<tr>
<td>A1-2</td>
<td>Geopolitical Location of International Conflicts</td>
<td>265</td>
</tr>
<tr>
<td>A1-3</td>
<td>Types of Events</td>
<td>274</td>
</tr>
<tr>
<td>A1-4</td>
<td>Superpowers' Involvement in International Conflicts</td>
<td>283</td>
</tr>
<tr>
<td>A1-5</td>
<td>Chinese Involvement in International Conflicts</td>
<td>296</td>
</tr>
<tr>
<td>A1-6</td>
<td>Geopolitical Location and Physical Involvement</td>
<td>303</td>
</tr>
<tr>
<td>A1-7</td>
<td>Types of Events and Physical Involvement</td>
<td>304</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>Example of Balance</td>
<td>36</td>
</tr>
<tr>
<td>1-2</td>
<td>Example of Imbalance</td>
<td>37</td>
</tr>
<tr>
<td>1-3</td>
<td>Behavioral and Character Oscillations</td>
<td>42</td>
</tr>
<tr>
<td>1-4</td>
<td>Examples of Possible Character Oscillations</td>
<td>44</td>
</tr>
<tr>
<td>2-1</td>
<td>Market as a Space</td>
<td>63</td>
</tr>
<tr>
<td>2-2</td>
<td>Hypothetical Relation between Party Affiliation and Political Ideology</td>
<td>64</td>
</tr>
<tr>
<td>2-3</td>
<td>Market as a Relation</td>
<td>66</td>
</tr>
<tr>
<td>2-4</td>
<td>Supplier Element in Market System</td>
<td>67</td>
</tr>
<tr>
<td>2-5</td>
<td>Consumer Element in Market System</td>
<td>67</td>
</tr>
<tr>
<td>2-6</td>
<td>Market as a Structure</td>
<td>68</td>
</tr>
<tr>
<td>2-7</td>
<td>Hypothetical Example of Directed Structure</td>
<td>69</td>
</tr>
<tr>
<td>2-8</td>
<td>Block Diagram of Onate Model</td>
<td>75</td>
</tr>
<tr>
<td>2-9</td>
<td>Reversed Direction Model</td>
<td>78</td>
</tr>
<tr>
<td>2-10</td>
<td>Hypothetical Linkage Model</td>
<td>79a</td>
</tr>
<tr>
<td>2-11</td>
<td>Comparison of EC=a+b<em>IC and EC=A</em>ICb</td>
<td>79b</td>
</tr>
<tr>
<td>2-12</td>
<td>Block Recursive Structure of Ashley Model</td>
<td>81</td>
</tr>
<tr>
<td>2-13</td>
<td>Structure of Ashley Model (PRC)</td>
<td>85</td>
</tr>
<tr>
<td>2-14</td>
<td>Hypothetical Sequence of Peak Events (1)</td>
<td>90</td>
</tr>
<tr>
<td>2-15</td>
<td>Hypothetical Sequence of Peak Events (2)</td>
<td>91</td>
</tr>
<tr>
<td>2-16</td>
<td>General Structure of an Information Processing System</td>
<td>94</td>
</tr>
<tr>
<td>2-17</td>
<td>Interaction Unit for a Selected Portion of the Cold War, January, 1948 to December, 1949</td>
<td>97</td>
</tr>
<tr>
<td>2-18</td>
<td>Structure of Gamson-Modigliani Model</td>
<td>100</td>
</tr>
<tr>
<td>2-19</td>
<td>Higher Level Soviet Goals Assigned by US-Conservative Ideology</td>
<td>106</td>
</tr>
<tr>
<td>2-20</td>
<td>Uninstantiated INVADE Script in the POLITICS System</td>
<td>109</td>
</tr>
<tr>
<td>2-21</td>
<td>Instantiated INVADE Script</td>
<td>110</td>
</tr>
<tr>
<td>3-1</td>
<td>Chinese Perception of Level of International Tension</td>
<td>127</td>
</tr>
<tr>
<td>3-2</td>
<td>Level of Chinese International Conflict Involvement</td>
<td>128</td>
</tr>
<tr>
<td>3-3</td>
<td>Level of International Tension</td>
<td>129</td>
</tr>
<tr>
<td>3-4</td>
<td>Chinese Domestic Economic Situation</td>
<td>130</td>
</tr>
<tr>
<td>3-5</td>
<td>List of Chinese Domestic Campaigns</td>
<td>134</td>
</tr>
<tr>
<td>3-6</td>
<td>Level of Chinese Domestic Campaign Mobilization</td>
<td>135</td>
</tr>
<tr>
<td>3-7</td>
<td>Model of Macro Chinese International Conflict Behavior (Block Diagram)</td>
<td>136</td>
</tr>
<tr>
<td>3-8</td>
<td>Model of Macro Chinese International Conflict Behavior (Equations)</td>
<td>137</td>
</tr>
<tr>
<td>3-9</td>
<td>Summary Results of Macro Model</td>
<td>159</td>
</tr>
<tr>
<td>4-1</td>
<td>Macro Flowchart of CHINA_WATCHER</td>
<td>167</td>
</tr>
<tr>
<td>4-2</td>
<td>Cartoon in <em>Renmin Ribao</em> implying Precedential Understanding</td>
<td>172</td>
</tr>
<tr>
<td>4-3</td>
<td>Structure of Routines to be Selected by Different Models</td>
<td>177</td>
</tr>
</tbody>
</table>
Hypothetical Network of Precedent Candidates and Their Narrative Context Cases
Structure of Models to be Tested in Their Accuracy in Updates of Amity-enmity Map and in Prediction of the Side to be Supported
Update of Amity-enmity Map of Model REV/RIG/AG, 1949 - 1978
Update of Amity-enmity Map of Model REV/MIX/AG, 1949 - 1978
Update of Amity-enmity Map of Model REAL/RIG/AG, 1949 - 1978
Update of Amity-enmity Map of Model REAL/MIX/AG, 1949 - 1978
USSR's Status in Amity-enmity Maps of Four Models
India's Status in Amity-enmity Maps of Four Models
Albania's Status in Amity-enmity Maps of Four Models
Yugoslavia's Status in Amity-enmity Maps of Four Models
Tanzania's Status in Amity-enmity Maps of Four Models
Structure of Four Selected Models
GLM and CHINA_WATCHER Results Compared
Actual and Predicted Levels of Chinese International Conflict Involvement
Example of Case Description of the CACI Data Set
Chinese Perception of Level of International Tension
Geopolitical Location Over Time
Types of Events Over Time
Wars Selected in the CACI Data Set
Wars of National Liberation Selected in the CACI Data Set
Three Types of Threats to Communist Parties/Regimes/Movements Over Time
Cases Involving Nuclear Threats
Superpowers' Involvement in International Conflicts Over Time
Cases of Superpowers' Collusion
Use of Major Polemical Invectives by Peking Review in Reference to the United States and the Soviet Union, 1970-71
Accusation in Renmin Ribao against the USSR
Scale of Chinese Involvement in International Conflicts
Chinese Involvement in International Conflicts Over Time
Chinese Combat Episodes Selected in the CACI Data Set
INTRODUCTION
The purpose of this thesis is to explore and empirically test several plausible theories about the international conflict behavior of the People's Republic of China from 1949 to 1978. With what categories do the Chinese decision makers perceive and understand international conflicts, events, or crises? Which side will they support? What kind of decision strategy do they apply to cope with these events? What determines the general level of Chinese involvement in international conflicts? What affects the Chinese perception of international tension? Has Chinese international conflict behavior undergone major changes since the establishment of the People's Republic in 1949? Has it been oscillating? These are the major questions to be examined throughout the thesis.

In addition to the above main purpose, this thesis has a secondary purpose: to explore appropriate methods for representing our theories. We need a rigorous form of representation for our theory if we are to put it through empirical tests. What types of representation have been used in recent international relations and foreign policy research? What are their most appropriate areas of applications? What are their advantages and disadvantages? These questions will also be addressed in this thesis.

The significance of the first purpose is obvious. Since its establishment in 1949 the People's Republic of China (PRC) has always been a major actor not only in East Asian international politics but in the world politics in general. It
fought with the United States over Korea; it advanced its
troops to "liberate" Tibet; it went to the brink of a major
war with the United States over the offshore islands; it drove
Indian forces back in the Sino-Indian border war; it was
engaged in a serious fighting with the Soviet Union over the
Sino-Soviet border disputes; and in 1979 it invaded Vietnam to
"punish" the "misconduct" of its former ally. In other numer-
ous cases in which the PRC was not engaged in actual combats,
it actually played very important roles by mobilizing its mil-
itary forces, by giving military and/or non-military aids to
the parties in conflict, by expressing its comments, and somet-
times by keeping silent. It is therefore imperative to under-
stand the PRC's international conflict behavior if wars are to
be avoided and a peaceful world order acceptable to all
parties is to be constructed.

Excellent works on Chinese foreign policy already exist.
Despite lack of access to internal information, many authors
have succeeded in reconstructing what happened in many impor-
tant international crises involving China. But they are often
very strong in rich details and the subtlety of their judgements but relatively weak in the explicitness of their assump-
tions and the replicability of their interpretive information
processing. And when some (often excellent) attempts
were made to draw up the framework of Chinese decision makers
in the form of, say, "the Maoist image of world order," "Mao's
strategy," etc. it is not very clear which part of the frame-
work is used in what way in a specific situation. Case studies often follow these frameworks, supposedly, to verify the accuracy and validity of the author's framework. But these case studies are often so rich in details and the framework is drawn up so subtly that how the general framework is applied to explain specific Chinese behavior becomes blurred and hard to replicate.

Thus, what we attempt in this thesis is to construct rigorous, explicitly operationalized models of Chinese international conflict behavior. They will be especially helpful on those questions where the experts disagree and conventional wisdom is divided. I shall explore alternate representations of several such theories developed in the field of Chinese foreign policy and put them to empirical tests with a systematically collected data on Chinese international conflict perception and involvement. This emphasis on rigor, the systematic nature of an investigation, and its commitment to reliable and valid deductive testing lead us to our second purpose of this thesis: to explore appropriate representational forms for testing complex international theories.

Part of the reason why I decided to discuss this issue in this thesis is because many statistically trained people seem to believe that the only legitimate scientific operationalization for testing such theory is the general linear model, which includes most of the techniques under the headings as regression analysis, econometrics, path analysis,
etc. According to this view, any scientific theory should be expressable as a set of linear equations. This view is erroneous if only because many existing scientific laws are not expressed in linear equation forms. It goes without saying that we do not deny the tremendous usefulness of the general linear model. What we oppose is the imperialistic, narrow-minded, exclusivistic advocacy of the general linear model. In this thesis, therefore, in addition to the general linear model tradition, we discuss a tradition less frequently mentioned in international relations research, information processing, as an alternative tradition for representing social theories in rigorous, operational terms. (1) We would like to demonstrate that the information processing framework is both appropriate and desirable for representing many key substantive issues in Chinese international conflict behavior. Also, we shall discuss certain other aspects of Chinese international conflict behavior which are better operationalized and tested in the general linear model tradition.

With the above motivational remarks, let us briefly present the plan of this thesis.

In Chapter 1, we shall review and attempt to clarify cer-

---

(1) The information processing viewpoint is very frequently used in decision making analyses. But authors in those decision making analyses usually do not go beyond making statements about decision making from information processing point of view. Not many attempts were made to represent a decision making system in a rigorous information processing structure which can be written in the form of computer language.
tain major substantive issues about Chinese international conflict behavior. Three categories of images of China as an international actor held by China experts will be identified. The first category is the frame of reference of the Chinese decision makers. In this category we discuss what is meant by the characterization of China as a "realist" and that of China as a "revolutionary." The second category concerns the Chinese strategy to cope with uncertainty in evaluation and in decision. When we characterize China as being rigid or flexible, or being aggressive or cautious, we are discussing images of this sort. The third category is the dynamics of Chinese foreign policy. Whether or not Chinese international conflict behavior has undergone major changes and in what way are the major issues here. Since relevant hypotheses of radical change usually mention it as a potent cause, we briefly discuss the impact of China's domestic political economic situation on China's international conflict behavior.

In Chapter 2, we shall discuss the issues of representational forms. As mentioned above, two traditions of foreign policy modeling will be examined: the tradition of the general linear model and that of information processing. A formal characterization and two applications will be given in the discussion of each tradition.

Chapter 3 will construct and test a macro model of Chinese international conflict behavior. The model is represented as a simultaneous linear equation system. We
shall examine whether statistically detectable regularities existed in the macro input-output patterns of Chinese international conflict perception and involvement. Are they responsive to the actual level of international tension, China's domestic economic situation, and China's domestic campaign mobilization? Using powerful statistical procedures associated with the general linear model tradition, we shall also check whether structural shifts occurred in such relationship during the 30 year period from 1949 to 1978.

In Chapter 4, I shall represent images discussed in Chapter 1 as micro level information processing models of Chinese international conflict behavior. For this purpose, a discrete-case-oriented computer simulation program, called CHINA_WATCHER, is constructed. Within the framework of CHINA_WATCHER, different models are specified and empirically tested.

Whatever the specified model is, CHINA_WATCHER tries to "understand" the international conflict situation of each of the 385 cases from 1949 to 1978 within the context of a continuously updated amity-enmity world map, the current domestic or international context, the narrative context, and precedential context. (1) Then, it predicts which side in the conflict the PRC will support, the level of verbal and physical involvement that the PRC will make. With this computer program, we try to

(1) All these terms will be operationally defined in Chapter 4.
find models which predicts (postdicts ?) the PRC's actual conduct most accurately. Also, we try to see if some periodization (some combination of different models applied in different periods) is possible.

In Chapter 5, we recapitulate our findings in Chapter 3 and Chapter 4 and discuss various issues and limitations of the present research scheme.

Finally, a word on the data set to be used is in order. Our main data set is the list of 385 international crises and their characteristics as perceived by Chinese decision makers, compiled by the CACI, Inc. In Appendix 1, we discuss the main features, validity, reliability and limitations of this data set. Also a very descriptive overview of the Chinese perception of and involvement in international conflict from 1949 to 1978 is given based on this data set.
CHAPTER 1

IMAGES OF CHINA AS AN INTERNATIONAL ACTOR
If not in the interests of the state, do not act. If you cannot succeed, do not use troops. If you are in danger, do not fight.

A sovereign cannot raise an army because he is enraged, nor can a general fight because he is resentful. For a while an angered man may again be happy, and a resentful man again be pleased, a state that has perished cannot be restored, nor can the dead be brought back to life.

Therefore, the enlightened ruler is prudent and the good general is warned against rash action. Thus the state is kept secure and the army preserved.

— Sun Tsu, 1963: 142-143.

Whoever sides with the revolutionary people is a revolutionary. Whoever sides with imperialism, feudalism and bureaucratic-capitalism, is a counter-revolutionary.


We should resolutely fight a decisive engagement in every campaign or battle in which we are sure of victory; we should avoid a decisive engagement in every campaign or battle in which we are not sure of victory; and we should absolutely avoid a strategically decisive engagement on which the fate of the whole nation is staked.


We hold that the question of whether one treats imperialism and all reactionaries strategically as the paper tigers they really are is of great importance for the question of how the forces of revolution and the forces of reaction are to be appraised, is of great importance of the question of whether the revolutionary people will dare to wage struggle, dare to make revolution, dare to seize victory, and is of great importance for the question of the future outcome of the world wide struggles of the people and the future course of history.

For the last thirty years since the establishment of the People's Republic, China has been depicted in various ways as an international actor. Some revolutionaries oppressed under colonial domination have expected that China is one of the few countries which will extend truly revolutionary help to them. Anticipating the same thing, some of the people in the capitalist countries have feared that China is exporting revolution abroad. On the other hand, some expert diplomats have concluded that China is following the logic of power politics as many other countries do. Those who are fascinated by her ancient civilization may maintain that the People's Republic is after all the same China, and that her behavior is essentially similar to that of the Celestial Empire. There are still many others who have different images of China as an international actor.

To start our exploration of Chinese international conflict behavior, we examine several images of China. Being a blind man touching an elephant called China, it is probably better to ask other blind men's opinions about this elephant before asserting that it feels like a wall, a trunk, etc. Instead of listing various images of this elephant randomly, however, it is important to recognize that there seem to exist three categories of images, each of which deals with a separate aspect of China as an international actor.

The first category is related to the frame of reference of the Chinese decision makers. Different views in this cate-
gory are often summarized as the distinction between the image of China as a realist and that of China as a revolutionary. This realist-revolutionary distinction constitutes the first dimension of our image of China as an international actor.

The second category concerns the strategy of the Chinese decision makers to cope with uncertainty. Different views in this category are usually polarized along the dimension of the hard-line/radical/left strategy vs. the soft-line/moderate/right strategy. In the following exercise, however, we use two dimensions instead of one dimension. The first dimension of this category is concerned with the strategy to cope with uncertainty in recognition/evaluation/understanding. The second dimension of this category is concerned with the strategy to deal with uncertainty in decision of actions. We can think of both hard-line and soft-line strategies on these two dimensions.

The third category is related with the dynamics of Chinese foreign policy. The issue is whether Chinese foreign policy has undergone changes or it is essentially constant. One school believes that the PRC's foreign policy has not changed much or that, if it has, it has gone through gradual, secular changes. The other school asserts that Chinese foreign policy has been "oscillating" or has gone through "cyclical" changes. This distinction constitutes the final dimension of our image of China as an international actor.
In the following sections, we cite representative views from each category and try to clarify them along the dimensions for the purpose of generating rigorous, formal models which can be tested empirically.
1 Frames of Reference

The dichotomy of realist and revolutionary clearly lies at the heart of the most frequent debates concerning the foreign policy of the People's Republic of China (Okabe, 1976; Barnett, 1977; Van Ness, 1970; Whiting, 1960, 1972a, 1972b). Though this distinction is seemingly clear, as Okabe (1976) says, in fact both the image of revolutionary China or that of realist China become very elusive when one tries to set the conceptual distinction straight and validate them empirically. But before presenting our attempt at clarification, we recount what the advocates of each image maintain.

The essence of the image of revolutionary China is that the PRC is pursuing a world revolution. In this view, Marxist-Leninist ideology dictates the conduct of China's external behavior. An introductory article on Chinese foreign policy presents this view as follows:

China's international behavior, in comparison with that of the U.S.S.R., is animated more by revolutionary values, and show the influence of a more subjective psychological environment. There is a more vehement commitment to the reification of Marxist-Leninist ideals in all areas of statecraft, outside influences are more rigorously excluded, and there is a more doctrinaire view of the world (Boyd, 1976:96).

Authors belonging to the somewhat moderate wing of this view argued in the mid 1960s that the ideological goal of a world Communist revolution is an important determinant of Chinese foreign policy, and probably will remain so, that pur-
suit of this objective is not synonymous with acquisition of national power, although the two frequently overlap, and that Mao Tse-tung and his associates probably give a higher priority to these ideological goals than their Soviet counterparts do (Halperinin and Perkins, 1965:1).

On the other hand, the essence of the image of realist China is that the PRC is seeking to increase its power. According to this view, the national interest dictates the foreign policy of the PRC. To cite an author of high reputation as one of the most competent China-watchers:

In the final analysis the record of China's behavior over the years suggests that when Peking's leaders believe vital Chinese security interests are at stake, these take clear precedence over other interests, and realpolitik considerations and balance-of-power approaches come to the fore (Barnett, 1977:18).

In an essay examining Chinese history and its relations with China's contemporary foreign relations, a Sinologist says:

The sources of the P.R.C.'s international behavior are not something peculiarly and mystically Chinese, or even Maoist, but the same national interests -- as seen by the rulers of the country and influenced to some unknown degree by its population -- that determine the actions of other modern nations (Feuerwerker, 1972:11).

Henry Kissinger, who admires Zhou Enlai as "one of the two or three most impressive men" (Kissinger,1979:745), agrees with the above view: "For all their charm and ideological fervor, the Chinese leaders were the most unsentimental practitioners of balance-of-power politics I have encountered" (Kissinger, 1979:1087-1088). There is, however, a fairly strong opposition to the attempt to differentiate revolution-
any foreign policy and realist foreign policy. The following passage represents this view:

Whether China's foreign policy is informed by Marxism or by national interests, by ideology or by pragmatism, is immaterial, since no valid distinction can be drawn between the possibilities. China's national interests are perceived through Marxist-Leninist eyes and its ideology is pragmatically implemented (O'Leary, 1980: 13).

If national interest is defined as something that the decision makers perceive and believe to be their nation's interest, any foreign policy behavior of any country can be described as following its national interest. In other words, the concept of national interest is "too broad, too general, too vague, too all-inclusive to perform useful analytic functions" (Sondermann, 1977: 126-127). Thus, O'Leary seems to call for the abandonment of the dichotomy because it is impossible to distinguish revolutionary foreign policy from realist foreign policy.

But is it? Are the proponents of the image of ideological foreign policy saying the same thing as those of the image of realpolitik? The answers to both questions, I believe, should be in the negative. Those subscribing to one image certainly have different views and expectations of the behavioral pattern of the PRC from those subscribing to the other image. What is necessary at this stage is a semantic examination of each image and not the abandonment of this pair. What types of foreign policy behaviors does a Sinologist have in mind when describing China's foreign policy as
revolutionary/ideological? What sorts of expectation does an international relations specialist have when claiming that China's foreign policy is realist or is directed by its national interest? These are the questions to be posed.

Table 1 - 1 is an attempt to contrast the essential differences between the two images of foreign policy. These differences all have something to do with the essential categories with which the decision makers perceive and understand the world. Thus the realist-revolutionary dichotomy concerns the framework with which the Chinese decision makers are believed to understand the world and which guide their actions.

The purpose of Marxist-Leninist revolutionary foreign policy is world revolution as well as progress in domestic revolutionary policy of the actor; but this possibility is of course predicated upon the survival of revolutionary and post-revolutionary actors. That of realist foreign policy is the actor's survival free of "ideals"; this is in turn predicated on resistance to actors subscribing to supranational organization principles contrary to a system of sovereign, survival oriented states. The basic assumption of international relations of both revolutionary and realist foreign policies is that international relations are conflictual ("manifestation of class struggle" vs. "power struggle in the state of war"). From the Marxist-Leninist revolutionary point of view, the actors in international relations, or, for
### Table 1-1
Revolutionary and Realist Frames of Reference of Foreign Policy

<table>
<thead>
<tr>
<th>Categories</th>
<th>Revolutionary</th>
<th>Realist</th>
</tr>
</thead>
<tbody>
<tr>
<td>purpose</td>
<td>world revolution and progress in domestic revolution</td>
<td>survival</td>
</tr>
<tr>
<td>assumption of international relations (IR)</td>
<td>conflictual (class struggle)</td>
<td>conflictual (power struggle)</td>
</tr>
<tr>
<td>actors in IR</td>
<td>classes (nation-states, sub-national groups, etc. representing class interests)</td>
<td>nationa-states (rigid distinction between domestic and international politics)</td>
</tr>
<tr>
<td>friends</td>
<td>socialist, communist countries, national liberation movements</td>
<td>those who are against the enemies</td>
</tr>
<tr>
<td>enemies</td>
<td>capitalist, imperialist countries and their lackeys</td>
<td>nation-states threatening one's security</td>
</tr>
<tr>
<td>important variables in IR</td>
<td>economic variables, threats to proletariat class</td>
<td>geopolitical variables (sphere of influence), threats to oneself</td>
</tr>
</tbody>
</table>
that matter, any social relations, are classes. In concrete terms, nation-states, national movements, groups which represent the respective class interest are considered to be the actors. From the realist point of view, the actors are nation-states. Sub-national groups are not qualified to be called international actors. Since the realist considers a nation-state the only qualified actor, he distinguishes international politics from domestic politics strictly; he does not allow the influence of domestic politics on his diplomacy. "Politics stops at the water's edge."

Since both view international relations to be conflictual, we can assume that they divide actors into two groups, namely, friends and enemies. (1) But realists and revolutionaries have different criteria for classifying actors into friends and enemies. For Marxist-Leninist foreign policy makers, socialist, communist classes (or nations, movements representing them) are friends; capitalist, imperialist, revisionist nations and their lackeys are enemies. For realist foreign policy makers, the definition of enemy comes first. Those countries threatening their security are their enemies. Friends are the enemies of their enemies. In other words, attributes of a nation, i.e. what type of a nation it

(1) If there exist a type of foreign policy which does not consider international relations to be conflictual, it may not classify actors into friends and enemies. This type may be called "communitarian". For analysis of the Chinese tendency to classify all political actors into either friends or enemies, see Pye (1968: 78-79) and Pye (1980: 124-128).
is, are irrelevant to the definition of friends and enemies for realist foreign policy.

Finally, these two types of foreign policy differ in the key variables with which the decision makers understand the situation and events in international relations. For Marxist-Leninist revolutionary foreign policy makers, economic variables are crucial, based on which they analyze class conflicts. Since they are concerned about communist survival, threats to communist nations, movements are also important. For realist foreign policy makers, the important variables are threats to their security and other geopolitical variables. (1)

(1) Armstrong (1977) makes an impressive attempt to represent two models of Chinese foreign policy as two different sets of propositions. The first is the "united front" model; the other is the "alliance" model.
2. Strategies to Handle Uncertain Situations (1)

Our second category of images of Chinese decision makers is related with their strategy to cope with uncertain situations. Different views are usually polarized as the distinction between the hard-line/radical/"left" strategy and the soft-line/moderate/"right" strategy. When a columnist writes that since Deng Xiaoping has come to power, the current regime has become moderate in its foreign policy or that during the Cultural Revolution the Chinese policies were controlled by the radicals, the reference is to this pair of images. Donald Zagoria briefly describes the differences of these two images, though he uses "left" and "right" instead of our "hard-line" and "soft-line".

The Left policy, either at home or abroad, has been marked by revolutionary slogans, by uncompromising actions, by a desire for rapid gains. It is generally practiced when revolutionary opportunities are believed to be ripe. It can also be, however, like Stalin's forced collectivization drive in 1928, a product of desparation. The Right strategy has generally been marked by slogans and gestures of compromise either to domestic or foreign class enemies, and by cautious advance, consolidation, or even retreat in the pursuit of revolutionary aims. It is generally adopted in periods of adversity, although, as the example cited above indicates, this is not always the case. The domestic or foreign strategy of any Communist party could be written in terms of these two divergent syndromes of behavior (Zagoria, 1962: 411).

(1) For an inventory of previous attempts by social and political psychologists more or less related with this section, see Etheredge (1979).
When Eto and Okabe (1969) talk about onpo (slow movement) and kyushin (rapid movement) in China's domestic policy, they more or less mean what Zagoria calls "right" and "left". In his recent work on China's Japan policy, Okabe (1976) uses the dichotomy, "broad united front" strategy vs. "tight united front" strategy, which also corresponds roughly to our soft-line vs. hard-line dichotomy.

As indicated in the above cited works, this pair of images often appears in conjunction with the discussion of changes of Chinese foreign as well as domestic policy. As the next section shows, there is a influential position that Chinese foreign policy "oscillates" between "hard-line" and "soft-line" as its domestic policy "oscillates" between the two. But this connection is not neccessarily a logical one. One can assert that China is always a "hard-liner".

Although the above cited works seem to suggest only one dimension when they mention the hard-line and soft-line difference. But I believe that it is possible and conceptually clearer to think of two dimensions. The first dimension is the strategy to cope with uncertainty in understanding in general and in affective evaluation in particular. This type of uncertainty occurs when the decision maker faces conflicting evidence about something which has to be evaluated. The second dimension is the strategy to cope with uncertainty in decision of action. This type of uncertainty occurs when the decision maker tries to list possible options and choose one,
i.e. when a decision has to be taken. (1) We can think of both hard-line and soft-line strategies on these two dimensions; the hard-line on the first dimension may also be considered the "rigid" evaluation strategy; the soft-line on the same dimension may be considered the "flexible" evaluation strategy; the hard-line on the second dimension may be considered the "aggressive" decision strategy; the soft-line on the same dimension may be considered the "cautious" decision strategy.

These two dimensions are often treated as identical. Sometimes they are considered identical even with the revolutionary - realist dimension. But this, I think, is a conceptual confusion. These two dimensions of strategies do not concern differences of purposes. They have very little to do with the definition of actors in international relations. They do not supply variables to define international situations. The distinction on these two dimensions becomes meaningful only after the frame of reference is determined. Within the specified frame of reference, rigid decision makers and flexible decision makers give different judgement of the situation, and aggressive decision makers and cautious decision makers take different actions.

It is of course possible to argue that whenever the frame of reference is revolutionary, the evaluation strategy is rig-

(1) Compare these two dimensions with Abelson (1959)'s belief level and action level.
id and the decision strategy is aggressive and that whenever the frame of reference is realist, the evaluation strategy is flexible and the decision strategy is cautious. But this is an empirical issue to be determined by empirical studies, not a conceptual issue. Conceptually there are eight possible combinations (if we assume dichotomy on these three dimensions.)

In the following, we elaborate the two types of uncertainty and the strategies to cope with each. Since the following exercises are the foundation of very important parts of the computer simulation in Chapter 4, the reader is asked to read them carefully.
(1) Uncertainty in Evaluation and Strategy to Cope with It -- Rigid and Flexible Strategies

Uncertainty in affective evaluation occurs, to use the term of cognitive psychology, when the situation is not "balanced" (Heider, 1946, 1958; Cartwright and Harary, 1956). To understand this, we have, first of all, to understand what is a "balanced" structure. A balanced structure is one in which "All relations among 'good elements' are positive (or null), all relations among 'bad elements' are positive (or null), and all relations among good and bad elements are negative (or null)". (1)

For example, consider the following:

(1) Iran took American hostages.
(2) The Soviet Union threatens U.S. interests in Persian Gulf by invading Afganistan.
(3) There is suspect that the Soviet Union is behind the Iranian hostage crisis.

The first sentence refers to negative relations between the United States and Iran. The second shows negative relations between the U.S. and the Soviet Union. The third sentence indicates positive relations between the Soviet Union and Iran. These relations are represented in Figure 1 - 1. This

situation is balanced because the "good" element (from the U.S. perspective) is the United States and has positive relations with itself and the "bad" elements, Iran and the Soviet Union have positive relations with each other and negative relations with the "good" element, the U.S. On the other hand, consider this:

(1) Iran took American hostages.
(2) Japan is an ally of the United States.
(3) Japan bought Iranian oil in large quantity on the spot market.

The first sentence is the same as before. The second indicates positive relations between the U.S. and Japan. The third shows positive relations between Japan and Iran. See Figure 1 - 2. The situation, however, is not balanced because Japan's relations with Iran ("bad" element) is positive.
To generalize the above, we introduce some notation following Abelson and Rosenberg (1958). We consider a pair of elements connected by a relation. That is, the basic "sentence" is of the form

\[ A r B \]

where A and B are elements and \( r \) is a relation. We use four types of relations: positive( \( p \)), negative( \( n \)), indifferent( \( o \)), and ambivalent( \( a \)). Thus

\[ A p B \]
\[ A n B \]
\[ A o B \]
\[ A a B \]
The fundamental definitions of these relations are represented in the following "addition" and "multiplication" tables (Table 1-2, Table 1-3). "Addition" here means the operation used when two (same or different) relations are implied for two objects to be related. Table 1-2 says, for example, if ApB, and ApB, then ApB, but if ApB and AnB, then AaB (definition of ambivalence), and so on.

An illustrative example:

(1) China and Japan concluded a treaty of peace and friendship.

(China)p(Japan)

(2) Japan made pledges to increase trade with China.

(China)p(Japan)

(3) The relations between China and Japan are (should be) positive.

(China)p(Japan)

"Multiplication" means the operation used when two (same or different) relations are implied transitively for three objects: if ApB and BpC, then ApC; if ApB and BnC, then AnC; if AaB and BpC, then AaC; and so on. An example.

(1) Iran took American hostages.

(Iran)n(U.S.)

(2) Iraq started war against Iran.
Table 1 - 2

Addition Table for Relations

<table>
<thead>
<tr>
<th></th>
<th>p</th>
<th>n</th>
<th>o</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>o</td>
<td>p</td>
<td>n</td>
<td>o</td>
<td>a</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

Table 1 - 3

Multiplication Table for Relations

<table>
<thead>
<tr>
<th></th>
<th>p</th>
<th>n</th>
<th>o</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>p</td>
<td>n</td>
<td>o</td>
<td>a</td>
</tr>
<tr>
<td>n</td>
<td>n</td>
<td>p</td>
<td>o</td>
<td>a</td>
</tr>
<tr>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

* Both tables are adopted from Abelson and Rosenberg, 1958: 8.
(Iran)n(Iraq)

(3) The U.S. has (should have) positive relations with Iraq.

(U.S.)p(Iraq)

For a further exercise, consider the following statement in addition to the above example.

(4) Iraq has been hostile to the United States.

(U.S.)n(Iraq)

The "multiplication" of (1) and (2) leads to (3). If (3) and (4) are added, i.e. (U.S.)p(Iraq) and (U.S.)n(Iraq), then Table 1-2 concludes that the relations between the U.S. and Iraq are ambivalent, (U.S.)a(Iraq).

As the reader may have noticed, an "imbalanced" situation is the situation which includes ambivalent relations. Remember Figure 1-2. If we rewrite the situation in the above notation we have just learned, the following can be shown.

(1) (U.S.)n(Iran)

(2) (U.S.)p(Japan)

Because of Table 1-3

(3) (Iran)n(Japan) must be the case.

But in fact,

(4) (Iran)p(Japan)

From (3) and (4)
(5) (Iran) a (Japan)
But because of (1)
(6) (U.S.) a (Japan)
And because of (2)
(7) (U.S.) a (Iran)

Now that we have understood what we mean by "balance" and "imbalance" in affective evaluation structure, we can return to the original argument, hard-line (rigidity) and soft-line (flexibility) under the uncertainty of affective evaluation. We assert that the essential difference between the two postures in affective evaluation lies in their different strategies to resolve the "imbalanced" or "ambivalent" affective structure. (1) In particular, they have different strategies to deal with a new piece of evidence after the structure becomes ambivalent. The hard-liner tends to give more credibility to negative evidence than positive evidence; the soft-liner tends to give more credibility to positive evidence than negative evidence. An attempt to contrast these two political posures is made in Table 1-4 and Table 1-5. Note that these are tables of relation between self and

(1) For attempts to relate some personality types with the ways to resolve imbalances, see Section IV,B in Abelson, et al., 1968: 613-651. It is noted, however, that our attempt is not to relate some personality types measured by external means, psychological tests, for example, with the ways to resolve imbalance but rather to define different lines by looking into the ways to resolve imbalance. Abelson(1959) presents four strategies to cope with imbalance: denial, bolstering, differentiation, and transcendence. I have not solved how these four should be related with our soft-hard lines.
others. To make the theory workable, let us assume that addition of relations between others is described in Table 1-6 for both hard-liners and soft-liners.

For example, in Figure 1-2, to achieve balance, either (U.S.)p(Iran), (U.S.)n(Japan), or (Iran)n(Japan) should be realized. But because all relations become ambivalent, if one uses Table 1-2, balance would never be achieved no matter what happens. The hard-line (Table 1-4) or the soft-line (Table 1-5) formulation provides a way out from imbalance.

Consider Figure 1-2 again. After imbalance is realized, i.e. all relations in the triangle become ambivalent, if an incident suggesting (Iran)n(Japan) occurs, Table 1-6 leads one to conclude (Iran)n(Japan) because addition of "a" and "n" is "n". Now replace (Iran)p(Japan) in Figure 1-2 with (Iran)n(Japan), and we have a balanced structure. In this case, the difference between the hard-line and the soft-line does not make any change. But if an incident implying (Iran)p(U.S.) occurs, the hard-liner and the soft-liner conclude differently about the structure. After the inference of Figure 1-2, (Iran)a(U.S.) is given. Then addition of "a" and the current "p" is still "a" in Table 1-4 (the hard-line view) but "p" in Table 1-5 (the soft-line view). Thus, the hard-line view does not solve the imbalance but the soft-line does. In the soft-line view, then, one can replace (Iran)n(U.S.) in Figure 1-2 with (Iran)p(U.S.). The result of this replacement brings about a balanced structure. If
### Table 1 - 4

**Rigid (hard-line) Addition Table for Relation between Self and Others**

<table>
<thead>
<tr>
<th>+</th>
<th>p</th>
<th>n</th>
<th>o</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>p</td>
<td>a</td>
<td>p</td>
<td>a</td>
</tr>
<tr>
<td>n</td>
<td>a</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>o</td>
<td>p</td>
<td>n</td>
<td>o</td>
<td>a</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

### Table 1 - 5

**Flexible (soft-line) Addition Table for Relation between Self and Others**

<table>
<thead>
<tr>
<th>+</th>
<th>p</th>
<th>n</th>
<th>o</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>p</td>
<td>a</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>n</td>
<td>a</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>o</td>
<td>p</td>
<td>n</td>
<td>o</td>
<td>a</td>
</tr>
<tr>
<td>a</td>
<td>p</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>
Table 1 - 6
Addition Table for Relation between Others

<table>
<thead>
<tr>
<th>+</th>
<th>p</th>
<th>n</th>
<th>o</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>p</td>
<td>a</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>n</td>
<td>a</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>o</td>
<td>p</td>
<td>n</td>
<td>o</td>
<td>a</td>
</tr>
<tr>
<td>a</td>
<td>p</td>
<td>n</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

(U.S.)n(Japan) occurs, the hard-line view can solve the imbalance but the soft-line view cannot by the similar reasoning.
The second type of uncertainty that decision makers have to deal with is that of choice of actions. To use John D Steinbruner's term, they have to face "structural uncertainty," in which "the imposition of enough structure on the situation, so that possible outcomes can be described and their probabilities of occurrence estimated, is itself a matter of uncertainty" (Steinbruner, 1972: 18). To clarify this, we examine three types of models which are not adequate for describing the situation that the decision maker faces.

The first is a deterministic model, in which all choices are known and the outcome for each is also known. In this model, one knows what will happen according to which choice one takes. This is not the situation that most of decision makers face.

The second is a stochastic model, in which all the choices are known and the probability of what will happen for each choice is also known. Throwing dice and roulette are good examples that this model can describe perfectly. But this is also not a situation which foreign policy decision makers are most likely to face.

The third is the strategic decision model, which game theory deals with. In spite of the sophistication of game theory, this model does not describe the situation adequately,
either, because foreign policy situations almost always defy
the following assumption on which game theory is based:

(1) The appropriate "state of the world" should be
identified and described.

(2) The actor's interpretations should be made clear;
that is, all the available alternatives should be
known.

(3) A preference or utility for the outcomes should be
determined.

(4) In the presence of chance elements, the possible
outcomes and the probabilities of their occurrence
should be discovered (Singleton and Tyndall, 1974:
22).

In the decision situation of structural uncertainty, then,
what are the possible guide posts for decision makers? With
Steinbruner, we "doubt that decision makers engage in sophis-
ticated outcome calculations with any degree of regularity or
consistency" (Steinbruner, 1972: 66). We assert that the di-
chotomy of hard-line and soft-line offers contrasting
strategies to cope with structural uncertainty. (1) The crux
of the contrast is revealed in the following injunctions:

(1) Hard (Aggressive): When in doubt, take a
stronger action.

(1) Herbert Simon's "satisfying" also seems to me too broad
and general to use as a concept to describe the decision
mechanism, particularly of foreign policy. See Simon,1957:
204ff, and March and Simon, 1958: 190ff.
(2) Soft (Cautious): When in doubt, take a weaker action.

In order for either of the maxims to be implemented, a few plausible options should be selected beforehand. We assume that this selection is done not by utility and probability calculations but by precedential reasoning, which is to be discussed in detail in a later chapter.

In this section, we have asserted that what is usually regarded as the hard-line - soft-line difference can be analyzed more precisely on the two dimensions: (1) the dimension of strategies to handle uncertainty in evaluation; and (2) the dimension of strategies to handle uncertainty in decision. For example, it is conceptually possible for a decision maker to be hard-line (rigid) on the former dimension and soft-line (cautious) on the latter dimension. Thus, including the dimension of the frame of reference discussed in the previous section, we have examined the three dimensions altogether. Before proceeding to the next section, in which we discuss images concerning dynamics instead of the content of the foreign policy, let us review these three dimensions of the content of Chinese foreign policy schematically:

Frame of Reference: realist -- revolutionary

Strategy to Cope With
(1) Uncertainty in Evaluation: hard-line -- soft-line (rigid) (flexible)
(2) Uncertainty in Decision: hard-line -- soft-line (aggressive) (cau-
tious)
3. Images of Dynamics

The type of images dealt with in this section is different from those examined in the previous sections; while the images examined in the previous sections are directly connected with the content of the belief systems of the Chinese decision makers, the images discussed in this section are related with the possible ways that these belief systems change. In other words, they are not images about the content but about modes of its changes.

On the one extreme there is a view that the Chinese foreign policy does not change. If one believes that Chinese foreign policy is always, say, realist as well as hard-line on both of the strategy dimensions, one's image of dynamics is that Chinese foreign policy is static with no allowance for change. For example, Whiting (1975) maintains that a "relatively stable continuity of foreign policy output can be identified despite changes in the power positions of the components which comprise the dominant coalition at different times" (225). In other words, the "uniqueness of" the temporary seizure of control over foreign affairs by an extremist faction in May, 1967, "however, argues for a model of basic continuity with incremental change rather than one of total unpredictability with wide fluctuations in behavior" (226).

On the other hand, there are images that hold that Chinese foreign policy has gone through major changes. As Andrew
J. Nathan (1976) shows, the most prominent is the image of cyclical changes or oscillations of foreign policy. An introductory text of Chinese politics, for example, states:

Throughout Mao's era China's conduct toward the rest of the world vacillated between pragmatic calculations based on national interest and ideological dogmatism, between benign understanding and revolutionary ardor (Pye, 1978: 350).

As mentioned in the previous section, Okabe (1976) summarises the history of China's foreign policy in terms of changes between "tight united front" policy and "loose united front" policy. His periodization is a fair representation of the oscillation view. The first period, 1949 - 1952, was the period of "tight east - west conflict." When Stalin died and the Korean truce was concluded, the pendulum swung back to the image of "loose bipolar" world and the period of "peaceful coexistence" began. The year 1958, however, saw a quick return to a hard-line policy, which Okabe calls "tight intermediate zone theory" policy. This period continued into the early 1960s. But as the domestic policy gradually became "moderate", this hard-line posture turned to rather "soft" form of "intermediate zone" policy. The Cultural Revolution, again, pulled the Chinese foreign policy back to one of a "tight bipolar" world, this time, between China and anti-China countries. Since the end of the Cultural Revolution, the Chinese foreign policy has again been that of "loose intermediate zone" theory, now called the "three worlds" theory.
It is useful at this point to clarify what we mean by "change" in foreign policy? Unless we specify this concept, we would have to agree to a moderate but unfalsifiable view such as the following:

China's foreign policies, like its domestic policies, have undergone many changes in direction and emphasis. . . . Despite all the changes, however, there have been significant continuities (Barnett, 1974: 246).

For our analytic purpose, therefore, we need to clarify and specify the concept of "change". For this purpose we distinguish between behavioral change and character change. The former is change in observable actions and action frequencies. The latter is change in the ways the decision makers process information and decide. In our framework, the character changes occur between realist and revolutionary foreign policy and between soft-line and hard-line strategies on both of the two strategy dimensions. The former category of change can occur without character change because, for example, of changes in the environment. (1) Even if the level of Chinese international conflict involvement happens to be very high in a certain year, one cannot always conclude that the Chinese foreign policy becomes aggressive in character. It may be the case that the level of international tension is so high that even a cautious decision maker cannot help increasing the lev-

(1) See Herbert Simon's discussion of the movements of an ant as an example of complex behavior produced by fixed simple rules (Simon, 1981: 63-65).
el of involvement. Thus, if we combine this distinction with the pair, oscillation view vs. no change view, we obtain the following four possibilities (Figure 1-3).

The first type is behavioral oscillation with no change in character; the second type is both behavioral and character oscillation; the third type is no behavioral change but character oscillation; the fourth is no change in either category.

Even though Figure 1-3 is depicted as if the changes in both levels can be measured quantitatively on a unidimensional scale, neither quantification nor unidimensionality is a necessary assumption. In fact, if the character is specified in terms of the three dimensions, it is extremely difficult to describe its change either quantitatively or on a
unidimensional scale. Also, if the character is described on multidimensional space, oscillations may occur on only one dimension and no changes may take place on the other dimensions.

When Nathan writes in his critique against oscillation view that "In foreign policy, the goals of national strength and world revolution have never altered. The left - right options, if they exist, deal only with means, not ends; with pace, not direction; with estimates of the obstacles to policies rather than with commitment to their realization" (Nathan, 1976: 728), he seems to assert that oscillation, if it occurs, is between hard-line and soft-line rather than between realist and revolutionary in our terms. Okabe( 1976 )'s view, discussed above, adheres to this variant of oscillations, as well. Pye( 1978 )'s view seems of the type of oscillations between realist cum soft-line and revolutionary cum hard-line. Some possibilities are depicted in Figure 1 - 4.

But the difficult and important issue is how it is possible to infer changes or constancy of the character of foreign policy from observable behavior. There is no assured ways. As will be discussed in the next chapter, all we can do is to construct models of character of foreign policy and examine how they fit the actual observations. Then, how to conceive of the "character" of foreign policy is crucial. We have to decide what should be constant if the character of foreign policy is to be called constant. In other words, how to re-
Figure 1-4

Some Examples of Possible Character Oscillations

realist + rigid + (aggressive)

realist + flexible

realist + rigid + (aggressive)

realist + flexible

realistic + flexible + cautious

revolutionary + rigid + aggressive

realist + rigid + cautious

realistic + flexible + cautious

revolutionary + flexible + cautious

realistic + rigid + aggressive

revolutionary + rigid + aggressive

revolutionary + rigid + cautious
resent the character of foreign policy is the most important task of this thesis.

In the next chapter, we review what sorts of representational forms are available and have been used for empirical studies of foreign policy. But before turning to this review, let us examine another substantive argument often made in conjunction with the oscillation view of Chinese foreign policy: linkage of domestic politics and internal situation with foreign policy. One proponent says:

An intimate relationship has always existed between domestic policy and foreign policy; the one can seldom be divorced from the other. In the case of Communist China the interplay between the two has been so very close that changes in foreign policy can be directly related to those in the internal situation. The "hard" line, as it is called, in foreign relations was preceded by equally tough internal policies. The change in the external posture from 1956 to 1958 was no more masked than a corresponding change within the country for the same period (Dutt, 1966: 1).

Pye (1978) agrees:

The face China presented to the outside generally was influenced by the state of domestic developments; when the country was caught up in revolutionary campaigns its foreign policy became more hard-line, and when the emphasis was upon economic development, foreign relations stressed the businesslike advancement of foreign trade (Pye, 1978: 350).

On the other hand, some scholars are opposed to directly relating domestic policies to foreign policies. Halperin and Perkins claim that "Close examination does not support the view that the relationship between Chinese domestic and for-
eign policies is causal" (Halperin and Perkins, 1965: 21). John Gittings maintains, on the contrary, that "the sequence of cause and effect is the reverse" of what the above argument would suggest. "Historically speaking," he says, "the whole development of modern China and its revolution had been circumscribed by its external environment, and since 1949 this wider setting has continued to preoccupy the Chinese leadership" (Gittings, 1974: 267).

What Halperin and Perkins mean, however, is not that there is no relation between domestic and foreign policies but that "whatever connection exists is more complex" (Halperin and Perkins, 1965: 22). Also, neither Dutt(1966) nor Pye(1978) is saying that change in domestic policy is the only factor that influences change in foreign policy. Thus, to sharpen the argument and make the images falsifiable, it is necessary to return to the discussion of what type of "change" is meant and the issue of how change in one is transferred to the other.

Although this thesis does not examine Chinese domestic politics in detail, it is important to distinguish domestic (observable) conditions and the character of domestic policy. The domestic influence of foreign policy can mean either that the domestic condition is considered in foreign policy decision making as an important factor or that the character of foreign policy is transformed as the character of domestic policy changes. In the former case, the behavior of foreign
policy may change as the domestic condition changes without changes in character of foreign policy. If the character of foreign policy has the revolutionary frame of reference, which includes the domestic condition as a very important variable to understand the international situation, it is only natural that the domestic condition is reflected in the foreign policy. On the other hand, what Dutt and Pye mean is the latter case. In this case, it is changes of the character of domestic policy that bring about changes of the character of foreign policy.

As the attentive reader may already have noticed, in either case, the real issue is how to represent different models of the character of Chinese foreign policy such that they can be tested empirically. In order to check whether the domestic condition affects the foreign policy behavior, it is necessary to construct a model which incorporates a mechanism of translating the domestic condition into international conflict behavior and to see whether the model fit the actual data. In order to examine whether oscillations occur in the character of foreign policy, we need to construct various models and see which models fits the data better and when.

The above efforts are essential event to start consideration of linkage between the character of foreign policy and that of domestic policy. Since this thesis does not construct models of domestic politics, it cannot establish empirical periodization of domestic politics in terms of character dif-
ference. However, it attempts to suggest the breakpoints in the character of foreign policy through the examination of comparative performance of various different models. Thus, strictly speaking, the present thesis could not give empirical judgement as to the issue of linkage between the character of domestic politics and the character of foreign policy. But in the final chapter, a speculative thought on this issue shall be given based on the empirical findings of Chapter 3 and Chapter 4.

In any case, before constructing our own models based on the survey of the images of China as an international actor, it is necessary to review what type of representational forms have been used in the international relations and the Chinese foreign policy researches. This is the topic of the next chapter.
CHAPTER 2

REPRESENTATIONAL FORMS OF FOREIGN POLICY
In Chapter 1, we tried to clarify the images held by western China specialists of China as an international actor. We classified them into the three broad categories: (1) Chinese decision makers' frame of reference; (2) their strategies to handle uncertainty; and (3) dynamics of Chinese foreign policy. The first and the second categories are related to the content of Chinese foreign policy. We observed in the last chapter that the images in the first category can be arranged on the realist - revolutionary dimension. In the second category, however, instead of the conventional unidimensional hard-line - soft-line arrangement, we proposed to use two dimensions: (1) rigid - flexible strategies to cope with uncertainty in evaluation/understanding of situation and (2) aggressive - cautious strategies to cope with uncertainty in decision.

In contrast with these two categories, the third category is not directly concerned with the content of Chinese foreign policy but with the issue of constancy or changes of foreign policy. The examination of this issue, however, revealed that it is one's representation of the content of Chinese foreign policy that is crucial to determine whether Chinese foreign policy has undergone changes (cyclical or otherwise). In other words, to resolve issues in the third category, it is necessary to tackle the issue of how to represent the content of Chinese foreign policy, the issues concerning the first two categories.
The theme of this chapter, then, is to explore representational forms to construct models representing part or all of the three dimensions concerning the content of Chinese foreign policy. Discussion of representational forms is important because there is no such thing as a "natural" or "common sense" way to rigorously represent one's model of human or social phenomena. Also, it is not so obvious whether one could differentiate one's substantive theory from the form of representations used to test it empirically because one's decision to use one formalization over others can affect the content of the theory. This particularly so when the theory is not developed rigorously and in some detail.

For this purpose, we examine two prevalent formalizing traditions used in international relations researches: the tradition of the general linear model and that of information processing models. They are not the only traditions available but they are very influential and relevant to our problem. Hence, they deserve special attention.
1 Preliminaries -- General Input-Output Systems

Before discussing the two traditions, the general linear model and information processing, I would like to explore the issue of formalization generally. To put these two traditions into some perspective, we have to start from somewhat more abstract discussion of input-output systems. Since the notation used in the following examination is Kumon(1973)'s, the interested reader may want to consult Kumon(1973) or Klir(1969).

Most generally, a formal input-output structure may be expressed as

\[ \{ S, v, V, R, E, D \} \]

where S is the name of the system, v is the set of variables used in the system, V is the Cartesian product of the ranges of the variables, R is the relation among the variables, E is called the element structure, and D is called the element-output coupling relation. This formalism shows what ought to be specified to describe an input-output structure adequately.

Let me explain the above terms in more detail one by one. First, when one wants to describe a system, one has to give a name to it, or he has to separate a part of reality from its environment. Second, one has to specify the variables that constitute the system whose name he has just given. Third, the ranges of all variables should be specified. Given the
ranges of all the variables, we can construct the space in which the system can exist. Just to recapitulate the above, let us consider an example. (1)

\{ \text{market}, \langle \text{price, quantity} \rangle, P \times Q \} \)

This system has the name "market", two variables, price and quantity, and the space as the Cartesian product of the ranges of the two variables (P \times Q). (2)

Figure 2-1 illustrate this.

![Figure 2-1 Market as a Space](image)

\[ V = P \times Q \]

Just specifying the space may not be satisfactory for the description of the system. The fourth component of our specification is relation (R). In general, a relation among sets

(1) This example of a market system is taken from Kumon(1973).

(2) Hereafter, \( \ast \) is used as a symbol to suggest an operation to take the Cartesian product; \# is used to suggest ordinary multiplication.
V1, V2, ..., Vn, i.e. R(V1, V2, ..., Vn) is defined as a subset of the Cartesian product V = V1 × V2 × ... × Vn. This definition is also expressed as R(V) ⊆ V. An example.

\[
\begin{align*}
S & \to \text{party affiliation} \\
v & \to \{ \text{party affiliation, political ideology} \} \\
V1 & \to \{ \text{Democrat(d), Independent(i), Republican(r)} \} \\
V2 & \to \{ \text{Liberal(l), Moderate(m), Conservative(c)} \} \\
R(V1, V2) & \to \{ (d, l), (d, m), (i, l), (i, m), (i, c), (r, m), (r, c) \}
\end{align*}
\]

The relation R(V1, V2) may also be expressed visually in Figure 2-2.

**Figure 2-2**

Hypothetical Relation between Party Affiliation and Political Ideology

<table>
<thead>
<tr>
<th></th>
<th>Liberal</th>
<th>Moderate</th>
<th>Conservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democrat</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Independent</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Republican</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

X indicates that the cell is included in the relation. It should be noted that relation is a more general concept than mapping, function, etc. It does not have to be one-to-one or many-to-one.

Often it is interesting to think of something that generates a relation. We call it the structure of the system.
To specify the structure, we first consider various sub-relations which can take place within subsets of the variables and then generate the original relation of the whole as an intersection of these sub-relations. We call these sub-relations "element relations". An element relation is expressed as

$$E_j \subseteq W_j$$

where $W_j$ is the Cartesian product of ranges of the variables included in the subset, $w_j$. If we consider a set

$$\mathcal{E}_j = \{e_j, w_j, W_j, E_j\} \quad j=1, \ldots, m$$

where $e_j$ is the name of this subsystem and $m$ is the number of subsystems, we call this set an "element (structure)". We use $\mathcal{E}$ as a set of $j$ for $1 \leq j \leq m$. Then our entire system so far becomes

$$\{ S, v, V, R, \mathcal{E} \}.$$ 

It is to be remembered that the element relations $E_j$ should be chosen such that their intersection would generate the relation of the overall system. In general, however, the choice of element structures for a given relation of the overall system is not unique and could not be constructed deductively.

Let us go back to our example of the "market" system. A relation is depicted in Figure 2-3. Then what sort of elements would generate this relation? One most conventional way is to create two elements, the supplier and the consumer. The supplier is characterized in our notation,
The consumer is characterized as

e2 \rightarrow \text{consumer}
\begin{align*}
w2 &\rightarrow \{\text{price, quantity}\} \\
w2 &\rightarrow \text{P} \times \text{Q} \\
E2 &\text{ is expressed in Figure 2-5}
\end{align*}

Now we can generate the relation of the overall system by taking the intersection of these two element relations as in Figure 2-6. But as mentioned above, this is not the only way to construct a structure which can generate the relation.

Finally, we introduce the direction of the element relations. In other words, we specify which variables are inputs to and outputs from each element. Since all the
Figure 2-4
Supplier Element in Market System

$W_1 = P \times Q$

Figure 2-5
Consumer Element in Market System

$W_2 = P \times Q$
variables related with each element is included in e, it suffices to show the binary relations between output variables (or input variables) and elements. Thus, our system becomes the final form,

\[ \{ S, v, V, R, E, D \} \]

This type of system, particularly the direction of the relations, is readily represented in the form of block-diagrams such as Figure 2-7. This is a totally hypothetical system specified as follows:

\[
S \rightarrow A \text{ Hypothetical Directional System}
\]
\[
v \rightarrow \{ v_1, v_2, v_3, v_4, v_5, v_6, v_7, v_8 \}
\]
\[
V \rightarrow V_1 \times V_2 \times V_3 \times V_4 \times V_5 \times V_6 \times V_7 \times V_8 \text{ (unspecified)}
\]
\[
R \rightarrow R(V_1, V_2, V_3, V_4, V_5, V_6, V_7, V_8)
\]
\[
E \rightarrow \{ \varepsilon_1, \varepsilon_2, \varepsilon_3, \varepsilon_4, \varepsilon_5 \}
\]
\[
\varepsilon_1: \ e_1 \rightarrow 1\text{st element}
\]
\[
w_1 \rightarrow \{v_1, v_2, v_3, v_4\}
\]
\[
w_1 \rightarrow V_1 \times V_2 \times V_3 \times V_4
\]
\[
E_1 \rightarrow R(V_1, V_2, V_3, V_4)
\]
\[
\varepsilon_2: \ e_2 \rightarrow 2\text{nd element}
\]
\[ w2 \rightarrow \{v2, v4, v5\} \\
W2 \rightarrow V2 \times V4 \times V5 \\
E2 \rightarrow R(V2, V4, V5) \\
E3: e3 \rightarrow 3rd element \\
w3 \rightarrow \{v3, v6\} \\
W3 \rightarrow V3 \times V6 \\
E3 \rightarrow R(V3, V6) \\
E4: e4 \rightarrow 4th element \\
w4 \rightarrow \{v4, v8\} \\
W4 \rightarrow V4 \times V8 \\
E4 \rightarrow R(V4, V8) \\
E5: e5 \rightarrow 5th element \\
w5 \rightarrow \{v5, v7\} \\
W5 \rightarrow V5 \times V7 \\
E5 \rightarrow R(V5, V7) \\
D \rightarrow \{d1, d2, d3, d4, d5\} \\
d1 \rightarrow \{e1, v1\} \\
d2 \rightarrow \{e2, v2\} \\
d3 \rightarrow \{e3, v3\} \\
d4 \rightarrow \{e4, v4\} \\
d5 \rightarrow \{e5, v5\} \\

Figure 2-7
Hypothetical Example of Directed Structure

Note that the inputs to each element can be derived from the difference, \(w_i - d_i\) for \(i = 1, \ldots, 5\). For example, the set of
inputs to the first element is \{v_2, v_3, v_4\} because \textit{w_1} is \{v_1, v_2, v_3, v_4\} and \textit{d_1} is \{e_1, v_1\}. 
2 General Linear Model

By the general linear model approach, I mean the group of formal representations and associated statistical techniques to estimate the parameters of a single linear equation or a simultaneous linear equation system. Since there are many good texts on the techniques, I do not deal with the issues of estimation. (1) Rather, I would like to discuss structural characteristics and frequent application practices of this model. For this purpose, I use the formalism that we have discussed in the previous section, that is, \{ S, v, V, R, \epsilon, D \}.

It goes without saying that there is no restriction in the general linear model as to the selection of the names of the system or the variables. The fact that the techniques were developed mainly in econometrics does not prevent anybody in any discipline from using it. In fact, there is no logical restriction about the range or the characteristics of the variables, either. If the independent variables one selects are qualitative, one can use dummy variables; if the dependent

---

(1) For an informal treatment, see Wonnacott and Wonnacott (1979). Maddala (1977) and Pindyk and Rubinfeld (1981) contain many recent developments and examples of applications mostly from economics and business forecasting. Johnston (1972) is a standard test. For a more rigorous treatment, see Theil (1971). Hanushek and Jackson (1977) is the first text which includes political science examples. Goldberger and Duncun (1973) deals with many issues. Alker (1974) is a critical review of some of the general linear models.
variables are qualitative, too, one can resort to the logit regression. If the recently developed log-linear model is considered part of the general linear model, qualitative variables can be handled within this tradition fairly satisfactory. (1) This fact does not necessarily mean that the general linear model can be applied to almost any phenomenon, discrete or continuous. One has to examine the structural specification issues carefully.

Next, the general linear model assumes that the observed data as a sample of the true population. Thus the task of modellers of the general linear model is to find structures that generate the true relation based on the information available in the sample. Now we are dealing with \( \varepsilon \). As in the previous section, each element is expressed as

\[ \varepsilon_j = \{ e_j, w_j, W_j, E_j \} \]

As in the whole system, there are no restrictions on \( e_j \), \( w_j \), and \( W_j \), though the variables are usually assumed to be continuous. The strong assumption is made on \( E_j \), the element relations. In the general linear model, the element relations should be linear functions.

In other words, each element relation is expressed as a linear equation. As a whole, the entire system is constructed

---

(1) Leo Goodman is the main developer of this technique. See Goodman (1970, 1971a, 1971b, 1972). For informal introductions, see Fienberg (1977) or Upton (1978). Bishop, Fienberg, and Holland (1975) is the first general reference. Analogy of this technique with the ordinary general linear model does not seem to be complete. See Fienberg (1977): 91-107.
as a simultaneous equation system. In matrix notation, the system is expressed as

\[ B y_t + \Gamma x_t = u_t \]

where \( B \) is a \( G \times G \) matrix of coefficients of endogenous (output) variables, \( \Gamma \) is a \( G \times K \) matrix of coefficients of predetermined (input) variables, and \( y_t \) is the \( G \times 1 \) column vector of the \( t \) th observation of all endogenous variables, \( x_t \) is the \( K \times 1 \) column vector of the \( t \) th observation of all predetermined variables, and \( u_t \) is the \( G \times 1 \) column vector of \( t \) th observation of error term for each equation.

In our notation, this system can be expressed as follows:

\[
\begin{align*}
S & \rightarrow \text{a simultaneous linear equation system} \\
v & \rightarrow \{y_1, y_2, y_3, \ldots, y_G, x_1, x_2, \ldots, x_K\} \\
v & \rightarrow \{Y_1 \times Y_2 \ldots \times Y_G \times X_1 \times X_2 \ldots \times X_K\} \\
R & \rightarrow R(\{Y_1, Y_2, \ldots, Y_G, X_1, X_2, \ldots, X_K\}) \\
\varepsilon & \rightarrow \{\varepsilon_1, \varepsilon_2, \ldots, \varepsilon_G\} \\
D & \rightarrow \{d_1, d_2, \ldots, d_G\}
\end{align*}
\]

Note that the number of the element structure is the same as the number of the equations in the matrix form. Each equation represent the element relation in each element structure. A special case, in which only one element is specified to generate the relation, is a single equation model.

As mentioned before, a function is a very special case of relation and a linear function is still a special case of a function. In the general linear model tradition, linear functions are used to specify structural specification. (1)

(1) Of course, non-linear functions which can be transformed into linear functions can be dealt with in this tradition. An example.
But, in general, structural specification does not have to take the form of linear functions; there are infinitely many different ways to do this. It is wrong to consider that there is no other alternatives. Of course, I am not saying that the linear specification of the structure is bad or useless. On the contrary, it is often very parcimonious and useful, particularly when the phenomenon being modeled is an fairly aggregate one.

Given this fairly abstract discussion, let us turn to concrete examples of application of the general linear model in the field of international relations, in general, and Chinese foreign policy, in particular. The first example is Onate (1974) and the second is Ashley (1980). (1)

Both deal with some aspects of Chinese international conflict behavior. Therefore, both have much to do with the discussion of the previous chapter even substantively. The former uses a very simple specification of the structure, a single equation; the latter uses a very complex specification of the structure, a simultaneous equation system.

Onate (1974) is an attempt to test the hypothesis that increases in the levels of internal conflict in China lead the Chinese to seek foreign policy conflict. It was a

\[ Y = A^X^B^U \implies \log Y = \log A + b \log X + \log U \]

Also, many methods are being developed to estimate other non-linear equations.

(1) Other applications of Chinese politics in this tradition include Liao (1976) and Ting(1979).
pathbreaking work in the field of Chinese foreign policy in the sense that it was almost the first attempt to use the general linear model to explore substantively relevant hypotheses. His model is the simplest possible one in the general linear model, a single bivariate equation. In our notation, this model is expressed as follows:

\[
\begin{align*}
S & \rightarrow \text{Chinese International Conflict Decision System} \\
v & \rightarrow \{ \text{internal conflict(IC)}, \text{external conflict(EC)} \} \\
V & \rightarrow \text{IC} \quad \text{EC} \\
R & \rightarrow \text{EC} = a0 + a1*IC + u \\
D & \rightarrow \{ (R,IC) \}
\end{align*}
\]

Notice that if there is only one element, we can treat the system as \{ S, v, V, R, D \} instead of \{ S, v, V, R, E, D \} because S is actually E. In the block diagram, the above is described fairly compactly (Figure 2-8).

Figure 2-8
Block Diagram of Onate Model
Onate, however, did not report the result of the above model saying, "raw data, . . . . , showed a lack of any relationship between the two domains of conflict (data not shown)" (Onate, 1974: 585). Then, without much discussion, he took logs of both variables and ran a regression. In other words, what he tested, in fact, was

\[ \log EC = b_0 + b_1 \log IC + u \]

His results may be summarized as follows:

\[ \log EC = 2.128 + 0.12 \log IC \]

\[ ( ? ) (0.04) \quad R^2 = 0.27 \quad n = 21 \]

where the number in the parentheses are the standard errors of the coefficients. (1) With these results, he concluded that "the results indicate that on an annual . . . basis, a moderate relationship exists between foreign and domestic conflict in the People's Republic of China over a 21-year period" (587).

One characteristic revealed in this study as well as many other studies using simple specification of the structure in the general linear model is general lack of interest in the structures they impose on the data to test their hypotheses. They rarely discuss the nature of the structure which generates the observed sample. Sometimes many authors seem to apply the general linear model almost mechanically.

(1) The standard error of the intercept was not reported. The Durbin-Watson statistic was not reported, either. Thus, it is hard to see whether there is serial correlation among the error terms.
Onate (1974) unfortunately did not seem to avoid that tendency completely. The following is an illustration.

I have presented an equation \( \log EC = b_0 + b_1 \log IC + u \) as if it were the only model that he tried. But, in fact, he reported other equations, too. All the equations whose results were reported are listed below.

1. \( \log EC = b_0 + b_1 \log IC + u \)
2. \( \log IC = b_0 + b_1 \log EC + u \)
3. \( \log EC(t) = b_0 + b_1 \log IC(t-1) + u \)
4. \( \log IC(t) = b_0 + b_1 \log EC(t-1) + u \)
5. \( \log EC(t) = b_0 + b_1 \log IC(t-2) + u \)
6. \( \log IC(t) = b_0 + b_1 \log EC(t-2) + u \)

where \( u \) is the disturbance term, the \( t-1 \) and \( t-2 \) in the parentheses suggest the existence of lags. The equations (2), (4), (6) reflect his interest in examining the reverse effect from external conflict behavior to internal conflict. This does not, however, imply just the reversal of arrows of the original structural specification like Figure 2-9. In the case of (1), (3), (5), Figure 2-8 represent the structure because the Chinese international conflict decision apparatus can increase external conflicts if it consider it necessary to divert the attention of people from serious internal conflicts. But, in the case of (2), (4), (6), Figure 2-9 cannot be the structure because it is highly unlikely that the Chinese international conflict decision makers can create internal conflicts when they are engaged in many international
conflicts. In other words, even though there is an actual directional relation from international conflict to internal conflict, the structure that generates this relation cannot be the same as the one which generates the directional relation from internal conflict to international conflict. Exchanging the independent variable and dependent variable brings about a serious difference of implication of the structure. If there is some structure that generates a directional link from external conflict to internal one, it may be a much larger political-economic system. (See Figure 2-10). No substantive attempt was made to clarify this implication in Onate(1974) except saying in the final section that "external conflict has had a disintegrative effect on internal group solidarity in the PRC." If he had paid more attention to the structure he
imposed, he would have clarified these implications in much earlier stage, even before he ran regressions. (1)

Our next example is Ashley (1980). This is a very impressive study of the dynamics of Sino-Soviet-American superpower triangle from 1950 to 1972. Theoretically, it is a direct outgrowth of Choucri and North (1975), the significance of which lies in its systematic attempt to test its "lateral

---

(1) The fact that he made log transformation just for some technical reason shows his lack of substantive interest in the structural specification. He changed the equation \( EC = a_0 + a_1 \times IC + u \) to the equation \( \log EC = b_0 + b_1 \times \log IC + u \) seemingly as a matter of technical procedure. But this change influences substantive interpretation of the result. If one takes the anti-log of (2), then one has

\[ EC = A^{b_1} \times U \]

where \( \log A = b_0 \) and \( \log U = u \). This is in fact a non-linear function. Compare the two different figures in Figure 2-11. (1) and (2) shows totally different relations between the two variables.
Figure 2-11

Comparison of EC = a + bIC and EC = A^IC^b

(1) EC = a + bIC

(2) EC = A^IC^b

- b > 1
- 0 < b < 1
- -1 < b < 0
- b = -1
- b < -1
pressure" hypothesis. In addition to the unilateral dynamics and bilateral dynamics, which were modeled by Choucri and North, Ashley incorporated multilateral "balance of power" dynamics in the model. In the following, I would like to restrict myself to methodological issues and structural specifications. As for substantive issues, this work certainly deserves a separate extensive review and comments, which I would not attempt in this thesis.

His model is a very complex specification of the general linear model. The entire structure is what is usually called a "block recursive" system. (1) Figure 2-12, reproduced from Ashley (1980:63), shows the overall relations among blocks. Each block, of course, can be considered an element in our notation. Actually each block is generated by a set of element structures. Thus, we may use the term "sub-system" to refer to a block.

As Figure 2-12 shows, Ashley seems to conceive of each block as fairly abstract, phenomena generating element structure. Block A, for example, is an element which generates

---

Thus, Onate should have been able to interpret his result more precisely and interestingly if he had attempted to examine the implication of the log-transformation. For example, by showing the 95% confidence interval for b1, he could have specify one of the relations in (2) of Figure 2-11. Since \( b_1 = 0.12 \), and \( s(b1) = 0.04 \), 95% confidence interval is \( 0.12 - (2.09)(0.04) < b_1 < 0.12 + (2.09)(0.04) \), that is, \( 0.04 < b_1 < 0.20 \). This implies that even though internal conflicts increase, external conflicts do not increase proportionally.

(1) A very simple description of block recursive systems is given, for example, in Wonnacott and Wonnacott (1979): 298-299.
Figure 2-12
Block Recursive Structure of the Ashley Model*

*Taken from Ashley (1980): 63.
three superpowers' expansion, intersection, and military capabilities. Block B is a provocation generating element. It should be noted that Ashley does not specify physical entities like the United States, China, or the USSR, as elements. This is like the macro economic model, whose sub-systems are non-physical entities, i.e. goods market, money market, and labor market, rather than physical entities like firms, consumers, or the government.

However, is it appropriate to adopt this type of sub-system specification when there are only a few (in this case, three) actors involved. As long as a country's trade dispersion, defense expenditure, friendly/hostile actions against others are conceived of as its outputs, it seems ontologically proper to consider countries to be sub-systems. Interest rates, labor demand, national income, etc. are not determined by a single actor's action. But the PRC's defense expenditure, the PRC's action against the US, etc., no matter how much influenced by joint actions of others, are still the PRC's actions. In fact, the elements constituting each sub-system are somehow grouped by country. Thus, it is possible to regroup the lowest element structures, i.e. equations, in terms of national "boundaries". Figure 2-13 is an alternative block diagram to show the structure including the PRC decision making apparatus. This representation blurs the block recursive nature of the entire system but can convey intui-
## Table 2-1

The Concept-to Measure Links (Ashley Model)**

<table>
<thead>
<tr>
<th>Conceptual variable</th>
<th>Measure</th>
<th>Calculus*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expansion</td>
<td>Trade Dispersion #2</td>
<td>Actor A's Total Trade</td>
<td>Reflects both aggregate intensity and dispersion across regions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\sigma_{R_i} = \frac{1}{N} \sum_{i=1}^{N} (A's trade in R_i) \times (B's trade in R_i)$</td>
<td></td>
</tr>
<tr>
<td>Intersection</td>
<td>A-B Intersection #2</td>
<td>$\sum_{i=1}^{N} (A's trade in R_i) \times (B's trade in R_i)$</td>
<td>Weights most heavily intersections in $R_i$ of trading 'importance' to A and B.</td>
</tr>
<tr>
<td>Provocation</td>
<td>A-B Provocation #2</td>
<td>$\sum_{i=1}^{N} (A's trade in R_i) \times (B's trade in R_i) \times (Number of Local Wars in R_i)$</td>
<td>Weights wars as provocative depending on degree of intersection within a region.</td>
</tr>
<tr>
<td>Military Capability</td>
<td>Defense Expenditure</td>
<td>For US, official (constant 1970) dollar budgetary data are used. For CPR and USSR, annual defense expenditure figures derived from analysts' responses to question: how much would it cost, in US constant dollar equivalents, to develop, purchase, operate, and maintain military capability?</td>
<td>Extremely gross aggregates, but the only non-force-specific measures with capacity to gauge both military 'effort' and 'potential.'</td>
</tr>
<tr>
<td>Normal Conflict</td>
<td>Mean level of conflict,</td>
<td>The mean across all conflict levels exhibited by A toward B within a one year period. Events scaled on 30-point conflict implications for violence scale.</td>
<td>Sensitive to low and midrange as well as high conflict events.</td>
</tr>
<tr>
<td>Cooperation</td>
<td>represented as $A \rightarrow B$</td>
<td>(Mean).</td>
<td></td>
</tr>
<tr>
<td>Threshold of Violence</td>
<td>Peak level of conflict,</td>
<td>Highest conflict level of A toward B within one year period. Events scaled on 30-point scale.</td>
<td>Single highest point reached on the scale; may be viewed as a conflict 'ceiling.'</td>
</tr>
<tr>
<td></td>
<td>represented as $A \rightarrow B$</td>
<td>(Peak)</td>
<td></td>
</tr>
</tbody>
</table>

**A** is an actor, **B** is a second actor (or target), and **R** is a geographic region. Trade and defense expenditure data are in millions of constant 1970 dollars.

†On this scale, a score of '1' indicates very low conflict and high cooperation while, at the other extreme, a score of '30' represents very high conflict, usually escalating armed hostilities.

**Taken from Ashley (1980): 56.**
tively more satisfactory interpretations. (1) Table 2-1 is taken from Ashley (1980: 56) for the description and measure of the endogenous variables.

As indicated from Figure 2-13, Ashley's specification of the structure is very elaborate and carefully conducted. Within the framework of the general linear model, he incorporates non-linear relations, too (where X appears in Figure 2-13). Almost all indices are well thought out and interpreted accurately.

He says, "This book is concerned with long-term historical processes and trends. Its aim is not to explain or even describe discrete events" (59). This is an apt statement of the purpose of an application of the general linear model. There seem no flaws in his model in this respect. But I find his specification of what he calls "thresholds of violence" somewhat unsatisfactory. He defines thresholds of violence as follows:

The proximity of an actor to war in its behavior toward a target within a span of time -- a conflict 'ceiling' for each actor-target pairing over some period. More so than normal conflict and cooperative levels, thresholds of violence are sensitive to the occurrence (or non-occurrence) of confrontations and crises among major powers (53).

As shown in Table 2-1, operationally, a threshold of violence is the highest conflict level of A toward B within one year

---

(1) In fact, I am not very sure how much necessity or inevitability the block recursive structure has in terms of Ashley's substantive theory.
THE FOLLOWING PAGES ARE ILLEGIBLE
## Table 2-2

Notation: Symbols Used in the Ashley Model

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>EXPLANATION</th>
</tr>
</thead>
</table>
| A->B(Mean) | "A" and "B" are actors (like US, USSR, and CFR), 
(\text{Mean}) indicates a conflict level, and "\text{towards}" is read "toward." Thus, A->B(Mean) indicates "A's mean level (or normal) conflict toward B." |
| A->B(Peak) | Where A->B(Mean) indicates normal conflict, A->B(Peak) indicates "A's threshold of violence toward B." |
| A->B(Mean) - 11 | The bar over A->B indicates a three-year-lagged moving average; and 11 is a threshold level. Thus, |
| \[
\frac{1}{3} \sum_{i=1}^{3} A->B(Mean)_{t-i} - 11
\] |
| 3A->B(within system means) \_t-1 | The percentage of A's within-system normal conflict that is directed toward B, lagged one year: |
| \[
\frac{A->B(Mean)_{t-1}}{A->B(Mean)_{t-1} + A->C(Mean)_{t-1}}
\] |

**Diagrams:**

- \(X_2 \rightarrow X_1 \rightarrow Y\)
  - Indicates multiplicative interaction of \(X_1\) and \(X_2\) in their effects on \(Y\). Alternatively, the effects of \(X_1\) on \(Y\) depend upon the value of \(X_2\).

- \(X_1 \rightarrow X_1 \rightarrow Y\)
  - Indicates that the one-year-change in \(X_1\) (i.e., \(X_{1t} - X_{1t-1}\)) is entered in the equation for, and causally determines, \(Y\).

- \(X_1 \rightarrow X_1 \rightarrow Y\)
  - Indicates that the two-year-change in \(X_1\) (i.e., \(X_{1t} - X_{1t-2}\)) is entered in the equation for, and causally determines, \(Y\).

- \(X_1 \rightarrow t-1 \rightarrow Y\)
  - \(i.e., X_{1t-1}\)
  - Indicates that the previous year's \(X_{1t}\) is entered in the equation.

- \(X_1 \rightarrow -11 \rightarrow Y\)
  - Indicates that \(X_{1t-11}\) is entered in the equation.
period. Given these logical as well as operational definitions, I argue that this sort of phenomenon is most fruitfully analyzed as a discrete event rather than as a continuous variable which shows a trend. Particularly it is not suitable to be expressed as a linear combination for several continuous independent variables. Ashley does not seem to think so. He maintains:

Consequently, it is in thresholds of violence that one expects to see the dynamics of crisis -- threat, counterthreat, and demonstrations of resolve -- most clearly manifested. At the same time, however, it must be understood that an annual threshold of violence does not necessarily connote the occurrence of a crisis and that, in attempting to explain variation in thresholds of violence, this analysis does not try to illuminate the short-range dynamics of crisis or crisis decision-making. Instead, the emphasis is on those long-range dynamics that incline national leaders to expand or constrict their repertoires of action so as to include or exclude actions approaching the brink of war. Put differently, the interest is in those longer-range processes that eventuate in the raising or lowering of what might be called conflict 'ceiling' (159-160, underline is Ashley's).

In spite of Ashley's strong emphasis that a threshold of violence does not necessarily connote a crisis, its level is after all determined almost always by a single event. In other words, the number representing the level of a threshold of violence seems essentially different from the other variables. Expansion, intersection, provocation, military capability and normal conflict behavior can be considered "a kind of 'trace' left by literally hundreds or thousands or even many millions of decisions" (Ashley, 59), but a threshold of violence is hard
to be conceived of similarly. The former five variables are all aggregate variables created by some form of weighted sum of many less aggregated variables which might show some discreteness. Because they are weighted and aggregated (thus, short-range discrete characteristics are cancelled out), it is not so unplausible to consider them central tendencies of the long-range trends. But in the case of a threshold of violence, since it is determined mainly by a single event, it is very likely to be influenced by short-range dynamics, if not crisis dynamics. The scale of the persons involved in the decision of the "peak" conflict event, if not crisis, seems radically smaller than the others'.

Conceptually, I believe that Ashley is wrong to assume that a kind of 'ceiling' on the level of conflict is determined by the long-range processes. What is determined by the long-range dynamics, I believe, is his normal conflict behavior. The distance between the 'ceiling' and the normal conflict behavior seems determined by such things as the particular nature of the on-going events, their historical sequence, timing of decisions and so on. Therefore, the 'ceiling' or a threshold of violence should be expressed as a result of essentially discrete events, the structure of which may not be fully captured in linear function.

Probably because Ashley treats this variable, thresholds of violence, more or less similarly with the other variables, his interpretation of the regression results seems misleading
at least in one important respect: each actor's degree of responsiveness. The equation of this element structure is

\[ \Delta t(H(Peak) = \alpha_6 + \beta_{24}[A's \text{ GNP/Pop.}] + \beta_{24}[A's \text{ Def. Ex.} - B's \text{ Def. Ex.}] + \beta_{25}[(A \rightarrow B \text{ Provocation } P2) \times (A \rightarrow B \text{ Mean} - 11)] + \beta_{26}[B \rightarrow A(Peak)] + \beta_{27}[A \rightarrow C(Peak)_{t-1}] + \beta_{28}[\Delta(B's \text{ Def. Ex.} - C's \text{ Def. Ex.})] + \nu_6 \]

The case in point is interpretation of the fourth coterm, B→A(Peak). According to Ashley, this term "is representative of actors' tendencies to respond in kind to conflict behaviors directed at them. Finding that the coefficients of this term for the six equations are mostly significant, more strongly so than in the case of normal conflict behavior, he concludes that "it is apparent that reciprocity relationships are generally much stronger among thresholds of violence than they are among mean conflict levels. The powers, it would seem, increasingly attend to and respond to actions at or approaching the brink of war"(170). This interpretation is misleading, at least in part. To see this point, first, it should be remembered that the level of a threshold of violence is determined by a single event which has the highest score in one
year period. A hypothetical situation may be depicted in Figure 2-14.

Figure 2-14
Hypothetical Sequence of Peak Events (1)

Since the peak event (A→B) occurs either before or after the peak event (B→A), whether A is responsive to B or not is determined only through the examination of the sequence of events. As in Figure 2-14, if the peak events (A→B) always precede the peak events (B→A), then A may be initiative all the time and B may be responsive all the time. But if we specify the structure like Ashley's above equation, the coefficient of B→A(peak) should certainly be significant and Ashley may conclude that A is responsive to B! In other words, it is impossible to determine, from the significant coefficient, which of the following is the case: (1) both are more or less responsive as well as initiative (Figure 2-15);
and (2) one is almost always initiative and the other, almost always responsive (Figure 2-14).

In fact, the above explanation is still misleading, too, because whether or not one actor is responsive or initiative cannot be determined just examining the peak event alone. We need to know the patterns of preceding cases. This line of argument then may leads the reader to realize that pairing the peak events in terms of the year they occurred is very arbitrary. In other words, what is called for is none other than the analysis of short-range dynamics. Ashley is correct when he says that "this analysis distinguishes between the dynamics of normal, day-to-day conflict and cooperation . . . and the dynamics of thresholds of violence" (145). But when he decided to apply the same technique, the general linear model, to ex-
amine thresholds of violence, I believe he took an unfruitful, if not totally wrong, path.

In sum, the general linear model is often applied without paying much attention to the structure supposedly generating the observed relations. Onate (1974) shows some of this tendency. A few impressive works including Ashley (1980) avoid such tendency. Still, overapplication may frequently be found. Ashley did not have to adhere to the assumption of continuous variables. He did not have to use the same technique to specify all parts of the structure. The law of instrument should be avoided if possible. (1)

---

(1) The law of instrument is Abraham Kaplan (1965)'s term. It is formulated as follows: "Give a small boy a hammer, and he will find that everything he encounters needs pounding" (Kaplan, 1965: 28). As Kaplan says, the law of instrument is not always useless. "What is objectionable is not that some techniques are pushed to the utmost, but that others, in consequence, are denied the name of science" (Kaplan, 1965: 29).
3 Information Processing Models

Following Newell and Simon, I define an information processing system as "a system consisting of a memory containing symbol structures, a processor, effectors, and receptors" (Newell and Simon, 1972: 20). Figure 2-16, a reproduction from Newell and Simon, shows the general characteristics of an information processing system. How is this sort of system understood in our \( \{ S, v, V, R, E, D \} \) framework? The interpretation of the general linear model was fairly straightforward. But in the case of an information processing system, it may be convenient to differentiate some of the above terms. First, it is usually desirable to specify an index variable which assigns order among corresponding variables. The range of this index variable, \( i \), is a set of non-reversible perfect order, i.e.

\[
t = \{ 0, 1, 2, \ldots, T \}
\]

Then, the rest of the variables are indexed.

\[
v^T = \{ v^t_i \mid i = 1, \ldots, n, t = 1, \ldots, T \}
\]

The necessity of attaching an indices to variables lies in the fact that in an information processing system the order of the sequence of inputs often has crucial importance. Each variables can be either continuous or discrete except the index variable which is discrete. But the practice of information processing modeling often assumes discreteness of the variables.
Figure 2-16
General Structure of an Information Processing System

*Taken from Newell and Simon (1972): 20.

The next revision in our framework is an introduction of memory state,

\[ m_i = \{ v_i^t \mid i=1, \ldots, n, \ t=1, \ldots, C-1 \} \]

where \( n \) is the number of variables, and \( C \) is the index of the current input. Then,

\[ \mu = \{ m, M \} \]

where \( m = \{ m_i \mid i = 1, \ldots, T \} \)

and \( M = M_1 \ M_2 \ \ldots \ \ldots \ M_T \). That is, the memory state is a set of the whole variables up to the current input. Now, \( E \) should be revised, too. Remember that an element structure is expressed as

\[ E_j = \{ e_j, w_j, W_j, E_j \} \ j=1, \ldots, m \]

where \( e_j \) is the name of the element, \( w_j \) is the set of variables related by the element, \( W_j \) is the Cartesian product
of the ranges of the variables, \( E_j \) is the relation of the variables, and \( m \) is the number of elements. Now, since an information processing assumes direction of the relation generated by the element, we can partition \( w_j \) into \( i_w^t, o_w^t \) and \( m^t \) where \( i_w^t \) is the set of variables that enter the element at \( t \), \( o_w^t \) is the set of variables that are produced by the element at \( t \), and \( m^t \) is the memory state at \( t \). Thus, \( W_j^t = I_W^t \times O_W^t \times M^t \). \( E_j^t = R(I_W^t, O_W^t, M^t) \). The outputs, therefore, are produced by the element given the current inputs and the current memory. In the case of the general linear model, the relation is usually expressed as a linear equation. In the information processing tradition, it is often expressed in an ordered set of conditional statements (often called a "production system").

To generate the observed or possible relations, in the general linear model we solve the system of simultaneous equations. In the information processing, we have to specify the order of execution of the elements. We call this type of specification a "program". The set of programs constituting the entire structure is expressed as

\[
P = \{P_1, P_2, \ldots, P_k\}
\]

where these programs are executed sequentially from \( P_1 \) to \( P_k \). Each program may call another program. An example of a set of programs is

\[
P_1 \rightarrow \{e_1, e_2, P_2, e_3\}
\]

\[
P_2 \rightarrow \{e_4, e_5\}
\]
This example, of course, can be expressed as a single program whose specification of sequence is \{e1,e2,e4,e5,e3\}.

In sum, and information processing system may be expressed as

\[ \{ S, v, V, R, \varepsilon, \mu, D, P \} \]

In the following, as in the previous section, I would like to examine the structural specification of two examples. Both are more or less related with international conflict behavior. (Unfortunately, I could not find any works focused on Chinese foreign policy.) The first one is Gamson and Modigliani(1971), the second is Carbonell(1978). The former is an example of simple specification; the latter is an example of complex specification.

Gamson and Modigliani(1971) is an impressive attempt to assess contending theories of the cold war interactions between the Western bloc and the Soviet bloc. Its model, though simple, carries much substantive implications. As in the case of Ashley(1980), I would not examine the substantive issues unless necessary to understand methodological issues. First, variable specifications. The model has two input variables and on output variables for each "basic interaction unit". The outputs are major actions of a coalition( either the Soviet or the Western according to which model it is). The inputs are the adversary's pattern of behavior and its own pattern of behavior preceding to the major action in the basic interaction unit. Figure 2-17 is taken from Gamson and Modigliani
Figure 2-17
Interaction Unit for a Selected Portion of the Cold War, January, 1948 to December, 1949**

Type of Pattern
- Extremely bellicose
- Quite bellicose
- Fairly bellicose
- Balanced firm
- Balanced
- Balanced flexible
- Fairly accommodative
- Quite accommodative
- Extremely accommodative

Major Soviet actions

Date
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

1948
1949

Extremely bellicose
- Quite bellicose
- Fairly bellicose
- Balanced firm
- Balanced
- Balanced flexible
- Fairly accommodative
- Quite accommodative
- Extremely accommodative

W+ W+ W+ W+

Major Western actions

** Taken from Gamson and Modigliani (1971): 19.

(1971: 19). "Each unit denoted by a pair of vertical lines that bracket a portion of the time axis. Every unit is terminated by a major coalition action that is indicated by a vertical arrow pointing to the date on which it occurred. The adversary's pattern of behavior in the preceding time period is described by a horizontal bar whose elevation corresponds
to a level of belligerence on the scale to the left of the chart"(18-19).

In addition to inputs and outputs, they use intervening unobservable variables: interpretation of the adversary's behavior, the tactical objective toward the adversary. The liberal use of unobservable variables is the distinct characteristics of the information processing tradition.

Second, the specification of the structure. Their model has three element structures: interpretation of the adversary's current intentions, setting a tactical objective, and decision of an appropriate response. The most important element is the interpretation mechanism. Gamson and Modigliani think that contending theories of the cold war interactions between the two blocks can be reduced to the different specifications of this in this interpretation mechanism. As the "parameters" of the structural specification, they used the following three:

1. The coalition's own strategic goals.
2. The coalition's image of how its own goals are perceived by the adversary.
3. The coalition's perception of its adversary's strategic goals.

Each "parameter" is assumed to take one of the three values: consolidation(C), expansion(E), and destruction(D). Hereafter, we show the structural specification as a list of three characters in the order: the coalition's goal, the coalition's
reflective image, the coalition's perception of its adversary's goal. Thus, CCE represents that the coalition has consolidationist goals, a reflected image of consolidationist, and perceive its adversary as expansionist. For example, Gamson and Modigliani assert that John F. Kennedy's view of the cold war interaction can be expressed as confrontation between the Soviet EEE interpretation structure and the Western CEE interpretation structure.

Though the number of possible combination of parameter values is very large ($3^{#6} = 729$), they assert the prevalent views are listed in Table 2-3. Thus, only seven combinations were, in fact, assigned: DEC, DEE, ECE, EEC, EEE, CCE, and CEE. In other words, they have seven different interpretation structure. For example, if one assigns CCE to the interpretation structure, one has the overall structure represented in Figure 2-18. This structure, in fact, does not require our extended formalism, \( \{ S, v, V, R, E, \mu, D, P \} \). This model does not have memory component, that is, the memory state does not affect the output of each element structure. Gamson and Modigliani's inputs are processed without considering how the previous inputs were processed and how the previous outputs were generated. Thus, the more general formalism, \( \{ S, v, V, R, E, D \} \), can describe the model perfectly. It may be proper, therefore, to locate the Gamson and Modigliani model somewhere in between the general linear model and full-fledged information processing models. The following is the specifica-
Figure 2-18
Structure of Gamson-Modigliani Model

adversary's behavior
→
interpretation
(CCE)
→
interpretation of adversary's behavior
→
setting of tactical objective
→
tactical objective
→
decision of response
→
response
Table 2-3
Summary of Belief Systems about the Cold War*

<table>
<thead>
<tr>
<th>Family name and members</th>
<th>Soviet goal</th>
<th>Soviet image of how it was perceived</th>
<th>Soviet view of Western goal</th>
<th>Western goal</th>
<th>Western image of how it was perceived</th>
<th>Western view of Soviet goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soviet destructionist/ Western consolidationist</td>
<td>Destruction</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant I (e.g., Strauss-Hupé et al.)</td>
<td>Destruction</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant II</td>
<td>Destruction</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant III</td>
<td>Destruction</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
</tr>
<tr>
<td>Soviet expansionist/ Western consolidationist</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant I (e.g., JFK)</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant II</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant III (e.g., Dulles)</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Soviet consolidationist/ Western consolidationist</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant I (e.g., Fromm)</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
</tr>
<tr>
<td>Soviet expansionist/ Western expansionist</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant I (e.g., Mün)</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant II (e.g., Steel)</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Consolidation</td>
<td>Expansion</td>
</tr>
<tr>
<td>Soviet consolidationist/ Western expansionist</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant I (e.g., Oglesby)</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant II</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Variant III (e.g., Soviet officials)</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
<td>Expansion</td>
</tr>
<tr>
<td>Soviet consolidationist/ Western destructionist</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Destruction</td>
<td>Expansion</td>
<td>Consolidation</td>
</tr>
<tr>
<td>Variant I (e.g., Chinese)</td>
<td>Consolidation</td>
<td>Consolidation</td>
<td>Expansion</td>
<td>Destruction</td>
<td>Expansion</td>
<td>Consolidation</td>
</tr>
</tbody>
</table>

*Taken from Gamson and Modigliani (1971): 54-55.*
tion of the structure with CCE using \{ S, v, V, R, \varepsilon, D \}:

S \rightarrow \text{Gamson-Modigliani Decision Model}

v \rightarrow \{ \text{adversary's behavior(AB), one's own behavior(OB),}
\text{interpretation of adversary's behavior(IAB), tactical objective(TO), response(RE)} \}

AB \rightarrow \{ \text{extremely belligerent(eb), quite belligerent(qb),}
\text{fairly belligerent(fb), balanced firm(fbf),}
\text{balanced(b), balanced flexible(bx), fairly accomodative(fa), quite accomodative(qa), extremely accomodative(ea)} \}

OB \rightarrow \{ \text{Belligerent, Nonbelligerent} \}

IAB \rightarrow \{ \text{Aggressive, Resistant, Receptive, Lax, Uninterpretable} \}

TO \rightarrow \{ \text{Resist, Reassure, Approach, Exploit, Wait} \}

RE \rightarrow \{ \text{Refractory, Conciliatory, ?} \}

V \rightarrow AB \times OB \times IAB \times TO \times RE

R \rightarrow R( AB, OB, IAB, TO, RE ) (1)

\varepsilon \rightarrow \{ \varepsilon_1, \varepsilon_2, \varepsilon_3 \}

\varepsilon_1 \rightarrow \{ \text{interpretation, } \{ AB, OB, IAB \}, AB \times OB \times IAB, E1 \}

\varepsilon_2 \rightarrow \{ \text{objective setting, } \{ IAB, TO \}, IAB \times TO, E2 \}

\varepsilon_3 \rightarrow \{ \text{response decision, } \{ TO, RE \}, TO \times RE, E3 \}

D \rightarrow \{ ( \varepsilon_1, IAB ), ( \varepsilon_2, TO ), ( \varepsilon_3, RE ) \}

E1 is expressed in the following production system:

- if AB is eb, qb, or fb, then IAB is aggressive.

(1) The observable relation is R( AB, OB, IAB )
if AB is bf, b, or bx, then IAB is uninterpretable.
if AB is fa, qa, or ea, then, IAB is receptive.

E2 is expressed in the following production system:
if IAB is aggressive, then TO is resist.
if IAB is resistant, then TO is reassure.
if IAB is receptive, then TO is approach.
if IAB is lax, then TO is exploit.
if IAB is uninterpretable, then TO is wait.

E3 is expressed in the following production system.
if TO is resist or exploit, then RE is refractory.
if TO is reassure or approach, then RE is conciliatory.
if TO is uninterpretable, then RE is ?.

Thus, the difference of the Gamson and Modigliani model with Ashley's or Onate's is that the variables are assumed to be discrete and, Therefore, the relations among them are expressed as discrete production systems. It is true that production systems expressed as above are somewhat messy and not as simple and elegant as linear equations. But the fact that the relations are not expressed in the form of well-established equations make the model less rigorous or "scientific". Gamson and Modigliani show that discrete and specific conflict cases can be modeled scientifically and that their results contain many substantive implications. (1)

However, the fact that their model does not include memory component show some inadequacy as a model representing historical sequence of events. Because every single case is treated independently with other cases, the effect that a case

(1) According to their research, the specification that both the Soviet and Western blocks have CEE interpretation structure generates the observed relation, R(AB, OB, RE) most closely. This findings supports such works as Eric Fromm, May Man Prevail (1961) and D. F. Fleming, The Cold War and Its Origins (1961) in their substantive interpretation of the cold war interaction.
in the distant past might have on the current one is not considered. When the Soviet Union decided to build the Berlin wall in 1961, it may have been influenced by the experience of its Berlin blockade in 1948.

The second issue is whether it is more fruitful to construct more complex specifications. Is it more interesting to include more variables to specify each actor's belief system? Can we obtain more insights by increasing the number of categories for each variables? For example, can we think of more than three responses, refractory, conciliatory and unclear(?)? I think that the answers to these questions are in general in the affirmative. A more complex system can become more messy and somehow incomprehensible. Some sort of discipline is necessary. But the current situations of international conflict research seem to justify more complication to cope with richness of historical reality. I think the following statement by a leading thinker of the field of artificial intelligence holds valid in the field of international relations, too:

It is understandable why psychologists are uncomfortable with complex proposals not based on well established mechanisms. But I believe that parsimony is still inappropriate at this stage, valuable as it may be in later phases of every science (Minsky, 1974: 6).

Now I would like to move on to our second example of information processing tradition, Carbonell(1978). His computer simulation program is called POLITICS and is one of the few
applications of most recent developments of artificial intelligence researches to the domain of politics. It may be considered an advancement of Robert Abelson's series of computer simulation efforts of political ideologies (Abelson and Carrol, 1965, Abelson, 1973). "POLITICS is an automated political belief system simulator. Given an event about a political conflict and a ideology to use in interpreting the event, POLITICS generates a full story representation, predicts possible future events, answers a variety of questions, makes comments about how the situation can affect the United States, and suggests possible courses of action to be taken by the U.S." (Carbonell, 1978: 27). This system, in principle, can be expressed in our notation. But since its $E$, $D$, $P$ portion is very large and complex and AI(artificial intelligence) researchers usually do not report in somewhat similar notations as ours, unfortunately it is impractical to represent it system in our notation. (1) Instead, I would like to illustrate the general characteristics of the system in its own terms.

First, it should be noted that Carbonell, just like Gamson and Modigliani, makes an attempt to represent different political ideologies. As of the date of publication, POLITICS accepts two different political ideologies: US-Conservative ideology and US-Liberal ideology. One of the characteristics

(1) After all, Carbonell does not report full specification of the program in his article. To capture the full specification, one has to read the code of the whole program.
of POLITICS is that each ideology is represented by its goal tree alone. Its theoretical assumption is that "there should be no consistent differences in thinking processes or other cognitive behavior between people having different ideologies" (31). In other words, the difference between liberal and conservative ideologies in the United States is the difference in their assignment of goals in a hierarchy of importance and interdependence. For each ideology, different goal trees are assigned to political entities such as the United States, the Soviet Union, the third world countries, western industrial countries, and Communist countries. Figure 2-19, is the higher level goals for the Soviet Union assigned by the US-Conservative ideology.

*Figure 2-19
Higher Level Soviet Goals Assigned by US-Conservative Ideology*

*Taken from Carbonell (1978): 31.*

The input to POLITICS, just like Gamson and Modigliani,
is a conflict event. But the input is an English sentence rather than the values of the specific variables. POLITICS assigns relevant values to relevant variables by itself by reading the input sentence. For example, consider the input text: "The United States Congress voted to fund the Trident submarine project." It is parsed into the memory representation exhibited below.

```
((ACTOR
 TYPE(*GOVT*)NAME(CONGRESS)PART(*US*)REF(DEF))
 <= (*ATTRANS*)
 OFJ(*MONEY* AMOUNT(SUFF))
 TO(#ORG INVOLVING (#WEAPON TYPE (*SUBMARINES*)
 NAME(TRIDENT))
 REF(INDEF))
 FROM NIL)
 TIME((AFTER NOW X))
 MODE((INTENTIONAL)))
```

This representation may be paraphrased as follows: "An agency of the U.S. government called the Congress has the intention of transferring money (from an unspecified source) to another agency which has something to do with weapons whose category is submarines and whose name is Trident. There is a note that the amount of money transferred is sufficient for its (as yet unspecified) purpose."(Carbonell, 1978:32-33).

Then, the parced input is processed and various sorts of inference are made. Inference is necessary because the input sentence alone cannot convey much information to answer such questions as: "What did the U.S. Congress did this for?", "What should the U.S. do if Russia builds nuclear submarines?", and so on. To make such inference, POLITICS
invokes various scripts and goal inference rules. The script, a key concept in the Schank and Abelson line of artificial intelligence researches, is a structure that describes appropriate sequences of events which constitute stereotypical and/or mundane situations frequently encountered by the understander. "A script is made up of slots and requirements about what can fill those slots. The structure is an interconnected whole, and what is in one slot affects what can be in another" (Schank and Abelson, 1977: 41, also see Abelson, 1973, Abelson, 1976, and Schank and Abelson, 1975). Scripts are used to group inferences, since "activation of a script defines the context in which the events are to be interpreted" (Carbonell, 1978: 33). If the input sentence meet a specified conditions, a certain script is invoked and the event is interpreted within its framework. For example, the input sentence, "Russia massed troops on the Czech border", invokes the INVADE script. Figure 2-20 and Figure 2-21 represent a prototypical INVADE script and instantiated INVADE script by the above sentence.

Next, POLITICS tries to understand the context inferred by invoking various scripts in terms of achieving some goal present in the actor's ideology. POLITICS achieves this task by invoking a set of goal determining rules. Through this process, conditions to invoke another script may be satisfied. Then, the new script is invoked and further contextual refinements are made. In this process, conflicts between the
Figure 2-20
Uninstantiated INVADE Script in the POLITICS System**
(Started track is signals the default path in the US-Conservative ideology.)

**Taken from Carbonell (1978): 43.
Figure 2-21
Instantiated INVADE Script*

**INSTANTIATED SCRIPT ROLES:**

&INVADER  ← *RUSSIA*
&INVADEE ← *CZECHOSLOVAKIA*
&FORCES1 ← (*TROOPS* PARTOF (*RUSSIA*))
&FORCES2 (uninstantiated)
&KEYPLACES (uninstantiated)

**INSTANTIATED GOALS:**

**GOAL OF RUSSIA:** (Take political control of Czechoslovakia.)

**SUBGOAL:** (Take military control of key places in Czechoslovakia.)

**GOAL OF CZECHOSLOVAKIA:** (Prevent Russia from taking political control.)

**SUBGOAL:** (Prevent Russia forces from taking military control of key places.)

**INSTANTIATED PATH IN SCRIPT:**

*RUSSIA* decides to take political control of *CZECHOSLOVAKIA*.

*RUSSIA* summons necessary TROOPS.

*RUSSIA* sends TROOPS to the border between *RUSSIA* and *CZECHOSLOVAKIA*.

(Seven points in the story timeline)
What follows is the default path in the US-conservative ideology:

*RUSSIA* sends TROOPS into *CZECHOSLOVAKIA*.

Russian TROOPS defeat Czech TROOPS in combat.

Russian TROOPS take over Czech &KEYPLACES.

Russian TROOPS have military control over *CZECHOSLOVAKIA*.

*RUSSIA* can impose political control over *CZECHOSLOVAKIA*, achieving its goal.

*Taken from Carbonell (1978): 44.*
goals of one or more political actors may occur. POLITICS then uses what Carbonell calls "counterplanning rules," listed below:

RULE C1: To stop actor X from accomplishing his goal G(X) see if there is any goal G(A) which is mutually exclusive with G(X). If so, give high priority to accomplishing G(A).

RULE C2: If A wishes to accomplish G(A) and G(A) is being blocked by X working on a mutually exclusive G(X) then try to thwart G(X) by some other means.

RULE C3: To prevent X from achieving G(X) threaten a higher level goal of X, say G'(X). Thus, expect X to divert its efforts to G'(X).

RULE C4: To prevent X from achieving G(X) prevent X from achieving a necessary subgoal of G(X).

RULE C5: To achieve G(A) if X is blocking a subgoal of G(A) try to find an alternative plan(or script) for G(A).

RULE C6: If G(A) and G(X) are in conflict and there exists a G'(A) = G'(X) where the G' goal is higher level than the G goals, then A should try mediating with X to mutually achieve G' and abandon their respective G goals. (Metaphorically speaking: Why fight over a molehill when together we can conquer a mountain.) (Carbonell, 1978: 41-42.)

After all these processes, POLITICS is now ready to accept questions. For an illustration, I reproduce one example from Carbonell.

INPUT TEXT: Russia massed troops on the Czech border.

INTERPRETATION COMPLETED, READY TO ACCEPT QUESTIONS.

Q: Why did Russia do this?
A: BECAUSE RUSSIA THOUGHT THAT IT COULD TAKE POLITICAL
   CONTROL OF CZECHOSLOVAKIA BY SENDING TROOPS.
Q: What will Russia do next?
A: RUSSIA MAY TELL ITS TROOPS TO START THE INVASION.
Q: What else can Russia do?
A: RUSSIA MAY WAIT FOR CZECHOSLOVAKIA TO GIVE IN TO RUSSIAN DEMANDS.
Q: What happens if Czechoslovakia does not give in?
A: RUSSIA MAY DECIDE TO START THE INVASION.
Q: What should the United States do?
A: THE UNITED STATES SHOULD INTERVENE MILITARILY.
Q: What else can the United States do?
A: THE UNITED STATES CAN DO NOTHING, OR IT CAN INTERVENE
   DIPLOMATICALLY BY CONFERRING WITH RUSSIA ABOUT
   CZECHOSLOVAKIA. THESE ALTERNATIVES ARE BAD FOR THE
   UNITED STATES. (Carbonell, 1978: 42).

As the above discussion suggests, Carbonell's POLITICS
uses very elaborate internal structural specifications. Those
specifications are concerned with discrete variables (actor
type, event type, goals, etc.) and are very concrete. Because
of this, it may lack mathematical elegance which some general
linear model may have. But it can cope with many fairly spe-
cific, concrete, and discrete events successfully. Though
conducted in the field of artificial intelligence, the signif-
icance of this type of modelling is large in the field of po-
litical science researches.
4. Conclusion

In this section we recapitulate some of the important issues as to the characteristics and application possibilities in the two traditions of representational forms. First, the most important difference. These two traditions seem to have different views concerning an important ontological issue: what should be considered constant in representing human/social phenomena? In the general linear model tradition, what is constant is the relation between the current inputs and the current outputs. The current inputs here includes lagged variables. The important thing is that the constancy is expressed as the set of constant stimuli-response patterns. In Onate's model, what is constant is the relation between the internal conflict and the external conflict. Even in Ashley's complex model, each element structure accepts the current inputs and generate the output as a linear function of the inputs.

On the other hand, the tradition of information processing, what is constant is not the direct mapping from the current inputs to the current outputs but the rules and productions with which to process the current inputs and generate the current outputs. Often these rules do not suggest direct relations between the current inputs and current outputs. The reader is asked to read Carbonell's "counterplanning rules" again to see this point. In terms of
our formalism, \{S, v, V, R, , , D, P\}, the existence of , the memory state, and P, the program, contributes to make this difference. The same inputs may be processed very differently because of differences of respective memory states. Because of long sequence of programs, which introduce many intervening unobservable variables, different inputs may produce very similar outputs. (1)

In other words, if a substantive theory is to be represented in the general linear model, it should be expressed as a set of causal relations, relations between the current inputs and the current outputs. On the other hand, if a theory is to be represented in the tradition of information processing, it should be expressed as a set of processing rules.

With this understanding, now let us return to the our original question: what is the most appropriate form of representation of Chinese decision making of international conflict behavior? Are the idealtypical poles on the three dimensions btwt represented as a set of stimuli-response patterns or a set of processing rules? If one remembers what these polar view on these three dimensions are, one should

(1) Strictly speaking, if the memory state is included in the current inputs, the rules and productions used in information processing tradition can be interpreted as mapping from inputs into outputs. For works that show formal equivalence of information processing models and stimulus-response models, see Millensor (1967) and Suppes (1969). In their formulation of S-R models, internal states are considered causes, too. See Alker (1971, 1974) for relevant discussion in view of political science applications.
find it easier to conceive of them as a set of procedures rather than fixed response patterns to specified stimuli. A rigid, aggressive realist is different from a rigid but cautious revolutionary in his frame of reference and his strategy to handle uncertainty in decision, both of which are very hard to be expressed in the S-R formula.

Then, is the information processing generally to be preferred? Unfortunately, the answer is still unclear because it has a serious problem of testability. It is not equipped with statistical procedures to carry out rigorous hypothesis testing.

On the other hand, the general linear model tradition has very extensive sets of statistical procedures. In addition to the ordinary statistical inference about coefficient values, various statistical procedures to test whether structural shifts occurs in the coefficient values have been developed. One of the most conventional tests in this respect is usually called the "Chow" test (Chow, 1960 and Fisher, 1970). This test is relevant particularly in the issue of dynamics, the third category of images discussed in Chapter 1. This procedure allows us to make a statistical judgement whether the stimuli-response patterns change over the period of consideration.

But to this heavy emphasis on statistical validation, two types of objection may be posed by workers in the information processing tradition. The first is ontological objection that
important social phenomena should be understood as possibilities instead of probabilities. In relation to this ontological view, practical objection is raised; statistical methods are often very insensitive to important issues. To quote a complaint from a psychological paper: "the statistics are insensitive to individual differences, or for that matter, to any other psychological aspects of the subject's behavior that might be expected to affect the statistics" (Simon with Gregg, 1967: 322). Furthermore, researchers in the information processing tradition may assert that validation can be made by other means. Newel and Simon (1972) shows that the extensive use of the protocols produced by the subjects can contribute a great deal in selecting theories.

Next, there is another criticism against the information processing tradition: because of flexibility in specifying rules, practitioners in the tradition of information processing can easily fall back on some kind of ad-hoc-ism, hence creating an undisciplined complexity which no one can comprehend. Thus, leading cognitive psychologists state:

[The central imperative of Artificial Intelligence: express your theories in the form of programs] is an admirable ideal, but it must be rejected as impractical for psychology. Any plausible psychological theory of thinking would require a massive program embodying a large number of ad hoc assumptions. Since the theory would almost certainly be wrong, and the program almost certainly incomprehensible, it would be foolish to invest so much effort in this way (Johnson-Laird and Wason, 1977: 10).
There are two types of answers to this criticism from the information processing tradition. One is a somewhat passive refutation represented in a passage by Minsky (1974) quoted in the previous section. A more positive refutation was made by Simon with Gregg (1967):

Appearences [that computer simulation models are too "flexible," hence weak and not falsifiable]. . . . are decidedly deceptive. A large part of the program and data in the process model are required to make explicit things that are only implicit -- but of necessity assumed -- in the stochastic theory. . . . the difference in parcimony are more apparent than real as soon as both formulations are held to the same standard of explicitness (385).

Given the above issues of advantages and disadvantages of these two traditions, what should we do? Our answer is simple: use both carefully. As a representational form for the belief and decision system, we prefer the information processing tradition. Even Johnson-Laird and Wason do not completely reject the use of computer programs as a representational form. On the contrary, they recommend:

An approach that may be worth trying is for psychologists to develop large-scale theories in the usual informal way, and then to implement small-scale models of important components of them as computer programs (Johnson-Laird and Wason, 1977: 10).

What is required is a discipline. The exercise in Chapter 1 to clarify concepts and dimensions function as a discipline to design computer programs. It is nothing but an attempt to extract "important components" of the belief system of decision making instead of creating a large-scale theory of Chinese de-
cision making system.

Though the representation made through the general linear model is not completely satisfactory, its powerful statistical procedures for detecting stimuli-response patterns help us gain insights as to the character of the system. Particularly, its procedures for examining the possible shifts in response patterns can suggest the points at which more deeply structured character changes may have occurred. In addition, an attempt of finding more or less constant response patterns is valuable in itself because its findings could stimulate further conceptualization of foreign policy process.

In the next chapter, we make an attempt to apply the general linear model to detect aggregate response patterns and their possible shifts. Then, in Chapter 4, we construct a computer programs to represent our three dimensions in the tradition of information processing.
CHAPTER 3

MACRO ANALYSIS OF CHINESE INTERNATIONAL CONFLICT BEHAVIOR
Through the examination of the two traditions of representational forms in Chapter 2, we found that (1) the general linear model can represent any theory expressed as a set of observable stimulus-response patterns that are linear in their coefficients; (2) information processing models, on the other hand, can represent theories consisting of many intermediate processing rules that mediate input-output relationships. We also pointed out that the content of Chinese foreign policy, as expressed in the space spanned by the three dimensions discussed in Chapter 1, is more adequately represented through the tradition of information processing. We believe that whether a country's foreign policy is realist or revolutionary, whether it is rigid or flexible, and whether it is aggressive or cautious can be best judged by examining what kind of processing rules it uses when it faces an international conflict/crisis/event.

But in a more fundamental sense, our conceptualization of the character of Chinese foreign policy in terms of these three dimensions may be in error despite the fact that we count on many China experts' views for their construction. A better conceptualization of the character of Chinese foreign policy may be made in the stimulus-response patterns. The character of foreign policy may be described just as a set of mapping from the current inputs into the current outputs. If that is the case, we do not have to worry about the processing models. All substantive issues should be stated in the
stimulus-response patterns instead of using the terms like "realist", "revolutionary", "rigid", "flexible", "aggressive", or "cautious". According to this view, all one has to do is think of possible observable input variables and output variables and arrange them in a simultaneous equation system (or a single equation) (1)

I do not believe that the above view is correct in all aspects of international conflict behavior of China, or, for that matter, of any country. Particularly, if one is interested in fairly disaggregated level behavior, e.g. how China reacts to a specific incident, any representation taking no account of the memory state, processing rules, etc. seems inadequate. Having stated this, however, I do not deny the possible existence of regularity in input-output patterns at a fairly aggregate level as Ashley shows in his superpower interaction model.

Our strategy in this chapter, therefore, is to construct a model in the tradition of the general linear model at an aggregate level. The model is a macro model of Chinese international conflict behavior as opposed to a micro model which will be constructed to represent the three dimensions in Chapter 4. But what are the substantive issues at the macro lev-

(1) Of course, most of the practitioners in the general linear model do not hold this extreme view. They try to represent some of the concepts in terms of parameter values. But then, parameter values can often be interpreted differently. Thus, statistical inference of the parameter values sometimes could not give particularly useful insight to the concept variation.
el? Our discussion in Chapter 1 did not deal with the macro behavior very much. The three dimensions are more related to the micro level phenomena, which is the reason why they may be better represented in the information processing tradition. Then, is there no substantive issue at a macro level? There is at least one very interesting issue. It is the influence of domestic situation on the international conflict behavior, which we discussed very briefly in the third section of Chapter 1. In fact, Onate's model and important parts of Ashley's model are nothing but the general linear representation of this issue.

The basic issue tested in this chapter is what kind of patterns exist between the two endogenous variables, Chinese perception of the level of international tension and the level of their involvement in international conflicts, and the three exogenous variables, "actual" level of international tension (1), Chinese domestic campaign mobilization, and Chinese domestic economic situation. An important concern is whether the changes of patterns occurred in the 30 year period under consideration.

In the following section, we discuss the variables selected to represent the model, their measurement procedures, the structural specification of the model, and hypotheses

(1) There is no such things as "actual" or "objective" level of international tension. It means independently perceived level of tension as opposed to the tension perceived by the Chinese.
tested by the model. In the second section, the results of estimation are presented. In the final section, a summary of the findings is given.
1. Structural Specification

To describe our model of Chinese aggregate international conflict behavior, I shall use the same formula as we have used to review Onate (1974) and Ashley (1980) in Chapter 2. Since it is in the framework of the general linear model, \( <S, v, V, R, \varepsilon, D> \) is sufficient to describe it. \( S \), the name of the system, is the model of the Chinese aggregate international conflict behavior. The next component, \( v \), the list(vector) of variables, consists of five variables, two endogenous (output) variables and three exogenous (input) variables:

1. perception of international tension
2. involvement in international conflicts
3. level of international tension
4. domestic economic situations
5. domestic campaign mobilization.

The first two variables are determined by the system. The latter three variables are assumed to be given from the outside of the system.

Before examining the further components of the system, i.e. how these variables are related, it is in order to describe how each variables are measured. In other words, we have to decide what indices are to be used to represent these concepts. Since there are no conventional and established indices for these variables. The following indices should in no way be considered definite. Their validity is partially
determined by the results of the analysis. Each tree is partially recognized by its own fruit.

The first variable is Chinese perception of the level of international tension. This variable is meant to indicate the level of conflict in the world. I use the overall annual frequency of on-going crises in the CACI data set as described in Appendix 1. The plot for this index is given in Figure 3-1. The selection of the crises and the limitations of the CACI data set will be discussed in Appendix 1.

The second variable, involvement in international conflicts, is measured as a weighted sum of annual frequencies of the different involvement categories in the CACI data set. As will be discussed in Appendix 1, it is possible to create a unidimensional order of general involvement. Since the order of ACTIONS SHORT OF COMBAT; NO DETAIL AVAILABLE seems debatable, I give the same weight to it as ACTIONS SHORT OF COMBAT; NO MILITARY PERSONNEL IN CRISIS AREA. For the other categories, I give exponentially increasing weight from NO PHYSICAL INVOLVEMENT; NOTING to COMBAT. Thus, the overall level of annual involvement is measured as

\[
(INVOLVEMENT \text{ IN INTERNATIONAL CONFLICTS})_t = (# \text{ OF NO PHYSICAL INVOLVEMENT; JUST NOTING})_t \\
+ 2*(# \text{ OF NO PHYSICAL INVOLVEMENT; BEYOND NOTING})_t \\
+ 4*(# \text{ OF ACTIONS SHORT OF COMBAT; NO DETAIL})_t \\
+ 4*(# \text{ OF ACTIONS SHORT OF COMBAT; NO MILITARY})_t \\
+ 8*(# \text{ OF ACTIONS SHORT OF COMBAT; MILITARY})_t \\
+ 16*(# \text{ OF COMBAT})_t
\]
The plot is given in Figure 3-2. Even though this overall aggregate picture loses some of the richness of the multiple time-series presented in Appendix 1, it is useful for seeing the overall trends. One can clearly see the very low level of conflict involvement in 1957 and the early 1970s.

The third variable, the level of international conflict, is measured by the annual frequency of the on-going conflicts compiled in the revised Butterworth/Scranton data set (Buttorworth and Scranton, 1976, Alker and Sherman, 1980). The cases in this data set are selected in order to create a more or less "unbiased" list of the international conflicts occurred after World War II. Figure 3-3 shows the time-series plot of this variable from 1949 to 1978.

The fourth variable, the domestic economic situation, is measured by the rate of annual increase of the agricultural production index estimated by the CIA (1979). The gross national product or the industrial production index may also be used to represent the domestic economic situation. But I use the agricultural production index because, as a basic guide to China's economy says, the "development of agriculture and the balance between food and population are China's fundamental economic problems" (Howe, 1978: 66). Figure 3-4 is the time-series plot of the rate of increase in the agricultural production index. This figure clearly shows the disasters after the Great Leap Forward in 1959 and 1960.

The measurement of the final variable, domestic campaign
Figure 3-1

Chinese Perception of Level of International Tension
Figure 3-2

Level of Chinese International Conflict Involvement
Figure 3-3
Level of International Tension

Graph showing the level of international tension from 1949 to 1979, with peaks and troughs indicating changes over time.
Figure 3-4

Chinese Domestic Economic Situation
(Rate of Agricultural Production Increase)
mobilization, requires a more detailed explanation. Despite the fact that mass campaigns constitute one of the most significant characteristics of contemporary Chinese political life, there is no readily available quantitative measure of their impact. According to an introductory text on contemporary Chinese politics:

A mass campaign in China can be defined as a movement, conceived at the top, which encourages and promotes active participation by the masses in collective action, for the purpose of mobilizing support for or against a particular policy or program. Rarely has an important policy or program been launched without a mass campaign to support it (Wang, 1980: 177).

What we need, therefore, is some measure to suggest how much mobilization effort is made to achieve domestic policy goals. The strategy for creating an index of domestic campaign mobilization is the same as that used to create the index of involvement in international conflicts. First, we need a list of mass campaigns from 1949 to 1978. Second, we have to categorize them according to some mobilization scale. And finally, we weight each campaign and count the weighted annual frequency. The basic list is created from Cell(1977)'s list of the campaigns from 1949 to the early 1970s and Wang(1980)'s list of the campaigns in the 1970s. Each campaign, then, is classified into one of the four categories: very high, high, medium, and low. For the campaigns drawn from Cell(1977), a categorization is made on the basis of his scale. For the
campaigns in the 1970s, as reported in Wang (1980)'s list, a categorization is made on the basis of the present author's judgement. Figure 3-5 is the list of the campaigns and their scores. The Great Leap Forward and the Great Proletarian Cultural Revolution are the only campaigns classified in the category of very high mobilization. Given the importance of these two campaigns, I adopt an exponential weight to create a composite measure of the domestic campaign mobilization as follows.

\[
(DOMESTIC \ CAMPAIGN \ MOBILIZATION)_{t} = (# \ OF \ LOW \ MOBILIZATION \ CAMPAIGNS)_{t} + 2*(# \ OF \ MEDIUM \ MOBILIZATION \ CAMPAIGNS)_{t} + 4*(# \ OF \ HIGH \ MOBILIZATION \ CAMPAIGNS)_{t} + 8*(# \ OF \ VERY \ HIGH \ MOBILIZATION \ CAMPAIGNS)_{t}
\]

The resultant time-series plot is given in Figure 3-6.

We can define the space of study as the Cartesian product of the ranges of these five variables. The observed relation is represented as twenty-nine five-element vectors, each of which contains the observed yearly values of these five variables. Following the tradition of the general linear model, we consider these observation as if they were a random sample drawn from some larger population. The crucial task, therefore, is to find a structure which can generate the observed relations. It is impossible to determine whether the
structure so constructed actually corresponds with the true structure. But we can exclude (false) structures with certain probabilities. In other words, given the observed relations, statistical inference can help us rule out certain structural specifications as implausible.

Our structural specification is represented in the block-diagram of Figure 3-7. The model has two element structures: a perception mechanism and an involvement mechanism. Each element accepts three inputs and produces one output. These element relations are expressed in this model as linear functions. In the form of stochastic equations (equations with probabilistic error terms), they are represented in Figure 3-8. (1)

Justification for these two equations is in order. The

(1) The reader may suggest that we may be able to represent at least part of important characteristics of the "realist" or "revolutionary" frame of reference by disaggregating the variables, using qualitative variables, and introducing multiplicative terms. We do not deny that possibility. Some clever specification may be able to do that. But some of our attempts on this line, though limited, show that serious obstacles exist when it comes to statistical inference. Increase of the number of disaggregated variables decrease the degree of freedom and makes meaningful statistical inference as to the structural shifts extremely difficult. Introduction of qualitative variables and multiplicative terms often cause serious multicollinearity problems as well as degreses the degree of freedom.

Application of log-linear models for multivariate contingency tables is also abandoned because of practical difficulty. If one tries to use meaningful number of variables, each having several categories, then the number of cells exceeds the data points very easily. For example, if one uses six variables, each having three categories, then the number of cells is 729, which is more than the cases listed in the CACI data set (see Appendix 1).
<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agrarian Reform</td>
<td>5006</td>
<td>5211</td>
<td>s</td>
<td>3</td>
<td>19</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Suppression of Counterrevolutionaries</td>
<td>5011</td>
<td>5108</td>
<td>s</td>
<td>3</td>
<td>26</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Mutual Aid Teams</td>
<td>5112</td>
<td>5112</td>
<td>e</td>
<td>2</td>
<td>10</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Three Anti</td>
<td>5112</td>
<td>5207</td>
<td>l</td>
<td>3</td>
<td>25</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Five Anti</td>
<td>5112</td>
<td>5211</td>
<td>s</td>
<td>3</td>
<td>25</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Agricultural Producers Cooperatives</td>
<td>5307</td>
<td>5'88</td>
<td>e</td>
<td>2</td>
<td>11</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Study of the PRC Draft Constitution</td>
<td>5406</td>
<td>5109</td>
<td>l</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Socialist Reform of Private Business</td>
<td>5601</td>
<td>5'05</td>
<td>s</td>
<td>2</td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Elimination of Counterrevolutionaries</td>
<td>5412</td>
<td>5'12</td>
<td>s</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Higher-level Agricultural Producers' Cooperatives</td>
<td>5508</td>
<td>5'08</td>
<td>e</td>
<td>3</td>
<td>23</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Combat the Four Evils</td>
<td>5604</td>
<td>5'08</td>
<td>e</td>
<td>3</td>
<td>23</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Hundred Flowers</td>
<td>5605</td>
<td>5'02</td>
<td>l</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Study Mao's &quot;On Handling Contradictions Among People&quot;</td>
<td>5702</td>
<td>5'03</td>
<td>l</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Rectification</td>
<td>5705</td>
<td>5'06</td>
<td>l</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Anti-Rightist</td>
<td>5706</td>
<td>5'04</td>
<td>s</td>
<td>3</td>
<td>24</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Great Leap Forward</td>
<td>5710</td>
<td>6101</td>
<td>e</td>
<td>3</td>
<td>28</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Communes</td>
<td>5807</td>
<td>6011</td>
<td>e</td>
<td>3</td>
<td>22</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Backyard Furnaces</td>
<td>5906</td>
<td>5809</td>
<td>e</td>
<td>3</td>
<td>21</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cultural Revolution(58-59)</td>
<td>5809</td>
<td>5'03</td>
<td>l</td>
<td>2</td>
<td>15</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Urban Communes</td>
<td>5809</td>
<td>5'10</td>
<td>e</td>
<td>2</td>
<td>14</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Counter Rightist Sympathies</td>
<td>5908</td>
<td>6003</td>
<td>l</td>
<td>2</td>
<td>13</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Aid Agriculture</td>
<td>6011</td>
<td>6'11</td>
<td>e</td>
<td>3</td>
<td>18</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Learn from the PLA</td>
<td>6302</td>
<td>6503</td>
<td>l</td>
<td>2</td>
<td>17</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Socialist Education</td>
<td>6209</td>
<td>6'11</td>
<td>s</td>
<td>3</td>
<td>18</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Train Revolutionary Successor Generation</td>
<td>6405</td>
<td>6'05</td>
<td>l</td>
<td>3</td>
<td>18</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Learn from Tachai</td>
<td>6404</td>
<td>8'19</td>
<td>e</td>
<td>2</td>
<td>13</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Learn from Taching</td>
<td>6404</td>
<td>8'18</td>
<td>e</td>
<td>2</td>
<td>13</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Study and Apply Chairman Mao's Thought</td>
<td>6403</td>
<td>6'05</td>
<td>l</td>
<td>2</td>
<td>16</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Great Proletarian Cultural Revolution</td>
<td>6605</td>
<td>6904</td>
<td>s</td>
<td>3</td>
<td>29</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Rectification</td>
<td>6907</td>
<td>6912</td>
<td>l</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Support the Army, Cherish the People</td>
<td>6301</td>
<td>6012</td>
<td>l</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Barefoot Doctors</td>
<td>6809</td>
<td>7112</td>
<td>e</td>
<td>3</td>
<td>20</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Anti Lin Biao</td>
<td>7109</td>
<td>7308</td>
<td>s</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti Confucius and Anti Lin Biao</td>
<td>7308</td>
<td>7'88</td>
<td>l</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Margin</td>
<td>7508</td>
<td>7'11</td>
<td>i</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study the Dictatorship of the Proletariat</td>
<td>7501</td>
<td>7508</td>
<td>l</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campaign Against Capitalist Runners</td>
<td>7601</td>
<td>7009</td>
<td>s</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti Gang of Four</td>
<td>7601</td>
<td>8'18</td>
<td>s</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emulation Campaign in Railroads</td>
<td>7703</td>
<td>7703</td>
<td>e</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nationwide Sanitation</td>
<td>7898</td>
<td>8'38</td>
<td>e</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four Modernization</td>
<td>7801</td>
<td>8888</td>
<td>e</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I - id #; II - name; III - start date; IV - end date; V - Campaign Type (i - ideological, s - struggle, e - economic); VI - Cell’s category; VII - Cell's scale; VIII - Category used in this study. 88 in III and IV columns means that the date cannot be specified. Cases 1 - 32 are taken from Cell (1977). Cases 33 - 41 are taken from Wang (1980).
Figure 3-6
Level of Chinese Domestic Campaign Mobilization
Figure 3-8

Model of Macro Chinese International Conflict Behavior (Equations)

(PERCEPTION OF INTERNATIONAL TENSION)

\[ \text{PERCEPTION OF INTERNATIONAL TENSION} = a_1 + a_2 \times (\text{INvolvement in International Conflicts}) + a_3 \times (\text{Level of International Tension}) + a_4 \times (\text{Domestic Economic Situation}) + u_1 \]

(INVOLVEMENT IN INTERNATIONAL CONFLICTS)

\[ \text{INVOLVEMENT IN INTERNATIONAL CONFLICTS} = b_1 + b_2 \times (\text{PERCEPTION OF INTERNATIONAL TENSION}) + b_3 \times (\text{Domestic Campaign Mobilization}) + b_4 \times (\text{Domestic Economic Situation}) + u_2 \]

The first equation means that the Chinese perception of the level of international tension is determined by the level of current Chinese involvement in international conflicts, the level of (actual) international conflicts, and China's domestic economic situation. The second equation means that the level of Chinese international conflict involvement is determined by the level of Chinese perception of international tension, domestic campaign mobilization, and domestic economic situations.

Various hypotheses can be tested for each coefficient in these two equations. Since there are different views concerning the signs of the coefficients of domestic economic situation and domestic campaign mobilization, we test the null hy-
hypothesis against two different alternative hypotheses for each of these terms. The hypotheses, (3-a), (5-a), and (6-a) below, belong to one view; the hypotheses, (3-b), (5-b), and (6-b), the other. The former is the view more or less corresponding to Onate (1974)'s attempt, in which domestic weakness is considered the key to explain international conflict behavior. The latter, on the other hand, focuses on domestic growth in explaining international conflict behavior. The Choucri-North-Ashley line of researches of "lateral pressure" represents this view. Details for each hypothesis is given below.

The first equation is meant to test four hypotheses:

(1) The higher the level of Chinese involvement in international conflicts rises, the higher the level of Chinese perception of international conflicts becomes.

(2) The higher the level of international conflicts becomes, the higher the level of Chinese perception becomes.

(3-a) The worse its domestic economic situation becomes, the higher the level of China's perception of international conflicts becomes.

(3-b) The better its domestic economic situation, the higher the level of China's perception of international conflicts becomes.

Strictly speaking, what we shall test are not the above hypotheses but the null hypotheses; the above hypotheses are the alternative hypotheses for the null hypotheses. In standard statistical notation, each hypotheses are expressed as
(1) \( H_0: a_2 = 0; \ H_1: a_2 > 0 \)
(2) \( H_0: a_3 = 0; \ H_1: a_3 > 0 \)
(3-a) \( H_0: a_4 = 0; \ H_1: a_4 < 0 \)
(3-b) \( H_0: a_4 = 0; \ H_1: a_4 > 0 \).

(1) and (2) are straightforward. But (3-a) and (3-b) may require explanation. The reason why I try these two alternative hypotheses for the null hypotheses of no relations is because we could plausibly argue both effects of domestic economic situations on the perception of the international conflicts. The line of argument for (3-a) goes: if the internal situation is bad, the decision makers become more sensitive to the international environment in general and international conflicts in particular in order to avoid external interference to take advantage of its bad economic conditions; if the internal situation is good, the decision makers do not have to be particularly sensitive to international conflicts. On the other hand, the line of argument for (3-b) goes: if the internal situation is good, the nation tends to expand, thus its concern about the international environment in general and international conflicts in particular increase; if the domestic situation is bad, the leaders have to concentrate on the domestic reconstruction, thus the attention to international conflicts decrease.

Five hypotheses will be tested by the second equation:

(4) The higher the Chinese perception of international conflicts becomes, the higher the level of the Chinese involvement in international conflicts becomes.
(5-a) The higher the Chinese domestic campaign mobilization becomes, the higher the level of Chinese involvement in international conflicts becomes.

(5-b) The higher the Chinese domestic campaign mobilization becomes, the lower the level of Chinese involvement in international conflicts becomes.

(6-a) The worse the domestic economic situation becomes, the higher the level of Chinese involvement in international conflicts becomes.

(6-b) The better the domestic economic situation becomes, the higher the level of Chinese involvement in international conflicts becomes.

As in the case of the first equation, we can rewrite the above in the following standard statistical notation:

\[
\begin{align*}
\text{(4)} & \quad H_0: b_2 = 0 ; H_1: b_2 > 0 \\
\text{(5-a)} & \quad H_0: b_3 = 0 ; H_1: b_3 > 0 \\
\text{(5-b)} & \quad H_0: b_3 = 0 ; H_1: b_3 < 0 \\
\text{(6-a)} & \quad H_0: b_4 = 0 ; H_1: b_4 < 0 \\
\text{(6-b)} & \quad H_0: b_4 = 0 ; H_1: b_4 > 0
\end{align*}
\]

(4) is straightforward. The rest of the hypotheses may need explanation. First, the argument for (5-a) runs like: As seen in the above discussion of the domestic campaigns in China, the Chinese decision makers use mass campaigns to achieve domestic goals. To mobilize and unite people, they can utilize involvement in international conflicts. Thus, the level of involvement is heightened when the domestic campaign mobilization is high. On the other hand, the argument for (5-b) runs like: there is no doubt that the Chinese decision makers use mass campaigns to achieve domestic goals. But to achieve
domestic important goals it is wise for the leaders to avoid international conflicts and concentrate on the domestic campaigns. Thus, the level of involvement in international conflict is lowered when the Chinese are engaged in high domestic campaign mobilization.

The argument for (6-a) is similar to that for (3-a): when the domestic economic situation is bad, the Chinese leaders become more sensitive to international conflicts. Also, they tend to make an attempt to divert the attention of the people by engaging in international conflicts. The argument for (6-b) is also similar to that for (3-b): when the domestic economic situation is bad, the leaders cannot afford to engage in many international conflicts extensively; when the domestic economic situation is good, on the other hand, any nation tends to expand and the chance of being involved in international conflicts increases.

Last but not least, the possibility of changes in character (i.e. changes in structure) should be examined. In the framework of the general linear model, the structural changes usually mean the changes in parameter values. (1) As discussed in Chapter 1, it is important to note that ups and downs of the values of the dependent variables (i.e. behavioral changes) do not necessarily mean changes in character.

(1) Of course, if an change in functional form occurs, it constitute a more radical structural change than just changes in parameter values. We do not examine this possibility in this thesis, however.
structure. The same function and the same parameter values can generate radically turbulent behavior. Our concern, therefore, is to find whether significant changes occurred in parameter values.
2. Results

Though simple, our model is a simultaneous equation system consisting of two equations. It is widely known that the OLS (ordinary least squares) method brings about biased estimators of the coefficients. Thus, following the general practice, I use the 2SLS (two-stage least squares) method to estimate the coefficients. But since it has also been found that the OLS method is more robust against possible specification errors than many of the simultaneous-equation methods, I also report the OLS estimation in the following. (1) Table 3-1 summarizes the 2SLS estimation of the first equation (perception); Table 3-2, the OLS estimation of the first equation (perception); Table 3-3, the 2SLS estimation of the second equation (involvement); and Table 3-4, the OLS estimation of the second equation (involvement).

As is suggested in the final part of the previous subsection, whether or not structural changes occurred, and, if so, when, are the focus of our analysis. Thus, I tried many different break points. The periodization reported in the tables shows the most clear cutting points in terms of co-

(1) See Maddala(1977: 231). For these estimation issues, see any of the standard tests of econometrics including Johnston(1972), Hanushek and Jackson(1977), Wonnacott and Wonnacott(1979), Pindyck and Rubinfeld(1981). As the results show, both estimation methods produce almost identical results. Thus, we can be fairly confident about this specification. Nevertheless, the following interpretation is based on the 2SLS estimation.
Table 3-1
Perception: Results of 2SLS Estimation

<table>
<thead>
<tr>
<th>Period</th>
<th>R²</th>
<th>R²</th>
<th>F-ratio</th>
<th>SSR</th>
<th>D.W.</th>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Er.</th>
<th>T-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950 to 1978</td>
<td>.86</td>
<td>.84</td>
<td>50.907</td>
<td>238.12</td>
<td>1.25</td>
<td>Constant</td>
<td>-28.5858</td>
<td>6.21</td>
<td>-4.61</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>df=3.25</td>
<td></td>
<td></td>
<td>Chinese Intl. Conf. Inv.</td>
<td>0.1218</td>
<td>0.05</td>
<td>2.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of Intl Tension</td>
<td>0.6939</td>
<td>0.08</td>
<td>8.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic Economic Situation</td>
<td>-2.0947</td>
<td>7.09</td>
<td>-0.29</td>
</tr>
<tr>
<td>1950 to 1957,</td>
<td>.96</td>
<td>.94</td>
<td>47.856</td>
<td>11.65</td>
<td>2.08</td>
<td>Constant</td>
<td>-28.2730</td>
<td>4.73</td>
<td>-5.96</td>
</tr>
<tr>
<td>1977 to 1978</td>
<td></td>
<td></td>
<td>df=3.6</td>
<td></td>
<td></td>
<td>Chinese Intl Conf. Inv.</td>
<td>0.1248</td>
<td>0.03</td>
<td>3.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of Intl Tension</td>
<td>0.6337</td>
<td>0.11</td>
<td>5.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic Economic Situation</td>
<td>15.9144</td>
<td>13.68</td>
<td>1.16</td>
</tr>
<tr>
<td>1958 to 1976</td>
<td>.64</td>
<td>.57</td>
<td>9.076</td>
<td>157.46</td>
<td>1.75</td>
<td>Constant</td>
<td>-27.3433</td>
<td>18.08</td>
<td>-1.51</td>
</tr>
<tr>
<td>(GLS AUTO1</td>
<td></td>
<td></td>
<td>df=3.15</td>
<td></td>
<td></td>
<td>Chinese Intl Conf. Inv.</td>
<td>0.1229</td>
<td>0.06</td>
<td>2.19</td>
</tr>
<tr>
<td>Estimation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of Intl Tension</td>
<td>0.6800</td>
<td>0.29</td>
<td>2.38</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic Economic Situation</td>
<td>-11.4959</td>
<td>9.59</td>
<td>-1.20</td>
</tr>
</tbody>
</table>
Table 3-2
Perception: Results of OLS Estimation

<table>
<thead>
<tr>
<th>Period</th>
<th>$R^2$</th>
<th>$\bar{R^2}$</th>
<th>F-ratio</th>
<th>SSR</th>
<th>D.W.</th>
<th>Variables</th>
<th>Coefficient</th>
<th>St.Er.</th>
<th>T-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950 to 1978</td>
<td>.87</td>
<td>.85</td>
<td>56.455</td>
<td>217.72</td>
<td>1.54</td>
<td>Constant</td>
<td>-30.3960</td>
<td>4.81</td>
<td>-6.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Intl. Cnfl. Invl</td>
<td>0.1472</td>
<td>0.02</td>
<td>8.87</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of Intl. Tension</td>
<td>0.6867</td>
<td>0.08</td>
<td>8.68</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic Economic Situation</td>
<td>-2.5677</td>
<td>6.72</td>
<td>-0.38</td>
</tr>
<tr>
<td>1950 to 1957</td>
<td>.97</td>
<td>.95</td>
<td>61.545</td>
<td>9.14</td>
<td>2.30</td>
<td>Constant</td>
<td>-29.4976</td>
<td>4.06</td>
<td>-7.26</td>
</tr>
<tr>
<td>1977 to 1978</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Intl. Cnfl. Invl</td>
<td>0.0990</td>
<td>0.02</td>
<td>4.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of Intl. Tension</td>
<td>0.6890</td>
<td>0.08</td>
<td>8.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic Economic Situation</td>
<td>24.7750</td>
<td>9.43</td>
<td>2.63</td>
</tr>
<tr>
<td>1958 to 1976</td>
<td>.79</td>
<td>.74</td>
<td>18.439</td>
<td>152.83</td>
<td>1.53</td>
<td>Constant</td>
<td>-14.2864</td>
<td>15.19</td>
<td>-0.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Intl. Cnfl. Invl</td>
<td>0.1481</td>
<td>0.02</td>
<td>6.97</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of Intl. Tension</td>
<td>0.4324</td>
<td>0.25</td>
<td>1.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic Economic Situation</td>
<td>-1.1050</td>
<td>9.75</td>
<td>-0.11</td>
</tr>
<tr>
<td>Period</td>
<td>$R^2$</td>
<td>$R^2$</td>
<td>F-ratio</td>
<td>SSR</td>
<td>D.W.</td>
<td>Variables</td>
<td>Coefficient</td>
<td>St.Er.</td>
<td>T-stat</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
<td>-------</td>
<td>---------</td>
<td>--------</td>
<td>-------</td>
<td>------------------------------------------</td>
<td>-------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>1950 to 1978</td>
<td>.20</td>
<td>.11</td>
<td>2.115</td>
<td>25327.5</td>
<td>1.22</td>
<td>Constant</td>
<td>55.8436</td>
<td>27.58</td>
<td>2.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Prept. Intl. Tn.</td>
<td>0.3661</td>
<td>1.17</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmto Campaign Mblztn.</td>
<td>2.0386</td>
<td>1.23</td>
<td>1.66</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmto Econmc Situation</td>
<td>51.0688</td>
<td>73.76</td>
<td>0.69</td>
</tr>
<tr>
<td>1950 to 1957</td>
<td>.84</td>
<td>.75</td>
<td>10.206</td>
<td>1331.9</td>
<td>2.32</td>
<td>Constant</td>
<td>45.7230</td>
<td>18.43</td>
<td>2.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Prept. Intl. Tn.</td>
<td>2.7489</td>
<td>0.93</td>
<td>2.97</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmto Campaign Mblztn</td>
<td>-1.8879</td>
<td>1.02</td>
<td>-1.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmto Econmc Situation</td>
<td>212.4720</td>
<td>64.51</td>
<td>3.29</td>
</tr>
<tr>
<td>1958 to 1976</td>
<td>.83</td>
<td>.79</td>
<td>24.072</td>
<td>4043.0</td>
<td>1.97</td>
<td>Constant</td>
<td>-30.6027</td>
<td>40.95</td>
<td>-0.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Prept. Intl. Tn.</td>
<td>3.4840</td>
<td>1.75</td>
<td>1.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmto Campaign Mblztn</td>
<td>2.6546</td>
<td>0.89</td>
<td>2.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmto Econmc Situation</td>
<td>7.2852</td>
<td>48.09</td>
<td>0.15</td>
</tr>
<tr>
<td>Period</td>
<td>$R^2$</td>
<td>$R^2$</td>
<td>F-ratio</td>
<td>SSR</td>
<td>D.W.</td>
<td>Variables</td>
<td>Coefficient</td>
<td>St. Er</td>
<td>T-stat</td>
</tr>
<tr>
<td>--------------</td>
<td>-------</td>
<td>-------</td>
<td>---------</td>
<td>------</td>
<td>------</td>
<td>-----------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>1950 to 1978</td>
<td>.51</td>
<td>.45</td>
<td>8.67</td>
<td>15562.9</td>
<td>.98</td>
<td>Constant</td>
<td>7.3361</td>
<td>17.13</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Prept. Intl. Tn.</td>
<td>2.8436</td>
<td>0.63</td>
<td>4.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Campaign Mblztn</td>
<td>1.3654</td>
<td>0.94</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Econmc Situation</td>
<td>78.2560</td>
<td>57.35</td>
<td>1.36</td>
</tr>
<tr>
<td>1950 to 1957,</td>
<td>.84</td>
<td>.76</td>
<td>10.59</td>
<td>1290.8</td>
<td>2.23</td>
<td>Constant</td>
<td>39.6926</td>
<td>17.75</td>
<td>2.24</td>
</tr>
<tr>
<td>1977 to 1978</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Prept. Intl. Tn.</td>
<td>3.1330</td>
<td>0.88</td>
<td>3.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Campaign Mblztn</td>
<td>-1.8379</td>
<td>1.01</td>
<td>-1.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Econmc Situation</td>
<td>207.5300</td>
<td>63.43</td>
<td>3.27</td>
</tr>
<tr>
<td>1958 to 1976</td>
<td>.86</td>
<td>.83</td>
<td>29.996</td>
<td>3358.7</td>
<td>2.29</td>
<td>Constant</td>
<td>-53.1866</td>
<td>15.89</td>
<td>-3.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Prept. Intl. Tn.</td>
<td>4.4866</td>
<td>0.57</td>
<td>7.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Campaign Mblztn</td>
<td>2.3964</td>
<td>0.71</td>
<td>3.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Econmc Situation</td>
<td>5.4872</td>
<td>43.75</td>
<td>0.13</td>
</tr>
</tbody>
</table>
efficient values and fit of the equations. (1) The first period is the period before the Great Leap Forward and after the death of Mao Zedong and the downfall of the "Gang of Four". The second period is the period in between these two break points. In terms of domestic politics, the first may be characterized as the period of construction and reconstruction. The second is the period of constant turbulence, the period of struggles, and the period of the Great Leap Forward and the Great Proletarian Cultural Revolution.

With the above brief description of the two periods in mind, let us examine the estimation results of each equation. As both Table 3-1 and Table 3-2 show, the fit of the equation applied over the whole period from 1950 to 1978 is very high.

(1) This is not conclusive because I have not made exhaustive search. Periods I tried were drawn from Sinological literature and debates. Inferior break points than the reported include:

(2) 1950-1965, 1966-1976;

The first periodization more or less corresponds the conventional understanding of the changes in Chinese attitude toward the Soviet Union. The 1950-1957 is the period of lean-to-one-side, the 1958-1969 is the period of beginning and aggravation of Sino-Soviet rift, and the 1970-1978 is the period of the Soviet Union as the principal enemy. The second periodization emphasizes the current Chinese definition of the period of "cultural revolution" (1966-1976). The third periodization adds the Great Leap Forward period and the period after the death of Mao to the second periodization. This periodization produces more or less the same results as the reported one in terms of the coefficient values and significance. But the fit is not as good.

(1) The year 1949 is excluded because domestic economic situation is measured as the rate of increase of agricultural production index, whose data series start from 1950. The origi-
(1) The F-ratio is significant, far greater than the .01 significant level, $F_{25,25}^3 = 4.68$. But so are the F-ratios of the equations for the two periods. We have to determine whether these two periods are necessary. In other words, we have to check whether the samples in these two periods are drawn from different population with respect to the Chinese perception of international conflicts. The appropriate test for this purpose is the F-test, usually referred to as the Chow test (Chow, 1960; Fisher, 1970). The null hypothesis here is the equality of the coefficients of both equations:

$$H_0: \quad a_1(1)=a_1(2), \quad a_2(1)=a_2(2), \quad a_3(1)=a_3(2),$$

$$a_4(1)=a_4(2).$$

The number in parentheses indicates the period. The alternative hypothesis is that the coefficients take different values across the periods:

$$H_1: \quad a_1(1) \neq a_1(2), \quad a_2(1) \neq a_2(2), \quad a_3(1) \neq a_3(2),$$

$$a_4(1) \neq a_4(2).$$

The F-test shows that the null hypothesis cannot be rejected at .05 level. The F-ratio for the 2SLS estimation is 2.14, which is lower than $F_{25,25}^H = 2.84$. (The F-ratio for the OLS estimation is 1.81.)

This result is not at all surprising. By inspecting the coefficient values for the first three coterms in Table 3-1, one finds that their values for the whole period, the first annual agricultural production index includes the index of 1949 but the rate of increase in 1949 can be calculated only if one has the index of 1948 too.
period, and the second period are almost identical. And the coefficients of the two important variables, the Chinese involvement and the level of international conflicts, are both positive and significant at .05 level. The final coterm, domestic economic situation, does not show significant values in either period.

But since the sign of the estimated value of the coefficient differs across the periods, a further test is conducted to see if the coefficients from the two periods are jointly significant. The null hypothesis for this test is still,

\[ H_0: \quad a_1(1)=a_1(2), \quad a_2(1)=a_2(2), \quad a_3(1)=a_3(2), \quad a_4(1)=a_4(2) \]

But the alternative hypothesis in this case is

\[ H_2: \quad a_1(1)\neq a_1(2), \quad a_2(1)\neq a_2(2), \quad a_3(1)\neq a_3(2), \quad a_4(1)\neq a_4(2) \]

To represent the alternative hypothesis, we have to use a single equation with a dummy variable instead of two equations.

(1) The 2SLS and OLS estimation is reported in Table 3-5. Clearly, this equation with a dummy variable does not make improvement. The SSR (sum of squared residuals) in the 2SLS es-

---

(1)

(PERCEPTION OF INTERNATIONAL TENSION)

\[ = a_1 + a_2*(INVolvEMEnt IN INTERNATIONAL Conflicts) + a_3*(LEVEL OF INTERNATIONAL TENSION) + a_4*(DOMESTIC ECONOMIC SITUATION) + a_5*D*(DMESTIC ECONOMIC SITUATION) + u_1 \]

where

\[ D = 0 \quad \text{for} \ 1950 \text{ to } 1957, \ 1977 \text{ to } 1978 \]

\[ 1 \quad \text{for} \ 1958 \text{ to } 1976. \]
<table>
<thead>
<tr>
<th>Period</th>
<th>OLS Estimation</th>
<th>2SLS Estimation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950 to 1978</td>
<td>R^2 = 0.87</td>
<td>R^2 = 0.85</td>
</tr>
<tr>
<td></td>
<td>F = 85.040</td>
<td>F = 85.040</td>
</tr>
<tr>
<td></td>
<td>df = 4, 24</td>
<td>df = 4, 24</td>
</tr>
<tr>
<td></td>
<td>SSR = 217.3</td>
<td>SSR = 246.000</td>
</tr>
<tr>
<td>D.W. Ratio</td>
<td>1.50</td>
<td>1.50</td>
</tr>
<tr>
<td>Coefficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.1457</td>
<td>0.1530</td>
</tr>
<tr>
<td>St. Er.</td>
<td>0.7060</td>
<td>0.7802</td>
</tr>
<tr>
<td>T-stat</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Level of Intl. Tension</td>
<td>0.2797</td>
<td>0.0197</td>
</tr>
<tr>
<td>Domestic Economic Situation</td>
<td>3.9537</td>
<td>19.35</td>
</tr>
<tr>
<td>Dummy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese Intl. Cnfl. Inv.</td>
<td>-3.0274</td>
<td>3.66</td>
</tr>
<tr>
<td>Domestic Economic Situation</td>
<td>0.1703</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Table 3-5: Results of OLS and 2SLS Estimation of the Alternative Equation (Dummy Variable Model)
timation even increases. Therefore, we can conclude that there did not occur structural shifts throughout the whole period in the mechanism of the Chinese perception of international conflicts. The hypotheses (1) and (2) in the previous subsections are supported. That is, the Chinese perception is positively influenced by their involvement in international conflicts and the actual level of international conflicts. Neither (3-a) nor (3-b) is supported from our data and statistical inference. Domestic economic situations seem to have little to do with the level of the Chinese perception of international conflicts. (1)

Next, let us proceed to the examination of the estimation of the second equation, the equation of the Chinese involvement in international conflicts. Table 3-3 is the results of the 2SLS estimation; Table 3-4, of the OLS estimation. In contrast with the case of perception of international conflicts, dividing the whole period into two periods improves the fit greatly. The F-ratio of the 2SLS estimation over the whole period is not significant at .05 level. On the other hand, the F-ratios of the 2SLS estimation of both periods are significant at .01 level. A quick inspection of the coefficient values across the periods also reveals very interesting contrasts. The sign of the coefficient of domes-

(1) Introduction of multiplicative terms such as (LEVEL OF INTERNATIONAL CONFLICT)*(DOMESTIC ECONOMIC SITUATION + 1), (DOMESTIC ECONOMIC SITUATION + 1)*(DOMESTIC CAMPAIGN MOBILIZATION) caused multicollinearity problems and produced less desirable results.
tic campaign mobilization is negative in the first period while it is positive in the second period. The coefficient value of domestic economic situation is a large positive and significant in the first period while it is insignificant in the second period.

As in the examination of the first equation above, let us conduct F-tests to determine whether these changes across the periods are statistically significant. The null hypothesis is

\[ H_0: \quad b_1(1)=b_1(2), \quad b_2(1)=b_2(2), \quad b_3(1)=b_3(2), \]
\[ b_4(1)=b_4(2). \]

The alternative hypothesis is

\[ H_1: \quad b_1(1)\neq b_1(2), \quad b_2(1)\neq b_2(2), \quad b_3(1)\neq b_3(2), \]
\[ b_4(1)\neq b_4(2). \]

The F-ratio of the 2SLS estimation is 19.49 and that of the OLS estimation is 12.32, both of which are higher than the .01 significance level, \( F = 4.31 \). Thus, we can reject the null hypothesis that there occurred no structural shifts in comparison with the alternative that all parameter values changed across the two periods.

Rejection of the null hypothesis vis-à-vis an alternative hypothesis does not necessarily mean adoption of that particular alternative hypothesis. It may be the case that there exists better alternatives. The above alternative hypothesis says that all coefficients change their values across the periods. But a careful examination of the estimated coefficient values across the periods reveal that the estimated co-
efficient value of the Chinese perception of international conflicts did not make as a radical change as the coefficients of domestic campaign mobilization and domestic economic situation. Therefore, we can reasonably construct the following alternative hypothesis:

\[ H2: \ b1(1) \neq b1(2), \ b2(1)=b2(2), \ b3(1) \neq b3(2), \ b4(1) \neq b4(2). \]

Evaluation of this alternative hypothesis (H2) vis-a-vis the former one (H1) should go through two stages. First, we have to show that H2 is superior to the null hypothesis H0. If H0 cannot be rejected vis-a-vis H2, H2 is not worth comparing with H1 because H1 is already determined to be better than H0. If H0 is rejected in this stage, we proceed to the second stage. In the second stage, we treat H2 as the null hypothesis with respect to H1 and see if H1 is significantly better than H2 (or if H2 can be rejected). If H2 cannot be rejected, we prefer H2 to H1.

To represent H2, we have to use a single equation with dummy variables. (1) The 2SLS and OLS estimation is reported in Table 3-6. The first stage test involves the comparison of

\[(1)\]

\[ \text{(INVOLVEMENT IN INTERNATIONAL CONFLICTS)} = b1 + b2*D + b3*(\text{PERCEPTION OF INTERNATIONAL TENSION}) + b4*(\text{DOMESTIC CAMPAIGN MOBILIZATION}) + b5*D*(\text{DOMESTIC CAMPAIGN MOBILIZATION}) + b6*(\text{DOMESTIC ECONOMIC SITUATION}) + b7*D*(\text{DOMESTIC ECONOMIC SITUATION}) + u2 \]

where \(D = 0\) for 1950 to 1957, 1977 to 1978

\(1\) for 1958 to 1976.
Table 3-6

Involvement: Results of OLS and 2SLS Estimation of the Alternative Equation (Dummy Variable Model)

<table>
<thead>
<tr>
<th>OLS Estimation Period</th>
<th>$R^2$</th>
<th>$R^2$</th>
<th>F-ratio</th>
<th>SSR</th>
<th>D.W.</th>
<th>Variables</th>
<th>Coefficient</th>
<th>St.Er.</th>
<th>T-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950 to 1978</td>
<td>.84</td>
<td>.80</td>
<td>19.570</td>
<td>5011.2</td>
<td>2.14</td>
<td>Constant</td>
<td>24.6183</td>
<td>13.80</td>
<td>1.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>df=6, 22</td>
<td></td>
<td></td>
<td>Constant*Dummy</td>
<td>-68.9686</td>
<td>15.19</td>
<td>-4.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Proct. Intl. Tn.</td>
<td>4.0931</td>
<td>0.49</td>
<td>8.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Campaign Mblztn</td>
<td>-1.7129</td>
<td>1.03</td>
<td>-1.66</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Campaign Mblztn *Dummy</td>
<td>4.2104</td>
<td>1.26</td>
<td>3.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Ecrnc Situation</td>
<td>195.1760</td>
<td>64.53</td>
<td>3.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Ecrnc Situation *Dummy</td>
<td>-188.9860</td>
<td>78.10</td>
<td>-2.42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2SLS Estimation 1950 to 1978</th>
<th>$R^2$</th>
<th>$R^2$</th>
<th>F-ratio</th>
<th>SSR</th>
<th>D.W.</th>
<th>Variables</th>
<th>Coefficient</th>
<th>St.Er.</th>
<th>T-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.80</td>
<td>.75</td>
<td>14.667</td>
<td>6303.9</td>
<td>1.87</td>
<td>Constant</td>
<td>43.8157</td>
<td>19.24</td>
<td>2.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>df=6, 22</td>
<td></td>
<td></td>
<td>Constant*Dummy</td>
<td>-61.0042</td>
<td>17.75</td>
<td>-3.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinese Proct. Intl. Tn.</td>
<td>2.9341</td>
<td>0.91</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Campaign Mblztn</td>
<td>-1.8638</td>
<td>1.16</td>
<td>-1.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Campaign Mblztn *Dummy</td>
<td>4.6603</td>
<td>1.44</td>
<td>3.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Ecrnc Situation</td>
<td>210.0890</td>
<td>72.98</td>
<td>2.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dmstc Ecrnc Situation *Dummy</td>
<td>-201.8160</td>
<td>87.97</td>
<td>2.29</td>
</tr>
</tbody>
</table>
the SSR of this equation with the SSR of the equation over the whole period in Table 3-3 and Table 3-4. The F-ratio of both 2SLS and OLS estimation are significant. The former is 22.13 and latter is 15.44, both greater than the .01 significant level, \( F_{21}^{.01} = 4.82 \).

The second stage is the comparison between the SSR of H2 and SSR of H1. The F-ratio from the 2SLS is 3.63 and that from the OLS is 1.63. Both are lower than the .05 significant level, \( F_{21}^{.05} = 4.32 \). Thus we conclude that H2 cannot be rejected vis-a-vis H1 and we prefer H2 over H1.

In terms of the hypotheses presented in the previous subsection, the following is our conclusion. (See Table 3-6.) The hypothesis (4) is supported. The perception of international conflicts of the Chinese decision makers influences their level of involvement in international conflicts positively. The parameter value of this relation does not change across the period. (5-a) is supported in the second period while (5-b) is weakly supported in the first period. The mode of influence of domestic campaign mobilization changes across the period. During the period from 1958 to 1976, there was clearly a pattern of the increase in the international conflict involvement at the time of high domestic campaign mobilization. During the period before and after there 19 years, domestic campaign mobilization did not have a positive impact on international conflict involvement. On the contrary, the data suggest that it has a negative, though weak, impact on
international conflict involvement. Finally, (6-a) is not supported by the data in any period and (6-b) is supported in the period from 1950 to 1957 and from 1977 to 1978. In other words, improvement of economic situation had positive effects on involvement in international conflicts in the period before the Great Leap Forward and after the fall of the "Gang of Four". But during the 19 years of turmoil and struggles, the economic condition did not seem to have systematic effects on the Chinese involvement in international conflicts.
3. Summary

In this chapter, we have applied the general linear model to the aggregate international conflict behavior of the People's Republic of China. What determines the Chinese perception and involvement in international conflicts and whether changes in character occurred in these domains are the questions. Figure 3-9 presents our findings in the block diagram form. Our first finding is that no structural changes occurred in the perception mechanism. We find that the Chinese perception of international conflicts are mainly determined by the actual level of international conflicts and the level of their involvement in international conflicts. Domestic economic situation does not seem to affect their perception systematically.

Our second finding is that structural shift occurred in the involvement mechanism. The breakpoints were 1958 and 1976, the year of the Great Leap Forward and the year of Mao's death and the fall of the "Gang of Four" respectively. The major changes occurred in the ways that domestic factors influence international conflict involvement. In the period before 1958 and after 1976, it is found that the Chinese involvement in international conflicts increases as the domestic economic situation becomes better. Domestic campaign mobilization in this period seems to have a negative impact on their international conflict involvement. In the period from
Figure 3-9
Summary Results of Macro Model

1950 to 1957, 1977 to 1978

LEVEL OF INTERNATIONAL CONFLICTS

PERCEPTION MECHANISM

PERCEPTION OF INTERNATIONAL CONFLICTS

INVOLVEMENT DECISION MECHANISM

INVOLVEMENT IN INTERNATIONAL CONFLICTS

DOMESTIC ECONOMIC SITUATION

DOMESTIC CAMPAIGN MOBILIZATION

1958 to 1976

LEVEL OF INTERNATIONAL CONFLICTS

PERCEPTION MECHANISM

PERCEPTION OF INTERNATIONAL CONFLICTS

INVOLVEMENT DECISION MECHANISM

INVOLVEMENT IN INTERNATIONAL CONFLICTS

DOMESTIC ECONOMIC SITUATION

DOMESTIC CAMPAIGN MOBILIZATION
1958 to 1976, it is found that the Chinese international conflict involvement increases when their campaign mobilization is high. Domestic economic situation is found to have little systematic effect on their involvement in international conflicts. In other words, the theme of domestic influence on international conflict involvement in the period before 1958 and after 1976 is "lateral pressure" of Choucri-North-Ashley researches; the theme in the period from 1958 to 1976 is "domestic use of international conflicts."

In the whole period from 1950 to 1978, the level of the Chinese perception of international conflicts have significant effect on their involvement in them. But the mode of its effect (coefficient value) did not change across the two periods. Given the finding of no structural changes in perception, we can conclude that at least on the aggregate level, the influence of the international environment on the Chinese conflict behavior (perception and involvement) is constant during the period from 1950 to 1978. Structural shifts occurred in the mechanism how domestic factors influence international conflict involvement.
CHAPTER 4

DISCRETE CASE MODELING OF CHINESE INTERNATIONAL CONFLICT BEHAVIOR
In Chapter 3, it is demonstrated that Chinese international conflict perception and involvement can be aggregatively modeled fairly satisfactorily in the framework of the general linear model. We found regularity in the patterns between the current aggregate inputs and the current aggregate outputs. We also found that structural shifts occurred in their patterns. (1)

The model in the previous chapter, however, was not constructed to represent any view on the three dimensions discussed in Chapter 1. And since it was an aggregate model, it was not constructed to answer such questions as: Which side in a specific conflict does the People's Republic of China support? What do the Chinese say about a specific conflict?

(1) This success in the application of the general linear model to Chinese international conflict behavior raises the issue briefly mentioned in the beginning of Chapter 3 again: is it really necessary to use the three dimensions developed in Chapter 1 to conceptualize the character of Chinese international conflict behavior. Now that we found fairly regular patterns, is it sufficient to consider these aggregate input-output patterns the characteristics of Chinese international conflict behavior? Do we still have to worry about such concepts as realist, revolutionary, rigidity, flexibility, aggressiveness, or cautiousness?

As mentioned in Chapter 3, I reject the view that all and only aspects of Chinese international conflict behavior that can be examined scientifically are what can be represented as mapping from the current inputs into the current outputs. What we found in Chapter 3 is that we can fruitfully examine macro and aggregate characteristics of Chinese international conflict behavior as a mapping from the current inputs into the current outputs. It is not that macro and aggregate characteristics are all and the only things that we can examine scientifically. Our position on this issue is that micro characteristics of Chinese international conflict behavior can also be examined scientifically and best be modeled as a set of information processing rules.
Does it make a comment on it or more? What does the PRC do toward the incident? In other words, while, the model in the previous chapter explains the general level of the Chinese involvement, it does not predict the mode of involvement in each specific conflict or event.

In this chapter, we shall attempt to answer these questions by constructing models of specific discrete events. To wit, we shall proceed to a micro analysis of Chinese international conflict behavior going beyond the last chapter's macro analysis. In this micro analysis, the three dimensions in the first Chapter are finally utilized to the full extent. And various views on these dimensions will be tested empirically. As the reader remembers, the first dimension (realist vs. revolutionary) concerns the framework with which the Chinese decision makers understand the world; the second dimension (rigid vs. flexible) concerns the strategy to cope with uncertainty in evaluation/understanding; and the third dimension (aggressive vs. cautious) concerns the strategy to cope with uncertainty in decision.

To represent these dimensions and other decision making mechanisms, an information processing scheme, called CHINA_WATCHER, within which contrasting specifications or models of Chinese international conflict behavior can be made, is constructed. In other words, this attempt is similar in spirit to Gamson and Modigliani (1972) and Carbonell (1978). The plan of this chapter, then, is as follows. First, an
overview of CHINA_WATCHER is given. This computer program facilitates simulations of several different models of the Chinese foreign policy decision making. Second, a more rigorous specification of each routine is presented. How different models can be represented in the framework of CHINA_WATCHER is presented. And finally, the results of simulations of various models will be given. We would like to discuss the performance of each model and present possible periodization of the history of the PRC's involvement in international conflicts based on the relative performance of different models.
1. Overview

Various models considered in this chapter within the framework of CHINA_WATCHER all have the characteristics of information processing models. As defined in Chapter 2, an information processing model is a model "consisting of a memory containing symbol structures, a processor, effectors, and receptors." The reader is suggested to refer to the Newell and Simon figure reproduced in Chapter 2 (Figure 2-17). We have also discussed how an information processing system can be represented in our \(< S, v, V, R, \varepsilon, \mu, D, P >\) framework. (1)

Since we are interested in relative validity of various images of China as an international actor, we would like to construct different models, each of which represents idealtypical image discussed in Chapter 1, and run them with the actual data as inputs. If the outputs of one model is closer to the actual behavior of the PRC than the others' outputs, then we can use this result as evidence to support that model, i.e. the image it represents. Also, by checking which model performs best in which year or period, we can judge whether oscillations in character occurred in Chinese

(1) To refresh the reader's memory, S is the name of the system; v is the set of all variables used in the system, V is the possible space of the system, i.e. the Cartesian product of the ranges of all variables; R is the observed or unobserved relation among all variables; \(\varepsilon\) is the set of element structures which generate R; \(\mu\) is the memory state; D is called an element-output relation; and P is the set of programs carried out sequentially.
international conflict behavior. In this section, the general framework of our information processing system, CHINA_WATCHER, is presented very informally. A more rigorous specification is made in the following section. (1)

The basic operations performed by CHINA_WATCHER is given in Figure 4-1. After the model selection -- a realist, rigid and aggressive model, a revolutionary, flexible, and cautious model, etc. --, an initial description of the world situation may be made. In other words, the user can specify friends and enemies of the People's Republic of China at the time of its establishment before any model run can occur. (If this initialization is not made, all countries are considered neutral or indifferent actors to the PRC.) Then, CHINA_WATCHER begins to receive the 385 CACI conflicts/crisis/events in the order of their occurrence. (See Appendix 1 for the details of the CACI data set.) For each case, CHINA_WATCHER does essentially three things: to "understand" it, to "decide" what to do about it, and to "reevaluate" its assessment of the participating actors based on the current conflict/crisis/event. (2)

(1) The current version of CHINA_WATCHER contains more routines (programs and element structures in the terminology of our framework) than described in the text. They include the routines to explore other decision making mechanisms not reported in this thesis and many periphery service routines such as input, output, option specifications, initializations, etc.

(2) The anthropomorphism of "understand", "decide", and "reevaluate" does not of course imply that this computer program represents the whole sense of human or social understand-
Figure 4-1

Macro Flowchart of CHINA_WATCHER

start

Select model and specify options. Initialize friends and enemies at the time or PRC establishment

get information of current conflict/crisis/event

[Understanding of Current case]

1. Characterize current case in terms of its attributes (including update of all countries' amity-enmity status)
2. Determine international context
3. Determine domestic context
4. Determine narrative context
5. Determine precedential context

[Decision of Action]

1. Decide which side to support
2. Decide level of verbal involvement
3. Decide level of physical involvement

[Update]

Update friend/enemy status of the participants of current case
To understand the current conflict/crisis/event, CHINA_WATCHER has to obtain its important attributes. Attributes here mean such characteristics as type of events, date of occurrence, location, participants, threats to communists regimes/parties/movements, possibility of nuclear confrontation, and so on. Which specific attributes are used by China watcher depends on the model selection. In other words, the user decides which characteristics to be considered. As the discussion of Chapter 1 shows, realist decision-makers and revolutionary decision makers have different criteria by which to judge what are important characteristics.

Just knowing the participants is not sufficient to understand the nature of the case. One has to know whether the current case is a conflict between friends and enemies, between friends and friends, or between enemies and enemies. Even to do this, one already has to know who are friends and who are enemies for the People's Republic of China. As Mao Zedong said, "Who are our enemies? Who are our friends? This is a question of first importance for the revolution" (Mao, 1965: 13). For this purpose, CHINA_WATCHER updates its evaluation of all independent countries in terms of amity and enmity toward China immediately after it receives the current case. The criteria of evaluation, again, depends on the model
selection: the realist and the revolutionary have different criteria to categorize actors into friends and enemies; hard-liners and soft-liners have different attitudes toward ambivalent actors.

From this updated amity-enmity world map, CHINA_WATCHER then finds the participants of current case and sees if the actor configuration is "balanced" in Heider's (1946) sense. (Recall the second section of Chapter 1.) As will be shown later, I assume that a rigid actor and a flexible actor differ on how this process works.

After examining the attributes and the participants of the current case, CHINA_WATCHER then examines four types of contexts: the international context, the domestic context, the narrative context, and the precedential context. The international context of the current case is operationalized as the set of other on-going conflicts/crises/events when the current case is received. By examining characteristics of these cases, CHINA_WATCHER tries to find how dangerous the international context is to the PRC. The domestic context is similarly represented in terms of the level of on-going domestic campaigns at the time when the current case is received and the economic performance of the PRC in the year of the case. As will be shown in the next section, whether one emphasizes the international context or the domestic context depends on one's frame of reference, i.e. whether one proposes a realist or revolutionary account of Chinese conflict behavior.
The narrative context requires a more detailed explanation. It is the preceding cases which constitute a longer, unfolding "story," with the current case as its most recent episode. For example, when the People's Liberation Army crossed the Yalu River and intervened in the Korean War, the PRC must have regarded this event as the most recent episode of a narrative which probably began with the U.S. involvement in the Chinese Civil War and continued as the Korean War broke out, with further chapters including Truman's declaration of the Taiwan Strait neutralization, United Nations' intervention, and MacArthur's landing at Inchon. Historical force of an unfolding story could not be captured if each case is treated in isolation.

Setting the precedential context is the most important feature of CHINA_WATCHER simulation program. This part of the program is a direct offspring of the Alker-Christensen-Greenberg precedent-logic model of UN peacekeeping (Alker and Christensen, 1972; Alker and Greenberg, 1976). The essential idea is to derive instruction for current action from an analysis of cases in memory that are similar to the current one in certain key respects. The decision makers are assumed practically to understand the current case in part through the analogy of the past precedents. It is assumed that this precedent search operation provide plausible options of action to the decision makers. For example, the cartoon carried in the Renmin Ribao immediately after the Chi-
inese intervention in the Korean War clearly illustrates their understanding of the American conduct in the Far East through the analogy of the Japanese invasions of Korea and China before World War II (Figure 4-2). (1)

One of the most difficult issues of precedent-logic modeling is the criteria of similarity. This issue will be discussed in the next section in some detail. For now let it suffice to say that the criteria depends on the model selection, i.e. whether the model is realist or revolutionary. In other words, we assume that the realist and the revolutionary use different sets of variables to judge which case is similar to the current case. (Recall Table 1-1.)

Based on the above understanding, CHINA_WATCHER decides (or predicts) what the PRC will do in the current case. (2) It predicts three things: the side to be supported, the level of verbal involvement and the level of physical involvement. The decision strategy differs whether the model is aggressive

(1) Because of data inavailability, the current CHINA_WATCHER could not search precedents before the establishment of the PRC in October 1949. Unfortunately, history began for CHINA_WATCHER in the tenth month of 1949. For future expansion of the data base, a Chinese chronology translated inn Bobrow, Chan, and Kringen (1980: 211-216), for example, provide a useful list of cases in the period before the establishment of the People's Republic.

(2) Since the simulation is run with the past data as the input, what CHINA_WATCHER does is to "postdict" the PRC's action. But for the present exposition, I use the word "prediction" because for CHINA_WATCHER each current case constitutes the "present" case to cope with. It cannot utilize the information concerning the cases following the current one; they are "future" cases that CHINA_WATCHER knows nothing of.
Figure 4-2
Cartoon in Renmin Ribao implying Precedential Understanding

Renmin Ribao, Nov. 4, 1950.
or cautious. As the discussion in Chapter 1 suggests, if the model is aggressive, the option of higher involvement is chosen in the available options selected by precedent search operation; if the model is cautious, the option of lower involvement is chosen. (1)

The final operation of CHINA_WATCHER for a single case is to update the participants' friend/enemy status. Because of participation in the current case, each participant is reevaluated by CHINA_WATCHER. A thus-far friendly country may become an enemy because it has just participated in a conflict in confrontation with the PRC. How to reevaluate each participant's status, again, depends on the model selection. Hard-liners and soft-liners have different reevaluation mechanisms.

(1) If several precedents are selected by the precedent search operation, we assume that what the PRC did in these precedents constitute the available options for the current case. For example, if the PRC was engaged in a combat in one precedent and if it sent military personnel in the crisis area but was not engaged in a combat, combat and sending military personnel constitute the available options for the current case. If the model's strategy is aggressive, CHINA_WATCHER predicts that the PRC will be engaged in a combat; if it is cautious, CHINA_WATCHER predicts that the PRC will send military personnel to the crisis area.
2. Representation of Different Models

Now that the general processing strategy has been explained, a more detailed description of how different models are represented is called for. In our \( < S, v, V, R, \varepsilon, M, D, P > \) formalism, different models are distinguished by different specification of each component. The most important among these components are element structures, \( S \), and the programs \( P \). Thus, the following discussion centers mainly on what sort of element structures and programs (1) are used for different models.

Before dealing with each routines (element structures and programs), let us review where in the above overview the different specifications of the model affect the way that the information is processed. A summary is given in Table 4-1. By choosing either the realist or the revolutionary frame of reference, either the rigid or the flexible strategy of evaluation, and either the aggresive or cautious strategy of decision, one can specify the entire model. (2) (In the following, for the easiness of reference, I call the realist-revolutionary distinction as the frame difference, the

---

(1) I often use "routines" to mean them in the following.

(2) Strictly speaking, one has to specify some other options which are not directly related with the realist-revolutionary or the rigid-flexible, or the aggresive-cautious difference. Options related with precedent search routines are not directly interpretable with in these two dimensions.
<table>
<thead>
<tr>
<th>Operation</th>
<th>Different Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important Attributes Selection</td>
<td>realist vs. revolutionary</td>
</tr>
<tr>
<td>Update of amity-enmity world map at the time of current crisis</td>
<td>realist vs. revolutionary</td>
</tr>
<tr>
<td>Determination of balance or imbalance of party configuration</td>
<td>rigid vs. flexible</td>
</tr>
<tr>
<td>Emphasis of international or domestic context</td>
<td>realist vs. revolutionary</td>
</tr>
<tr>
<td>Precedent search</td>
<td>realist vs. revolutionary</td>
</tr>
<tr>
<td>Support decision</td>
<td>aggressive vs. cautious</td>
</tr>
<tr>
<td>Verbal involvement decision</td>
<td>aggressive vs. cautious</td>
</tr>
<tr>
<td>Physical involvement decision</td>
<td>aggressive vs. cautious</td>
</tr>
<tr>
<td>Update of amity-enmity status of participants</td>
<td>rigid vs. flexible</td>
</tr>
</tbody>
</table>
rigid-flexible distinction as the evaluation strategy difference, and the aggressive-cautious distinction as the decision strategy difference.) Thus, there are eight pure models, in which the same frame, the same evaluation strategy, and the same decision strategy are chosen throughout the entire operations. There are many mixed models, some of which will be examined very carefully in the next section. Figure 4-3 shows the routines that these eight pure models go through. We use the following convention to refer to various models:

Model A/B/C means the model whose frame is A, whose evaluation strategy is B, and whose decision strategy is C, where A is either REV (revolutionary) or REAL (realist), B is either RIG (rigid) or FLEX (flexible), and C is either AG (aggressive) or CAU (cautious).

For example, Model REV/RIG/AG is the model in which the frame is revolutionary, the evaluation strategy is rigid, and the decision strategy is cautious. In Figure 4-3, each model is specified by taking the appropriate branches according to the model assumption. Model REV/RIG/AG connects, for example, POLSYM - FRIEND1 - FOE2 - BALANCE - SITAMB1 - DMCAMP - DMECST - NARRATIVE - PRECEDENT - SUPPORT1 - CHOICE1 - UPDATE1 - FRIEND1 - AMB_H - FOE2. Additional convention will be introduced to consider mixed models in the next section. In other words, the sequence of the programs which each model connects constitute our entire program (P) for each model. Now, let us turn to each routine.
*Different sets of variables are used in the precedent search whether the assumption is REV or REAL.
(1) Update of Amity-Enmity World Map at the Time of Current Crisis

POLSYM is a routine to evaluate each country's amity-enmity status from the revolutionary point of view. As we have discussed in Chapter 1, revolutionary foreign policy makers regard socialist and communist countries as friends and capitalist and imperialist countries as enemies. In other words, the political-economic system of each country is the criteria to tell a friend from a foe. POYSYM uses Eto, et al. 's indices of political and economic system of countries in the world (1979). They use four indices for capitalist nature and four indices for Marxist-Leninist socialist nature. Their criteria of evaluation is reproduced in Table 4-2. They evaluated each country in terms of these indices for three periods: the early 1950s, the early 1960s, and the early 1970s.

With their data in memory, POLSYM conducts the following operations for 168 countries:

1. Receive the date of occurrence of the current conflict/crisis/event.
2. If the date is before the independence of the country in consideration, then the country's political economic system status (SYSSTAT) is zero (neutral).
3. If the date is after the independence of the country in consideration, then do the following:
   (1) Check whether the date is in the 50s, the 60s, or the 70s;
   (2) Find the values of the indices of the capitalist nature and the Marxist-Leninist socialist nature in the relevant decade;
Table 4-2
Score Criteria of Eto, et. al.'s Data of Political-Economic System

<table>
<thead>
<tr>
<th>Capitalist Nature</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>score criteria</strong></td>
<td><strong>1</strong></td>
<td><strong>2</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td>land ownership</td>
<td>public</td>
<td>partial restriction (tradition, land reforms)</td>
<td>essentially free</td>
</tr>
<tr>
<td>financial market</td>
<td>.non-functional</td>
<td>partial restriction (imperfectly functioning)</td>
<td>essentially free</td>
</tr>
<tr>
<td>establishment of private enterprise</td>
<td>no private enterprise</td>
<td>both private &amp; state</td>
<td>free</td>
</tr>
<tr>
<td>political power of capitalist party</td>
<td>non-existent (illegal)</td>
<td>less than 1/2 seats of assembly</td>
<td>more than 1/2 seats of assembly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marxist-Leninist Socialist Nature</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>score criteria</strong></td>
<td><strong>1</strong></td>
<td><strong>2</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td>land nationalization</td>
<td>non-existent</td>
<td>laws exist but implement-</td>
<td>more than 2/3 implement-</td>
</tr>
<tr>
<td>planning</td>
<td>no sign</td>
<td>ation unclear</td>
<td>ed</td>
</tr>
<tr>
<td>collectivization of agriculture</td>
<td>non-existent</td>
<td>coops or mix</td>
<td>more than 1/3</td>
</tr>
<tr>
<td>political power of communist party</td>
<td>non-existent (illegal)</td>
<td>less than 1/2 seats of assembly</td>
<td>more than 1/2 seats of assembly</td>
</tr>
</tbody>
</table>
(3) Add the values of the four indices of the Marxist-Leninist socialist nature;
(4) Add the values of the four indices of capital-
    ist nature;
(5) Calculate the country's political economics status (SYSSTAT) as the difference of (3) and
    (4). (1)

4. If the evaluation strategy is rigid, and
   (1) if the political economic status is
       Marxist-Leninist (SYSSTAT > 4), then invoke
       FRIEND1;
   (2) if the political economic status is
       capitalistic (SYSSTAT < -4), then invoke FOE2.

5. If the evaluation strategy is flexible, and
   (1) if the political economic status is
       Marxist-Leninist (SYSSTAT > 4), then invoke
       FRIEND2;
   (2) if the political economic status is
       capitalistic (SYSSTAT < -4), then invoke FOE1.

To understand 4 and 5, the routines FRIEND1, FRIEND2, FOE1, and FOE2 should be explained. These four routines with other four routines, AMB, AMB_H, AMB_S, and INDIF, perform the transformation of amity-enmity status of each actor. Reference to the discussion of Abelson and Rosenberg's "psycho-logic" in Chapter 1 should be extremely useful. These transformation routines should answer the following question: what status does a country acquire in the PRS's amity-enmity world map if it used to be a "friend" (enemy, ambivalent ac-
    tor, or indifferent actor) and exhibits friendly (antagonis-
    tic, ambivalent, or indifferent) behavior toward China? In
    general, FRIEND1 or FRIEND2 is invoked when the actor in con-
    sideration has exhibited friendly behavior toward China; FOE1

(1) For example, the United States' scores in the 1970s for
    the four indices of capitalist nature are all 3 and those for
    the four indices of Marxist-Leninist nature are all 1. Thus,
    SYSSTAT of the US is (1+1+1+1)-(3+3+3+3)=-8.
or FOE2 is invoked when the actor has exhibited antagonistic behavior toward China; AMB, AMB_H, or AMB_S is invoked when the actor has done ambivalent behavior toward China; INDIF is invoked when the actor has done indifferent behavior toward China. The following are the key operational rules of theses transformation routines.

FRIEND1 (invoked when the actor exhibited friendly behavior toward China):

If the actor's old status is friend,
   then the new status is friend.
If the actor's old status is enemy,
   then the new status is ambivalent actor.
If the actor's old status is ambivalent actor,
   then the new status is ambivalent actor.
If the actor's old status is indifferent actor,
   then the new status is friend.

FRIEND2 (invoked when the actor exhibited friendly behavior toward China):

If the actor's old status is friend,
   then the new status is friend.
If the actor's old status is enemy,
   then the new status is ambivalent actor.
If the actor's old status is ambivalent actor,
   then the new status is friend.
If the actor's old status is indifferent actor,
   then the new status is friend.

FOE1 (invoked when the actor exhibited antagonistic behavior toward China):

If the actor's old status is friend,
   then the new status is ambivalent actor.
If the actor's old status is enemy,
   then the new status is enemy.
If the actor's old status is ambivalent actor,
   then the new status is ambivalent actor.
If the actor's old status is indifferent actor,
then the new status is enemy.

**FOE2** (invoked when the actor exhibited antagonistic behavior toward China):

- If the actor's old status is friend,
  - then the new status is ambivalent actor.
- If the actor's old status is enemy,
  - then the new status is enemy.
- If the actor's old status is ambivalent actor,
  - then the new status is enemy.
- If the actor's old status is indifferent actor,
  - then the new status is enemy.

**AMB** (invoked when the actor exhibited ambivalent behavior toward China):

- If the actor's old status is friend,
  - then the new status is ambivalent actor.
- If the actor's old status is enemy,
  - then the new status is ambivalent actor.
- If the actor's old status is ambivalent actor,
  - then the new status is ambivalent actor.
- If the actor's old status is indifferent actor,
  - then the new status is ambivalent actor.

**AMB_H** (invoked when the actor exhibited ambivalent behavior toward China):

- If the actor's old status is friend,
  - then the new status is ambivalent actor.
- If the actor's old status is enemy,
  - then the new status is enemy.
- If the actor's old status is ambivalent actor,
  - then the new status is ambivalent actor.
- If the actor's old status is indifferent actor,
  - then the new status is ambivalent actor.

**AMB_S** (invoked when the actor exhibited ambivalent behavior toward China):

- If the actor's old status is friend,
  - then the new status is friend.
- If the actor's old status is enemy,
then the new status is ambivalent actor.
If the actor's old status is ambivalent actor,
then the new status is ambivalent actor.
If the actor's old status is indifferent actor,
then the new status is ambivalent actor.

INDIF (invoked when the actor exhibited indifferent behavior toward China):

If the actor's old status is friend,
then the new status is friend.
If the actor's old status is enemy,
then the new status is enemy.
If the actor's old status is ambivalent actor,
then the new status is ambivalent actor.
If the actor's old status is indifferent actor,
then the new status is indifferent actor.

The reader is reminded that the combination of FRIEND1, FOE1, AMB, and INDIF constitutes the addition table of Abelson and Rosenberg (1958)'s psychologic reproduced in Chapter 1 (Table 1-2). On the other hand, the combination of FRIEND1, FOE2, AMB_H, and INDIF constitutes Table 1-4; the combination of FRIEND2, FOE1, AMB_S, and INDIF constitutes Table 1-5.

Now, let us return to POLSYM and see the implication of the statements 4 and 5. The essential idea is that if the evaluation strategy is rigid and the political-economic system is Marxist-Leninist, FRIEND1 is called and if it is capitalistic, FOE2 is called. For example, consider a country whose status was "friend" because it previously had socialist political-economic system or it did friendly action toward
the PRC in the past crisis. (1) If this country's political-economic system becomes capitalistic in the current round for the first time, its status is transformed by FOE2 into "ambivalent actor". If in the next round the country is still capitalistic, its status is transformed again by FOE2 from "ambivalent actor" into "enemy". Similar interpretation can be made if the evaluation strategy is flexible but is left for the reader's exercise. (1)

If the frame is realist, DIPREL is invoked instead of POLSYM. DIPREL judges each country's status purely by the state of the diplomatic relations with the PRC. Thus, the data necessary for this routine is the date of establishment of diplomatic relations, the date of break, the date of reestablishment, and so on. The essential idea is that the country is considered friendly during the first year of the (re)establishment of diplomatic relations with the PRC. After the first year the maintenance of its diplomatic relations with the PRC does not affect its status; if it is a friend, it is considered a friend; if it became an enemy by UPDATE1 or UPDATE2, maintenance of its diplomatic relations does not

---

(1) This possibility is handled by UPDATE1 AND UPDATE2 discussed below.

(1) The greatest limitation as to the application of POLSYM is the data. Eto, et. al. (1979)'s data set has scores only for the early 1950s, the early 1960s, and the early 1970s. Thus, though the design of POLSYM can capture the change of political-economic system precisely if the date of change were given, the actual run of POLSYM can produce roughly three major changes.
change its status of enemy at all. If the country has no diplomatic relations, it is always considered antagonistic to the PRC.

To rewrite the above idea somewhat more precisely:

1. Receive the date of the occurrence of the current conflict/crisis/event.
2. If the date is before the independence of the country in consideration, the country's status is "indifferent actor".
3. If the date is within the first year after the establishment or reestablishment of the country's diplomatic relations with the PRC,
   (1) If the evaluation strategy is rigid, invoke FRIEND1
   (2) If the evaluation strategy is flexible, invoke FRIEND2
4. If the date is during the period when no diplomatic relations exist between the country and the PRC,
   (1) If the evaluation strategy is rigid, invoke FOE2.
   (2) If the evaluation strategy is flexible, invoke FOE1.
5. If other cases, the status is not transformed. (Same thing as invoking INDIF.)

The implication of the invocation of FRIEND1, FRIEND2, FOE1, and FOE2 can be interpreted as in the case of POLSYM.
(2) Determination of Balance or Imbalance of Actor Configuration

Once each country's status is updated, the configuration of the participants of the current case should be examined. This operation is performed by a routine called BALANCE. The BALANCE routine first examines whether the current case is a unilateral or collective event or a bilateral confrontation. It is noted that in either case multiple actors can participate. Signing of the nuclear test-ban treaty by the United States and the USSR (Case 175 in the CACI set), for example, is considered to be in the former category. The Korean War after the Chinese intervention (Case 21) is a bilateral confrontation with North Korea and the PRC on one side and South Korea and the United States on the other.

Then, the BALANCE routine checks whether the configuration of each side is balanced in Heider's sense. If the US and the USSR are both enemies in 1963, then the party configuration of CASE 175 is balanced with the two parties being enemies. In the case of the Korean War, the side of North Korea and the PRC is balanced with the two parties being friends and the side of South Korea and the US is balanced with the two parties being enemies. In this way, all cases are categorized into one of the twenty possibilities (Table 4-3). This category number is stored as the value of the variable called ASSESS, which is to be used in SITAMB1,
Table 4-3
Possible Party Configuration (ASSESS) of Conflict/Crisis/Event

<table>
<thead>
<tr>
<th>ASSESS</th>
<th>Side A</th>
<th>Side B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>all friends</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>all enemies</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>imbalance</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>all indifferent</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>all friends</td>
<td>all friends</td>
</tr>
<tr>
<td>6</td>
<td>all friends</td>
<td>all enemies</td>
</tr>
<tr>
<td>7</td>
<td>all friends</td>
<td>imbalance</td>
</tr>
<tr>
<td>8</td>
<td>all friends</td>
<td>all indifferent</td>
</tr>
<tr>
<td>9</td>
<td>all enemies</td>
<td>all friends</td>
</tr>
<tr>
<td>10</td>
<td>all enemies</td>
<td>all enemies</td>
</tr>
<tr>
<td>11</td>
<td>all enemies</td>
<td>imbalance</td>
</tr>
<tr>
<td>12</td>
<td>all enemies</td>
<td>all indifferent</td>
</tr>
<tr>
<td>13</td>
<td>imbalance</td>
<td>all friends</td>
</tr>
<tr>
<td>14</td>
<td>imbalance</td>
<td>all enemies</td>
</tr>
<tr>
<td>15</td>
<td>imbalance</td>
<td>imbalance</td>
</tr>
<tr>
<td>16</td>
<td>imbalance</td>
<td>all indifferent</td>
</tr>
<tr>
<td>17</td>
<td>all indifferent</td>
<td>all friends</td>
</tr>
<tr>
<td>18</td>
<td>all indifferent</td>
<td>all enemies</td>
</tr>
<tr>
<td>19</td>
<td>all indifferent</td>
<td>imbalance</td>
</tr>
<tr>
<td>20</td>
<td>all indifferent</td>
<td>all indifferent</td>
</tr>
</tbody>
</table>
SITAMB2, SUPPORT1, and SUPPORT2.

SITAMB1 and SITAMB2 evaluate the overall party configuration from the rigid and the flexible points of view respectively. Given the value of ASSESS, both routines decide whether (1) the case is balanced (AMB=0), (2) the case is not balanced with friends being confronted with each other (AMB=1), (3) the case is not balanced with enemies being confronted with each other (AMB=2), or (4) the case is not balanced because one or all group configurations are not balanced (AMB=3). SITAMB1 and SITAMB2 make different judgements as to the first (AMB=0) and the last (AMB=3) cases. Their precise productions are given as follows:

SITAMB1 (rigid):
If ASSESS = 5, then AMB = 1.
If ASSESS = 10, then AMB = 2.
If ASSESS = 3, 15, 16, or 19, then AMB = 3.
Else, AMB = 0.

SITAMB2 (flexible):
If ASSESS = 5, then AMB = 1.
If ASSESS = 10, then AMB = 2.
If ASSESS = 3, 7, 11, 13, 14, 15, 16, or 19, then AMB = 3.
Else, AMB = 0.

In other words, their difference lies in the way to handle the cases where ASSESS is 7, 11, 13, or 14 (See Table 4-3). These four are the cases where one of the two sides has unbalanced party configuration. The rigid actor (with SITAMB1) considers these cases clear enough to treat them similarly as the other balanced cases because the other side is composed of either friends or enemies. The flexible actor (with SITAMB2) says
the configuration of the confrontation is not balanced or clear. (He is not driven to "balance" the configuration because of a greater tolerance for contradictory complexity.)
(3) International and Domestic Contexts

After understanding the nature of the parties in the current conflict/crisis/event, CHINA_WATCHER proceeds to understand the contexts in which the current case occurs. In our idealtypical models of the realist and the revolutionary, the realist is assumed to attach more importance to the international context than the domestic context and the revolutionary is assumed to attach more importance to domestic contexts than international contexts. Let us start with the routines to examine the international context: INCON and INTHRT.

INCON searches in the memory state (i.e. all the inputs concerning the past cases) to find international conflicts which are still going on when the current case occurs. The necessity of this search is clear if one understands the fact that the decision makers have to cope not only with the current case but with unresolved conflicts which have not yet ceased to exist. It is especially important to see whether there exist very dangerous unresolved conflicts. For example, if there are critical conflicts at hand in which China has to deal with other superpowers, this situation should be distinguished from others. INTHRT is the routine in CHINA_WATCHER to determine whether the situation is dangerous or not. The following rule is used in it:
1. Check the following (2 to 6) for all the on-going cases selected by INCON unless the condition of 6 is satisfied.
2. Is the PRC an original party of the case?
3. Does the case occur in the PRC territory or in the PRC's sphere of interest?
4. Is the US or the USSR involved in opposition to the PRC's interests?
5. Is at least one of the following true?
   (1) Potential or actual nuclear confrontation is involved.
   (2) The PRC is engaged in actual combat.
6. If the answers to these questions (from 2 to 5) are all in the affirmative, then the international context is dangerous (ISOAV = 1) and exit.
7. If no on-going cases satisfies the condition of 6, then the international context is not dangerous (ISOAV = 0) and exit.

Next, let us turn to the routines to examine domestic contexts: DMCAMP and DMECST. DMCAMP is a routine to see if any domestic mobilization campaigns are on-going when the current case occurs. The data for this routine is the list of domestic campaigns discussed in Chapter 4 (Table 4-5). DMCAMP then determines the level of mobilization by the following formula.

\[
\text{MOBL} = \left( \# \text{ OF ON-GOING LOW MOBILIZATION CAMPAIGNS} \right) \\
+ 2\left( \# \text{ OF ON-GOING MEDIUM MOBILIZATION CAMPAIGNS} \right) \\
+ 4\left( \# \text{ OF ON-GOING HIGH MOBILIZATION CAMPAIGNS} \right) \\
+ 8\left( \# \text{ OF ON-GOING VERY HIGH MOBILIZATION CAMPAIGNS} \right)
\]

For the use in the precedent search routines, DMCAMP categorize MOBL into MOBT in the following way.
If $MOBL < 5$, then $MOBT = 1$ (LOW).
If $5 < MOBL < 10$, then $MOBT = 2$ (MEDIUM).
If $10 < MOBL < 15$, then $MOBT = 3$ (HIGH).
If $15 < MOBL$, then $MOBT = 4$ (VERY HIGH).

DMECST is a routine to determine the domestic economic situation of the year when the current case occurs. It uses the growth of the GNP, the agricultural production (AGP) index, and the industrial production (INP) index, all estimated by the CIA (1979). The following evaluation formula is used:

If GNP, AGP, and INP all grow positively,
then $DMSIT = 1$.
If GNP, AGP, and INP all grow negatively,
then $DMSIT = -1$.
Otherwise, $DMSIT = 0$. 
(4) Narrative Context

After determining the international and domestic contexts, CHINA_WATCHER searches the narrative context of the current case, i.e. an unfolding story, with the current case as its most recent episode. To construct a routine that generates an unfolding narrative, however, is not as easy as to program INCON or DMCAMP. INCON and DMCAMP have only to identify currently unfinished international conflicts and domestic campaigns respectively. But the NARRATIVE routine has to judge which previous case is the immediately preceding episode in a longer still unfolding story.

The current version of NARRATIVE performs this task by concentrating on the protagonists. It proceeds by:

(1) picking up the case which ended within a year before the current case takes place and in which at least one primary actor from each side of the conflict appears in the same side of the current case;

(2) choosing the next previous episode which ended within a year before the first preceding episode chosen above and in which the same actor condition is satisfied;

(3) repeating this procedure recursively until no further cases satisfy the search rules.
(5) Precedential Context

The final and most important component of CHINA_WATCHER's "understanding" of the situation is made through the routine, PRECEDENT, which searches precedentially similar cases in the memory state and determines the precedential context of the current case. There are several important and unresolved issues. First, we have to decide the variables which constitute precedentially relevant features of the present and the past situations. Second, we have to clarify and operationalize the concept of "similarity." Third, we need to examine what sort of learning and forgetting occurs. The current version of PRECEDENT is in no way perfect and definitive. But it shows one possible and hopefully promising way of answering these issues.

First, selection of variables. What variables one considers important to find precedents depends on one's frame of reference. In our case, we assume a realist uses different set of variables to select precedents from a revolutionary. Based on Table 1-1, I decided to use the following two sets of variables to represent the realist and the revolutionary framework.

Realist Framework:

1. Geopolitical Location (see Appendix 1)
2. Types of Events (see Appendix 1)
3. PRC participation as an original party (yes or no)
4. Party configuration (AMB derived by either SITAMB1 or SITAMB2)
5. Potential Nuclear confrontation (see Appendix 1)
6. International context (ISOAV derived by INTHRT)
7. Narrative context

Revolutionary Framework:

1. Type of Event (see Appendix 1)
2. Threats to Communist regimes/parties/movements (see Appendix 1)
3. PRC participation as an original party (yes or no)
4. Party configuration (AMB derived either by SITAMB1 or SITAMB2)
5. Domestic campaign mobilization (MOBT)
6. Domestic economic situation (DMSIT)
7. Narrative context

As the reader notices, all the routines described above in one way or the other influences the selection for precedents. In other words, the PRECEDENT routine is the culmination of the information processing in the CHINA_WATCHER simulation program. Since the narrative context cannot be represented in the form of discrete variables such as AMB, ISOAV, MOBT, and DMSIT, it influences the precedent selection through a special routine called NARRATIVE_MATCH, which will be discussed shortly.

Even if we selected the important variables, we cannot still program a routine to select relevant precedents unless we determine the concept of similarity and operationalize a similarity score. In the following, therefore, we would like to spend some time to review concepts of precedential similarity. The Alker-Christensen-Greenberg UN model tried three
different routines representing three different concepts of precedential similarity: LEX, MAX, and ROT (Alker and Christensen, 1972). CHINA_WATCHER adopts LEX and MAX, but tries MAXFMIN instead of ROT.

Let us start with MAX. This concept of precedential similarity seems almost mechanical. Suppose each case or conflict is described as

\[ C(i) = \{v_1, v_2, v_3, \ldots, v_n\} \]

where \(i\) is the case number and \(v_1, v_2, v_3, \ldots, v_n\) are the variables whose specified values constitute the conflict situation. MAX hypothesizes that two earlier cases \(C(j)\) and \(C(k)\) are equally similar to a current \(C(i)\) if the number of the variables characterizing \(C(j)\) which have the same values as \(C(i)\)'s corresponding variables is the same as that number of \(C(k)\). If, on the other hand, the number of variable "matches" between \(C(j)\) and \(C(i)\) is bigger than the number of \(C(k)\) to \(C(i)\) "matches," then \(C(j)\) is more similar to \(C(i)\) than \(C(k)\).

In set theoretic notation, if \(\{C(i) \cap C(j)\} = \{v_1, v_2, v_3\}\) and \(\{C(i) \cap C(j)\} = \{v_2, v_3, v_4\}\), then \(C(j)\) and \(C(k)\) are equally similar to \(C(i)\), even though the exact variables that are matched are different. If \(\{C(i) \cap C(j)\} = \{v_3, v_4, v_6, v_8\}\) and \(\{C(i) \cap C(k)\} = \{v_1, v_2\}\), then \(C(j)\) is more similar to \(C(i)\) than \(C(k)\). MAX, in sum, puts equal weight on each variable and does not give any order of importance to the set of variables considered relevant to similarity matching.

LEX, on the other hand, is a more restricted concept of
precedential similarity. LEX presupposes an ordered set of variables. In our notation, we must initially order variables so that v1 is more important than v2, v2 is more important than v3, and so forth. The matching procedure is done lexicographically. If, for example, \( \{C(i) \cap C(j)\} = \{v2, v3, v4, v5, \ldots \} \), C(i) and C(j) are still not similar because v1, the most important variable, does not match. Another example: if \( \{C(i) \cap C(j)\} = \{v1, v2, v3\} \) and \( \{C(i) \cap C(j)\} = \{v1, v2, v4, v5\} \), C(j) is more precedentially similar to C(i) than C(k) because v4, and v5 are irrelevant unless v3 matches. In other words, a preceding match variable is more important in LEX searching than all the following match variables put together. (If you use MAX in the last example, C(k) would be more precedentially similar to C(i) than C(j).)

Before turning to MAXFMIN, it is necessary to explain the concepts of MIN and FMIN. The MIN procedure specifies the minimum number of matches necessary for two cases to be judged to be similar. This procedure can be used in conjunction with either MAX or LEX. If it is used with MAX (MAXMIN), it has the following meaning. If the given MIN value is, say, three, then matches less than three, e.g., \( \{v1, v2\} \), \( \{v4, v5\} \), or \( \{v6\} \) mean nothing in terms of precedential similarity; they are just dismissed as not being similar. If MIN is used with LEX (LEXMIN), it signifies the following: if the MIN value is, let us say, three, total lexicographic matches less than three, like \( \{v1, v2\} \) and \( \{v1\} \) are disregarded. The FMIN pro-
procedure specifies the necessary variables to be matched for two cases to be judged similar. MIN applied to LEX is, in effect, FMIN because any minimum matches other than the matches in the first fixed number of variables has no significance by virtue of LEX procedure. Matches like \{v_3, v_4, v_5\} are not recognized as relevant not by the MIN part but by the LEX part of LEXMIN. To be relevant, matches should always include, say, \{v_1, v_2, v_3\}: minimum matches of fixed variables (FMIN).

The above discussion of MIN and FMIN leads us to MAXFMIN fairly easily. As the name indicates, MAXFMIN is MAX with an FMIN restriction. Since it is FMIN, the number of required matches of the fixed variables should be specified. Since it is MAX, it does not differentiate the rest of the variables in terms of importance. Suppose FMIN is \{v_1, v_2, v_3\}. Because of MAX, \{v_1, v_2, v_3, v_4\} is the same as \{v_1, v_2, v_3, v_6\} or \{v_1, v_2, v_3, v_7\}. If, on the other hand, LEXMIN is applied to these three examples, the first is higher in its similarity score than the other two. The latter two are, in LEXMIN, the same as \{v_1, v_2, v_3\}. The actual scoring procedure in CHINA_WATCHER is as follows:

1. If MIN is satisfied,
   then \( \text{SCORE} = 1 + (\text{# of additional matches}) \)
2. If MIN is not satisfied,
   then \( \text{SCORE} = 0 \)

Even though we can somehow choose one of the above procedures to obtain similarity scores, we have still other
issues to face. The first is whether to include in the preceding search the cases designated by NARRATIVE as the preceding episodes to the current case in a single unfolding story. In our formulation, since we assume that the logic used by policy-makers in searching narrative context differ from the logic used in precedent search we exclude the cases in the same narrative from the precedent search.

The next issue is how to deal with learning and forgetting. CHINA_WATCHER currently has three optional routines: FAILEVAL, SUCEVAL, and NOLEARN. The logic behind the first two learning procedures is: a candidate for precedent is more likely to be chosen if its result was non-failure in FAILEVAL (or success in SUCEVAL) than if it ended in failure in FAILEVAL (or non-success in SUCEVAL). This logic is exactly the same as the one used in the Alker-Cristensen-Greenberg UN model. The scoring procedure is also identical: add to the precedential similarity score an increment such that cases with a minimum match are considered precedentially "closer" than failure (or non-success) cases with matches on all search-directing variables.

As for forgetting, CHINA_WATCHER does more or less the same thing as the UN model. The failure (or non-success) case is forgotten with an exponential decay rate every year. The rate 1.33 means that the precedential similarity score of a failure (or non-success) case becomes $\frac{3}{4}$ of its value in the previous year. Another procedure is added to the above expo-
ential decay: non-failure (or success) cases become the same as failure (or non-success) cases after a specified number of unsuccessful precedential applications.

I have mentioned above that the narrative context determined by the NARRATIVE routine also influences the selection of precedents. I have stated that the routine called NARRATIVE\_MATCH does the job. Here is the place to describe it. NARRATIVE\_MATCH is invoked when the precedent searching routines above find multiple precedents. Even with learning and forgetting, it is quite possible to have more than one precedent. One strategy of designing may be to leave them as they are and accept them as constituting the precedential context. Our current strategy is to select further similar cases among those multiple cases and reduce the number of precedents if possible. To select further similar cases we use the narrative context of each candidate case selected by the above routines. The following is the way that NARRATIVE\_MATCH utilizes the narrative context to further reduce the size of the precedential context. (See Figure 4-4 for a hypothetical network of precedent candidates and their narrative context cases.)

1. Let the narrative cases of the current one NC(i), i=1, . . . , n(0), the candidate cases for precedents CP(j), j=1, . . . , m, narrative cases for CP(j), NCP(i,j), i=1, . . . \(N(j), j=1, . . . , m.\)

2. If NC(i) does not exist (i.e., n(0)=0, or the current case has no narrative cases), find CP(j) which has no narrative cases (i.e. n(j)=0) and call it a precedent of the current case.
3. Do the following (4 - 7) for i=1 to n(0) or 4 whichever the smallest.
4. Do the following (5 - 6) for all CP(j) left on the candidate list.
5. If n(j) < i, CP(j) is removed from the candidate list.
6. If NC(i) and NCP(i,j) do not meet the MIN criteria discussed above, CP(j) is removed from the candidate list.
7. If all CP(j) are removed from the candidate list, adopt the candidate list of the one before the last round as the precedent list and exit.
8. If some CP(j) are not removed from the candidate list after the 4 - 7 loop, adopt the final candidate list as the precedent list and exit.

Figure 4-4
Hypothetical Network of Precedent Candidates and Their Narrative Context Cases
(6) Decision Routines

Now that we have completed the part of "understanding," we proceed to the part of "decisions". As mentioned in the overview, CHINA_WATCHER predicts the following three types of decisions: the side to be supported, the level of verbal involvement, and the level of physical involvement. The first decision, the side of support, is predicted by SUPPORT1 or SUPPORT2 depending on whether the line is hard or soft. The latter two decisions, the level of verbal involvement and the level of physical involvement, are predicted by CHOICE1 or CHOICE2 again depending of whether the line is hard or soft. SUPPORT1 or SUPPORT2 predicts one out of the following five possibilities (PRESUP):

1. PRC supports side A.
2. PRC criticizes/accuses side A. (1)
3. PRC supports side B.
4. PRC indifferent.
5. PRC ambivalent.

The mechanism of prediction of either SUPPORT1 or SUPPORT2 is straightforward. The prediction is derived directly from ASSESS value produced in the BALANCE routine (see Table 4-3 again). The difference of SUPPORT1 (aggressive decision) and SUPPORT2 (cautious decision) is that of mapping ASSESS into

---

(1) This occurs only if the case is a unilateral or collective event.
PRESUP. The following are these two different mappings:

**SUPPORT1 (aggressive support decision):**

If ASSESS = 1, 6, 7, 8, 14, or 18, then PRESUP = 1.
If ASSESS = 2, then PRESUP = 2.
If ASSESS = 9, 11, 12, 13, or 17, then PRESUP = 3.
If ASSESS = 4 or 20, then PRESUP = 4.
Otherwise, PRESUP = 5.

**SUPPORT2 (cautious support decision)**

If ASSESS = 1, 6, 8, or 18, then PRESUP = 1.
If ASSESS = 2, then PRESUP = 2.
If ASSESS = 9, 12, or 17, then PRESUP = 3.
If ASSESS = 4 or 20, then PRESUP = 4.
Otherwise, PRESUP = 5.

The level of verbal involvement and the level of physical involvement are predicted according to the CACI categories of verbal involvement and physical involvement discussed in Appendix 1. The level of verbal involvement has two categories:

1. simply note the existence of the crisis;
2. go beyond simply noting the existence of the crisis.

The level of physical involvement has five categories:
(1) Uncodable (no physical involvement).
(2) Actions short of combat; no details available.
(3) Actions short of combat; no military personnel in crisis area.
(4) Actions short of combat; military personnel in crisis area.
(5) Combat involving military personnel.

The decision mechanism of verbal or physical involvement crucially depends on the precedents selected by the PRECEDENT and other related routines. We assume that the precedents offers the range of plausible options for the PRC decision makers. If only one precedent exists, the current version of CHINA_WATCHER considers the action taken by the PRC in the precedent to be the most plausible option for the PRC in the current case too; thus, it predicts that the PRC will do the same action as in the precedent. In this type of single precedent cases, the aggressive-cautious difference does not affect the prediction. Even when multiple precedents are selected, if the PRC did the same action in all these precedents, there is no room for the decision strategy difference; CHINA_WATCHER predicts that the PRC will do the same action as in the precedent.

The aggressive and cautious difference affects the decision only when multiple precedents exist and the PRC's action in these precedents are not the same. CHOICE 1 and CHOICE2 answer what action the PRC will take in these circumstances from aggressive and cautious perspectives respectively.

CHOICE1 selects the strongest action in the range of
actions that the PRC did in the precedents; CHOICE2 selects the weakest action in the range of actions that the PRC did in the precedents. This mechanism is applied to both predictions of the level of verbal involvement and the level of physical involvement.
(7) Update of Amity-Enmity Status of Participants

After these decisions are made, CHINA_WATCHER updates the participants' statuses based on the fact that they participated in the current conflict/crisis/event on one side against the other. This task is performed by UPDATE1 or UPDATE2 depending on the evaluation strategy. As the reader may remember, POLSYM evaluates each country by its political-economic system and DIPREL evaluates it by its diplomatic relations with the PRC. UPDATE1 and UPDATE2 evaluate it by its participation in international conflicts. The rough operations of UPDATE1 and UPDATE2 are as follows:

UPDATE1 (rigid update)

1. If ASSESS is either 1, 6, 7, 8, 14, or 18, then for countries on side A, invoke FRIEND1, for countries on side B, invoke FOE2.
2. If ASSESS is either 2, 9, 11, 12, 13, or 17, then for countries on side A, invoke FOE2, for countries on side B, invoke FRIEND1
3. If ASSESS is either 4 or 20, then for all parties, invoke INDIF.
4. Otherwise, for all parties, invoke AMB_H.

UPDATE2 (flexible update):

1. If ASSESS is either 1, 6, 8, or 18, then for countries on side A, invoke FRIEND2, for countries on side B, invoke FOE1.
2. If ASSESS is either 2, 9, 12, or 17, then for countries on side A, invoke FOE1,
for countries on side B, invoke FRIEND2.

3. If ASSESS is either 4 or 20,
   then for all parties, invoke INDIF.

4. Otherwise,
   (1) If the PRC is not involved, for all parties, invoke AMB_S.
   (2) If the PRC is involved, then for the countries on the same side of the PRC, invoke FRIEND2,
       for the countries on the other side, invoke FOE1.

The statement 4 under UPDATE2 suggests that even flexible actors tend to consider those countries to have exhibited friendly action if they are ambivalent but participated in an ambivalent confrontation situation on the same side with the PRC.

Finally, we have reached the end of one round of CHINA_WATCHER. After finishing either UPDATE1 or UPDATE2, CHINA_WATCHER is ready to accept the next conflict/crisis/event. In this way, CHINA_WATCHER processes the 385 cases from the CACI data set one by one sequentially. Now it is in order to see how several different combinations of routines, i.e. different models, work with actual data. This is the topic of the next section.
3. Results of Simulations

As the previous section shows, different models can be represented as different combinations of routines. One of the most important issues in this section is how to select better models. The strategy adopted in this thesis is as follows: (1) Since friend/enemy evaluation updates and support side decisions are made without being affected by involvement decisions, we first attempt to find better models which generate better support side predictions and plausible changes in China's amity-enmity world map; (2) Since involvement decisions are affected by friend/enemy evaluation updates, we secondly use the models selected in the first stage and examine variations of these selected models in terms of their prediction accuracy of the involvement level. In the following, therefore, we first examine different models' performance as to their evaluation of each country in terms of amity and enmity. Second, using the model thus selected, we shall see how a typical case is processed step by step. Plausibility of discrete processing of a concrete case is the issue at this stage. Third, we shall evaluate the overall performance of different models in terms of prediction accuracy. And finally, we shall examine the performance of different models by different periods in terms of prediction accuracy so as to see whether character changes occur over different periods.
(1) Updates of Amity-Enmity Map and Support Decision

As Figure 4-3 shows, POLSYM, DIPREL, UPDATE1, UPDATE2, FRIEND1, FRIEND2, FOE1, FOE2, AMB_H, and AMB_S are involved in updates of the PRC's amity-enmity world map. SUPPORT1 and SUPPORT2 predict which side in a conflict the PRC will support. In addition to the eight pure models, two mixed models are examined in this subsection. They are:

1 Model REV/RIG/AG
2 Model REV/RIG/CAU
3 Model REV/FLEX/AG
4 Model REV/FLEX/CAU
5 Model REAL/RIG/AG
6 Model REAL/RIG/CAU
7 Model REAL/FLEX/AG
8 Model REAL/FLEX/CAU
9 Model REV/MIX/AG
10 Model REAL/MIX/AG

We reproduce in Figure 4-5 the relevant routines and the connecting rules from Figure 4-4 and add "mix" routines.

Model REV/MIX/AG and Model REAL/MIX/AG require justification; they are different from others in that they use MIX instead of RIG or FLEX assumption in their evaluation strategies. The implication of this change is this: in the RIG specification (in which FRIEND1, FOE2, and AMB_H are used), once a country is categorized as an "enemy", it cannot become a "friend" no matter what it does afterward; it can become an "ambivalent actor" at most; in the MIX specification (in which FRIEND2, FOE2, and AMB_H are used), an enemy can be-
Figure 4-5
Structure of Models to be Tested in Their Accuracy in Updates of Amity-enmity Map and in Prediction of the Side to be Supported
come a "friend" if it shows friendly behavior twice in a row.

The support side prediction accuracy of each model is listed in Table 4-4. The prediction accuracy is shown as the percentage of correct prediction. As described in the previous section, each model has to predict one out of the five possibilities: (1) PRC supports side A, (2) PRC criticizes/accuses side A, (3) PRC supports side B, (4) PRC indifferent, (5) PRC ambivalent. Since a random prediction would predict 20% correctly, Model REV/FLEX/CAU and Model REAL/FLEX/CAU did even worse than a random predictor. The other six models achieved far better performance than a random predictor. But for further examination, I choose the two better models from the side of revolutionary models and the two

<table>
<thead>
<tr>
<th>Model</th>
<th>Accuracy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REV/RIG/AG</td>
<td>72</td>
</tr>
<tr>
<td>REV/RIG/CAU</td>
<td>54</td>
</tr>
<tr>
<td>REV/FLEX/AG</td>
<td>46</td>
</tr>
<tr>
<td>REV/FLEX/CAU</td>
<td>14</td>
</tr>
<tr>
<td>REAL/RIG/AG</td>
<td>80</td>
</tr>
<tr>
<td>REAL/RIG/CAU</td>
<td>59</td>
</tr>
<tr>
<td>REAL/FLEX/AG</td>
<td>60</td>
</tr>
<tr>
<td>REAL/FLEX/CAU</td>
<td>13</td>
</tr>
<tr>
<td>REV/MIX/AG</td>
<td>62</td>
</tr>
<tr>
<td>REAL/MIC/AG</td>
<td>80</td>
</tr>
</tbody>
</table>
from the side of realist models: Model REV/RIX/AG, Model REV/MIX/AG, Model REAL/RIG/AG, and Model REAL/MIX/AG.

Our second criterion to evaluate models in this section is how each model categorizes each country into a friend, an enemy, an ambivalent actor, or an indifferent actor. (1) We would like to know how each model's amity-enmity world map is updated and see if it changes plausibly. There is some troublesome problem, however. In the case of support side prediction, we can check whether the model's prediction is accurate or not by matching the actual support side of the PRC. But plausibility of updates of amity-enmity world map cannot be matched with the actual amity-enmity world map of the decision makers of the PRC. We cannot calculate the percentage of success. Therefore, for this examination, the reader and the present author's intuitive understanding of Chinese foreign policy cannot help playing an important part.

Figure 4-6 to Figure 4-9 shows the time-series changes of the numbers of friends, enemies, and ambivalent actors in these four models. The difference of the structural specifications of RIG and MIX is revealed in the number of "friends" and "ambivalent actors". Many ambivalent actors in

(1) Logically, this should be the first criterion because the support side decision is made after the categorization of all countries into friends and enemies. The reason we treat this as the second criterion is mostly a practical one. As we mention in the text, there is not ready summary measure in this criterion. Thus, we eliminate some models using the prediction accuracy of the support side decision so that we can intensively study limited number of models.
Figure 4-6
Update of Amity-enmity Map of Model REV/RIG/AG

# of Friends

# of Enemies

# of Ambivalent Actors
Figure 4-7
Update of Amity-enmity Map of Model REV/MIX/AG
Figure 4-8
Update of Amity-enmity Map of Model REAL/RIG/AG

# of Friends  # of Enemies
---  # of Ambivalent Actors
Figure 4-9
Update of Amity-enmity Map of Model REAL/MIX/AG

- # of Friends
- # of Enemies
- # of Ambivalent Actors
Model REV/RIG/AG and Model REAL/RIG/AG are categorized as "friends" in Model REV/MIX/AG and Model REAL/MIX/AG. A great leap occurred in 1960 in the number of enemies in the revolutionary models (Model REV/RIG/AG and Model REV/MIX/AG). (1)

The clear difference between the revolutionary models (Figure 4-6 and Figure 4-7) and the realist models (Figure 4-8 and Figure 4-9) is seen in the number of enemies in the 1970s. In the realist models, the number of enemies declines sharply in the 1970s, while no such declines occur in the revolutionary models. This difference is attributed to the fact that many countries established diplomatic relations with the PRC in the early 1970s. (Remember that it was 1971 when the PRC gained the U.N. seat.) The realist models, because of the structure of DIPREL, reflect this increase of diplomatic relations in the form of the decline of enemies, while the revolutionary models, because of the structure of POLSYM, cannot or will not use this information. It should be noted that the decrease of enemies is compensated by the increase of ambivalent actors in Model REAL/RIG/AG but it is compensated by the increase of friends in Model REAL/MIX/AG.

The comparison of these four models in terms of Figures

(1) This jump is perhaps an artifact caused by the way our political-economic systems are scored. As discussed in the previous section, the scores are updated only three times, the early 1950s, the early 1960s, and the early 1970s. If we could use annually updated scores, we would have obtained more gradual changes than in Figure 4-6 and Figure 4-7. But since even in realist models a leap occurs in 1960, possible bias may not be so big.
4-6 to 4-9 seems to suggest the superiority of the realist models. But as mentioned before, we have no firm grounds for this judgement. (1) Thus, a further examination in more detail seems in order. This time, departing from aggregate patterns in changes of the numbers of friends, enemies, ambivalent actors, let us examine the changes of statuses of some specific countries over the thirty year period. Figures 4-10 to 4-14 show the status changes of five countries according to the four models. The five countries, the USSR, India, Albania, Yugoslavia, and Tanzania, are chosen because the evaluation of these countries seems to suggest the crucial attitude of the PRC in many fields.

Figure 4-10 shows inadequacy of Model REV/MIX/AG's assignment of the USSR's position. It is highly improbable for the PRC to consider the USSR a friend in the late 1960s to the 1970s. Model REAL/MIX/AG seems to be the best in the evaluation of the USSR. But arguments for other models can probably be made fairly plausibly. India's position is evaluated more or less similarly by all four models, though Model REAL/MIX/AG's assignment of India as a "friend" in 1950 seems to show its superiority given the fact that the PRC used India as an intermediary to send messages immediately before the Korean War (see Whiting, 1960). Albania's position is not evaluated satisfactorily by any of the four models. Model

(1) The fact the realist model seems plausible to us may merely reflect that our intuitive model is closer to the realist models.
Figure 4-10
USSR's Status in Amity-enmity Maps of Four Models

Model REV/RIG/AG

Model REV/MIX/AG

Model REAL/RIG/AG

Model REAL/MIX/AG

friend
amb
enemy
friend
amb
enemy
friend
amb
enemy

49 55 60 65 70 75 78
Figure 4-11
India's Status in Amity-enmity Maps of Four Models

friend
amb
(indif)
enemy

friend
amb
(indif)
enemy

friend
amb
enemy

friend
amb
enemy

Model REV/RIG/AG
Model REV/MIX/AG
Model REAL/RIG/AG
Model REAL/MIX/AG

49 55 60 65 70 75 78
Figure 4-12
Albania's Status in Amity-enmity Maps of Four Models

Model REV/RIG/AG

friend
amb
enemy

friend
amb
enemy

Model REAL/RIG/AG

friend
amb
enemy

Model REAL/MIX/AG

friend
amb
enemy

49  55  60  65  70  75  78
Figure 4-13
Yugoslavia's Status in Amity-enmity Maps of Four Models

- Model REV/RIG/AG
- Model REV/MIX/AG
- Model REAL/RIG/AG
- Model REAL/MIX/AG

Years: 49, 55, 60, 65, 70, 75, 78
Figure 4-14
Tanzania's Status in Amity-enmity Maps of Four Models

friend
amb (indif)
enemy
friend
amb (indif)
enemy
friend
amb (indif)
enemy
friend

Model REV/RIG/AG

Model REV/MIX/AG

Model REAL/RIG/AG

Model REAL/MIX/AG

49 55 60 65 70 75 78
REAL/RIG/AG is unacceptable among others. It considers Albania an "enemy" from late 1960s to the 1970s, when Albania seemed to be one of the few vocal supporters of the PRC. In the case of Yugoslavia, though no satisfactory models exist, Model REV/MIX/AG is unacceptable, given the changes of the Chinese attitude toward Titoism. In the case of Tanzania, Model REAL/RIG/AG is unacceptable because it does not reflect the fact that cooperation with Tanzania has long been the symbol of the PRC's diplomacy with the Third World.

Throughout this examination, Model REAL/MIX/AG seems to be the best model; it predicts support sides 80% correctly and gives fairly plausible pictures of changes in the amity-enmity world map. In the examination of the five countries' statuses changes, Model REAL/MIX/AG presents the most plausible picture, though not perfect. Model REV/RIG/AG is not as good as Model REAL/RIG/AG in its support prediction. But it seems to give better picture in the 5-county examination. Model REV/MIX/AG and Model REAL/RIG/AG presents unacceptable trace of status changes of important countries. Therefore, in the next subsection, we shall examine Model REV/MIX/AG, Model REAL/RIG/AG and their variants.
CHINESE
INTERNATIONAL CONFLICT BEHAVIOR
1949 - 1978

Volume II

by

AKIHIKO TANAKA

B.A., University of Tokyo
(1977)

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE
DEGREE OF

DOCTOR OF PHILOSOPHY

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

September 1981

© AKIHIKO TANAKA 1981

The author hereby grants to M.I.T. permission to reproduce
and to distribute copies of this thesis document in whole or
in part.

Signature of Author

Department of Political Science
July 20, 1981

Certified by

Hayward R. Alker, Jr.
Thesis Supervisor

Accepted by

Hayward R. Alker, Jr.
Chairman, Departmental Graduate Committee
(2) Context Understanding and Involvement Decisions -- A Concrete Case Example

Through the examination of updating of amity-enmity maps and support side decision, we have selected Model REV/RIG/AG and Model REAL/MIX/AG for further examination. To review, Model REV/RIG/AG uses the revolutionary framework and rigid mechanisms to updates its amity-enmity map and the aggressive strategy to decide the PRC's support side in each case. Model REAL/MIX/AG uses the realist framework and mixed (MIX) mechanisms to update its amity-enmity map and aggressive strategy to decide the PRC's support side in each case. As we proceed to the part of understanding various contexts and involvement decisions, we should consider variants of Model REV/RIG/AG and Model REAL/MIX/AG. Why further variants? Because we have many more options to specify to complete the whole structural specification. In PRECEDENT, we should specify many options such as the precedent search rules, learning rules, and forgetting rate. Also, we can think of mixed mechanism in the decision strategy. We already knew that the aggressive strategy works better in the support decision. But the cautious strategy may work better in the involvement decision. In addition to the two pure models in terms of the decision strategy, (1) we should examine two mixed models. To

(1) "Pure" here means that the same strategy is used in all decision mechanism. Model REAL/MIX/AG is already a "mixed"
clarify this difference, we introduce another convention to refer to different models:

The two "pure" models are referred to as
Model REG/RIG/AG-AG and
Model REAL/MIX/AG-AG.

The two mixed models are referred to as
Model REG/RIG/AG-CAU and
Model REAL/MIX/AG-CAU.

In other words, AG-AG in the last slot represents that the aggressive strategy is used both in the support side decision (i.e. SUPPORT1 is invoked) and the involvement decisions (i.e. CHOICE1 is invoked); AG-CAU represents that the aggressive strategy is used in the support side decision but the cautious strategy is used in the involvement decision (i.e. CHOICE2 is invoked). A complete specification of these four models and options in the precedent search routines are given in Figure 4-15.

In this subsection, we shall examine how a single concrete case is processed step by step by each model. In this type of simulation, it is at least as interesting and important to see how each discrete case is treated by the program as it is to examine overall aggregate prediction statistics.

A case chosen in this exercise is Case 193, the Vietnam War after the Gulf of Tonkin Incident. The full description of this case in the CACI data set is given in Appendix 1 (Figure A1-1). First, let us see how Model REV/RIG/AG-AG and Mod-

---

model in terms of the evaluation strategy but a "pure" model in this section if it uses the aggressive strategy in the involvement decision too.
Figure 4-15

Structure of Four Selected Models

POLSYM ----------------- DIPREL
| FRIEND1                | FRIEND2
|------------------------|------------------------
| FOE2                   | FOE2

BALANCE
| SITAMB2

DMCAMP
| DMESCST

NARRATIVE
| PRECEDENT
| FMN
| FAILEVAL
(forgetting rate =1.33)
(NO. of failure to invalidate success = 2)
(lower threshold of precedent score = .5)
(maximum number of precedent = 5)
NARRATIVE MATCHE
| SUPPORT

CHOICE1
| UPDATE2

FRIEND1
| AMB'H

--- Model REV/RIG/AG-AG --- Model REAL/MIX/AG-AG
--- Model REV/RIG/AG-CAU --- Model REAL/MIX/AG-CAU
el REV/RIG/AG-CAU process this case. We treat the two models together because they are identical except for the selection of the involvement decision routine (CHOICE1 or CHOICE2).

After receiving this case, CHINA_WATCHER with Model REV/RIG/AG-AG or Model REV/RIG/AG-CAU first updates the amity-enmity world map using POLSYM with FRIEND1 and FOE2, then it finds that the primacy actors are North Vietnam on the one side and the United States and South Vietnam on the other side. It also finds that the secondary actors are the USSR and the PRC on North Vietnam's side and South Korea and other countries on the other side.

Then, CHINA_WATCHER finds each actor's status in the amity-enmity map. At the time of this incident, the updated amity-enmity map of these revolutionary models says that North Vietnam, the USSR and other countries are ambivalent actors, that the United States, South Vietnam, and South Korea are enemies, and that the PRC is a friend (of course). It is odd to find that North Vietnam is considered an "ambivalent actor" in 1964. It is because FRIEND1 is being used in POLSYM. In other words, in Model REV/RIG/AG-AG and Model REV/RIG/AG-CAU, once an enemy is considered an enemy, it can never be a friend again. North Vietnam became an enemy because of Case 4 CHOW WARNS NEIGHBORS NOT HARBOR KMT BANDIT TROOPS (1) in 1949. Because of this somewhat insignificant case and because of

(1) As in Appendix 1, short case descriptions in capital letters are the CACI's.
FRIEND1, North Vietnam can never become a friend within these revolutionary models. (1)

In any case, CHINA_WATCHER then examines the participants configuration. The side of North Vietnam is not balanced. The side of South Vietnam is not balanced either. Thus, this is a case in which ASSESS value is 15 (confrontation between ambivalent valued groups). By SITAMB1, the AMB value is determined as 3.

By checking the attributes of the CHINA_WATCHER finds that this is a war, that a communist regime is threatened, and that the PRC is an original party. These attributes will be used in the precedent search.

The next procedure is to find domestic contexts. CHINA_WATCHER finds seven domestic campaigns going on at this time. They are:

22 Aid Agriculture
23 Learn from the PLA
24 Socialist Education
25 Train Revolutionary Successor Generation
26 Learn from Tachai
27 Learn from Taching
28 Study and Apply Chairman Mao's Thought (2)

(1) If the reader thinks that everything will be solved by either changing FRIEND1 to FRIEND2 or by taking away Case 4, the reader should be reminded that things are not so easy. As we have already seen in the previous subsection, putting FRIEND2 in POLSYM makes Model REV/MIX/AG, which we have rejected as inadequate. The change may work well for this particular case, but it probably causes more troubles in others. Taking away inconvenient cases to save a model may not be called a good practice of social or any other sciences.

(2) The numbers and the names are taken from Figure 3-5, originally from Cell (1977).
The level of mobilization is medium in all campaigns. Thus, MOBL is 14 (= 7*2*2) and MOBT is 2 because MOBL < 15. The domestic economic situation in 1964 is good (DMSIT = 1) with the GNP rising 16%, the AGP rising 5% and the INP rising 27%.

In this case, CHINA_WATCHER could not find its narrative context cases.

Based on all the above findings, CHINA_WATCHER now searches the precedents of this case. To repeat, the following variables are used in the revolutionary models. (The narrative context is omitted.)

1. Type of Event
2. Threats to Communist regimes/parties/movements (yes or no)
3. PRC participation as an original party
4. Party configuration
5. Domestic Campaign Mobilization
6. Domestic Economic Situation

In our current models, the first three variables constitute the FMIN. Their values should be the same if two cases are to be judged similar.

With the above criteria, there are six cases which satisfy the FMIN condition. They are:

6. 1950 PLA-KMT Armed Conflict Continues; Hainan Island Is Liberated
7. 1950 KMT Air Attacks on PRC Coastal Cities, Causes Severe Damage
21. 1950 PLA Aids DPRK in Routing U.S. Rhee Invaders; War Ends
24. 1951 Mao Claims US scheming to Occupy DPRK; invade PRC Mainland
44. 1954 US Aids KMT War Against PRC; PLA Seizes Islands
164. 1952 Indian Armed Forces Attack PRC; USSR/US Support
INDIA

Cases 6, 7, 21, 24, and 164 have one more match in addition to FMIN MATCHES. Thus their scores before learning and forgetting are 2s. Case 44 has only FMIN matches; its score before learning and forgetting is 1. Case 7 has unfavorable results to the PRC. Thus, it was being forgotten at the forgetting rate, 1.33 a year. By 1964, its score become 0.04. On the other hands, the other cases are non-failures. Thus their final scores are arrived by adding 4. The cases attaining highest scores are Cases 6, 21, 24, and 164. Since we have multiple precedent candidates, NARRATIVE_MATCH is invoked. The current case has no narrative context cases. So CHINA_WATCHER tries to find cases with no narrative context cases but finds that these four candidates have all their narrative context cases. In other words, NARRATIVE_MATCH cannot tell which is more similar to the current case. Thus, all four cases constitute the precedential context of Case 193, the Vietnam War after the Gulf of Tonkin incident.

Now that understanding is finished, let us move on to the decision mechanisms. As for the support decision, both Model REV/RIG/AG-AG and Model REV/RIG/AG-CAU use SUPPORT1. Since ASSESS is 15 (confrontation between ambivalent valued groups), PRESUP IS 5 (PRC ambivalent), which turns out incorrect. The PRC always supported the side of North Vietnam in the Vietnam War. As for the involvement decisions, Model
REV/RIG/AG-AG uses CHOICE1 and Model REV/RIG/AG-CAU uses CHOICE 2. CHOICE1 chooses the stronger options within the range of options suggested by the precedents; CHOICE2 chooses the weaker options within the same range. Let us see what the PRC did in the four precedents. In all cases, the PRC went beyond just noting the existence of the crisis. In Cases 6, 21, and 164, the PRC was engaged in combat. And in Case 24, it is coded that the PRC's involvement was actions short of combat; military personnel in crisis area. Thus, Model REV/RIG/AG-AG predicts that the PRC will go beyond noting about this incident and that the PRC will be engaged in combat; Model 1S predicts that the PRC will go beyond noting about this incident and that the PRC's involvement will be action short of combat with military personnel in crisis area. It turns out that Model REV/RIG/AG-CAU is correct in this case.

Next, let us see the process of the realist models, Model REAL/MIX/AG-AG and Model 8S. CHINA_WATCHER with these models first updates the amity-enmity world map too. It has to evaluate the same participants as in the revolutionary models: North Vietnam, the USSR, and the PRC on the one side and the U.S., South Vietnam, South Korea, and others on the other side. These realist models assign more plausible statuses to the participants than the revolutionary models; North Vietnam and the PRC are friends and all the others are enemies including the Soviet Union.
The BALANCE routine, this time, concludes that the ASSESS value is 14 (confrontation between an ambivalent group and enemies). With SITAMB1, CHINA_WATCHER judges that this case is clear (AMB = 0). The attribute important to the realist models are examined; the geopolitical location of this case is the sphere of the PRC interest; the type of event is war; the PRC is an original party; and a potential nuclear confrontation is involved.

Since the models are realist, CHINA_WATCHER checks the international context. It finds fifteen on-going international conflicts/crises/events: Cases 57, 108, 111, 117, 135, 166, 173, 179, 182, 184, 186, 188, 190, 191, 192. Though many cases are going on, none of them is dangerous enough to pose a serious threat to the PRC. INTHRT thus concludes that ISOAV is 0. The narrative context cases are not found.

As in the revolutionary models, let us list the variables to be used in the precedent search:

1. Geopolitical Location
2. Type of event
3. PRC participation as an original party.
4. Party configuration
5. Potential or Actual Nuclear Confrontation
6. International Context

The first three variables constitute the FMIN. Somewhat surprisingly, exactly the same cases which pass the FMIN criteria of the revolutionary models pass the FMIN criteria of the realist models: Cases 6, 7, 21, 24, 44, and 164. But their
scores are different. Case 21 has one more matches than the FMIN matches; Cases 6, 7, 24, 164 has two more matches than the FMIN matches; Case 44 has the complete matches. After learning and forgetting, Case 44, the first Taiwan Straits crisis of 1954, has the highest similarity score (SCORE = 8). Since there is only one precedent, NARRATIVE_MATCH is not invoked.

Then, what will be the decisions of the realist models. The support side is decided by SUPPORT1. Since ASSESS is 14, PRESUP is 1 (PRC supports side A), which turns out correct. As for the involvement decisions, since there is only one precedent, Model REAL/MIX/AG-AG and Model REAL/MIX/AG-CAU give the same prediction. They predict that the PRC will go beyond noting the existence of the crisis and that the PRC's physical involvement will be combat. Since the PRC was not engaged in combat in the Vietnam War, the later prediction (postdiction) is incorrect.

The above exercise shows that our four models could present fairly plausible skeleton-like picture of the international conflict as viewed by the PRC decision makers. However, they are in no way perfect. The revolutionary models (Model REV/RIG/AG-AG and Model REV/RIG/AG-CAU) are inadequate in assigning the statuses to the participants in the conflict and fail to predict the support side correctly. The realist models are very accurate in this respect. But they fail to predict the physical involvement correctly. Also, the selec-
tion of the first Taiwan Strait Crisis as the precedent of the Vietnam War does not fit the conventional understanding of the China experts.

On the other hand, the selection of precedents in revolutionary models seems to have the ring of truth. In fact, Renmin Ribao's "Observer" used the Korean analogy when he says, "People can still remember clearly how the U.S. war of aggression in Korea was expanded. The Johnson administration is taking the same old road" (July 22, 1965, translated in Peking Review, July 30, 1965: 10-11). Whiting (1975), for example, compares the Chinese behavior toward the Vietnam War with its behavior in its war with India and in the Korean War.

In sum, our models with rigorously specified operations achieved moderate success in revealing the nature of the Vietnam War viewed from China. It goes without saying that the description and prediction of our models cannot match the richness and subtlety of such case studies as Zagoria (1967, 1968), Ra'anana (1968), and Gurtov and Hwang (1980). But given the explicitness, simplicity (or simple-mindedness?), and rigor (or rigidity?) of our models with very limited data base, the moderate success presented here is significant. It is hoped that this moderate success suggests that we are on the right track to capture the essence of wisdom of the wise experts, which they have not (or could not) make explicit.
(3) Context Understanding and Involvement Decisions -- Overall Results of Different Models

The reader may have wondered which of the four models then performs the best among themselves. In the example of the Vietnam War, this issue is inconclusive. We cannot judge the overall performance of a model by just examining a single case. We have to turn to the overall prediction success rate. Table 4-5 shows the prediction success rate and the \( \nabla_p " \) (del-p) values of the four models. The prediction success rate is the percentage of the correct prediction over the total cases whose precedents are found. (The cases in which no precedents are found are "passed".) The \( \nabla_p \) is a statistic to evaluate discrete value prediction (see Hildebrand, Laing, and Rosenthal, 1974a, 1974b, 1975, 1976, 1977). The \( \nabla_p \) value is affected not by correct predictions but by bad predictions. (1)

As Table 5-5 show, overall Model REAL/MIX/AG-CAU does the best in terms of values and Model REV/RIG/AG-CAU does the second best. In other words, in both revolutionary and realist models, the cautious decision procedure (CHOICE2) predicts better than the aggressive procedure. This finding is interesting particularly in comparison with the finding s about the support side decision. In support side decision, the aggres-

(1)
(d)
\[ \nabla_\phi = 1 - \frac{\sum \sum w_{ij} p_{ij}}{\sum \sum w_{ij} p_i \cdot p_j} \]

where the cell probabilities are:

\[
\begin{array}{cccc}
P_{11} & P_{12} & P_{1j} & P_{1m} \\
\hline
P_{21} & P_{22} & P_{2j} & P_{2m} \\
\hline
\vdots & \vdots & \vdots & \vdots \\
\hline
P_{i1} & P_{i2} & P_{ij} & P_{im} \\
\hline
P_{n1} & P_{n2} & P_{nj} & P_{nm} \\
\hline
P_1 & P_2 & P_j & P_m \\
\end{array}
\]

and the weights schedule is:

\[
\begin{array}{cccc}
w_{11} & w_{12} & w & w_{1m} \\
\hline
w_{21} & w_{22} & w_{2m} & \\
\hline
w_{n1} & w_{n2} & w_{nm} & \\
\end{array}
\]

We use the following weight schedule:

\[
\begin{array}{cccccc}
0 & 1 & 2 & 3 & 4 \\
\hline
1 & 0 & 1 & 2 & 3 \\
2 & 1 & 0 & 1 & 2 \\
3 & 2 & 1 & 0 & 1 \\
4 & 3 & 2 & 1 & 0 \\
\end{array}
\]


Table 4-5

Accuracy of Four Models in Prediction of Verbal Involvement and Physical Involvement

<table>
<thead>
<tr>
<th></th>
<th>Verbal Inv.</th>
<th>Physical Inv.</th>
<th>Total cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\psi$</td>
<td>$\psi$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Model REV/RIG/AG-AG</td>
<td>.203</td>
<td>.528</td>
<td>341</td>
</tr>
<tr>
<td></td>
<td>79</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Model Rev/RIG/AG-CAU</td>
<td>.288</td>
<td>.597</td>
<td>341</td>
</tr>
<tr>
<td></td>
<td>77</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Model REAL/MIX/AG-AG</td>
<td>.178</td>
<td>.514</td>
<td>345</td>
</tr>
<tr>
<td></td>
<td>79</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Model REAL/MIX/AG-CAU</td>
<td>.294</td>
<td>.630</td>
<td>345</td>
</tr>
<tr>
<td></td>
<td>77</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

The results of the procedure (SUPPORT1) show far better performance regardless the frame difference. In sum, our findings suggest that the PRC is rigid in recognition of friends and enemies and aggressive about which side in a conflict to support. But when it comes to involvement, the PRC is cautious, particularly in physical involvement.

What about the difference of the frame? Is the PRC more realistic than revolutionary? Or the other way around? Table 4-5 suggests that the PRC is more realistic than revolutionary. But before being tempted to conclude the victory of the realistic models, let us consider the possibility of oscillations. In Chapter 4, we find a fairly long cycle in the structure generating the PRC's aggregate involvement level. Can we find
a similar cycle? After many experiments, it is found that periodization shown in Table 4-6 contrasts the relative performance between Model REV/RIG/AG-CAU and Model REAL/MIX/AG-CAU. This Table shows that the revolutionary model with cautious involvement decision mechanism does better in the periods from 1949 to 1953, from 1957 to 1958, from 1968 to 1969, and from 1974 to 1976 and that the realist model with cautious involvement decision mechanism does better in 1954 to 1956, from 1959 to 1967, from 1970 to 1973, and from 1977 to 1978.

To conclude this chapter, let us review our findings in terms of our original issues discussed in Chapter 1. First, the frame of reference of the Chinese decision makers. Our result suggests that oscillations occurred on this dimension. In other words, the revolutionary framework and the realist framework took turns over the 30 year period from the establishment of the People's Republic. Second, the strategies to cope with uncertainty. The first dimension in this category is the strategy to cope with uncertainty in evaluation and understanding of amity-enmity relations. On this dimension, the rigid, hard-line evaluation strategy and the mixed evaluation strategy took turns corresponding to the framework changes. This oscillation on this dimension is the consequence of the fact that in our finally selected models, the rigid, hard-line strategy coincides the revolutionary framework and the mixed,
Table 4-6
Performance of Model REAL/MIX/AG-CAU and Model REV/RIG/AG-CAU over Different Periods

<table>
<thead>
<tr>
<th></th>
<th>REAL/MIX/AG-CAU</th>
<th>REV/RIG/AG-CAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \nabla_{q} )</td>
<td>( % )</td>
<td>( % )</td>
</tr>
<tr>
<td>49 - 53</td>
<td>-0.184</td>
<td>55</td>
</tr>
<tr>
<td>54 - 56</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>57 - 58</td>
<td>0.444</td>
<td>90</td>
</tr>
<tr>
<td>59 - 67</td>
<td>0.292</td>
<td>84</td>
</tr>
<tr>
<td>68 - 69</td>
<td>0.069</td>
<td>62</td>
</tr>
<tr>
<td>70 - 73</td>
<td>0.165</td>
<td>59</td>
</tr>
<tr>
<td>74 - 76</td>
<td>0.285</td>
<td>64</td>
</tr>
<tr>
<td>77 - 78</td>
<td>0.702</td>
<td>92</td>
</tr>
</tbody>
</table>
pragmatic strategy is coincides the realist framework. The second dimension in this second category is the strategy to cope with uncertainty in decision. We found that different mechanisms are in operation in the support side decision and the involvement decision. In either case, however, oscillations did not take place. In the support side decision, the Chinese have consistently been aggressive whereas in the involvement decision, they have been cautious. In a sentence, the image of Chinese international conflict behavior supported by this simulation exercise is this:

The Chinese have been oscillating between the rigid, hard-line evaluation strategy within the revolutionary framework and the mixed, pragmatic evaluation strategy within the realist framework but they have been consistent in their aggressive strategy for taking sides and in their cautious involvement decision strategy.

It goes without saying, however, that this results is not the final word. This attempt is rather a beginning of refinement and sophistication of rigorous examination of Chinese international conflict behavior. Many issues remain unresolved. As the attentive reader may have already wondered, one of the important and immediate issues is how to relate the results we obtained in Chapter 3 and the results stated above. There is no definite answer for this. But we try to reconcile these two results in the next concluding chapter. In addition some other important issues will be discussed.
CHAPTER 5

CONCLUSION
The main task set in this thesis was to explore and empirically test several theories of the structure which generates the international conflict behavior of the People's Republic of China from 1949 to 1978. For this purpose, we first surveyed the literature to find major categories of the images of China held mainly by western China experts as an international actor. The first category was the frame of reference of the Chinese decision makers. The second was the strategy to cope with uncertainty, which was further divided into (1) the strategy to cope with uncertainty in evaluation and (2) the strategy to cope with uncertainty in decision. The third category concerned the dynamics or changes of Chinese foreign policy. Whether or not oscillations occurred and whether or not China's domestic situation had an impact on Chinese international conflict behavior were the main themes in this category.

Then, we examined two traditions of representational forms for translating theoretical hypotheses into testable forms: the tradition of the general linear model and that of information processing. We found that the former is suited to represent theories which can be interpreted as sets of linear mapping from the current inputs into the current outputs. We found that the latter can handle theories which can be expressed as complex sets of intermediate rules and procedures for processing current inputs. We concluded that the contending views concerning the frame of reference and the
strategy of Chinese international conflict behavior are best represented as sets of rules and procedures, thus amenable to the treatment in the information processing tradition.

But to utilize the power of the general linear model to test the response patterns and their changes especially at an aggregate level, we decided to construct a model in the tradition of the general linear model to examine the aggregate input-output patterns of Chinese international conflict behavior, mainly focusing on the influence of the domestic situation on the international conflict behavior. In other words, before constructing micro models representing alternative plausible hypotheses about the frame of reference and various uncertainty management strategies, we decided to examine what kind of macro patterns would emerge at an aggregate level. In this macro analysis, we found that two different structure of aggregate response patterns took turns over the 30 year period. The first structure appears from 1950 to 1957, and from 1977 to 1978; the second structure appear from 1958 to 1976. We pointed out that these two break points correspond to the beginning of the Great Leap Forward and the death of Mao Zedong and down fall of the Gang of Four.

In Chapter 4, we proceeded to construct various micro models to represent contending views in terms of the frame of reference and the strategies to cope with uncertainty. Based on their respective rules, they predict the decisions to be taken by the PRC in each of the 385 conflict and event cases
in the CACI data set. It is found in this exercise that cycles involving two different models occurred over the 30 year period. Model REV/RIG/AG-CAU performed better in the periods from 1949 to 1953, from 1957 to 1958, from 1968 to 1969, and from 1974 to 1976. Model REAL/MIX/AG-CAU performed better in the periods from 1954 to 1956, from 1959 to 1967, from 1970 to 1973, and from 1977 to 1978. (1) To repeat our conclusion in Chapter 4,

The Chinese have been oscillating between the rigid, hard-line evaluation strategy within the revolutionary framework and the mixed, pragmatic evaluation strategy within the realist framework but they have been consistent in their aggressive strategy for taking sides and in their cautious involvement decision strategy.

Several important issues still remain unanswered. Among them, probably the most important and the immediate issue is how we relate the findings in Chapter 3 and the findings in Chapter 4, i.e. what is the link between the results of the application of the general linear model and that of information processing modeling. In concrete terms, a major issue is how to evaluate the two different periodizations we derived from the two different modeling traditions.

(1) Model REV/RIG/AG-CAU is the model in which the frame of reference is revolutionary, the amity-enmity evaluation strategy is rigid, the strategy of support-side decision is aggressive, and the strategy of involvement decision is cautious. Model REAL/MIX/AG-CAU is the model in which the frame of reference is realist, the amity-enmity evaluation strategy is mixed, the strategy of support-side decision is aggressive and the strategy of involvement decision is cautious.
The summary comparison between these two periodization is given in Figure 5-1. A definitive answer will not be given in this thesis. But I shall try to clarify the issue and offer a partial accommodation between the two approaches.

Within the tradition of the general linear model, this issue has been studied fairly extensively under the heading of "aggregation". (1) But most works discuss the relations between macro-equations and micro-equations, both of which have similar functional forms (e.g. linear functions). Our problem is immensely more complicated; the functional forms are radically different and some of the variables are not directly comparable. Thus, and analytical solution of this particular case may be extremely difficult and not pursued in this thesis.

One possible position of this issue is that we do not have to worry about relating these two different findings because they are found on different levels of aggregation. We have to accept these two as they are. The dependent variables in our model in Chapter 3 are the annual level of Chinese perception of international tension and the annual level of Chinese involvement in international conflicts. The dependent variables in our information processing models in Chapter 4 are (1) the side to be supported, (2) the level of verbal involvement, and (3) the level of physical involvement in a specific and discrete international conflict/event/crisis.

(1) A brief summary is given in Maddala, 1977: 207-217.
Figure 5-1

CHINA_WATCHER and GLM Results Compared

<table>
<thead>
<tr>
<th>CHINA_WATCHER Results</th>
<th>GLM Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1949 REV/RIG/AG-CAU</td>
<td></td>
</tr>
<tr>
<td>1953</td>
<td></td>
</tr>
<tr>
<td>1954</td>
<td></td>
</tr>
<tr>
<td>1956 REAL/MIX/AG-CAU</td>
<td></td>
</tr>
<tr>
<td>1957 REV/RIG/AG-CAU</td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td></td>
</tr>
<tr>
<td>1967 REAL/MIX/AG-CAU</td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td></td>
</tr>
<tr>
<td>1969 REV/RIG/AG-CAU</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td></td>
</tr>
<tr>
<td>1973 REAL/MIX/AG-CAU</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td></td>
</tr>
<tr>
<td>1976 REV/RIG/AG-CAU</td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>SAME AS 1949 - 1957</td>
</tr>
</tbody>
</table>
These two sets of dependent variables represent phenomena on the different levels of analysis. Thus, according to this view, there is no problem at all if we find different periodizations in terms of their respective structural parameters.

According to this view, therefore, if one is interested in the annual level of Chinese international conflict involvement, one does not have to worry about whether the Chinese are realist or revolutionary, rigid or flexible in evaluation, or aggressive or cautious in decision. All one has to consider are the level of Chinese perception of international tension, the level of domestic campaign mobilization and the domestic economic situation. In other words, on this aggregate level, no concern is necessary as to the Chinese frame of reference and her strategy to cope with uncertainty. After aggregation, regularity in the relations among more "objective" variables "emerges". On the other hand, if one is interested in the prediction of Chinese behavior in each specific case, one has to rely on information processing models, in which one has to assume what type of frame of reference and strategies are used by the Chinese decision makers.

Another possible position is that the macro behavior should be able to be reduced to some sort of summation of micro behavior. According to this view, what we found in our information processing models is more fundamental than the results we found in Chapter 3. In other words, the periods
derived from the CHINA_WATCHER simulation exercise are more basic and the aggregate patterns captured by the general linear model are something generated by the basic changes occurred in the information processing system of Chinese foreign policy decisions.

Both views cannot be proved. It may also be possible to propose a practical mixed view claiming that some phenomena "emerge" on the aggregate level but some others can be reduced to some summation of disaggregated phenomena. But, then, we wonder what parts are emerged and what parts can be reduced in what way.

In any case, we could not give final judgement on this issue. Instead, we probe whether it is possible to obtain as good a fit as the result of the regression model by aggregating the prediction of verbal and physical involvement made by the information processing model. In other words, we try to examine whether the micro model can predict aggregate phenomena as accurately as the macro model. (1) As the reader may remember, the annual level of Chinese international con-

---

(1) As we pointed out in Chapter 3, it seems statistically very difficult to obtain micro prediction by disaggregating the macro model as long as we are in the tradition of the general linear model.
Conflict involvement is measured as

\[
(INVOLVEMENT \text{ IN INTERNATIONAL CONFLICTS})_t = \left(\frac{\# \text{ OF NO PHYSICAL INVOLVEMENT; JUST NOTING}}{\# \text{ OF NO PHYSICAL INVOLVEMENT; BEYOND NOTING}}\right)_t + 2 \times \left(\frac{\# \text{ OF ACTIONS SHORT OF COMBAT; NO DETAIL}}{\# \text{ OF ACTIONS SHORT OF COMBAT; NO MILITARY}}\right)_t + 4 \times \left(\frac{\# \text{ OF ACTIONS SHORT OF COMBAT; NO MILITARY}}{\# \text{ OF ACTIONS SHORT OF COMBAT; MILITARY}}\right)_t + 16 \times \left(\frac{\# \text{ OF COMBAT}}{\# \text{ OF COMBAT}}\right)_t
\]

Thus, we construct the annual predicted level of Chinese international conflict involvement by the model chosen in Chapter 4, a combination of Model REV/RIG/AG-CAU and Model REAL/MIX/AG-CAU, each of which is used in its respective periods. Since many cases have no precedents and are "passed" in the first 5 years, we plot the annual level of involvement and the annual predicted level of involvement from 1955 to 1978 in Figure 5-2. This figure shows that the fit is very good. In fact, \(R^2\) in this model is .83, which is at least as good a fit as the final involvement equation in Chapter 3 \((R^2 = .80)\). (1) What this exercise demonstrates is that our micro model can explain the annual level of involvement, a macro variable, fairly satisfactorily by aggregating the discrete predictions. This fact of course does not prove the victory of the information processing tradition. But it does suggest that we could not still exclude the possible correctness of

(1) Strictly speaking, comparison in terms of \(R^2\) is not appropriate because the degrees of freedom in the CHINA_WATHER simulation model is hard to calculate.
Figure 5-2
Actual and Predicted Levels of Chinese International Conflict Involvement

Legend:
- - - - - - Actual Annual Level
- - - - - - - - Predicted Annual Level
the view that the micro structure specified as a set of processing rules and procedures is more fundamental than the macro structure expressed as a set current input-output patterns. The indefinite nature of this discussion suggests the necessity of further sophistication and refinement in our modeling efforts in both traditions.

Next, let us proceed to another issue unanswered in this thesis: what produced the structural shifts in both of the modeling attempts? This issue is connected with the above issue. If one believes the view that the micro model is more fundamental, then one has to ask what caused the shifts in the micro structure. If one believes that the macro and the micro model should be treated separately, then one has to ask what caused changes in each. In any case, this issue involves a construction of a meta-theory to explain structural shifts, which was well beyond the scope of this thesis.

Instead of attempting a full-fledged meta-theory, here we restrict ourselves to discuss a very brief sketch of possible meta-theory. For this purpose, we deals only with a meta-theory to explain shifts in micro-structure. A meta-theory should be either an internal oscillation mechanism or a mechanism through which external factors cause the changes, or both. Without details, let us discuss both possibilities. First, internal oscillation mechanism. Since very few attempts have been made to construct a theory to explain character changes or oscillations endogenously, let us
speculate a model probably implicitly held by a fair number of China-watchers. This is a model of realist-revolutionary oscillations.

The first axiom: The more a country is involved in the international system, the more it has to conform to the "rules of state behavior," i.e. realist mode of framework and behavior; otherwise it is punished by the system, i.e. international difficulties arise (see Waltz, 1979: 116-128).

The second axiom: The People's Republic of China is a Marxist-Leninist country, thus, it has to pursue Marxist-Leninist policy even internationally; otherwise legitimation crises arise internally.

Given these two axioms, if one starts with revolutionary policy, then by axiom 1, international difficulties arise. To reduce them, one has to take a realist posture; then by axiom 2, legitimation crises arise, and to alleviate them, revolutionary policy is adopted and the cycle is completed.

Second, external factors. Probably the most promising approach is factional politics. In other words, the microstructure of international behavior changes because leaders in charge of foreign policy or entire national policy changes as a result of factional struggle. In this sort of effort, we have to specify what type of faction has what type of foreign policy view. If we can specify the dynamic mechanism of the factional conflict and the ascendancy and fall of particular factions, we can construct not just a model to explain foreign policy changes but a model to explain internal as well as ex-
ternal politics of the PRC endogenously. (1)

The third and final issue is more specific: the adequacy of the CHINA_WATCHER simulation program. The current CHINA_WATCHER scheme uses a precedent logic as the dominant logic for understanding the situation and for generating plausible decision options. The narrative context search is not fully utilized in the option selection. Since the narrative context is an unfolding story with two or more protagonists, the lack of an important role for the narrative context search in option selection means that the current scheme has limited mechanisms for handling multi power strategic interactions.

The current CHINA_WATCHER does not have routines to create the image of the other actor (e.g. its nature, its decision makers frame of reference, their strategies), the image of the other's image of China, and so forth. The attentive reader may recall that Gamson and Modigliani (1971) discussed in Chapter 2 contains this type of mechanism, though very simple one. (2)

Even in the realm of the precedent search, our choice of

(1) In the field of Chinese politics, Nathan (1973) is the first attempt to clarify the nature of factional politics in fairly rigorous terms. Gottlieb (1977) is an impressive attempt to explain the Sino-Soviet conflict in the late 1960s in terms of factional politics. Pye (1980) is a most recent attempt to reformulate a model to understand Chinese politics from the perspective of factional politics. Riker (1962) is a classic rigorous attempt to formulate a theory of coalition building based on a theory of factional proto-coalition dynamics.

(2) Alperson, 1975, 1977 and Lefebvre, 1977a, 1977b discuss formal representational forms in this type of situation.
FMINT as a procedure to determine similarity is not definitive. Very recent Artificial Intelligence works such as Winston (1979) and Schank (1980) seem relevant in this respect.

Despite the above issues and limitations, this thesis succeeded in producing empirical results about Chinese international conflict behavior as summarized in the first half of this chapter and in presenting examples of applications of the general linear model and information processing in understanding Chinese foreign policy. As the above discussion suggests, many issues are to be further explored, more conceptual clarity is required, and more sophistication of methods is necessary. But this thesis, like others, should end somewhere. As Abraham Kaplan has said, "no inquiry is in fact concluded; it is only terminated" (1965: 217).
APPENDIX 1

CACI DATA SET AND CHINESE INTERNATIONAL CONFLICT BEHAVIOR
In any serious attempt to understand any phenomenon empirically, systematically collected data are essential. No matter how elaborate our substantive conceptualization is, no matter how sophisticated our methodological understanding is, we cannot conduct an empirical examination of reality without systematically collected data.

But what do we mean by "systematically collected data"? Tautologically, they mean data collected according to some system. Then, what kind of system? Ideally, it should be based on the categorization of one's substantive conceptualization of the phenomena. The data should be collected to represent the substantive concepts one has created to understand the phenomenon.

In practice, one cannot always collect data in this fashion. Often, data collection is very costly and time consuming. (1) And one sometimes has to depend on the existing data set collected according to some other system which may not be perfectly corresponding to one's categorization. This study has this problem. I use the Chinese crisis management data set, collected by CACI, Inc. for the U.S. Defense Department, as a basic data set. Though the existence of this problem is undesirable, it is in some sense

---

(1) To understand this, it is sufficient to point out how costly and time-consuming it is to create everyday statistics such as the gross national product, the population, etc. Also, it is noted that most economists, for example, do not gather data by themselves; they usually use the data gathered by some national agencies and others.
unavoidable. Even the data set that one creates by oneself cannot represent one's substantive categorization perfectly. Operationalization can rarely be perfect. The important thing is the degree of correspondence between the framework of the data set and the substantive categorization.

We cannot wait until the perfect data set is created. In fact, a better substantive theory, a better methodology, and a better data set could not be created in one just waits for perfection of each component on its own. We can improve these three components only through interacting them constantly and carefully. We have to start from somewhere.

In this appendix, therefore, I would like to examine the CACI data set of the Chinese crisis management. For this purpose, it is inevitable to give descriptive characteristics of the Chinese international conflict behavior which the CACI data set allows us to draw.
1 CACI Data Set

Our basic data set is CACI's list of major international crises of concern to the People's Republic of China, 1949-1978. Detailed description of this data set and some descriptive discussion of the Chinese behavior is given in CACI (1979, 1980). It lists 385 events and characterizes each event according to some 30 attributes. (1) To compile this list, the following objectives were pursued:

(1) To identify crises as perceived by Chinese observers in order to obtain a Chinese perspective on the PRC's crisis management experience, and

(2) To develop an inventory of Chinese crises and attendant data on their characteristics in a form compatible with previous data files developed by CACI dealing with U.S. (1978a) and Soviet (1978e) crisis behaviors and concerns so as to facilitate comparison. (CACI, 1979: 2-16).

Official Chinese sources are used to identify the crises of concern to the People's Republic of China. (2) To provide ba-

---

(1) The original data set contained 386 cases. Since there is one duplication, I delete it from the data set. CACI expanded their data set by adding cases from 1979 to 1980 after we started this project. Thus we use their data set as of 1979. For the expanded data set, see CACI (1980).

(2) As to the reliability of Chinese sources, see CACI (1979): 2-18 - 19. "It is important to remember that one of the foreign audiences to whom the Chinese attempt to communicate through those media are the Communist parties and movements in
sic information to characterize each case, both Chinese sources and Western sources are used. Since Western sources are also used, deliberate or unintentional misrepresentations of events are avoided. The following are the major official Chinese sources:

(1) Periodicals (*Peking Review* and *People's China*);
(2) Speeches in the Communist Party's National Congresses;
(3) Chinese books and Pamphlets dealing with international events;
(4) Chronologies published by the Chinese. (1)

The CACI project team use the following definition and operational criteria to identify events.

**Definition:** Events involving foreign nations (internal or international), involving conflict (violent or nonviolent), significant trends, and "structural" changes that might negatively affect Chinese political-military interests, and that are cited in certain classes of Chinese sources.

**Operational Criteria:**

(1) All cases in which China was directly involved
and/or expressed considerable interests were included.

(2) Cases in which the Chinese were likely to have at least a strong indirect interest were always included if at least one of three conditions held:
- States along or near the Chinese border were involved
- Communist parties or regimes were involved
- Overseas ethnic Chinese were parties to the incidents.

The 32 descriptors used to characterize each case are listed in Table A1-1. Each descriptor has several categories. For the complete codebook of the data, see Appendix 2. The entire list of events and the raw data for them are also reproduced in Appendix 3 and Appendix 4 respectively. Figure A1-1 is an example of how each case is described in this categorization scheme.

Although this representation is a radical simplification of reality, it can hold far more richness of each event than Omate's, Ashley's, and Gamson and Modigliani's. Thus, as a data set, it is very flexible. The user can treat each case as a discrete event. It is also possible to make several different aggregations for different purposes.

The selection of the crises. This CACI data set, however, is not completely faultless for our purpose, particularly in consideration of our substantive discussion in Chapter 1.
Table A1-1
Descriptors Characterizing Cases in the CACI Data Set

1. Record identifier
2. Initiation date of crisis
3. Termination date of crisis
4. Crisis duration
5. Crisis location by JCS Region
6. Geopolitical location
7. Character of events
8. Scope
9. Level of violence
10. Strategic confrontation
11. Perceived threat to Communist Party/Regime/Movement
12. Actor mix
13-22. Key individual actor codes
   a = USSR
   b = U.S.
   c = Other western countries
   d = India
   e = Taiwan
   f = Japan
   g = Vietnam
   h = Other South East Asia
   i = Indonesia
   k = Korea
23. Chinese verbal involvement
24. Chinese physical involvement
25. Geographic involvement
26. Consolidated involvement
27. Chinese objective with respect to in-theater supported set
28. Chinese objectives with respect to in-theater opposed set
29. Chinese crisis management capabilities
30. Crisis outcomes for the PRC
31. Crisis outcomes for Chinese clients/allies
32. Crisis outcomes for politics of interest to PRC
Figure A1-1
Example of Case Description of the CACI Data Set

CRISIS DURATION
1964 TONKIN INCIDENT LEADS US TO SNOW TRIPS TO VN, SAIGON FALLS
Extra long (1 year)

CRISIS LOCATION BY JCS REGION
South East Asia (Vietnam, Cambodia, Thailand, Burma, Laos)

GEO-POLITICAL LOCATION
States along PRC border

CHARACTER OF EVENTS
Actual/perceived/successful

TYPE OF EVENTS
War (declared or undeclared)

SCOPE
International

LEVEL OF VIOLENCE
Violent events -- people injured/killed/seized

STRATEGIC CONSEQUENCES
Potential

SECONDARY INFLUENCE TO LMMNST PARTIES/AGG/NUMNT
Physical survival threatened

ACTION ID
Two or more large powers involved (USSR, U.S., PRC only)

PRECONDITION
PRC interests not involved, but PRC does approve what this player is doing

NOTES
Perceived by the PRC to be a key player, in opposition to PRC interests

NOTES
Not perceived by the PRC to be a key player

NOTES
Not perceived by the PRC to be a key player

NOTES
Not perceived by the PRC to be a key player

NOTES
Perceived by the PRC to be a key player, in support of PRC interests

NOTES
Perceived by the PRC to be a key player, in opposition to PRC interests

NOTES
Not perceived by the PRC to be a key player

NOTES
Perceived by the PRC to be a key player, in opposition to PRC interests

NOTES
Beyond notice, existence of crisis

NOTES
Actions short of combat: military personnel in crisis area

NOTES
PRC directly involved in crisis as major player

OBJECTIVES AE IN-THEATER SUPPORTED SET
Restore status quo ante

OBJECTIVES AE IN-THEATER OPPOSED SET
Oppose efforts to preserve BDA

MILITARY CAPABILITIES
Nonliable/highly limited

OUTCOMES FOR PRC
Mixed -- in functional sense

OUTCOMES FOR CLIENT/S ALLIES/ALLIES
Favorable

OUTCOMES FOR PLS OF INTEREST TO PRC
Not applicable
Since the crises are identified though the Chinese official sources, deliberate omission of some sensitive and important crises may be possible. The CACI project team argued that since "the focus of this project is primarily upon aggregate patterns, this is not a major concern" (CACI, 1979: 2-19 - 20). This, however, poses a considerable problem for our purpose because this work is concerned not only with aggregate patterns but also with the belief systems whose effects on individual cases are very important. If the omission of a certain case is just caused by indifference on the part of the PRC decision makers, the problem is not serious. But if the omissions are deliberately made for some political purposes, our inference of the belief systems based on the data set not including the omitted cases can be very biased. Therefore, ideally we have to supplement important cases which the PRC public media did not mention to the CACI data set. For this study, however, this supplement is not made, mostly because of the cost and time involved. Without conducting systematic and exhaustive search, it seems that the CACI list includes almost all important event for the PRC form 1949 to 1978. The reader can check this observation by examining the case names and trends discussed in the next section of this chapter.

Variable selections for characterizing events. As we have examined in Chapter 1, the friend-enemy distinction is very important in the first dimension (revolutionary vs. realist) as well as the second and the third dimensions (rigid
vs. flexible and aggressive vs. cautious). In other words, actor specification is very important. The CACI data set lacks this. Although it has a variable of actor mix (variable 12) and key individual actor codes (variables 13-22), what our substantive framework requires is a concrete list of the actors participating in each event. The CACI's variable 12 (actor mix) has six categories: (1) domestic, (2) two or more large powers involved, (3) large/middle power mix, (4) large/small power mix, (5) middle/small power mix, (6) small/small power mix. But this does not suggest whether the current event is a confrontation between one's friend and one's enemy or that between one's enemy and one's enemy. Furthermore, since the distinction between friends and enemies are made differently by different systems, it is not advisable to have the fixed descriptor to suggest the actor mix according to friend/enemy distinction. What we need are the actual names of the actors in each event. For this purpose, I coded primary actors and secondary actors in each crisis from the brief descriptions of all crises in CACI (1979: Chapter 3) and added these to the CACI data set. This actor list for all 385 events is reproduced in Appendix 5. Also, the code numbers and names of all possible actors are listed in Appendix 6. Also added are each actor's independence status (when it became independent -- Appendix 7), each actor's diplomatic relations with the PRC (Appendix 8), and indices describing the political-economic system of each actor (Appendix 9). How
these added data are utilized are described in Chapter 4.

Also lacking are the variables indicating the domestic conditions of the PRC. As discussed in the third section of Chapter 1, domestic conditions are frequently considered very important in understanding the Chinese international conflict behavior. Thus, I compiled a list of domestic mobilization campaigns from Cell (1978) and Wang (1980)'s lists and decided to use the CIA's estimate of China's agricultural production index. These two data are discussed in detail in Chapter 3.

With these additions to the CACI data set, our entire data set gives fairly accurate basis for our empirical understanding. In the next section, we shall see what kind of behavioral patterns will emerge out of the CACI data set with simple descriptive techniques.
2 A Description of Chinese International Conflict Behavior

As examined in the previous section, the CACI data set can be used fruitfully for our purpose. But abstract discussion as in the previous section may not be convincing to some readers. In this section, therefore, I would like to describe the Chinese perception and behavior of international conflicts from 1949 to 1978 using the CACI data set and very simple descriptive techniques. In fact, the following description was made prior to the modeling attempts in Chapter 3 and Chapter 4. In other words, it was a preliminary to the modeling attempts reported in the text. We first examined Chinese perception of international conflicts and other events in the following order: distribution over time, geopolitical distribution, types of events, and superpower involvement. Next, we examine Chinese involvement.
(1) Distribution over Time

Let us start with Figure A1-2, which represents the overall yearly frequency of crises going on in each year. This frequency plot is different from CACI's (CACI, 1979: 4-6). CACI's figure represents the yearly frequency of new crisis occurrences. This difference is important. In Figure A1-2, if one crisis continues to exist for, say, two years, it is counted in both years. I believe that this figure gives a more accurate representation of Chinese perception of on-going crises. If one counts the number of conflict events which occurred for each year, some years can become very low in frequency while in fact there were many on-going crises. Thus, we used this plot as CHINESE PERCEPTION OF THE LEVEL OF INTERNATIONAL TENSION in Chapter 3.

Now, looking at Figure A1-2, one finds many ups and downs. Generally, the period from 1949 to 1957 is low, the period from 1958 to 1969 is high, and the 1970s is medium. The average frequency from 1949 to 1957 is 13.75, that from 1958 to 1969 is 22.58 and that from 1970 to 1978 is 20.88.
Figure A1-2
Chinese Perception of Level of International Tension
(2) Geopolitical Distribution

The next question is in which area of the world the Chinese find more conflicts, crises and important events. Table A1-2 shows the distribution over areas. Not surprisingly, the Chinese paid more attention to the incidents occurred in the neighboring areas of the PRC; the first five categories, which more or less constitute Chinese sphere of influence, occupies 59%. (1) Among these neighboring areas, the present PRC territory and the states along the PRC border have almost

(1) This may have much to do with the criteria of choosing the cases. The criteria have definitely a bias toward the incidents occurring in the neighboring areas. See the previous section.
the same shares. The other three have more or less the same amount. Former Chinese territories include Central Asia, Far East, Taiwan, etc. Other Chinese territorial claims include Spratleys, Paracels, Senkakus, Assams, North East India, etc. States with large Chinese population include Thailand, Malaysia, Indonesia, and Singapore.

It is not surprising that the category of other Third World states occupies 30 percent. Within this category, the largest is sub-Saharan Africa, 29 percent, and the second is Middle East, 20 percent. The interest on the Western hemisphere is very low. Only 16 cases are recorded. (Not all 16 cases are included in the category of other Third World states because the incidents occurred in the U.S. and Canada were also included in these 16 cases.)

It is more interesting to see the distribution over time for each category. For this purpose, I have constructed a series of special graphs, given in Figure A1-3. (1) When we examined Figure A1-2 in the previous section, I explained the counting method of frequencies; the same counting method is used in this and the following figures, too. But the method can be understand more easily by examining Figure A1-3 than Figure A1-2. For example, in the first figure in Figure A1-3, PRESENT PRC HOMELAND, the bottom row gives the year, the second row from the bottom shows the frequency for each year, and

---

(1) These figures are printed out by the data retrieval computer system CRLS which I wrote specially for the CACI data set.
Figure A1-3 (continued)

**States with Large Chinese Population — 26 Cases**

<table>
<thead>
<tr>
<th>State</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Third World States — 116 Cases**

<table>
<thead>
<tr>
<th>State</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Soviet Border States — 9 Cases**

<table>
<thead>
<tr>
<th>State</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other States (West, etc.) — 31 Cases**

<table>
<thead>
<tr>
<th>State</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the numbers above are all specific case identification numbers. (Appendix 3 contains these id numbers and the names of the cases.) Thus, the figure shows that in 1949 case 1, the Chinese Civil War leading to the establishment of the PRC, and case 3, the USSR's pressure on the PRC to conform, were going on in the present PRC territory. Case 3 continued to exist in 1950. So, it appears on the 1950 column, too. Some cases lasted very long. In the figure of STATES ALONG PRC BORDER, for example, case 193, the Vietnam War, lasted from 1964 to 1975; it and other long lasting cases are pushed to the bottom of the case columns by my method of putting the newer cases (with higher id numbers) on top of other older cases. In other words, these figures show aggregate overall patterns as well as the identities of the cases included in the specified categories. Even the longevity of certain conflicts is indicated.

By inspecting Figure A1–3, interesting observations can be gained which may not be obtained from Table A1–2. One such overall pattern is that there was decline in the categories of immediate geopolitical concern to the PRC in the 1970s whereas conflicts in remote areas have obtained more attention since the early 1960s. PRESENT PRC HOMELAND and FORMER CHINESE TERRITORIES reveal the former tendency. OTHER SOVIET BORDER STATES, OTHER THIRD WORLD STATES, and OTHER STATES (WEST, ETC.) show the latter tendency. STATES ALONG PRC BORDER is in between the two tendencies and is more closer to the overall
distributional patterns in Figure A1-2. In other words, the Chinese paid (had to pay) more attention to the conflicts immediately affecting the PRC in the 1950s and 1960s. From 1960s on, the Chinese began to pay more attention to events in remote areas. The 1970s saw a decline in the number of crisis events geopolitically very immediate to the PRC. In other areas, no such sharp decline was observed.

This shift of attention, to be sure, reflects actual changes in the international environment. As a state established in 1949 after the lengthy civil war, the PRC had to settle the remaining crises and conflicts rooted in the civil war. The high frequencies in the early 1950s in the category of PRESENT PRC HOMELAND and FORMER CHINESE TERRITORIES are mostly attributed to this historical situation. Any revolutionary regime has to set its house in order in its early period.

A very sharp increase of attention to the Third World crises in late 1950s and early 1960s can also be attributed to the actual changes in the Third World. It is sufficient to note that most of the states in Africa achieved their independence after 1960 through severe struggles against or negotiations with colonial powers. If a necessary condition for a world power is mindfulness of the incidents occurred all over the world, even in the remotest place, the PRC was taking the road to become one in late 1950s and early 1960s. (Mindfulness, of course, is not a sufficient condition.)
(3) Types of Events

Basic categories and distribution of types of events are given in Table A1-3. The most frequent category is CONFLICT SHORT OF WAR/FOREIGN INTERVENTION. These first five categories more or less suggest domestic origins of events whereas the latter four suggest international origins. The

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Cases ( % )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous domestic trends/events</td>
<td>39(10)</td>
</tr>
<tr>
<td>Riot, other civil disorder</td>
<td>48(13)</td>
</tr>
<tr>
<td>Uprising, revolt, insurgency</td>
<td>24( 6)</td>
</tr>
<tr>
<td>War of national liberation</td>
<td>21( 5)</td>
</tr>
<tr>
<td>Coup d'etat</td>
<td>19( 5)</td>
</tr>
<tr>
<td>Structural change*</td>
<td>49(13)</td>
</tr>
<tr>
<td>Border incident</td>
<td>67(17)</td>
</tr>
<tr>
<td>War (declared or undeclared )</td>
<td>22( 6)</td>
</tr>
<tr>
<td>Conflict short of war/foreign intervention</td>
<td>96(25)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>385(100)</strong></td>
</tr>
</tbody>
</table>

* Structural change includes shift in political alignment, formation/dissolution of alliance, and dangerous international trends/events.

The former occupies 39 percent and the latter, 61 percent. This table does not show change in each category over time. Thus, Figure A1-4 is prepared in the same way as Figure A1-3. The three categories, RIOT, OTHER CIVIL DISORDER, STRUCTURAL CHANGE, and CONFLICT SHORT OF WAR/FOREIGN INTERVENTION, display somewhat similar patterns; they increased in the 1960s
and subsided in the 1970s. WAR shows very different pattern, almost inverse one. The pattern of WAR OF NATIONAL LIBERATION is further different; its frequency increased in the 1960s but did not decrease in the 1970s. Also, it should be noted that wars of national liberation generally lasted a very long time.

To increase our sense of concreteness of what was going on, I list the names of each event categorized in WAR (Figure A1-5) and WAR OF NATIONAL LIBERATION (Figure A1-6). These names, prepared by CACI, are not meant to be "objective"; they are supposed to reflect the Chinese perspective. As the reader may have noticed, there is some fuzziness of the CACI's distinction between wars and conflicts short of war. For example, the first Taiwan Strait crisis (1954) is categorized as war whereas the second Taiwan Strait crisis (1958) is not. In general, however, the general distinction is clear.

In sum, we may conclude that the period from the late 1950s to the late 1960s, at least in the Chinese perspective, saw many changes in international alliances, many riots, many international conflicts short of war, and many wars of national liberation. The 1970s, though less turbulent and probably safer to China than the 1960s, was still in the condition of "great disorder under heaven" (tianxia daluan).

In addition to the types of events discussed above, it is proper to examine the types of threat that each event has. First, let us examine the threats to the Communist countries, parties, and movements. This classification should be impor-
### Dangerous Domestic Trends (39 cases)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>35</td>
</tr>
<tr>
<td>1921</td>
<td>54</td>
</tr>
<tr>
<td>1922</td>
<td>51</td>
</tr>
<tr>
<td>1923</td>
<td>64</td>
</tr>
<tr>
<td>1924</td>
<td>62</td>
</tr>
<tr>
<td>1925</td>
<td>40</td>
</tr>
<tr>
<td>1926</td>
<td>44</td>
</tr>
<tr>
<td>1927</td>
<td>70</td>
</tr>
<tr>
<td>1928</td>
<td>72</td>
</tr>
<tr>
<td>1929</td>
<td>72</td>
</tr>
</tbody>
</table>

### War of National Liberation (21 cases)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>20</td>
</tr>
<tr>
<td>1921</td>
<td>27</td>
</tr>
<tr>
<td>1922</td>
<td>27</td>
</tr>
<tr>
<td>1923</td>
<td>103</td>
</tr>
<tr>
<td>1924</td>
<td>111</td>
</tr>
<tr>
<td>1925</td>
<td>122</td>
</tr>
<tr>
<td>1926</td>
<td>110</td>
</tr>
<tr>
<td>1927</td>
<td>105</td>
</tr>
<tr>
<td>1928</td>
<td>117</td>
</tr>
<tr>
<td>1929</td>
<td>114</td>
</tr>
</tbody>
</table>

### Riot, Other Civil Disorder (48 cases)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>35</td>
</tr>
<tr>
<td>1921</td>
<td>54</td>
</tr>
<tr>
<td>1922</td>
<td>51</td>
</tr>
<tr>
<td>1923</td>
<td>64</td>
</tr>
<tr>
<td>1924</td>
<td>62</td>
</tr>
<tr>
<td>1925</td>
<td>40</td>
</tr>
<tr>
<td>1926</td>
<td>44</td>
</tr>
<tr>
<td>1927</td>
<td>70</td>
</tr>
<tr>
<td>1928</td>
<td>72</td>
</tr>
<tr>
<td>1929</td>
<td>72</td>
</tr>
</tbody>
</table>

### Coup d'Etat (19 cases)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>35</td>
</tr>
<tr>
<td>1921</td>
<td>54</td>
</tr>
<tr>
<td>1922</td>
<td>51</td>
</tr>
<tr>
<td>1923</td>
<td>64</td>
</tr>
<tr>
<td>1924</td>
<td>62</td>
</tr>
<tr>
<td>1925</td>
<td>40</td>
</tr>
<tr>
<td>1926</td>
<td>44</td>
</tr>
<tr>
<td>1927</td>
<td>70</td>
</tr>
<tr>
<td>1928</td>
<td>72</td>
</tr>
<tr>
<td>1929</td>
<td>72</td>
</tr>
</tbody>
</table>

---

**Appendix 1**

**Figure A1-4**

*Types of Events Over Time*

---

**Uprising, Revolt, Insurgency** (24 cases)

**War of National Liberation** (21 cases)

**Riot, Other Civil Disorder** (48 cases)

**Coup d'Etat** (19 cases)
Figure A1-4 (continued)
Figure A1-5
Wars Selected in the CACI Data Set

1950 PLA-KMT ARMED CONFLICT CONTINUES; HAINAN ISLAND IS LIBERATED
1950 KMT AIR ATTACKS ON PRC COASTAL CITIES, CAUSES EVERSE DAMAGE
1950 U.S. GETS ROK PUPPETS TO ATTACK N KOREA; PRC ENDANGERED
1950 U.S. PLOT CAUSES DPRK WITHDRAW FROM SEOUL; PRC ENDANGERED
1950 PLA AIDS DPRK IN ROUTING U.S., RHEE INVASERS; WAR ENDS
1951 MAO CLAIMS U.S. SCHEMING TO OCCUPY DPRK; INVADE PRC MAINLAND
1954 U.S. AIDS KMT WAR AGAINST PRC; PLA SEIZES ISLANDS
1961 INDIAN TROOPS END PORTUGUESE RULE GOA, ETC; PRC SPTS ACT
1962 INDIAN ARMED FORCES ATTACK PRC; USSR/U.S. SUPPORT INDIA
1964 TONKIN INCIDENT LEADS US TO SND TRPS TO VN, SAIGON FALLS
1965 INDIAN ARMED ATTACK ON PAKISTAN; U.S./UK/USSR INSTIGATORS
1967 US, ISRAELI ARMED ATTACK ON ARKS; USSR COLLIDES; PRC AVOWS SPT
1970 U.S. GETS JORDAN TO ATTACK PLA; SYRIAN TROOPS INTRUDE
1971 INDIAN ARMY INVADES EAST PAKISTAN; USSR SUPPORTS AGGRESSION
1973 OCT 73 WAR: ISRAEL ATTACKS EGYPT, SYRIA; U.S. CALLS ALERT
1975 USSR STIRS UP CONFLICT: ANGOLA; SOVIETS, CUBANS KILL MANY
1975 INDONESIAN TRPS SEIZE EAST TIMOR; PRC DENOUNCS ACT. NLS GOES ON
1977 ZAIRE: SOVIET MERCENARIES INVADE SHABA, ARE OUSTED
1977 VN FORCES LAUNCH MASS INVASION-CAMBODIA, ARE REPELLED
1979 ZAIRE: SOVIET CUBAN MERCENARIES INVADE, SZE KOLEWEZE; OUSTED
1978 VN LAUNCHES 2D INVASION-CAMBODIA; FAILS, SUFFERS HEAVY LOSSES
1978 3RD VN INVASION-CAMBODIA: PHNOM PENH TAKEN; USSR SUPPORTS
Figure A1-6
Wars of National Liberation Selected in the CACI Data Set

1950 PEOPLE'S ARMED STRUGGLE EXPANDS IN BURMA
1950 UK OPPOSES MALAYA STRUGGLE; REPRESSES OVER SEAS CHINESE
1954 ALGERIANS WIN WAR OF NATIONAL LIBERATION; PRC SENDS AID
1957 U.S. SUPPRESSES; PRC SUPPORTS; UPRISING: OMAN
1957 INDONESIANS STRUGGLE TO RECOVER W IRIAN FROM IMPERIALISTS
1959 POPULAR REVOLTS IN CONGO; PRC DECLARES SUPPORT
1959 CAMEROON PEOPLE STRUGGLE VS FRENCH RULE; U.S. AMBITIONS
1959 NYASALAND PEOPLE STRUGGLE VS UK COLONIALISTS; PRC VOWS SPT
1959 S YEMENI PEOPLE STRUGGLE VS UK RULE; PRC DECLARES SPT
1959 GUINEA-BISSAU PEOPLE STRUGGLE FOR NATL LIB; PRC VOWS SPT
1961 ANGOLAN NATL LINER STRUGGLE SPREADS; PRC SUPPORTS UPRISING
1961 ANTIN-UK UPRISING: BRUNEI; UK SENDS TROOPS; PRC BACKS NLM
1961 INDONESIA SUCCEEDS IN EFFORT TO LIBERATE WEST IRIAN
1962 PRC SUPPORTS RHODESIANS STRUGGLE FOR NATIONAL INDEPENDENCE
1965 THAI PATRIOTIC FRONT FORMED, WANTS U.S. OUT; RUNS INSURGENCY
1966 PRC SUPPORTS SOMALI STRUGGLE FOR NATIONAL LIBERATION
1966 PRC SUPPORTS Eritrean Struggle for National Liberation
1968 RHODESIA EXECUTES ZIMBABWEAN FROM FIGHTERS; STRUGGLE GOES ON
1971 PRC ORDERING SPANISH SUPPRESSION OF BASQUE FIGHTERS
1972 PRC SUPPORTS IRISH STRUGGLE; UK TROOPS MASSACRE IRISH: DERRY
1972 PRC SUPPORTS NAMIBIAN STRUGGLE FOR SELF-DETERMINATION
tant if the PRC is to follow Marxist-Leninist foreign policy. Figure A1-7 shows three categories of the type of threats to the Communist countries, parties, and movements over time. There is decline of the threats to well-being in the early 1970s. But since threats to physical survival continued to exist in the early 1970s at more or less constant level, if we add these two categories, we have a somewhat different trend from the overall trend of Figure A1-2. Threats to Communist countries, parties, and movements seem to have existed almost constantly throughout the 30 year period.

Second, let us examine very strong threats to the PRC, nuclear threats. As expected, there were not many cases. The CACI data set list 5 cases in which potential nuclear confrontation was implied and 4 cases in which actual nuclear confrontation was implied. These 9 cases are listed in Figure A1-8. It is odd that the Zhenbao Island incident of 1969 is not listed in either category. Whether or not the Chinese felt an actual or potential nuclear threat is unclear. But it seems reasonable to consider the Zhenbao Island incident a case involving at least a potential nuclear threat. (1) In the CHINA_WATCHER simulation in Chapter 4, I added Zhenbao island incident in the potential nuclear confrontation list.

(1) See Kissinger's description of the Sino-Soviet relations immediately after the incident. He reports that a Soviet Embassy official in Washington D.C. asked a State Department specialist in Soviet Affairs "what the US reaction would be to a Soviet attack on Chinese nuclear facilities" (Kissinger, 1979: 183). Also see Allen Whiting's review of Kissinger, Haldeman, Nixon's memoirs, Whiting (1980).
Figure A1-8
Cases Involving Nuclear Threats

Cases Involving Potential Nuclear Threats

1950 U.S. GETS ROK PUPPETS TO ATTACK N KOREA; PRC ENDANGERED
1951 MAD CLAIMS U.S. SCHEMING TO OCCUPY DPRK; INVADE PRC MAINLAND
1954 U.S. AIDS KMT WAR AGAINST PRC; PLA SEIZES ISLANDS
1962 US SENDS MILITARY TO THAILAND; PRC DENOUNCES MOVE
1964 TONKIN INCIDENT LEADS US TO SEND TRPs TO VN; SAIGON FALLS
1966 USSR/U.S. INCREASE COLLUSION IN VN; US PURSUES PEACE TALKS

Cases Involving Actual Nuclear Confrontation

1950 U.S. 7TH FLEET TO TAIWAN STRAITS, A DIRECT ATTACK ON PRC
1950 U.S. PLOT CAUSES DPRK WITHDRAW FROM SEOUL; PRC ENDANGERED
1950 PLA AIDS DPRK IN ROUTING U.S., RHEE INVAIDERS; WAR ENDS
1958 2ND TAIWAN STRAIT CRISIS-PRC SHELLS QUEHOU; REJECTS US CHARGES
(4) Superpowers Involvement

It is obvious that the Chinese has been attaching great importance to their relations with the two super powers, the United States and the Soviet Union. In this sub-section, I would like to examine how the CACI data set describe the Chinese perception of the superpowers' involvement in the international conflicts from 1949 to 1978. As in the above subsections, let us start to examine the table of frequency

Table A1-4

Superpowers' Involvement in International Conflicts

<table>
<thead>
<tr>
<th>Category</th>
<th>USSR(%)</th>
<th>USA(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not a key player</td>
<td>288(75)</td>
<td>244(63)</td>
</tr>
<tr>
<td>Key player in opposition to PRC interest</td>
<td>44(11)</td>
<td>66(17)</td>
</tr>
<tr>
<td>Key player in support of PRC interest</td>
<td>1(0)</td>
<td>0(0)</td>
</tr>
<tr>
<td>PRC interest not involved, but PRC does not approve of what it is doing</td>
<td>41(11)</td>
<td>71(18)</td>
</tr>
<tr>
<td>PRC interest not involved, but PRC approves of what it is doing</td>
<td>9(2)</td>
<td>0(0)</td>
</tr>
<tr>
<td>Key player, but uncodable</td>
<td>2(1)</td>
<td>4(1)</td>
</tr>
<tr>
<td>Total</td>
<td>385(100)</td>
<td>385(100)</td>
</tr>
</tbody>
</table>

distribution (Table A1-4). One outstanding feature is very small number of entries in the positive categories; the Soviet Union has only one case in which it is a key player in support of the PRC interest; it has 9 cases in which the Chinese in-
terest is not involved but the PRC approve of the Soviet Union's conduct; and the United States has no cases belonging to either category. This fact may be mostly explained by the CACI's criteria to select incidents; structural changes selected in the CACI data set were defined as those cases "that might negatively affect Chinese political-military interests." Thus, those which might positively affect the Chinese, e.g. the Sino-Soviet Treaty of 1950, Nixon's visit to Beijing in 1972, were excluded. In both negative categories the United States has more cases than the Soviet Union. This is understandable because after all the United States had not had diplomatic relations with the PRC for the entire period under consideration of this study; it was as late as December 1978 when both countries declared to "normalize" their relations.

But we all know that dramatic changes of relations among these three powers occurred in these three decades. Even a rudimentary description effort such as this would not be satisfactory unless changes over time are described. Thus, we have to turn to Figure A1-9 for distribution of events over the 30 year period.

Several observations can be drawn. First, the early 1950s was clearly characterized as a period of American hostility to the PRC. Almost all the perceived cases of the U.S. involvement in this period involve the Chinese interest too, thus implying a strong Sino-American confrontation.
**Figure A1-9**

Superpowers' Involvement in International Conflicts Over Time

### USA, Key Player in Opposition to PRC Interest

<table>
<thead>
<tr>
<th>Year</th>
<th>19</th>
<th>20</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PRC Interest Not Involved, But PRC Does Not Approve What USA Is Doing

<table>
<thead>
<tr>
<th>Year</th>
<th>71</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>72</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Data

<table>
<thead>
<tr>
<th>Year</th>
<th>43</th>
<th>56</th>
<th>78</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>72</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure A1-9 (continued)

PRC INTEREST NOT INVOLVED, BUT PRC APPROVE WHAT USSR IS DOING

16

98

67

98

124 143

193 194

193 193

193 193

193 193

193 193

PRC INTEREST NOT INVOLVED, BUT PRC DOES NOT APPROVE WHAT BOTH USA AND USSR ARE DOING

94

51

52

54 55 57

59 60 61 63

64 66 68 69

70 72 73 74

75 77

PRC INTEREST NOT INVOLVED, BUT PRC DOES NOT APPROVE WHAT BOTH USA AND USSR ARE DOING

113

129 138 146

165

129 138 146

209 241 254 255

282

313 321 326 330

BOTH USA AND USSR ARE KEY PLAYERS IN CONFLICTION TO PRC INTEREST

175 181

175 164
Second, this data set suggests very early seeds of the Sino-Soviet rift, too. Case 3, AFTER CIVIL WAR, USSR PRESSURES PRC TO CONFORM, shows the Chinese resentment against Stalin during and immediately after the civil war. (1) Case 39, KHRUSHCHEV, GROUP SEIZE LEADERSHIP OF CPSU: USSR, suggests the PRC's fear against the Khrushchev's rise in the Soviet Union after the death of Stalin. (2) From 1955 on, the Chinese came to find some of the Soviet behavior difficult to approve of. And the late 1950s saw the beginning of the confrontation of interests between these two Communist countries. (3)

Third, the CACI data set demonstrates that Chinese perceived the 1960s as the period of intense hostility of both superpowers against them. The first four figures in Figure A1-9 show the pattern clearly. But were there cases in which both the United States and the Soviet Union were key players and perceived in opposition to the Chinese interest? Were

---

(1) For historical accounts of the Sino-Soviet relations in this period, see Simmons(1975), Okabe(1978), and chapter 7 of Gittings(1974).

(2) The selection of this case, however, may be misleading because apparently it is selected from the later period Chinese accounts of Khrushchev's conducts. There was no official Chinese statement to accuse Khrushchev in the period immediately after Stalin's death. Few historical accounts support that the Chinese were threatened by the rise of Khrushchev in 1953. On the contrary, "Sino-Soviet relations showed a marked improvement after Stalin's death" (Gittings, 1968: 56), and "Khrushchev proved to be the most adept at bidding for Chinese support" (Hinton, 1972: 62).

(3) Still the best historical account in this period is Zagoria(1962).
there cases in which the Chinese interest was not involved but the PRC did not approve of both superpowers' conduct. Four cases fall in the former and 14 the latter. The last two figures in Figure A1-9 depict their time series distribution. Their names are given in Figure A1-10. Three period of the perceived superpowers' collusion against the PRC emerge out of these figures: 1961 to 1963, 1967, and 1973 to 1974.

Although the present thesis is not an attempt to model the interaction of the three great powers, let alone to explain the historic realignment of their relations occurred in the 1970s, it is still interesting to speculate, based on the CACI data set, why the Chinese sought an accommodation to the U.S. in the late 1960s to early 1970s. If isolation avoidance is a reasonable goal of any nation seeking its security, the above three periods may have offered opportunities of realignment. It is my speculation that the Nixon visit to Beijing, though significant, did not bring about a complete realignment of the triangle. It seems that only after the period of 1973-1974 was the Sino-American entente system established fairly firmly. Let us examine the three periods one by one to support this speculation.

The first period, 1961 to 1963, seems threatening enough for the Chinese leaders to reconsider the Sino-Soviet alliance. Khrushchev's posture of "peaceful coexistence," Soviet-American deals on the Nuclear Test Ban Treaty, and the Soviet attitude to the Sino-Indian War of 1962 must have
Figure A1-10
Cases of Superpowers' Collusion

Both USA and USSR are key players in opposition to PRC interest

1962 USSR/U.S. SIGN PART'L NUCLEAR TEST BAN TREATY; PRC CONDEMNS
1962 INDIAN ARMED FORCES ATTACK PRC; USSR/U.S. SUPPORT INDIA
1963 USSR/OTHERS SIGN NUCLEAR TEST BAN TREATY; DENOUNCED BY PRC
1963 USSR JOINS U.S. & JAPAN IN ANTI-PRC ALLIANCE

PRC interest not involved, but PRC does not approve what both USA and USSR are doing

1959 KHRUS. IKE MEET AT CAMP DAVID; USSR STARTS CATERING TO U.S.
1960 IMPERIALIST AGGRESSION AGAINST CONGO; PRC DECLARES SUPPORT
1961 LUMUMBA MURDERED; U.S., BELGIUM IMPLICATED; PRC PROTESTS
1961 CPSU, U.S. LEAD TO ARREST OF GIZENGA; SETBACK FOR CONGO NL
1962 CUBAN MISSILE CRISIS; U.S. BLOCKADE; USSR TO REMOVE MSL
1965 INDIAN ARMED ATTACK ON PAKISTAN; U.S./UK/USSR INSTIGATORS
1966 USSR/U.S. INCREASE COLLUSION IN VN; US PURSUES PEACE TALKS
1967 US, ISRAELI ARMED ATTACK ON ARABS; USSR COLLUDES; PRC الدعم السوفيتي
1967 U.S./USSR SUMMIT CONFERENCE: CLASHED; MORE COLLABORATION
1969 NORTH KOREA DOWNS U.S. RECCUE A/C; USSR RESCUES CREW: COLLUSION
1972 U.S./USSR SIGN SALT I TREATY; PRC CRITICIZES IT AS FAILURE
1973 U.S. PRESSURES USSR INTO LETTING MORE JEWS EMIGRATE
1973 OCT 73 WAR: ISRAEL ATTACKS EGYPT, SYRIA; U.S. CALLS ALERT
1974 U.S./SOVIET ARMS RACE INTENSIFIES: MIRUS & CRUISE MISSILES
intensified the Chinese perception of the superpower collusion. (1) One reason that the Chinese did not make positive attempts at seeking rapprochement with the United States may be found in the fifth graph of Figure A1-9, the category of cases in which Chinese interests are not involved but the PRC approves Soviet conduct. The two cases appeared in 1964: 193 and 194. Case 193 is the Vietnam War after the Tonkin Gulf incident; case 194 is the purge of Khrushchev. In other words, the Vietnam War posed such a serious threat to the PRC that rapprochement with Washington was out of the question. Furthermore, the purge of Khrushchev must have given the Chinese some hope of change on the part of Kremlin. Also, 1964 is very low in both negative categories concerning Soviet conduct. (2)

The second period, the late 1960s, saw the increase in Soviet opposition to Chinese interests and Soviet conduct that the Chinese did not approve of. It also saw a general decrease in U.S. opposition to Chinese interests. Under such circumstances, the perception of superpower collusion seems to have convinced the Chinese leaders to accommodate with the less dangerous superpower, the United States. In fact, after the Soviet invasion to Czechoslovakia on August

(1) Griffith (1964) gives a very detailed historical narrative as well as important documents on this period.

21, 1968 (case 276), an article in *Renmin Ribao* (People's Daily) reversed the usual polemical order used in attacks against Washington and Moscow and cited the Soviet Union before the United States as the chief opponent. (1) On November 26, the Chinese proposed to resume the Warsaw Ambassadorial talks after the new Nixon administration took power. Thus, from 1969 to 1971, intricate and subtle exchanges of signals were made as Kissinger's memoir describes, and the process culminated as Kissinger's visit to Beijing in July 1971.

Kissinger's visit to Beijing and Nixon's in the following year do not seem to have been brought about purely by isolation avoidance logic. An important factor to be considered here is the fact that, in our first figure of Figure A1-9, which represents the cases of Soviet opposition to Chinese interests, there are no entries from 1970 to 1973! There are no entries in both Soviet-American collusion categories (the last two figures of Figure A1-9) in 1970 and 1971. As shown in Garber (1980)'s content analysis of the polemical invectives by *Peking Review* (Figure A1-11), it was mostly the United States that was accused during this period. Hiramatsu (1978a)'s content analysis of the Chinese accusation in *Renmin Ribao* against the Soviet Union also indicates the decline of accusations against the USSR from 1970 to 1972 (Figure A1-12). To solve this puzzle, Garber presents an explanation of

Figure A1-11


1970

1971

Anti-Soviet Invective as a Percentage of Anti-U.S. Invective, 1970-71
Figure A1-12
Accusation in Renmin Ribao against the USSR

*Constructed from Hiramatsu (1978a)'s data
factional struggle among the Chinese leaders. (Remember that it was 1971 when Lin Biao attempted a coup.) Since the present thesis is not the place to examine the details of factional politics, it is sufficient to note that the strictly deterrent considerations were not the only factor bringing about the Nixon visit to Beijing. (1)

If the above inference is correct, the position of the principal enemy may not have shifted from the United States to the Soviet Union with Nixon's visit to China. As the figure of US-USSR collusion suggest, there were five cases from 1972 to 1974 in which both superpowers were involved as key players and the PRC did not approve of their conduct. This third US-USSR collusion period in general and the end of the Vietnam War in particular seem to have consolidated the Chinese favorable attitude toward the United States. After that period, particularly after 1976, the trend seems clear; no US opposition to Chinese interests and an increase of Soviet opposition to the PRC.

(1) In addition to Garber (1980) and Hiramatsu (1978a, 1978b), Gottlieb (1977) and Libethal (1980) offer good analysis in the periods from the late 1960s to the 1970s.
(5) PRC Involvement

In this final section, we would like to examine what the Chinese have done in the conflicts and events thus far described. The CACI data set has two types of involvement: verbal and physical. The former has two categories: (1) the Chinese simply note the existence of the crisis; (2) the Chinese go beyond simply noting the existence of the crisis. The latter has five categories: (1) Uncodable (no physical involvement); (2) actions short of combat; no details available; (3) actions short of combat; no military personnel in crisis area; (4) actions short of combat; military personnel in crisis area; and (5) combat involving military personnel. To quote the CACI codebook (Appendix 2), the cases in the second categories (no details available) are the cases in which it is possible to "infer that PRC did something but there is not enough, or enough consistent, information to specify what." The third category (no military personnel in crisis area) implies that "PRC is actively engaged on-site in attempting to influence crisis outcome but no military advisors, etc. -- except for attaches -- directly involved in crisis-related activity." The fourth category (military personnel in crisis area) suggests that individual military advisor, military teams, or regular military units are involved but that the "PRC military personnel are not engaged in two-sided combat operations."
Table A1-5
Chinese Involvement in International Conflicts

<table>
<thead>
<tr>
<th>Physical</th>
<th>Verbal</th>
<th>Noting</th>
<th>Beyond Noting</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncodable</td>
<td>57</td>
<td>125</td>
<td>182</td>
<td></td>
</tr>
<tr>
<td>No detail</td>
<td>4</td>
<td>71</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>No military Personnel</td>
<td>1</td>
<td>42</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Military Personnel</td>
<td>1</td>
<td>66</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Combat</td>
<td>0</td>
<td>18</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>322</td>
<td>385</td>
<td></td>
</tr>
</tbody>
</table>
Figure A1-13
Scale of Chinese Involvement in International Conflicts

No physical involvement with simply noting
  ↓
No physical involvement with going beyond noting
      ↓
Actions short of combat; no detail available
          ↓
Actions short of combat; no military personnel in crisis area
              ↓
Actions short of combat; military personnel in crisis area
                ↓
Combat

Table A1-5 is a cross classification of these two types of involvement. One outstanding characteristic of this table is that in almost all cases of Chinese physical involvement (from no detail to combat) the Chinese went beyond just noting the existence of the events. In other words, whenever they did something, they say something. This tendency justifies the creation of a unidimensional order of general involvement as described in Figure A1-13. (1) The time series distribution of events belonging to each of the six categories of the order

(1) The position of action with no detail may be debatable. Therefore, in Chapter 3, we gave action with no detail the same weight as the action with no military personnel.
in Figure A1-13 is given in Figure A1-14. The names of the eighteen cases of combat are given in Figure A1-15.

First, let us look into the general patterns. Figure A1-14 indicates clear differences between periods. The two extreme categories (NO PHYSICAL INVOLVEMENT & SIMPLY NOTING and COMBAT) show almost inverse trends. The NO PHYSICAL INVOLVEMENT & BEYOND NOTING category has a big increase in the late 1950s and the early 1960s and continues to have steady high level through 1970s. The two categories of medium physical involvement (NO DETAIL AVAILABLE and NO MILITARY PERSONNEL INVOLVED) have high levels in the 1960s. The category of MILITARY PERSONNEL INVOLVED keeps relatively high level throughout the three decades except in the early 1970s. In sum, a rough characterization of each decade in terms of the Chinese involvement is made as follows:

1950s -- intense physical involvement but low level verbal involvement.

1960s -- high physical involvement as well as high verbal involvement.

1970s -- low physical involvement but high verbal involvement.

Comparison of Figure A1-15 (names of combat episodes the Chinese were engaged in) and Figure A1-9 (cases involving the possibility of nuclear confrontation) seems to give insights into Chinese perception of the most dangerous events. Events concerning the Korean War (cases 13, 19, 21, 24) and the sec-
Figure A1-15
Chinese Combat Episodes Selected in the CACI Data Set

1949 PRC ESTABLISHED; USSR PLAYS VALUABLE ROLE
1949 KMT RETREATS TO TAIWAN; SOME KMT TROOPS WITHDRAW TO INDOCHINA
1950 PLA-KMT ARMED CONFLICT CONTINUES; HAINAN ISLAND IS LIBERATED
1950 KMT AIR ATTACKS ON PRC COASTAL CITIES; CAUSES EVERE DAMAGE
1950 PLA LIBERATES TIBET; HOSTILE MOVES BY U.S., UK
1950 PLA AIDS DPRK IN ROUTING U.S., RHEE INVADERS; WAR ENDS
1951 PRC SUPPRESS INTERNAL OPPOSITION; KMT BANDITS
1954 U.S. AIDS KMT WAR AGAINST PRC; PLA SEIZES ISLANDS
1955 TIBETAN CLIQUE INSTIGATES KHAMBA UPRISING; SIKANG PROVINCE
1955 KMT ASSISTS DALAI LAMA REBELLION; W SZECHUAN
1957 REACTIONARY TIBETAN CLIQUE CONDUCTS ANTI-PRC INSURGENCY
1958 2ND TAIWAN STRAIT CRISIS-PRC SHELLS QUEMODY; REJECTS US CHARGES
1958 KMT FORCES IN LAOS INVADE YUNNAN; U.S. PROVIDES MILITARY AID
1959 TIBETAN TRAITORS LAUNCH ARMED REBELLION; CRUSHED BY PLA
1962 INDIAN ARMED FORCES ATTACK PRC; USSR/U.S. SUPPORT INDIA
1965 U.S./KMT NAVAL INTRUSIONS; PRC WATERS; 3 KMT SHIPS SUNK
1969 SOVIET TROOPS VIOLATE PRC BORDER AT CHENPAI ISLAND
1974 SVN ENCROACHES ON HSISHA, OTHER IS.  RAM PRC FISHING BOATS
ond Taiwan Strait crisis (case 86) stood out as the most dangerous cases of the Chinese physical involvement. They are followed by the First Taiwan Strait crisis (case 44) and Zhenbao island incident (case 284). (1) Important conflicts involving potential nuclear confrontation but not Chinese combat were the Vietnam War (case 193,241) and the Laotian conflict in 1962 (case 157).

Next, let us examine the relations between Chinese physical involvement and some situational variables. Table A1-6 shows the relations between Chinese physical involvement and geopolitical location. Table A1-7 show the relations between the Chinese physical involvement and the types of events. As a description of what happened, it is sometimes very useful to start with the examination of what did not happen. In our tables, the cells with 0 entry represent what did not happen. These non-occurrences sometimes mean structural impossibility while some other times they just did not take place by chance. One cannot distinguish these two cases completely. But for the purpose of preliminary description, it is sufficient here to point out general tendencies. Table A1-6 clearly shows that the Chinese were not involved militarily in the events occurring in far distant regions. The Chinese were engaged in combat only in the present PRC homeland, the former Chinese

(1) As mentioned previously, I consider that the Zhenbao island incident involved at least potential nuclear confrontation, though the CACI data set does not. See the discussion in section (3).
<table>
<thead>
<tr>
<th>Category</th>
<th>No Action</th>
<th>No Detail</th>
<th>No Vary Prsnll</th>
<th>Xltry Prsnll</th>
<th>Combat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Geographical</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Present PRC Homeland</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>58</td>
<td>13</td>
<td>78</td>
</tr>
<tr>
<td>Former Chinese Territories</td>
<td>14</td>
<td>41</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Other Chinese Territorial Claims</td>
<td>7</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Chinese Border State</td>
<td>31</td>
<td>31</td>
<td>13</td>
<td>4</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>States with Large Chinese Population</td>
<td>15</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Border Other Soviet State</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Other Third World States</td>
<td>86</td>
<td>16</td>
<td>13</td>
<td>1</td>
<td>0</td>
<td>116</td>
</tr>
<tr>
<td>Other States (West, etc.)</td>
<td>21</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>182</td>
<td>75</td>
<td>43</td>
<td>67</td>
<td>18</td>
<td>385</td>
</tr>
<tr>
<td>Types of Events</td>
<td>dangerous domestic trends/events</td>
<td>Riot, other civil disorder</td>
<td>Uprising, revolt, insurgency</td>
<td>War of national liberation</td>
<td>Coup d'état</td>
<td>Structural change</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------</td>
<td>---------------------------</td>
<td>-----------------------------</td>
<td>----------------------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Uncodable</td>
<td>22</td>
<td>30</td>
<td>9</td>
<td>18</td>
<td>12</td>
<td>27</td>
</tr>
<tr>
<td>Action short of combat; no detail available</td>
<td>10</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Action short of combat; no military personnel in crisis area</td>
<td>4</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Action short of combat; military personnel in crisis area</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>42</td>
</tr>
<tr>
<td>Combat</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>48</td>
<td>24</td>
<td>21</td>
<td>19</td>
<td>49</td>
</tr>
</tbody>
</table>
territory and in the border states. Only one military personnel involvement took place in the third world states.

As for the relations between the types of events and the Chinese physical involvement, strong military involvement took place in the categories suggesting international conflict origins. It is significant to note that there is no overt military involvement in the category of wars of national liberation.
APPENDIX 2

CODE BOOK OF CACI DATA
DATA FILE NAME : requestcchar
NUMBER OF CASES : 427 *
HOW STORED : 427 logical records, 32 items per record
FILE CONTENTS : Record identifier and codes for 31 descriptors of the 427 crises involving the PRC between 1949 and 1980
FORMAT : (I3,2X,I6,1X,I6,I2,I3,I2,I3,5I2,1X,10I1,1X,4I1,1X,3I1,1X,3I1)
SUPPLEMENTARY FILES: See prccrises and attached description of a given logical record

1. RECORD IDENTIFIER. Used to match against the master crisis list
2. INITIATION DATE OF CRISIS. Six-digit number (year, month, day)
3. TERMINATION DATE OF CRISIS. Six-digit number (year, month, day). 88 in month and day location indicates that date could not be specified. 77 in month and day location indicates the crisis was still in process as of January 1, 1979.
4. CRISIS DURATION
   Ø = Uncodable
   1 = Short (1 week)
   2 = Medium (8-30 days)
   3 = Long (31 days-1 year)
   4 = Extra long (1 year)
5. CRISIS LOCATION BY JCS REGION
   10 = North America
   11 = U.S.
   12 = Mexico or Canada
   20 = Central and South America
   21 = Central America
   22 = Caribbean (islands, at sea)
   23 = South America
   30 = Western Europe, Atlantic
   31 = Western Europe
   32 = Greece, Turkey, Cyprus
   33 = Yugoslavia, Albania
   34 = Atlantic (islands, at sea)
   40 = Eastern Europe, USSR
   41 = Eastern Europe
   42 = USSR
   50 = Middle East, North Africa
   51 = Middle East

*Since this is the code book of the updated dataset, the number of cases is different. But the coding scheme is identical
52 = North Africa
60 = South Asia, Indian Ocean, Sub-Saharan Africa
61 = South Asia
62 = Horn of Africa
63 = Indian Ocean
64 = Sub-Saharan Africa excluding Horn
70 = Pacific (islands, at sea), East Asia
71 = PRC
72 = Korea
73 = Mongolia
74 = South East Asia (Vietnam, Cambodia, Thailand, Burma, Laos)
75 = South East Asia (Indonesia, Malaysia, Singapore)
76 = Other Asian countries
80 = Polar Regions
90 = Space
00 = Multiple, the World, at the U.N.

6. GEOPOLITICAL LOCATION
0 = Not geographical (high seas not < 100 miles from PRC)
1 = Present PRC homeland
2 = Formerly Chinese territories stolen by imperialists (Central Asia, Far East, Taiwan, etc.)
3 = Other Chinese territorial claims, seizures (Spratleys, Paracels, Senkakus, Assam, N.E. India, etc.)
4 = States along Chinese border (Vietnam, Laos, Burma, India, Bhutan, Sikkim, Nepal, Pakistan, Afghanistan, USSR, Mongolia, DPRK, Japan, Macao, Hong Kong)
5 = States with significant Chinese population (Thailand, Hong Kong, Malaysia, Indonesia, Vietnam, Burma, Singapore)
6 = Soviet border states not already listed (Norway, Finland, Poland, CSSR, Hungary, Rumania, Turkey, Iran)
7 = Other Third World states
8 = Other states (West, etc.)

7. CHARACTER OF EVENTS: A TWO-DIGIT NUMBER:
First Digit:
1 = Potential/threat of
2 = Attempted/unsuccesful
3 = Actual/perceived/successful
4 = Other (explain in remarks)

Second Digit:
0 = Dangerous domestic trends/events
1 = Riot, other civil disorder
2 = Uprising, revolt, insurgency
3 = War of national liberation
4 = Coup d'etat
5 = Structural change (shift in political alignment, formation/dissolution of alliance, dangerous international trend/events)
6 = Border incident, dispute over territory or territorial waters, airspace violations
7 = War (declared or undeclared)
8 = Other -- including foreign intervention (political, military, spies, economic), conflict short of war; use only when no other category fits (explain in remarks as necessary)

8. SCOPE
0 = Domestic (intra-state) (war of national liberation unless third power is actively involved)
1 = International (inter-state) (PRC reacts to persecution of local Chinese population)

9. LEVEL OF VIOLENCE
0 = Non-violent events
1 = Violent events -- property damaged/destroyed/seized
2 = Violent events -- people injured/killed/seized (if both are applicable, use 2)

10. STRATEGIC CONFRONTATION
0 = No or not applicable (use for all cases other than those meeting the criteria for one of the following)
1 = Potential
2 = Actual

11. PERCEIVED THREAT TO COMMUNIST PARTY/REGIME/MOVEMENT
0 = Neither 1 nor 2 below applies (or N/A)
1 = Well-being or major activities threatened
2 = Political independence threatened
3 = Physical survival threatened

12. ACTOR MIX
8 = Uncodable (unclear, unknown, N/A)
1 = Internal (intra-national)
2 = Two or more large powers involved (USSR, U.S., PRC only)
3 = Large/middle power mix (Middle: U.K., France, FRG, Japan)
4 = Large/small power mix
5 = Middle/small power mix
6 = Small/small power mix

13-22. KEY INDIVIDUAL ACTOR CODES. CODED IN THE FOLLOWING ORDER:
a = USSR
b = U.S.
c = Other western countries
d = India
e = Taiwan
f = Japan
g = Vietnam
h = Other South East Asia
i = Indonesia
k = Korea
Codes should be interpreted as follows:

0 = Nation in question is not perceived by the PRC to be a key player in the crisis (This category includes all non-players and those whose role was of a minor, supporting/contributive nature)

1 = Nation/actor in question is perceived by the PRC to be a key player, in opposition to Chinese interests

2 = Nation/actor in question is perceived by the PRC to be a key player, in support of Chinese interests

3 = Chinese interests are not involved, but PRC does not approve of what key actor is doing

4 = Chinese interests are not involved, but PRC does approve of what key actor is doing

Convention G. Where the crisis events being examined are a segment or phase of a larger crisis (e.g., Korean War or DRV's efforts to reunify Vietnam), code actor mix and individual actor involvement as best fits Chinese perceptions of the segment under consideration (e.g., an actor can shift from support to opposition or non-player status over time).

5 = Key player, uncodable

23. CHINESE VERBAL INVOLVEMENT

1 = Chinese simply note existence of crisis

2 = Chinese go beyond simply noting existence of crisis (or PRC is automatically an actor)

24. CHINESE PHYSICAL INVOLVEMENT

0 = Uncodable

1 = Actions short of combat; no details available (are able to infer that PRC did something but there is not enough, or enough consistent, information to specify what)

2 = Actions short of combat; no military personnel in crisis area (i.e., PRC is actively engaged on-site in attempting to influence crisis outcome but no military advisors, etc. -- except for attaches -- directly involved in crisis-related activity)

3 = Actions short of combat; military personnel in crisis area (this can be individual advisors, teams, or even regular military units, but PRC military personnel are not engaged in two-sided combat operations. Examples: Border incidents where no shots are fired at opponents, border patrols harassing civilians of other actor, combat aircraft buzzing ships of other actor, air defense installations or aircraft forcing or shooting down aircraft, armed or otherwise, of other actor

4 = Combat involving military personnel, crews, or units exchanging fire, maneuvering, and taking action to achieve military-type objectives, e.g., seizure of terrain)
25. GEOGRAPHIC INVOLVEMENT
   0 = Uncodable (not geographic) or N/A
   2 = Crisis involves theater of concern to PRC (S. and E. Asia)
   and/or sizable community of overseas Chinese
   3 = Crisis involves neighboring country (has at least one
       border within 100 miles of Chinese territory)
   4 = PRC directly involved in crisis as major player use
       highest applicable number

26. CONSOLIDATED INVOLVEMENT
   Assigned highest numeric value of 3 previous variables

27. CHINESE OBJECTIVES WITH RESPECT TO IN-THEATER SUPPORTED SET
   0 = Uncodable (or N/A)
   1 = Preserve status quo ante
   2 = Restore status quo ante
   3 = Change status quo ante
   4 = Other (explain in remarks)
   5 = Indifference (both bad)

28. CHINESE OBJECTIVES WITH RESPECT TO IN-THEATER OPPOSED SET
   0 = Uncodable
   1 = Oppose efforts to preserve SQA
   2 = Oppose efforts to restore SQA
   3 = Oppose efforts to change SQA
   4 = Other (explain in remarks)  
   5 = Indifference (both bad)

29. CHINESE CRISIS MANAGEMENT CAPABILITIES
   0 = Negligible/highly limited (N/A, e.g., against USSR)
   1 = Substantial (code for crises occurring within 100 land miles
       of Chinese territory and/or 25 miles away over sea)

30. CRISIS OUTCOMES (IMMEDIATE, SHORT-TERM RESULTS)

   For the PRC
   0 = Uncodable (unknown, uncertain, unresolved events)
   1 = Favorable
   2 = Mixed -- Chinese world view confirmed (e.g., as to conduct
       to be expected on part of imperialists, etc.)
   3 = Mixed -- in functional sense
   4 = Unfavorable
   5 = PRC indifferent to outcome (e.g., coup in Korea)

31. CRISIS OUTCOME FOR CHINESE CLIENT(S)/ALLY(ALLIES)
   8 = Not applicable (no apparent PRC client/ally among crisis
      actors)
   0 = Uncodable (unknown, uncertain, unresolved events)
   1 = Favorable
   3 = Mixed
   4 = Unfavorable
   5 = Client/ally indifferent to outcome
32. CRISIS OUTCOME FOR POLITIES OF INTEREST TO PRC (I.E., OTHER THAN CLIENTS/ALLIES)

8 = Not applicable (PRC client/ally an actor)
0 = Uncodable (unknown, uncertain, unresolved events)
1 = Favorable
3 = Mixed
4 = Unfavorable
APPENDIX 3

LIST OF 385 CASES
1949 PRC ESTABLISHED: USSR PLAYS VALUABLE ROLE
1949 KMT RETREATS TO TAIWAN; SOME KMT TROOPS WITHDRAW TO INDOCHINA
1949 AFTER CIVIL WAR, USSR PRESSURES PRC TO CONFORM
1949 CHOW WARNS NEIGHBORS NOT TO HARBOR KMT BANDIT TROOPS
1950 U.S. GIVES AID TO KMT; ASSUMES FULL CONTROL OVER TAIWAN
1950 PLA-KMT ARMED CONFLICT CONTINUES; HAINAN ISLAND IS LIBERATED
1950 KMT AIR ATTACKS ON PRC COASTAL CITIES, CAUSES EVERE DAMAGE
1950 ANTI-KMT UPRISING: TAIWAN
1950 U.S. SHIP RAMS PRC SHIP IN POHAI BAY; 70 CHINESE DIE
1950 U.S./KMT AGENTS DESTROY PRC CIVIL A/C: HONG KONG
1950 UK AUTHORITIES DETAIN 70 PRC A/C: HONG KONG
1950 U.S. GETS ROK PUPPETS TO ATTACK N KOREA; PRC ENDANGERED
1950 U.S. 7TH FLEET TO TAIWAN STRAITS; A DIRECT ATTACK ON PRC
1950 U.S. PRESIDENT ANNOUNCES U.S. INTERVENTION: INDOCHINA
1950 U.S./KMT AGENTS SEIZE PRC FISHING CRAFT: HONG KONG
1950 UK COMPLITS BORDER, AIRSPACE VIOLATIONS FROM HONG KONG
1950 OVER SEAS ASIAN MINORITIES OPPOSE AFRICAN DISCRIMINATION
1950 REPEATED FRENCH AIP, GROUND VIOLATIONS OF PRC; KMT AIDS
1950 U.S. PLOT CAUSES DPRK WITHDRAW FROM SEOUL; PRC ENDANGERED
1950 PLA LIBERATES TIBET; HOSTILE MOVES BY U.S., UK
1950 PLA AIDS DPRK IN ROUTING U.S., RHEE INVADE CHINA; WAR ENDS
1950 PEOPLE'S ARMED STRUGGLE EXPANDS IN BURMA
1950 UK OPPOSES MALAYA STRUGGLE; REPRESSIONS OVERSEAS CHINESE
1951 MAO CLAIMS U.S. SCHEMING TO OCCUPY DPRK; INVADE PRC MAINLAND
1951 U.S./KMT AGENTS INFILTRATE PRC; ARE KILLED, CAPTURED
1951 THAI GOVT STARTS ANTI-CHINESE CAMPAIGN; PLANS EXPULSIONS
1951 PRC WARNS UK ON IL TANK SEIZURE: HONG KONG
1951 PRC PROTESTS EXCLUSION: U.S., JAPAN SIGN TREATY
1951 TIBETAN REACTIONARIES DEMAND PLA WITHDRAW TO TIBET
1951 INDIA OCCUPIES 9000 SQ KM PRC: EVICTS LOCAL ADMIN
1951 PRC SUPPRESSES INTERNAL OPPRESSION: KMT BANDITS
1952 UK AUTHORITIES DEFEND CHINESE; INFILTRATE BANDITS INTO PRC
1952 UK POLICE FIRE ON PRC DELEGATES, MANY JAILED: HONG KONG
1952 PRC PROTESTS UK SEIZURE OF A/C
1952 MAJOR RIOT AT PONGAM POW CAMP: CHINESE, KOREANS KILLED
1953 US REPRESSES RIOTS-KOJET POW CAMP; PRC DPRK PROTEST KILLING
1953 UK AUTHORITIES IN HONG KONG SEIZE PRC FISHING VESSEL
1953 U.S. BLOCKS FINNISH SHIP TO PRC: ORDERS KMT TO SEIZE IT
1953 KHURSHCHEV, GROUP SEIZE LEADERSHIP OF CPSU: USSR
1953 LOCAL OPPOSITION TO PRC RULE OVER TIBET GROWS
1954 U.S. SENDS MILITARY TO VN WAR; PREPARES TO SUPPLANT FRANCE
1954 PRC DOWNS UK A/C HAINAN ISLAND: U.S. SENDS NAVAL UNITS
1954 SEATO ALLIANCE FORMED: PRC CONDEMNED
1954 U.S. AIDS KMT WAR AGAINST PRC; PLA SEIZES ISLANDS
1954 ALGERIANS WIN WAR OF NATIONAL LIBERATION; PRC SENDS AID
1954 INDIA ENCROACHES ON PRC BORDER IN WESTERN, MIDDLE SECTORS
1955 U.S./KMT AGENTS SABOTAGE A/C, PRC DELEGATES: HONG KONG
1955 U.S./U.S. PLANES VIOLATE PRC AIRSPACE: 1 SHOT DOWN
1955 B U.S. PLANES VIOLATE PRC AIRSPACE: 1 SHOT DOWN
1955 KHURSHCHEV VISITS TITO, TRIES TO BURY HATCHET
1955 TIBETAN CLIQUE INSTIGATES KHAMBAM UPRIISING: SIKANG PROVINCE
1955 PORTUGAL SUPPRESSES DEMONSTRATIONS: INDIAN COLONIES
1955 PRC CONDEMN FRENCH SUPPRESSION: MZOROCCO
1955 PLA-BURMESE ARMED CLASH ALONG BORDER; MISUNDERSTANDING
1955 ROK NAVY SHELL, TRY TO SEIZE PRC FISHING VESSELS
1955 KMT BANDITS TROUBLE PRC, BURMESE GOVT: N BURMA
1955 U.S. CONGRESS OK'S PRESIDENTIAL USE OF MIL FORCES: TAIWAN
1955 USSR TAKES ADVANTAGE OF EGYPT AID AS FRONT
1955 KMT ASSISTS DALAI LAMA REBELLION: W SZECHUAN
1956 U.S. MIL REGCE A/C VIOLATE PRC AIRSPACE
1956 20 C3SU CONG (MOSCOW): KHURSHCHEV ATTACKS STALIN'S ERRORS
1956 PRC RESISTS JAPANESE PRESSURE TO RETURN WWII POW'S
1956 U.S. SUPPORTS DIEM'S ANTI-CHINESE PERSECUTION CAMPAIGN
1956 KMT FIGHTER VIOLATES PRC AIRSPACE, LANDS IN HONG KONG
1956 U.S. PREVENTS CHINESE STUDENTS RETURN TO PRC
1956 PRC REJECTS FILIPINO CLAIM TO RHONDS
1956 SUEZ CRISIS: UK, FRANCE, ISRAEL INVADE EGYPT, WITHDRAW
1956 CPSU LEADERS ERR IN POZNAN RIOTS: POLAND
1956 PLA ENTERS BURMA; PRC INTERESTED IN BORDER DELINEATION
1956 PRC WARNS U.S. ON AIR/NAVAL INTRUSIONS
1956 CPC PROTESTS Gov. PERSECUTION BY WEST GERMAN COMMUNISTS
1956 JAPAN REQUESTS USSR RETURN KURILES
1956 UK FILS TO HALT HONG KONG RIOTS; KMT AGENTS ARRESTED
1956 USSR, HUNGARIAN PEOPLE SMASH COUNTER-REVOLUTIONARY ATTEMPT
1957 SYRIA: U.S. BACKS Coup Attempt; Pushes Turkey to Plot War
1957 ANTI-U.S. DEMONSTRATION IN TAIWAN
1957 U.S. SUPPRESSES PRC SUPPORTS, UPAIRING: OMAN
1957 INDONESIANS STRUGGLE TO RECOVER W IRIAN FROM IMPERIALISTS
1957 REACTIONARY TIBETAN CLIQUE CONDUCTS ANTI-PRC INSURGENCY
1957 REBELLION CRUSHED: SUMATRA, MANY STATES INVOLVED
1958 KMT BOMBER HARASSES PRC MAINLAND, LANDS IN HONG KONG
1958 JAPANESE FISHING BOATS RAM PRC NETS; PRC DEMANDS AMENDS
1958 FRENCH UNION COLLAPSES. CPC CRITICIZES PCF SPT. OF GOVT
1958 UK VIOLATES PRC AIRSPACE; PERSECUTES LOCAL CHINESE
1958 UK TROOPS INTERVENE IN JORDAN. PRC WARNS UK TO HALT
1958 PRC CONDEMN'S U.S. INTERVENTION IN LIBANON; PRC HOLDS RALLY
1958 2ND TAIWAN STRAIT CRISIS-PRC SHELLS QUEMYO; REJECTS US CHARGES
1958 KMT AF ATTACKS FUKUIN PROVINCE; ONE A/C DOWNE
1958 15 INDIAN SQUIRRELS INTRUDE: SW SINKHAN; ARE SENT BACK
1958 GUINEA REJECTS FRENCH TIE; FRANCE HALTS AID; PRC VOWS SPT
1958 KMT FORCES IN LAOS INVADE YUNNAN; U.S. PROVIDES MILITARY AID
1958 PRC BACKS SOVIET PROPOSALS ON ENDING BERLIN OCCUPATION
1958 KMT WANTS SOVIET BOMBS TO AID KMT; PRC VOWS SPT
1958 THAI GOVT PERSECUTES CHINESE; PRC PROTESTS; DEMANDS HALT
1958 THAI-CAMBODIAN RELATIONS TEASE; PRC REJECTS THAI CHARGES
1959 U.S. BATTISTA REGIME OVERTHROWN IN CUBA. PRC DECLARES SPT
1959 SVN: MASSACRE'S POLITICAL PRISONERS PHALO; PRC, DRV PROTEST
1959 U.S. FORCES LAOTIAN ACTIONS AGAINST DRV, PATHET LAO
1959 POPULAR REVOLTS IN CONGO; PRC DECLARES SUPPORT
1959 GREEK GOVT ARRESTS, TRIES, MCP LDR. PRC DEMANDS RELEASE
1959 UK ESTABLISHES CYRUS REPUBLIC; PRC DENOUNCES ACT
1959 SVN SEIZES PRC SHIPS, CREWS; VIOLATES AIR, HSIHSA ISLANDS
1959 MALAY GOVT CLOSURES BANK CHINA. PRC, U.S. TRADE ACCUSATIONS
1959 CAMEROON PEOPLE STRUGGLE VS FRENCH RULE; U.S. AMBITIONS
1959 THAI GOVT BANS TRADE WITH PRC; PRC DENOUNCES ACTION
1959 TIBETAN TRAITORS LAUNCH ARMED REBELLION; CRUSHED BY PLA
1959 NYASALAND PEOPLE STRUGGLE VS UK COLONIALISTS; PRC VOWS SPT
1959 U.S. SHIPS, A/C VIOLATE PRC WATERS, AIRSPACE
1959 KMT BANDITS IN GHANA CONTINUE TO HARASS PRC FRONTIERS
1959 SINGAPORE PEOPLE STRUGGLE FOR NATIONAL INDEPENDENCE
1959 PAKISTANI GOVT PLOTS TO UNDERMINE PRC RULE; PRC PROTESTS
1959 NEHRU ENCOURAGES reactionaries TO OVERTHROW RULE: KERALA
1959 S YEMEN PEOPLES STRUGGLE VS UK RULE; PRC DECLARES SPT
1959 INDIA STARTS BORDER CLASHES; PRC DENIES INDIAN CHARGES
1959 KHRUS, IKE MEET AT CAMP DAVID; USSR STARTS CATERING TO U.S.
1959 PRC DIPLOMAT KIDNAPPED BY US IN BOMBAY. PRC PROTESTS
1959 PRC DEMANDS HALT TO ANTI- CHINESE WAVES: INDO.; TREATY SIGNED
1959 SOVIET REVISIONISTS SABOTAGE PRC: CAUSE ECONOMIC DIFFICULTY
1959 GUINEA-BISSAU PEOPLE STRUGGLE FOR NATL LIB; PRC VOWS SPT
1960 US, JAPAN SIGN DEFENSE TREATY; PRC, JAPANESE HOLD MASS PROTESTS
1960 UNREST IN LAOS LEADS TO COUPS; PRC DENIES U.S. CHARGES
1960 MASS RIOTING LEADS TO OUSTER OF RHEE REGIME IN S KOREA
1963 PEK. REVIEW PUBLISHES "LONG LIVE LENINIMS", A POLICY PSN
1960 UNREST, VIOLENT OVERTHROW OF MENDERES REGIME IN TURKEY
1960 PRC DENIES INDIAN AIRSPACE CHARGES; U.S. THE CULPRIT
1960 U-2 INCIDENT; U.S. WRECKS SUMMIT; PRC SUPPORTS USSR
1960 PROTESTS; IKE CANCELS JAPANESE TRIP; PLA SHELLS QUEMOY
1960 CPSU: SURPRISE ASSAULT ON CPC AT 3D RUMANIAN CP CONGRESS
1960 PRC BDR GDS PURSUE REBELS: TIBET; EXCHANGE FIRE W/ NEPALESE
1960 U.S. IMPOSES ECONOMIC SANCTIONS; CUBA; PRC Extends Aid
1960 IMPERIALIST AGGRESSION AGAINST CONGO; PRC DECLARES SUPPORT
1960 KHRUSCHEV ARBITRARILY WITHDRAWS ALL SOVIET AID FROM PRC
1960 PRC SEVERS SOUTH AFRICAN TIES; SUPPORTS PEOPLE'S STRUGGLE
1960 INDIA STARTS ANTI-CHINESE CAMPAIGN; PRC PROTESTS
1960 YUGOSLAV BANDITS ENTER ALBANIA; PRC DENOUNCES ACTION
1960 PRC NEWSPM ASSAULTED: YUGOSLAVIA; PRC PROTESTS
1960 ARMED INDIAN INTRUSIONS, AIR VIOLATIONS OF PRC INCREASE
1961 U.S. BREAKS TIES, ATTACKS CUBA; PRC CONDEMNS ACTIONS
1961 PRC SUPPORTS TANGANYIKA PEOPLE'S STRUGGLE VS UK COLONISTS
1961 LUMUMBA MURDERED: U.S., BELGIUM IMPLICATED: PRC PROTESTS
1961 KMT PATROL ENTERS YUNNAN, TRIES TO ABDUCT LOCALS, FLEES
1961 UNREST, COUP: SOUTH KOREA: REGIME TURNS ON LEFTISTS, MEDIA
1961 THAI GOVT ARRESTS PATRIOTS: ACCUSES PRC, DRV OF INSURG SUPPORT
1961 ANGOLAN NATL LIBER STRUGGLE SPREADS; PRC SUPPORTS UPRISING
1961 U.S. INVENTS BERLIN CRISIS AS PRETEXT FOR ARMS BUILD-UP
1961 FRENCH MIL ATTACK BIZERTA: PRC CONDEMNS NEW AGGRESSION
1961 U.S. CLAIMS KUWAIT; U.S., MIL INTERVENE; PRC DEMANDS PULLOUT
1961 CPSU, U.S. LEAD TO ARREST OF GIZENGA; SETBACK FOR CONGO NL
1961 U.S. FORCES QUADROPS TO RESIGN; PRC CONDEMNS BRAZIL
1961 AT XXII CONGRESS CPSU ATTACKS CP'S, M-L, SPLITS CAMP
1961 ANTIN-UK UPRISING: ERUPT; UK SENDS TROOPS; PRC BACKS NL
1961 INDIAN TROOPS END PORTUGUESE RULE GOA, ETC.; PRC SAYS ACT
1961 INDONESIA SUCCEEDS IN EFFORT TO LIBERATE WEST IRIAN
1961 IRAN JAILS STUDENT PARTY; PRC SUPPORTS Demand FOR RELEASE
1961 USSR BRKS ECON TIES WITH ALBANIA; ATTEMPTS TO OUST HOXHA GVT
1962 INDONESIA: IMPERIALISTS ATTEMPT TO KILL SUKARNO; PRC CONCEND
1962 NE WIN COMES TO POWER: BURMA; PRC RECOGNIZES NEW REGIME
1962 SOVIET SUBVERSION LEADS TO MASS EXODUS: SINKIANG
1962 US SENTS MILITARY TO THAILAND; PRC DENOUNCES YOVE
1962 SPANIARDS STRUGGLE VS FRANCO REGIME; PRC CONDEMNS SUPPORT
1962 3 MAJITN PRINCES AGREE ON COALITION GVT; DEFEAT FOR U.S.
1962 ENEMIES START REBELLION IN MALI; PRC SUPPORTS MALIS
1962 GHAFA'S NKURUMAH LIFE THREATENED; PRC CONDEMNS ACT
1962 USSR/U.S. SIGN PART'L NUCLEAR TEST BAN TREATY; PRC CONDENS
1962 TAIWAN SENDS AGENTS TO INFILTRATE, CONDUCT SASOTAGE
1962 INDIAN ARMED FORCES ATTACK PRC; USSR/U.S. SUPPORT INDIA
1962 CUBAN MISSILE CRISIS: U.S. BLOCKADE; USSR TO REMOVE MILS
1962 PRC SUPPORTS RHODESIANS STRUGGLE FOR NATIONAL INDEPENDENCE
1962 NSWP CP'S ATTACK ALBANIAN, CHINESE CP'S; USSR-INSTIGATOR
1963 UK ATTEMPTS TO DEMOLISH HOUSES IN HONG KONG
1963 INDIAN GVT INTENSIFIES CAMPAIGN VS LOCAL CHINESE LEFTISTS
1963 IRAQI GOVT KILLS LOCAL COMMUNISTS; PRC BITTERLY INDIGNANT
1963 CAREFULLY PLANNED ANTI-CHINESE RIOTS: INDONESIA
1963 CPSU, CPC EXCHANGE OPEN LETTERS: DISPUTE INTENSIFIES
1963 UK ESTABLISES MALAYSIA: ATTEMPTS OUST RLY; PRC VOWS SPT
1963 SOVIETS SMASH DISPLY AT PRC EMBASSY, COUPS 5 PRC DIPLOMATS
1963 USSR/OTHERS SIGN NUCLEAR TEST BAN TREATY; DENOUNCED BY PRC
1963 CZECHS CLOSE PRC PRESS OFFICE, EXPEL PRC DIPLOMAT
1963 ANTI-CHINESE DEMONSTRATION: MOSCOW'S PRC EMBASSY
1963 SOVIET TROOPS PERSECUTE, EVICT PRC TRAVEL PASGR, STUDENTS
1963 U.S./SVN/THAI FORCES HARASS CAMBODIAN BORDER; PRC CONDEMS
1963 SOVIET ARREST, RELEASE U.S. SPY BARGHOORN; PRC ACCUSES USSR
1963 USSR JOINS U.S. & JAPAN IN ANTI-PRC ALLIANCE
1963 YUGOSLAVE LEAVES SOCIALISTS; DEGENERATES INTO CAPITALISM
1964 U.S. SUES TERRORISTS; RIOTS: PRC SHOWS ACTIVE CONCERN
1964 U.S./BELGIUM TROOPS LAND STANLEYVILLE: FORCED TO WITHDRAW
1964 SOUTH KOREANS PROTEST JAPAN TALKS; OPPOSE PAK REGIME
1964 U.S. INSTIGATES COUP: LAOS: PRC DEMANDS OFFICIAL RELEASE
1964 BHUTANESE PM ASSASSINATED; PRC, INDIA TRADE CHARGES
1964 U.S.-INSTIGATED COUP OUTS GOULART: BRAZIL; NEW GOVT ATTACKS CHINA
1964 U.S. A/C BOMB PRC MISSION: LAOS; PRC PROTESTS STRONGLY
1964 2 KMT RECCUE PLANES SHOT DOWN GVR PRC. ANOTHER DOWN BY NAVY
1964 US/KMT AGENTS INFILTRATE, CAPTURED OR KILLED BY PLA
1964 INDIA RESUMES ARMED GROUND, AIR INTRUSIONS INTO PRC
1964 TONKIN INCIDENT LEADS US TO SEND TRPS TO VN, SAIGON FALLS
1964 KHIDUSHCHEV OUTED: SEEN BY PRC AS GREAT VICTORY FOR COMMUNIST M-L
1964 MONMOOUTH ANTI-US DEMO IN TANZANIA. PRC SENDS MIL AID
1964 USSR INCREASES DISRUPTION OF STATUS QUO ALONG PRC BORDER
1964 CPSU CALLS MEETING OF CP'S; DAY OF SPLIT IN INTRANAL KMT
1965 BURUNDI BRAS TIES WITH PRC; US; BELGIUM IMPLICATED
1965 PHILIPPINE FRONT FORMED, WANTS U.S. OUT: RUNS INSURGENCY
1965 CPSU CONVENES CP MEETING IN MOSCOW; EXTREMELY GRATE STEP
1965 MASS ANTIWAR DEMO: MOSCOW: SUPPRESSED BY SOVIET TROOPS
1965 USSR POLICE ATTK VN STUDENTS PROTESTING U.S. VN AGGRESSION
1965 USSR: PRC DELAYING TRANSIT OF SOVIET MILITARY TRIPS TO DRY
1965 COUP: DOMINICAN REP: U.S. SENDS TROOPS; PRC CONDEMNS ACTION
1965 U.S. A/C INTRUDE INTO PRC; ATTACK FISHING BOATS
1965 U.S./KMT NAVAL INTRUSIONS: PRC WATERS; 3 KMT SHPS SUNK
1965 ANTI-U.S./JAPANESE REGIME RIOTS: SOUTH KOREA; REPS HARRASSED
1965 U.S. SUPPRESSES CIVIL RIGHTS STRUGGLE; PUBLIC PRC SUPPORT
1965 INDIAN ARMED ATTACK ON PAKISTAN: U.S./UK/URSS INSTIGATORS
1965 COUP IN INDONESIA LEADS TO WHOLESALE MASSACRE OF CP
1965 PRC PREVENTS SOVIET ATTENDANCE AT AFRO-ASIAN CONFERENCE
1965 ANTI-WAR PROTEST IN U.S. REACHES MONMOUTH SIZE
1965 USSR TRIES TO USE TRADE UNION CONGRESS TO ATTACK PRC
1965 SOUTHERN RHODESIA DECLARES INDEPENDENCE: SUPPRESSES MASS PROTEST
1965 SVN NAVY ATTACKS PRC FISHING BOATS, CREWS: PRC WARNS SVN
1965 INDOCHINESE GOVT: MMISIVE ASSAULT ON LOCAL CHINESE
1965 US PLANES BOMB PRC MISSION IN LAOS. PRC PROTESTS
1965 DOMINICAL COUP: NEW GOVT BREAKS PRC TIES; EVICTS DIPLOMATS
1966 CENTRAL AFRICAN REPUBLIC COUP: NEW GOVT BREAKS PRC TIES
1966 PRC PROTESTS INDIAN USE OF DALAI LAMA IN TIBET
1966 CASTRO PUBLICLY ACCUSES PRC OF CONTEMPT, IGNORANCE
1966 INDONESIANS ATTK PRC EMBASIES, OTHER FACILITIES. PRC PROTESTS
1966 US PLANES ATTACK PRC CONSULATES IN LAOS; PRC PROTESTS
1966 U.S. ENGINEERS COUP: GHANA; NEW GOVT EXPELS PRC ADVISORS
1966 SUMARTO SEIZES POWER: INDONESIA: DISPLACES SUKARNO
1966 CPC, OTHERS REFUSE DELEGATIONS TO XXII CPSU CONGRESS
1966 2 U.S. PLANES ATTACK PRC FISHING BOATS FROM KWANGTUNG
1966 THAI GOVT SENDS ARMED FORCES TO VN; PRC WARNS THAILAND
1966 U.S. PLANES DUE PRC TRAINER; FLEE UNDER COUNTER-ATTACK
1966 USSR CAUGHT TRYING TO SABOTAGE AFRO/ASIAN WATER MEETING
1966 PRC PROTESTS U.S. ATTACK ON PRC CARGO SHIPS ON HIGH SEAS
1966 PRC SUPPORTS SOMALI STRUGGLE FOR NATIONAL LIBERATION
1966 PRC SUPPORTS SAWABA PARTY IN NIGER; CONDEMNS REGIME
1966 PRC SUPPORTS Eritrean Struggle for National Liberation
1966 SOVIET CONFISCATE PRC M-L WRITINGS; EXPEL PRC STUDENTS
1966 ALBANIAN CP ATTACKED BY CPSU LEADERS
1966 MASSIVE INDIAN UNREST: UPRISINGS, RIOTS, CLASHES WITH POLICE
1966 PORTUGUESE FORCEFULLY SUPPRESS CHINESE: MACAO: PRC PROTESTS
1966 HUNGARY SABOTAGES PRC TIES; EXPEL PRC STUDENTS; USSR-FAULT
1966 PRC PROTESTS U.S. BOMBING PRC FISHING BOATS: TONKIN GULF
1966 USSR/U.S. INCREASE COLLUSION IN VN; US PURSUES PEACE TALKS
1967 USSR ATTACKS CULTURAL REVOLUTION; VOWS SPT FOR LIUSHAO-CHI
1967 SOVIET TROOPS INTRUDE IN CHENPAI ISL; VIOLATE PRC AIRSPACE
1967 SOVIET POLICE ATTACK CHINESE STUDENTS: MOSCOW; PRC PROTESTS
1967 PRC REFUTES SOVIET ACCUSATIONS OF DRV WAR SHIPMENTS DELAY
1967 PRC PROTESTS U.S. ABDUCTION, JAILING PRC FISHERMEN IN SVN
1967 PRC PROTESTS PRC EMBASSY ATTACK BY SOVIET HOOLIGANS
1967 U.S. WARSHIPS RENEW INTRUSIONS; RAM, STRAFE PRC FISHING VESLS
1967 USSR OUSTS 2 PRC DIPLOMATS FOR ANTI-SOVIET ACTIVITIES
1967 PRC PROTESTS ATTACK ON CHINESE IN JAPAN BY CP REVISIONISTS
1967 U.S. PLANES INTRUDE INTO PRC AIRSPACE; SEVERAL DOWNED
1967 UK AUTHORITIES SUPPRESS STRIKES IN HONG KONG; PRC PROTESTS
1967 PRC PROTESTS ATTACK ON DIPLOMATS, JOURNALISTS: MONGOLIA
1967 U.S. ISRAELI ARMED ATTACK ON ARBS; USSR COLLUDES: PRC AVOS SPT
1967 U.S./URSS SUMMIT CONFERENCE: CLASSBORO; MORE COLLABORATION
1967 KENYA EXPELS PRC DIPLOMAT; INSTIGATES ATTACKS ON EMBASSY
1967 BURMA STARTS PERSECUTION OF CHINESE; JAILS MURDERS LEADERS
1967 UK HONG KONG AUTHORITIES CONFIRM ARMED PROVOCATION VS PRC
1967 PRC PROTESTS CZECH HALT TO CULTURAL TIES
1967 NEPAL CONDOVES ANTI-CHEMICAL ACTIVITIES IN KATHMANDU
1967 BURMESE ATTACK PRC EMBASSY; BORDER AIRSPACE VIOLATIONS
1967 RENEWED INDIAN BORDER INTRUSIONS; ATTACKS FRM SIKKI TO PRC
1967 SRI LANKANS STEAL ITEMS FROM PRC VESSELS; PRC PROTESTS
1967 ANOTHER KMT U-2 SPY PLANE DOWNED BY PLA OVER PRC
1967 JAPANESE POLICE ATTACK PRC EMBASSY PERSONNEL
1967 JAPAN: MASS ANTI-U.S. RIOT AT TOYO AIRPORT
1968 PUEBLO INCIDENT: PRC SUPPORTS NORTH KOREA
1968 U.S. PLANES BOMB PRC FREIGHTER; PRC PROTESTS STRONGLY
1968 MORE U.S. BOMBING, INTRUSIONS INTO PRC AIRSPACE
1968 U.S. SUBVERSION IN SOUTH YEMEN FAILS; U.S. BGMMBS PRC MOVING
1968 UK AUTHORITIES IN HONG KONG PERSECUTE PRC FILM MAKERS
1968 RHODESIA EXECUTES ZIMBABWEAN FRDM FGTRS; STRUGGLE GOES ON
1968 M L KING ASSASSINATION LEADS TO MASS BLACK UPRISINGS; U.S.
1968 USSR CONDUCTS ESPIONAGE IN PRC WATERS; PRC WARNS SOVIETS
1968 FRENCH WORKER-STUDENT STRIKE BETRAYED BY REVISIONISTS
1968 USURP INVADES, OCCUPIES CZECH; FLAGRANT IMPERIALISM
1968 MASSSES ATTACK U.S. BASES: TAIWAN; OPPOSITION TO KMT GROWS
1968 RUMANIA FACES DANGER OF SOVIET MILITARY INTERVENTION
1968 ALBANIA DENOUNCES, WITHDRAWS FROM WARSAW PACT
1968 CZECHS CONTINUE OPPOSITION TO SOVIETS; PRC ADMIRER COURGE
1969 INDIAN GOVERNMENT GETS RUSSIANS TO ATTACK PRC EMBASSY
1969 PRC DENIES HONG KONG CHEMICAL PERSECUTION BY UK: HONG KONG
1969 CHAO THOUGHT STIMULATES JAPANESE TO INTENSIFY ANTI-U.S. CAMPAIGN
1969 SOVIET TROOPS VIOLATE PRC BORDER AT CHENPAI ISLAND
1969 SOVIET RUSSIANS ATTACK PRC EMBASSY IN MOSCOW
1969 NORTH KOREA DOWNS U.S. RECCE A/C; U.S. RESCUES CREW: COLLUSION
1969 MALAYSIA MASSACRES, ARRESTS, SUPPRESSES OWN PEOPLE
1969 SOVIET PROVOCATIONS ON PRC BORDER: PACHA ISLAND, TIEHLEKTI
1969 U.S. RECCE A/C VIOLATES PRC AIRSPACE; IS DOWNED
1969 US/JAPAN STRENGTHEN MIL ALLIANCE; PRC DENOUNCES OKINAWA Accord
1970 PRC SUPPORTS EGYP AGAINST ISRAELI AGRRESSION
1970 CAMBODIA: SIMOUNK OUStubLED RIGHT-WING COUP; U.S. AT FAULT
1970 U.S. SPY SHIP INTRUDES INTO NORTH KOREAN WATERS; IS SUNX
1970 PRC WARNS U.S. ON CONTINUED VIOLATION AIRSPACE, WATERS
1970 ALLENDE ELECTED: CHILE; PRC SENDS CONGRATULATIONS
1970 U.S. GETS JORDAN TO ATTACK PLA; SYRIAN TROOPS INTRUDE
1970 JAPANESE STRUGGLE AGAINST U.S./JAPAN ACCORD ON OKINAWA
1970 PORTUGUESE COLONIALISTS DEFEATED; GUINEA: U.S. SUPPORT
1970 U.S. FORCES VIOLATE NORTH KOREAN AIRSPACE; FIRE AT BORDER POSTS
1970 USSR SIGNS FRC TREATY; DENOUNCED BY PRC AS BETRAYAL
1970 POLAND: TROOPS SUPPRESS DEMONSTRATORS; GIOMULKA STEPS DOWN
1971 PRC CONDEMN SPANISH SUPPRESSION OF BASQUE FIGHTERS
1971 TAIWANESE ATTACK U.S. BUILDINGS: TAIWAN; PROTEST U.S. POLICY
1971 INDIAN ARMY INVADES EAST PAKISTAN; USSR SUPPORTS AGGRESSION
1971 PRC PROTESTS FILIPINO OCCUPATION: CHUNGYEH, OTHER PRC IS
1971 THAILAND: MIL COUP; CONSTITUTION ABROGATED; FASCIST RULE
1971 INDIAN A/C INTRUDE INTO PRC AIRSPACE: PRC PROTESTS
1972 ANTI-CHINESE PROVOCATIONS OUTSIDE PRC EMBASSY: INDIA
1972 JAPAN ATTEMPTS TO ANNEX TAOYOU, OTHER IS.; PRC REJECT CLAIM
1972 PRC CONDEMONS REPEATED ISRAELI AGGRESSION AGAINST LABANON
1972 PRC SUPPORTS IRISH STRUGGLE; UK TROOPS MASSACRE IRISH: DERRY
1972 U.S. PLANES ATTACK PRC MERCHANT SHIPS IN DRV; PRC PROTESTS
1972 U.S./USSR SIGN SALT I TREATY; PRC CRITICIZES IT AS FAILURE
1972 EGYPT CLOSES SOVIET MIL MISSION; USSR RETALIATES IN PRESS
1972 PRC CONDEMONS U.S. AIR ATTACK ON PRC MERCHANT SHIP, LIFEBOATS
1972 PRC SUPPORTS NAMIBIAN STRUGGLE FOR SELF-DETERMINATION
1973 USSR INCREASES MIL FLIGHT NEAR NORTH JAPANESE ISLANDS
1973 ISRAEL DOWNS LIBYAN PASSENGER PLANE OVR SINAI. PRC CONDEMNS ACT
1973 CAMBODIAN UNREST GROWS; BOMBINGS, STRIKES, RIOT IN PHNOM PENG
1973 INDIA INVADES, OCCUPIES SIKKIM; USSR SUPPORTS; PRC CONDEMONS
1973 U.S. PRESSURES USSR INTO LETTING MORE JEWS EMIGRATE
1973 CHILE: ALLENDE OUSTED BY MIL COUP; MASS ARRESTS BY NEW GOVT
1973 INDONESIANS ATTACK CHINESE SHOPS, RESIDENTS IN BANDUNG
1973 ISRAELI PLANES FORCE LEBADES AIRLINER TO LAND IN ISRAEL
1973 LAOS: RIGHTISTS FAIL TO OUT SOJUANA PHOUMA IN COUP
1973 OCT 73 WAR: ISRAEL ATTACKS EGYPT, SYRIA; U.S. CALLS ALERT
1973 ROK: MASS STUDENT UNREST SUPPRESSED BY POLICE
1973 THAILAND: MASS STUDENT UNREST SUPPRESSED; PM RESIGNS
1973 USSR KIDNAPS PRC DIPLOMATS; PRC PROTESTS
1973 U.S./SOVIET ARM RACE INTENSIFIES: MIRVS & CRUISE MISSILES
1974 SVN ENCROACHES ON HSISHA, OTHER IS.; RRM PRC FISHING BOATS
1974 ROK: PAK REGIME EMERGENCY; SUPPRESSION INTENSIFIES
1974 PORTUGAL: FASCIST REGIME COLLAPSES; MIL UPRISING PUT DOWN
1974 GOVERNMENT OF NATIONAL UNION PROCLAIMED IN LAGS
1974 UN: THIRD WORLD DEMANDS CHANGE IN WORLD ECONOMIC RELATIONS
1974 SYRIA REPELS ISRAELI AGGRESSION; U.S. PROCURES ACCORD
1974 ISRAEL INTRUSIONS INTO LEBANON; NAVY SHELLS PRT OF TYRE
1974 SOVIET HELICOPTER DOWNED; PRC; CREW EVENTUALLY RELEASED
1974 INDIA EXPLODES NUCLEAR DEVICE; PAKISTAN REJECTS BLACKMAIL
1974 YUGOSLAVIA UNCOVERS SOVIET-BACKED ANTI-REGIME GROUP
1974 VN STARTS ANTI-PRC CAMPAIGN; BORDER INCISIONS, INCIDENT
1975 CAMBODIA: PATRIOTS CAPTURE PHNOM PENG
1975 ARMED CIVIL STRIFE WRACKS LEBANON
1975 MAYAGUEZ INCIDENT; PRC CONDEMONS U.S. SHIP SEQUERE AS PIRACY
1975 CAMBODIAN FORCES VIOLATE VN BORDERS; INSTIGATE ARMED CLASHES
1975 PLA COMMANDOS ATTACK ISRAELI MISSLE, AMMO PLANTS
1975 USSR STIFTS UP CONFLICT: ANGOLA; SOVIETs, CUBANS KILL MANY
1975 BANGLADESH: RAMJAN GOVT OUSTED IN COUP; PRC RECQG NEW GVT
1975 PRC REJECTS INDIAN CLAIM OF PATROL AMBUSH; ACCUSES INDIA
1975 BANGLADESH: COUP ATTEMPT SMASHED
1975 INDOCHINESE TPRS SEIZE EAST TIMOR; PRC DENOUNCES ACT. MLS GOES ON
1975 INDIAN BANDITS ATTACK BANGLADESH; HIT POLICE STATIONS
1975 RHODESIAN TPRS ATTACK MOZAMBI BORDER VILLAGES; PRC CONDEMONS
1975 PRC DENOUNCES U.S. AIR ATTACK ON CAMBODIAN TOWN: SUP POLPOT
1975 EGYPT ENDS TREATY W/ USSR; MAJOR BLOW TO SOVIET HEGEMONISM
1975 SOUTH AFRICA: MASS ANTI-GOVERNMENT EMO; PRC SUPPORTS STRUGGLE
1975 FILIPINO/KEDISH GRP DRILL FO OIL: NANSH; PRC PROTESTS
1975 POLAND: MASSES PROTEST ENFORCED ALLIANCE WITH USSR
1975 KOREA: U.S. BANDITS FELL TREE; DPRK FRCES ALRTD; PRC SPTS DPRK
1977 IMPERIALIST MERCENARIES ATTACK BENIN AIRPORT; ARE REPELLED
1977 ZAIRE: SOVIET MERCENARIES INAIDE SHABE, ARE OUSTED
1977 JAPAN, ROX SIGN ACCORD ON E CHINA SEA SHELF; PRC PROTESTS
1977 PAKISTAN: ARMED FORCES SEIZE POWER; IMPOSE MARTIAL LAW
1977 MALAYSIAN TROOPS FAIL TO MOP UP INSURGENTS
1977 INDIA CONT'S TO INTERFERE, AID TIBETAN REBELS; PRC PROTESTS
1977 VN FORCES LAUNCH MASS INVASION-CAMBODIA, ARE REPELLED
1977 VN PERSECUTES, EXPELS OVER 100,000 CHINESE; PRC DEMANDS HALT
1977 USSR INVOLVED SUBVERSION IN INNER MONGOLIA
1978 ISRAELI FORCES OVERRUN SOUTH LEBANON; ATTACK PLO BASES
1978 AFGHANISTAN: USSR ENGINEER COUP TO GAIN INDIAN OCEAN ACCESS
1978 SOUTH AFRICAN TROOPS ATTACK SWAPO CAMPS IN SOUTH ANGOLA
1978 USSR FORCES VIOLATE PRC BORDER NEAR WUSVLI; USSR APOLOGIZES
1978 ZAIRE: SOVIET CUBAN MERCENARIES INVADE, SZE KOLWEZE; OUSTED
1978 VN FAILS TO ENGINEER COUP IN CAMBODIA
1978 VN LAUNCHES 2D INVASION-CAMBODIA; FAILS, Suffers HEAVY LOSSES
1978 VN ACCUSES PRC OF AIRSPACE VIOLATION; PRC DENIES IT
1978 ALBANIA BREAKS WITH PRC; PRC PROTESTS UNJUST ALLEGATIONS
1978 VN TRPS, POLICE EXPEL CHINESE STRANDED VN SIDE OF BORDER
1978 VN TROOPS VIOLATE PRC BORDER, ATTACK OFFICIALS; EMPLOY MINES
1978 USSR: PRC A/C OVERFLEW INDIA; PRC DENIES IT
1978 VN TROOPS AMBUSH, FIRE ON PRC TROOPS; PRC WARNS VN TO STOP
1978 3RD VN INVASION-CAMBODIA: PHNOM PENH TAKEN; USSR SUPPORTS
1978 VN SHIPS ATTACK PRC TRAWLERS: BOARD, LOOT ONE; PRC PROTESTS
1978 MORE BORDER INCIDENTS: VN TROOPS LAY MINES, FIRE; PRC WARNS VN
1978 VN PATROL ENTERS PRC(PING EU): FIRES ON KILLS PRC MILITIA
APPENDIX 4

RAW DATA FOR 385 CASES
| 361  | 770308 | 770526 | 3 64 7 27 1 2 0 0 2 3 | 355000000000 | 2032 130 281 |
| 362  | 770588 | 780588 | 3 70 3 35 1 0 0 1 5 | 00000010001 | 2044 130 488 |
| 363  | 770705 | 770705 | 1 64 4 34 0 2 0 0 1 | 000000000000 | 1022 551 580 |
| 364  | 770721 | 770810 | 2 75 5 32 0 2 0 3 1 | 00000003000 | 1022 310 131 |
| 365  | 770722 | 780888 | 0 71 1 22 1 2 0 1 4 | 000000000000 | 2133 130 118 |
| 366  | 770933 | 780106 | 3 74 7 27 1 2 0 3 4 | 30000003400 | 2344 131 488 |
| 367  | 771088 | 760588 | 3 74 4 30 1 2 0 1 4 | 000000100000 | 2344 131 448 |
| 368  | 778888 | 788888 | 4 71 1 22 1 0 0 1 2 | 100000000000 | 2344 131 488 |
| 369  | 780314 | 760385 | 1 61 7 36 1 2 0 0 6 | 000000000000 | 2002 130 284 |
| 370  | 780427 | 780430 | 1 61 4 34 1 2 0 0 4 | 300000000000 | 1333 030 463 |
| 371  | 780504 | 760504 | 1 64 7 38 1 2 0 0 6 | 000300000000 | 1001 150 248 |
| 372  | 780539 | 760509 | 1 71 1 36 1 2 0 1 2 | 100000000000 | 2344 131 389 |
| 373  | 780512 | 760528 | 2 64 7 37 1 2 0 0 2 | 355000000000 | 2002 130 233 |
| 374  | 780583 | 780583 | 2 74 7 24 1 2 0 2 6 | 000000000000 | 2122 130 118 |
| 375  | 780615 | 780629 | 74 7 27 1 2 0 3 6 | 00000003400 | 2133 130 118 |
| 376  | 780710 | 780710 | 74 4 36 1 0 0 1 4 | 000000000000 | 2144 311 368 |
| 377  | 780707 | 780707 | 74 8 35 1 0 0 1 4 | 000000000000 | 2244 130 443 |
| 378  | 780801 | 780325 | 74 4 30 1 2 0 1 4 | 000000010000 | 2144 231 484 |
| 379  | 780625 | 780630 | 3 71 1 36 1 2 0 1 4 | 000000010000 | 2344 131 488 |
| 380  | 780588 | 780588 | 71 4 36 1 0 0 0 2 | 100000000000 | 2244 230 380 |
| 381  | 781110 | 781101 | 1 71 1 36 1 2 0 1 4 | 000000010000 | 2344 131 493 |
| 382  | 781203 | 781233 | 2 74 7 37 1 2 0 2 | 00000003400 | 2133 130 448 |
| 383  | 781233 | 781233 | 70 3 30 1 2 0 1 4 | 000000010000 | 2244 130 488 |
| 384  | 781214 | 781216 | 71 1 38 1 2 0 1 4 | 000000010000 | 2344 131 488 |
| 385  | 781223 | 781223 | 71 1 36 1 2 0 1 4 | 000000010000 | 2344 131 368 |
APPENDIX 5

ACTOR LISTS FOR 385 CASES
<p>| | | | | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>1</td>
<td>1510</td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>3</td>
<td>159002200810</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>1330</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>2</td>
<td>02900780</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>1530</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>2</td>
<td>02900780</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>1</td>
<td>1430</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>2</td>
<td>07401540</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>2</td>
<td>02900780</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>1</td>
<td>0430</td>
<td></td>
<td>1</td>
<td>0290</td>
<td></td>
<td>2</td>
<td>03001540</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>1</td>
<td>1510</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>1</td>
<td>1530</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>1</td>
<td>1720</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>1</td>
<td>0230</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>1</td>
<td>0030</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>2</td>
<td>15101650</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>1</td>
<td>1180</td>
<td></td>
<td>1</td>
<td>1710</td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>1</td>
<td>0430</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>1</td>
<td>0230</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>2</td>
<td>02900200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>1</td>
<td>1540</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>2</td>
<td>15100430</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>1</td>
<td>0290</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>1</td>
<td>1510</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 1st col - id #; 2nd col - # of Primary actor on side A; 4-6th col - primary actors' code #; 7th col - # of secondary actors on side A; 8-10th col - secondary actors' code #; 11th col - # of primary actors on side B
<table>
<thead>
<tr>
<th>Code</th>
<th>12-14th col</th>
<th>15th col</th>
<th>16-18th col</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>62</td>
<td>1500</td>
<td>1540</td>
<td>1800</td>
</tr>
<tr>
<td>63</td>
<td>0230</td>
<td>0</td>
<td>1800</td>
</tr>
<tr>
<td>64</td>
<td>1540</td>
<td>0</td>
<td>1160</td>
</tr>
<tr>
<td>65</td>
<td>0290</td>
<td>0</td>
<td>0290</td>
</tr>
<tr>
<td>66</td>
<td>0430</td>
<td>0</td>
<td>0300</td>
</tr>
<tr>
<td>67</td>
<td>1170</td>
<td>0</td>
<td>0300</td>
</tr>
<tr>
<td>68</td>
<td>0290</td>
<td>0</td>
<td>1800</td>
</tr>
<tr>
<td>69</td>
<td>0230</td>
<td>0</td>
<td>0290</td>
</tr>
<tr>
<td>70</td>
<td>0630</td>
<td>0</td>
<td>0290</td>
</tr>
<tr>
<td>71</td>
<td>1510</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>72</td>
<td>03001530</td>
<td>0</td>
<td>0631</td>
</tr>
<tr>
<td>73</td>
<td>06301510</td>
<td>0</td>
<td>1480</td>
</tr>
<tr>
<td>74</td>
<td>1410</td>
<td>1510</td>
<td>1040</td>
</tr>
<tr>
<td>75</td>
<td>0300</td>
<td>1540</td>
<td>1101</td>
</tr>
<tr>
<td>76</td>
<td>1530</td>
<td>0</td>
<td>0292</td>
</tr>
<tr>
<td>77</td>
<td>0650</td>
<td>0</td>
<td>1540</td>
</tr>
<tr>
<td>78</td>
<td>1530</td>
<td>0</td>
<td>0291</td>
</tr>
<tr>
<td>79</td>
<td>0530</td>
<td>1510</td>
<td>0740</td>
</tr>
<tr>
<td>80</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>81</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>82</td>
<td>04300492</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>83</td>
<td>0230</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>84</td>
<td>0750</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>85</td>
<td>0820</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>86</td>
<td>0230</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>87</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>88</td>
<td>0230</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>89</td>
<td>0430</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>90</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>91</td>
<td>1710</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>92</td>
<td>1430</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>93</td>
<td>0220</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>94</td>
<td>0350</td>
<td>1540</td>
<td>0740</td>
</tr>
<tr>
<td>95</td>
<td>1530</td>
<td>1540</td>
<td>0740</td>
</tr>
<tr>
<td>96</td>
<td>08101540</td>
<td>0291</td>
<td>0740</td>
</tr>
<tr>
<td>97</td>
<td>0130</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>98</td>
<td>0530</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>99</td>
<td>1530</td>
<td>1540</td>
<td>0740</td>
</tr>
<tr>
<td>100</td>
<td>0230</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>101</td>
<td>0230</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>102</td>
<td>04301530</td>
<td>1540</td>
<td>0740</td>
</tr>
<tr>
<td>103</td>
<td>0230</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>104</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>105</td>
<td>1530</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>106</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>107</td>
<td>0230</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>108</td>
<td>09001530</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>109</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>110</td>
<td>0650</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>111</td>
<td>1530</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>112</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>113</td>
<td>15101540</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>114</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>115</td>
<td>0650</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>116</td>
<td>0290</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>117</td>
<td>0530</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>118</td>
<td>07401540</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>119</td>
<td>0810</td>
<td>0</td>
<td>0740</td>
</tr>
<tr>
<td>120</td>
<td>0790</td>
<td>0</td>
<td>0740</td>
</tr>
</tbody>
</table>

12-14th col - primary actors' code #; 15th col - # of secondary actors on side B; 16-18th col - secondary actors' code #
<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>121</td>
<td>1</td>
<td>0230</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>122</td>
<td>1</td>
<td>1430</td>
<td>1</td>
<td>1540</td>
<td></td>
<td></td>
<td>1540</td>
</tr>
<tr>
<td>123</td>
<td>1</td>
<td>0230</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td>1540</td>
</tr>
<tr>
<td>124</td>
<td>1</td>
<td>1510</td>
<td></td>
<td></td>
<td>1</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>2</td>
<td>07401540</td>
<td></td>
<td></td>
<td>2</td>
<td>02900741</td>
<td>0</td>
</tr>
<tr>
<td>126</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>1510</td>
<td></td>
</tr>
<tr>
<td>127</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>1</td>
<td>0350</td>
<td></td>
<td></td>
<td>1</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>1</td>
<td>1650</td>
<td></td>
<td></td>
<td>3</td>
<td>013016621540</td>
<td>1810</td>
</tr>
<tr>
<td>130</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>1510</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>1330</td>
<td></td>
</tr>
<tr>
<td>132</td>
<td>1</td>
<td>0650</td>
<td></td>
<td></td>
<td>1</td>
<td>1900</td>
<td>10290</td>
</tr>
<tr>
<td>133</td>
<td>1</td>
<td>0020</td>
<td></td>
<td></td>
<td>1</td>
<td>1650</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>1650</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>1</td>
<td>0350</td>
<td></td>
<td></td>
<td>1</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>1</td>
<td>1530</td>
<td></td>
<td></td>
<td>1</td>
<td>1421</td>
<td></td>
</tr>
<tr>
<td>138</td>
<td>2</td>
<td>01301540</td>
<td></td>
<td></td>
<td>1</td>
<td>1661</td>
<td></td>
</tr>
<tr>
<td>139</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>0291</td>
<td>303008101540</td>
</tr>
<tr>
<td>140</td>
<td>1</td>
<td>0790</td>
<td>1</td>
<td>1540</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>141</td>
<td>1</td>
<td>1430</td>
<td></td>
<td></td>
<td>1</td>
<td>1431</td>
<td></td>
</tr>
<tr>
<td>142</td>
<td>1</td>
<td>1180</td>
<td></td>
<td></td>
<td>1</td>
<td>0051</td>
<td></td>
</tr>
<tr>
<td>143</td>
<td>1</td>
<td>1710</td>
<td></td>
<td></td>
<td>1</td>
<td>1780</td>
<td></td>
</tr>
<tr>
<td>144</td>
<td>1</td>
<td>0490</td>
<td></td>
<td></td>
<td>1</td>
<td>1470</td>
<td></td>
</tr>
<tr>
<td>145</td>
<td>1</td>
<td>0690</td>
<td></td>
<td></td>
<td>2</td>
<td>08001530</td>
<td>0</td>
</tr>
<tr>
<td>146</td>
<td>2</td>
<td>15101540</td>
<td>1</td>
<td>1810</td>
<td>1</td>
<td>1661</td>
<td>0</td>
</tr>
<tr>
<td>147</td>
<td>1</td>
<td>1540</td>
<td></td>
<td></td>
<td>1</td>
<td>0180</td>
<td></td>
</tr>
<tr>
<td>148</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td>149</td>
<td>1</td>
<td>1530</td>
<td></td>
<td></td>
<td>1</td>
<td>1532</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>1</td>
<td>0650</td>
<td></td>
<td></td>
<td>1</td>
<td>1180</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>1</td>
<td>0630</td>
<td></td>
<td></td>
<td>1</td>
<td>1040</td>
<td>1540</td>
</tr>
<tr>
<td>152</td>
<td>1</td>
<td>0570</td>
<td>1</td>
<td>1540</td>
<td></td>
<td></td>
<td>0671</td>
</tr>
<tr>
<td>153</td>
<td>1</td>
<td>0020</td>
<td></td>
<td></td>
<td>1</td>
<td>1510</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>1</td>
<td>0530</td>
<td></td>
<td></td>
<td>2</td>
<td>10401540</td>
<td>0</td>
</tr>
<tr>
<td>155</td>
<td>1</td>
<td>0230</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>1</td>
<td>0230</td>
<td></td>
<td></td>
<td>1</td>
<td>1510</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>2</td>
<td>14301540</td>
<td></td>
<td></td>
<td>1</td>
<td>0812</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>1</td>
<td>1310</td>
<td></td>
<td></td>
<td>1</td>
<td>1341</td>
<td></td>
</tr>
<tr>
<td>159</td>
<td>1</td>
<td>0810</td>
<td></td>
<td></td>
<td>2</td>
<td>09211700</td>
<td>0</td>
</tr>
<tr>
<td>160</td>
<td>1</td>
<td>0920</td>
<td></td>
<td></td>
<td>1</td>
<td>1700</td>
<td></td>
</tr>
<tr>
<td>161</td>
<td>1</td>
<td>0340</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>2</td>
<td>15101540</td>
<td></td>
<td></td>
<td>1</td>
<td>0300</td>
<td>1540</td>
</tr>
<tr>
<td>163</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>0650</td>
<td>303015101540</td>
</tr>
<tr>
<td>164</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td>165</td>
<td>2</td>
<td>03501510</td>
<td></td>
<td></td>
<td>1</td>
<td>1681</td>
<td></td>
</tr>
<tr>
<td>166</td>
<td>2</td>
<td>15301680</td>
<td></td>
<td></td>
<td>3</td>
<td>019003700630</td>
<td>1510</td>
</tr>
<tr>
<td>167</td>
<td>2</td>
<td>00200293</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>168</td>
<td>1</td>
<td>1530</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>169</td>
<td>1</td>
<td>0550</td>
<td></td>
<td></td>
<td>1</td>
<td>1800</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>1</td>
<td>0330</td>
<td></td>
<td></td>
<td>1</td>
<td>0681</td>
<td></td>
</tr>
<tr>
<td>171</td>
<td>1</td>
<td>0350</td>
<td></td>
<td></td>
<td>1</td>
<td>1800</td>
<td></td>
</tr>
<tr>
<td>172</td>
<td>1</td>
<td>0230</td>
<td></td>
<td></td>
<td>1</td>
<td>1510</td>
<td></td>
</tr>
<tr>
<td>173</td>
<td>3</td>
<td>033015301540</td>
<td>3</td>
<td>065011601430</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>174</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>1</td>
<td>0901</td>
<td></td>
</tr>
<tr>
<td>175</td>
<td>3</td>
<td>151015401320</td>
<td></td>
<td></td>
<td>1</td>
<td>1510</td>
<td></td>
</tr>
<tr>
<td>176</td>
<td>1</td>
<td>0230</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>177</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>1</td>
<td>0290</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>179</td>
<td>1</td>
<td>0220</td>
<td></td>
<td></td>
<td>3</td>
<td>143015401600</td>
<td>0</td>
</tr>
<tr>
<td>180</td>
<td>1</td>
<td>1510</td>
<td></td>
<td></td>
<td>1</td>
<td>1540</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1510</td>
<td>1540</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>------</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>241</td>
<td>2</td>
<td>1510</td>
<td>1540</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>243</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>245</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>246</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>247</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>248</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>1</td>
<td>1300</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>251</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252</td>
<td>1</td>
<td>1530</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>254</td>
<td>3</td>
<td>0430/07501410</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255</td>
<td>2</td>
<td>1510/1540</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>256</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>257</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>258</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>260</td>
<td>1</td>
<td>1030</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>262</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>264</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>265</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>266</td>
<td>1</td>
<td>0740</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>267</td>
<td>1</td>
<td>0780</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>268</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>269</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>270</td>
<td>2</td>
<td>0290/1640</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>271</td>
<td>1</td>
<td>1530</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>272</td>
<td>1</td>
<td>1530</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>273</td>
<td>1</td>
<td>1540</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>275</td>
<td>1</td>
<td>0430</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>276</td>
<td>1</td>
<td>0370</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>277</td>
<td>1</td>
<td>0300</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>278</td>
<td>1</td>
<td>1200</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>279</td>
<td>1</td>
<td>0020</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>280</td>
<td>1</td>
<td>0370</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>282</td>
<td>1</td>
<td>1530</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>283</td>
<td>1</td>
<td>0740</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284</td>
<td>1</td>
<td>0230</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286</td>
<td>1</td>
<td>0780</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>287</td>
<td>1</td>
<td>0900</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>288</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289</td>
<td>1</td>
<td>0230</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>290</td>
<td>2</td>
<td>0710/1540</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>291</td>
<td>1</td>
<td>0430</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>292</td>
<td>1</td>
<td>0220</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>293</td>
<td>1</td>
<td>0780</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>295</td>
<td>1</td>
<td>0230</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>296</td>
<td>1</td>
<td>0750</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>297</td>
<td>1</td>
<td>0740</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>298</td>
<td>1</td>
<td>0550</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>1</td>
<td>0780</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>2</td>
<td>0530/1510</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
301 1 1170 0 1 1171 0
302 1 1340 0 1 1342 0
303 2 03001540 0 1 0301 0
304 1 0650 1 1510 1 1110 0
305 1 0290 0 1 1160 0
306 1 1430 0 0 0 0
307 1 0230 0 0 0 0
308 1 0230 0 0 0 0
309 1 0290 0 0 0 0
310 1 0700 0 0 0 0
311 1 1530 0 0 0 0
312 1 0290 0 0 0 0
313 2 15101540 0 0 0 0
314 1 0430 0 0 0 0
315 1 0230 0 1 1510 0
316 1 1330 0 1 1540 0
317 1 0740 0 1 1011 0
318 1 0730 0 1 1510 0
319 1 0220 0 1 1510 0
320 1 0290 0 1 1510 0
321 1 1510 2 07001540 0 0 0
322 1 0280 0 0 0 0
323 1 0650 0 1 1800 0
324 1 0700 0 1 0820 0
325 1 0610 0 0 0 0
326 1 0700 1 1540 2 04301410 0 0 0
327 1 0730 0 0 0 0
328 1 1430 0 0 0 0
329 1 0230 0 1 1510 0
330 2 15101540 0 0 0 0
331 1 0230 0 1 1600 0
332 1 0730 0 0 0 0
333 1 1180 0 0 0 0
334 1 0810 0 0 0 0
335 1 1730 0 1 1410 0
336 1 0700 0 1 0820 0
337 1 0700 0 1 1510 0
338 1 0290 0 1 1110 0
339 1 0650 0 1 1651 1 1510 0
340 1 1650 0 2 15901610 0 0 0
341 1 0290 0 1 0222 0
342 1 0220 0 0 0 0
343 1 0620 0 0 0 0
344 1 0220 0 1 1540 0
345 1 0200 0 1 1610 0
346 1 0700 0 1 1730 0
347 3 005303501510 0 0 0 0
348 1 0110 0 0 0 0
349 1 0290 0 0 0 0
350 1 0110 0 0 0 0
351 1 0660 0 0 0 0
352 1 0110 0 0 0 0
353 1 1000 0 0 0 0
354 1 0220 0 0 0 0
355 1 0430 0 0 0 0
356 1 1330 0 2 11601390 0 0 0
357 1 0290 0 0 0 0
358 1 1170 0 1 1540 0
359 1 0780 0 1 0141 3 050009901440
360 1 0140 0 0 0 0
<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>361</td>
<td>1</td>
<td>1860</td>
<td>0</td>
<td>2</td>
<td>03501510</td>
<td>0</td>
</tr>
<tr>
<td>362</td>
<td>2</td>
<td>07400790</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>364</td>
<td>1</td>
<td>1110</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>365</td>
<td>1</td>
<td>0900</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>366</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>367</td>
<td>1</td>
<td>0220</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>368</td>
<td>1</td>
<td>1510</td>
<td>1</td>
<td>1510</td>
<td>1</td>
<td>0290</td>
</tr>
<tr>
<td>369</td>
<td>1</td>
<td>0820</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>370</td>
<td>1</td>
<td>0010</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>371</td>
<td>1</td>
<td>1330</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>372</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>373</td>
<td>1</td>
<td>1550</td>
<td>3</td>
<td>049009901270</td>
<td>2</td>
<td>03501510</td>
</tr>
<tr>
<td>374</td>
<td>1</td>
<td>0220</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>375</td>
<td>1</td>
<td>0220</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>376</td>
<td>1</td>
<td>0230</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>377</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>378</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>379</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>380</td>
<td>1</td>
<td>0230</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>381</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>382</td>
<td>1</td>
<td>0220</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>1</td>
</tr>
<tr>
<td>383</td>
<td>1</td>
<td>0230</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>384</td>
<td>1</td>
<td>0230</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
<tr>
<td>385</td>
<td>1</td>
<td>0290</td>
<td>0</td>
<td>1</td>
<td>1610</td>
<td>0</td>
</tr>
</tbody>
</table>
APPENDIX 6

CODE NUMBERS AND NAMES OF POSSIBLE ACTORS
0010 Afghanistan
0020 Albania
0030 Algeria
0040 Andorra
0050 Angola
0051 Angolan People
0052 FLNA
0053 MPLA
0060 Argentina
0070 Australia
0080 Austria
0090 Bahamas
0100 Bahrain
0110 Bangladesh
0120 Barbados
0130 Belgium
0140 Benin ( Dahomey )
0141 Benin Exiles
0150 Bhutan
0160 Bolivia
0170 Botswana
0180 Brazil
0190 Bulgaria
0200 Burma
0201 Burmese People
0210 Burundi
0220 Cambodia
0221 Cambodian People
0222 Khmer Rouge
0223 Right - wing Cambodians
0230 Cameroon
0231 Cameroon People
0240 Canada
0250 Cape Verde
0260 Central Africa
0270 Chad
0280 Chile
0290 People ' s Republic of China
0291 KMT Remnants
0292 Tibetan
0300 Taiwan
0301 Anti - KMT Chinese
0310 Colombia
0320 Comoros
0330 Congo
0340 Costa Rica
0350 Cuba
0351 Cuban Revolutionaries
0360 Cyprus
0361 Cypriot People
0370 Czechoslovakia
0380 Denmark
0390 Djibouti
0400 Dominica
0410 Dominican Republic
0411 Dominican People
0420 Ecuador
0430 Egypt
0440 El Salvador
0450 Equatorial Guinea
0460 Ethiopia
0461 Eritrean People
0470 Fiji
0480 Finland
0490 France
0491 French People
0492 French CP
0500 Gabon
0510 The Gambia
0520 East Germany
0530 West Germany
0531 West German CP
0540 Ghana
0550 Greece
0551 Greek CP
0560 Grenada
0570 Guatemala
0580 Guinea
0590 Guinea-Bissau
0600 Guyana
0610 Haiti
0620 Honduras
0630 Hungary
0631 Hungarian Counter-Rev
0640 Iceland
0650 India
0651 Goa's Demonstrators
0652 Indian CP
0660 Indonesia
0661 Indonesian CP
0662 Fretillín
0670 Iran
0671 Tudeh Party
0680 Iraq
0681 Iraq CP
0690 Ireland
0700 Israel
0710 Italy
0720 Ivory Coast
0730 Janica
0740 Japan
0741 Japanese People
0742 Japanese CP
0750 Jordan
0760 Kenya
0770 Kiribati
0780 North Korea
0790 South Korea
0791 South Korean People
0800 Kuwait
0810 Laos
0811 Lao Nationalists
0812 Pathet Lao
0820 Lebanon
0830 Lesotho
0840 Liberia
0857 Libya
0860 Liechtenstein
0870 Luxembourg
0880 Madagascar
0890 Malawi (Nyasaland)
0900 Malaysia
0901 Malaysia Natl Lib Movement
0902 Malaysia Pol's Armed Forces
0910 Maldives
0920 Mali
0921 Mali Counter Revolutionaries
0930 Malta
0940 Mauritania
0950 Mauritius
0960 Mexico
0970 Monaco
0980 Mongolia
0990 Morocco
0991 Moroccan People
1000 Mozambique
1010 Namibia
1011 Namibian People
1012 SWAPO
1020 Nauru
1030 Nepal
1040 The Netherlands
1050 New Zealand
1060 Nicaragua
1070 Niger
1071 Swaba Party
1080 Nigeria
1090 Norway
1100 Oman
1101 Omani People
1110 Pakistan
1120 Panama
1130 Papua New Guinea
1140 Paraguay
1150 Peru
1160 Philippines
1170 Poland
1171 Polish People
1180 Portugal
1190 Qatar
1200 Romania
1210 Rwanda
1220 Saint Lucia
1230 Saint Vincent
1240 San Marino
1250 Sao Tome and Principe
1260 Saudi Arabia
1270 Senegal
1280 Seychelles
1290 Sierra Leone
1300 Singapore
1301 Singapore People
1310 Solomon Islands
1320 Somalia
1330 South Africa
1331 South African People
1340 Spain
1341 Spanish Workers
1342 Basque
1350 Sri Lanka
1360 Sudan
1370 Suriname
1380 Swaziland
1390 Sweden
1400 Switzerland
1410 Syria
1420 Tanzania
1421 Tanganikan People
1430 Thailand
1431 Thai Patriots
1440 Togo
1450 Tonga
1460 Trinidad and Tobago
1470 Tunisia
1480 Turkey
1490 Tuvalu
1500 Uganda
1510 USSR
1520 United Arab Emirates
1530 United Kingdom
1531 Irish (Catholic) People
1532 Brunei People
1540 United States
1550 Upper Volta
1560 Uruguay
1570 Vatican City
1580 Venezuela
1590 North Vietnam
1600 South Vietnam
1601 South Vietnamese People
1610 Vietnam
1620 Western Samoa
1630 Yemen
1640 Southern Yemen
1641 Southern Yemeni People
1650 Yugoslavia
1651 Yugoslav Anti-Gov Group
1660 Zaire
1661 Congolese People
1662 Congo secessionists
1670 Zambia
1680 Zimbabwe (South Rhodesia)
1681 Rhodesian People
1700 Imperialists
1710 NATO
1720 SEATO
1730 Palestine Liberation Organization
1740 Pro-Moscow Communists
1750 Third World Nations
1760 Third World Students
1770 Vietnamese Students
1780 Warsaw Treaty Organization
1790 Ww II Occupation Forces
1800 Overseas Chinese
1810 United Nations
1820 Others
APPENDIX 7
ACTORS' DATE OF INDEPENDENCE
## STATUS OF COUNTRIES

<table>
<thead>
<tr>
<th>Code</th>
<th>Code of Actors</th>
<th>Date of Independence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0010</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0020</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0030</td>
<td>196207</td>
<td>0490</td>
</tr>
<tr>
<td>0040</td>
<td>088838</td>
<td>0490</td>
</tr>
<tr>
<td>0050</td>
<td>197511</td>
<td>1180</td>
</tr>
<tr>
<td>0060</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0070</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0080</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0090</td>
<td>197307</td>
<td>1530</td>
</tr>
<tr>
<td>0100</td>
<td>197108</td>
<td>1530</td>
</tr>
<tr>
<td>0110</td>
<td>197103</td>
<td>1110</td>
</tr>
<tr>
<td>0120</td>
<td>195611</td>
<td>1530</td>
</tr>
<tr>
<td>0130</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0140</td>
<td>196008</td>
<td>0490</td>
</tr>
<tr>
<td>0150</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0160</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0170</td>
<td>196529</td>
<td>1530</td>
</tr>
<tr>
<td>0180</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0190</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0200</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0210</td>
<td>166237</td>
<td>0130</td>
</tr>
<tr>
<td>0220</td>
<td>194911</td>
<td>0490</td>
</tr>
<tr>
<td>0230</td>
<td>196001</td>
<td>0490</td>
</tr>
<tr>
<td>0240</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0250</td>
<td>197557</td>
<td>1180</td>
</tr>
<tr>
<td>0260</td>
<td>196008</td>
<td>0490</td>
</tr>
<tr>
<td>0270</td>
<td>196008</td>
<td>0490</td>
</tr>
<tr>
<td>0280</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0290</td>
<td>194910</td>
<td>0000</td>
</tr>
<tr>
<td>0300</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0310</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0320</td>
<td>197507</td>
<td>0490</td>
</tr>
<tr>
<td>0330</td>
<td>196008</td>
<td>0490</td>
</tr>
<tr>
<td>0340</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0350</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0360</td>
<td>196008</td>
<td>1530</td>
</tr>
<tr>
<td>0370</td>
<td>000000</td>
<td>0300</td>
</tr>
<tr>
<td>0380</td>
<td>000000</td>
<td>0300</td>
</tr>
<tr>
<td>0390</td>
<td>197736</td>
<td>0190</td>
</tr>
<tr>
<td>0400</td>
<td>197511</td>
<td>1530</td>
</tr>
<tr>
<td>0410</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0420</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0430</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0440</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0450</td>
<td>196207</td>
<td>1340</td>
</tr>
<tr>
<td>0460</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0470</td>
<td>197010</td>
<td>1530</td>
</tr>
<tr>
<td>0480</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0490</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0500</td>
<td>196207</td>
<td>0490</td>
</tr>
<tr>
<td>0510</td>
<td>196532</td>
<td>1530</td>
</tr>
<tr>
<td>0520</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0530</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0540</td>
<td>195733</td>
<td>1530</td>
</tr>
<tr>
<td>0550</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0560</td>
<td>197402</td>
<td>1530</td>
</tr>
<tr>
<td>0570</td>
<td>000000</td>
<td>0000</td>
</tr>
<tr>
<td>0580</td>
<td>195810</td>
<td>0490</td>
</tr>
<tr>
<td>0590</td>
<td>197339</td>
<td>1180</td>
</tr>
</tbody>
</table>

*1st col - code # of actors; 2nd col. - date of independence; 3rd col - code # of country in control of the country before independence. The date is listed for those countries which became independent after 1949; others are listed as 000000*
0600 196605 1530
0610 000000 0300
0620 000000 0000
0630 000000 0000
0640 000000 0000
0650 000000 0000
0655 000000 0000
0700 000000 0000
0710 000000 0000
0720 196008 0490
0730 196208 1530
0740 000000 0000
0750 000000 0000
0760 196312 1530
0770 198888 1530
0780 000000 0000
0790 000000 0000
0800 196106 1530
0810 000000 0000
0820 000000 0000
0830 196310 1530
0840 000000 0000
0850 195112 2030
0860 000000 0000
0870 000000 0000
0880 196306 0490
0890 196407 1530
0900 195798 1530
0910 196577 1530
0920 196039 0490
0930 196439 1530
0940 196011 0490
0950 196603 1530
0960 000000 0000
0970 000000 0000
0980 000000 0000
0990 195833 0490
1000 197506 1180
1010 888838 1330
1020 196831 0070
1030 000000 0000
1040 000000 0000
1050 000000 0000
1060 000000 0000
1070 196038 0490
1080 196010 1530
1090 000000 0000
1100 000000 0000
1110 000000 0000
1120 000000 0000
1130 197509 0070
1140 000000 0000
1150 000000 0000
1160 000000 0000
1170 000000 0000
1180 000000 0000
1190 197109 1530
| 1200 | 000000 | 0000  |
| 1210 | 196207 | 0130  |
| 1220 | 888938 | 1530  |
| 1230 | 888988 | 1530  |
| 1240 | 000000 | 0300  |
| 1250 | 197507 | 1180  |
| 1260 | 000000 | 0000  |
| 1270 | 196008 | 0490  |
| 1280 | 197606 | 1530  |
| 1290 | 196104 | 1530  |
| 1300 | 196508 | 1530  |
| 1310 | 197808 | 1530  |
| 1320 | 196007 | 1530  |
| 1330 | 000000 | 0000  |
| 1340 | 000000 | 0000  |
| 1350 | 000000 | 0000  |
| 1360 | 195501 | 1530  |
| 1370 | 197511 | 1040  |
| 1380 | 196809 | 1530  |
| 1390 | 000000 | 0000  |
| 1400 | 000000 | 0000  |
| 1410 | 000000 | 0000  |
| 1420 | 000000 | 0000  |
| 1430 | 000000 | 0000  |
| 1440 | 196004 | 0490  |
| 1450 | 197006 | 1530  |
| 1460 | 196208 | 1530  |
| 1470 | 195603 | 0490  |
| 1480 | 000000 | 0000  |
| 1490 | 197910 | 1530  |
| 1500 | 196210 | 1530  |
| 1510 | 000000 | 0000  |
| 1520 | 197112 | 1530  |
| 1530 | 000000 | 0000  |
| 1540 | 000000 | 0000  |
| 1550 | 196008 | 0490  |
| 1560 | 000000 | 0000  |
| 1570 | 000000 | 0000  |
| 1580 | 000000 | 0000  |
| 1590 | 000000 | 0000  |
| 1600 | 195436 | 0490  |
| 1610 | 197607 | 1590  |
| 1620 | 196231 | 1050  |
| 1630 | 000000 | 0000  |
| 1640 | 196711 | 1530  |
| 1650 | 000000 | 0000  |
| 1660 | 195006 | 0130  |
| 1670 | 196410 | 1530  |
| 1680 | 196511 | 1530  |
APPENDIX 8

ACTORS' DIPLOMATIC RELATIONS WITH PRC
DIPLOMATIC RELATIONS WITH THE P.R.C.

<table>
<thead>
<tr>
<th>Date</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>19550120</td>
<td>0000000</td>
</tr>
<tr>
<td>19491123</td>
<td>0000000</td>
</tr>
<tr>
<td>19620673</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19720219</td>
<td>0000000</td>
</tr>
<tr>
<td>19721221</td>
<td>0000000</td>
</tr>
<tr>
<td>19710526</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19751004</td>
<td>0000000</td>
</tr>
<tr>
<td>19779539</td>
<td>0000000</td>
</tr>
<tr>
<td>19711025</td>
<td>0000000</td>
</tr>
<tr>
<td>19641112</td>
<td>0000000</td>
</tr>
<tr>
<td>19721229</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19750106</td>
<td>0000000</td>
</tr>
<tr>
<td>19740815</td>
<td>0000000</td>
</tr>
<tr>
<td>19491004</td>
<td>0000000</td>
</tr>
<tr>
<td>19500908</td>
<td>0000000</td>
</tr>
<tr>
<td>19531223</td>
<td>0000000</td>
</tr>
<tr>
<td>19580724</td>
<td>0000000</td>
</tr>
<tr>
<td>19710526</td>
<td>0000000</td>
</tr>
<tr>
<td>19701013</td>
<td>0000000</td>
</tr>
<tr>
<td>19760425</td>
<td>0000000</td>
</tr>
<tr>
<td>19640929</td>
<td>0000000</td>
</tr>
<tr>
<td>19721173</td>
<td>0000000</td>
</tr>
<tr>
<td>19701215</td>
<td>0000000</td>
</tr>
<tr>
<td>19491001</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19751113</td>
<td>0000000</td>
</tr>
<tr>
<td>19640222</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19500928</td>
<td>0000000</td>
</tr>
<tr>
<td>19720112</td>
<td>0000000</td>
</tr>
<tr>
<td>19491005</td>
<td>0000000</td>
</tr>
<tr>
<td>19500511</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19560530</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19701015</td>
<td>0000000</td>
</tr>
<tr>
<td>19701124</td>
<td>0000000</td>
</tr>
<tr>
<td>19751105</td>
<td>0000000</td>
</tr>
<tr>
<td>19501021</td>
<td>0000000</td>
</tr>
<tr>
<td>19640127</td>
<td>0000000</td>
</tr>
<tr>
<td>19740420</td>
<td>0000000</td>
</tr>
<tr>
<td>19741214</td>
<td>0000000</td>
</tr>
<tr>
<td>19491027</td>
<td>0000000</td>
</tr>
<tr>
<td>19721011</td>
<td>0000000</td>
</tr>
<tr>
<td>19509705</td>
<td>0000000</td>
</tr>
<tr>
<td>19720229</td>
<td>0000000</td>
</tr>
<tr>
<td>19720605</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>88888888</td>
<td>0000000</td>
</tr>
<tr>
<td>19591004</td>
<td>0000000</td>
</tr>
<tr>
<td>19740515</td>
<td>0000000</td>
</tr>
</tbody>
</table>

* 1st col - date of establishment of diplomatic relations with the PRC; 2nd col - date of breaking of diplomatic relations with the PRC; 3rd col - date of reestablishment of diplomatic relations with the PRC; . . . **88888888 in the 1st col suggests no diplomatic relations with the PRC. 00000000 in the 2nd col means that the relations have no change. The data are listed from country code 1 to country code 168.
<table>
<thead>
<tr>
<th>Code</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>99888888</td>
<td>00000000</td>
</tr>
<tr>
<td>99491056</td>
<td>00000000</td>
</tr>
<tr>
<td>99711290</td>
<td>00000000</td>
</tr>
<tr>
<td>99500401</td>
<td>00000000</td>
</tr>
<tr>
<td>99500609</td>
<td>19660722</td>
</tr>
<tr>
<td>83888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19710816</td>
<td>00000000</td>
</tr>
<tr>
<td>99580825</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19701106</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19721121</td>
<td>00000000</td>
</tr>
<tr>
<td>19720929</td>
<td>00000000</td>
</tr>
<tr>
<td>19770407</td>
<td>00000000</td>
</tr>
<tr>
<td>19631215</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19491066</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19710522</td>
<td>00000000</td>
</tr>
<tr>
<td>19620907</td>
<td>00000000</td>
</tr>
<tr>
<td>19711109</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19770217</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19721116</td>
<td>00000000</td>
</tr>
<tr>
<td>19721116</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19740531</td>
<td>00000000</td>
</tr>
<tr>
<td>19721014</td>
<td>00000000</td>
</tr>
<tr>
<td>19601027</td>
<td>00000000</td>
</tr>
<tr>
<td>19720131</td>
<td>00000000</td>
</tr>
<tr>
<td>19650726</td>
<td>00000000</td>
</tr>
<tr>
<td>19720415</td>
<td>00000000</td>
</tr>
<tr>
<td>19720214</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19491016</td>
<td>00000000</td>
</tr>
<tr>
<td>19581101</td>
<td>00000000</td>
</tr>
<tr>
<td>19750625</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19550801</td>
<td>00000000</td>
</tr>
<tr>
<td>19541119</td>
<td>00000000</td>
</tr>
<tr>
<td>19721221</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19740720</td>
<td>00000000</td>
</tr>
<tr>
<td>19710210</td>
<td>00000000</td>
</tr>
<tr>
<td>19541006</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19510521</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19761012</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19711102</td>
<td>00000000</td>
</tr>
<tr>
<td>19750609</td>
<td>00000000</td>
</tr>
<tr>
<td>19494007</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19491005</td>
<td>00000000</td>
</tr>
<tr>
<td>19711112</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19710506</td>
<td>00000000</td>
</tr>
<tr>
<td>19750712</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19711207</td>
<td>00000000</td>
</tr>
<tr>
<td>19760630</td>
<td>00000000</td>
</tr>
<tr>
<td>19710729</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19601216</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19730309</td>
<td>00000000</td>
</tr>
<tr>
<td>19570207</td>
<td>00000000</td>
</tr>
<tr>
<td>19581201</td>
<td>00000000</td>
</tr>
<tr>
<td>19760528</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19500509</td>
<td>00000000</td>
</tr>
<tr>
<td>19500914</td>
<td>00000000</td>
</tr>
<tr>
<td>19560801</td>
<td>00000000</td>
</tr>
<tr>
<td>19611209</td>
<td>00000000</td>
</tr>
<tr>
<td>19750701</td>
<td>00000000</td>
</tr>
<tr>
<td>19720919</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19740620</td>
<td>00000000</td>
</tr>
<tr>
<td>19540110</td>
<td>00000000</td>
</tr>
<tr>
<td>19710805</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19621018</td>
<td>00000000</td>
</tr>
<tr>
<td>19491033</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19540617</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19730915</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19740628</td>
<td>00000000</td>
</tr>
<tr>
<td>19500118</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
<tr>
<td>19750788</td>
<td>00000000</td>
</tr>
<tr>
<td>19751106</td>
<td>00000000</td>
</tr>
<tr>
<td>19560823</td>
<td>00000000</td>
</tr>
<tr>
<td>19680131</td>
<td>00000000</td>
</tr>
<tr>
<td>19550110</td>
<td>00000000</td>
</tr>
<tr>
<td>19721124</td>
<td>00000000</td>
</tr>
<tr>
<td>19640229</td>
<td>00000000</td>
</tr>
<tr>
<td>88888888</td>
<td>00000000</td>
</tr>
</tbody>
</table>
APPENDIX 9

ACTORS' POLITICAL ECONOMIC SYSTEM INDICES
INDICES OF POLITICAL SYSTEM

2331 1111 1111 1122
2331 1111 1311 1122
2331 1111 1311 1122
1111 3333 3331 1123
1111 3333 3331 1123
1111 3333 3331 1123
0000 0000 2000 0000
2221 2221 3333 1133
2221 2221 3333 1111
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
3333 1111 1112 3333
3333 1111 1112 3333
3333 1111 1112 3333
3333 1112 2112 3333
3333 1111 2112 3333
3332 1111 2113 3333
0000 0000 0000 0000
0000 0000 0000 0000
3333 1111 1111 3333
0000 0000 0000 0000
0000 0000 0000 0000
2331 1111 1231 1121
0000 0000 0000 0000
0000 0000 0000 0000
2222 1222 3233 1332
0000 0000 0000 0000
0000 0000 0000 0000
3333 1111 1112 3333
3332 1112 2133 3333
3332 1112 2133 3333
3332 1112 2133 3333
0000 0000 0000 0000
3333 1111 1211 3333
3333 1111 1211 2211
2231 1111 1111 1122

*Three lines constitute each country's political economic system indices; 1st line is the indices for the 1950s, the 2nd line, the 1960s, and the third line, the 1970s. The first four digits are the four indices of capitalist nature, the second four digits are the four indices of Marxist-Leninist socialist nature, the third four digits are the four indices of Non-Marxist-Leninist socialist nature, and the fourth four digits are the four indices of political system. We do not use the latter two sets of indices. For details, see Eto, et. al. (1979).
3332 1112 1312 3333
3332 1112 1313 3333
0000 0000 0000 0000
0000 0000 0000 0000
0000 0000 0000 0000
2331 1121 1111 1111
3331 1121 1311 1211
3331 1121 1311 1211
0000 0000 0000 0000
2221 3331 3333 1123
2221 3331 3333 1123
0000 0000 0000 0000
0000 0000 0000 0000
2221 1111 2223 1121
0000 0000 0000 0000
0000 0000 0000 0000
3332 1112 2113 3333
3331 1111 1111 1132
3331 1111 1311 1122
3331 1111 1311 1122
3333 1111 1111 1332
3333 1111 1111 1332
3333 1111 1111 1332
3333 1111 1111 1131
1111 2333 3331 1123
1111 2333 3331 1123
1111 2333 3331 1123
3333 1112 1132 3333
3333 1112 1232 3333
3333 1112 1232 3333
2222 1122 2333 1333
2222 1122 2333 1333
2222 1122 2333 1333
2221 1112 1111 1122
2221 1222 2222 1322
2323 1121 1311 1133
3331 1111 2211 3222
2331 1221 2311 2322
2333 1121 3311 1322
3331 1111 1211 1222
2321 1221 1321 1222
2221 1322 3333 1111
3333 1111 1112 3333
3333 1111 1112 3333
3333 1111 1112 3333
1322 3322 2132 3333
1322 3322 2333 3333
1322 3322 2333 3333
3333 1212 2313 3333
3333 1212 2313 3333
3333 1212 2313 3333
0000 0000 0000 0000
3333 1111 1311 1133
3333 1111 1311 1133
0000 0000 0000 0000
3333 1111 1112 3333
3332 1111 2113 3333
2333 1122 2112 3333
3333 1122 2312 3333
3333 1122 2312 3333
3333 1122 2312 3333
3331 1111 1111 1133
Appendix 9

3331 1111 1311 1133
3331 1111 1311 1133
0000 0000 0000 0000
3333 1111 1311 1133
3223 1111 1321 1123
0000 0000 0000 0000
0000 0000 0000 0000
1121 3323 3331 1123
1111 3333 3331 1123
1111 3333 3331 1123
2333 1211 2211 1323
2333 1221 2311 2323
2333 1221 2311 1323
0000 0000 0000 0000
2331 1211 1131 1123
2333 1211 3323 1123
3233 1111 1111 3223
3233 1111 1311 3223
3233 1111 1211 3223
3333 1111 1112 3323
3333, 1111 1312 3323
3333, 1111 1312 3323
0000 0000 0000 0000
0000 0000 0000 0000
3333 1111 1111 1131
3333, 1111 1311 2123
3333, 1111 1311 2123
3333, 1111 1311 2123
3331 1111 1111 1122
3331 1111 1111 1122
2221 1111 3333 1111
3333 1111 1111 1323
3333, 1111 1111 1323
3333, 1111 1111 1323
3332 1112 1312 3333
3332 1112 1312 3333
0000 0000 0000 0000
0000 0000 0000 0000
3332 1111 1113 3333
3332 1111 2323 3333
0000 0000 0000 0000
0000 0000 0000 0000
3333 1111 1311 2133
0000 0000 0000 0000
3333, 1121 1112 3333
3333, 1121 1312 3333
0000 0000 0000 0000
0000 0000 0000 0000
3231 1111 1111 1121
0000 0000 0000 0000
3133 1111 1311 2133
3131 1121 1321 1111
0000 0000 0000 0000
0000 0000 0000 0000
3332 1111 1333 3333
0000 0000 0000 0000
3233 1111 1211 2233
3231 1111 1113 2123
0000 0000 0000 0000


University of Pittsburgh.


Bibliography


Bibliography


Peking Review (Beijing Review)

People's China


Renmin Ribao (People's Daily)

Bibliography


Bibliography


