

POLITICAL INSTABILITY IN THE
MIDDLE EAST, 1970-72

by

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A THESIS

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POLITICAL INSTABILITY IN THE

MIDDLE EAST, 1970-72

A Thesis

Presented to

The Faculty of the Department of Government

Sam Houston State University

In Partial Fulfillment

of the Requirements for the Degree of

Master of Arts

by

Ghorbanali Ganji

July, 1976

ABSTRACT

Ganji, Ghorbanali, Political Instability in the Middle East, 1970-72.
Master of Arts (Government), July, 1976, Sam Houston State
University, Huntsville, Texas.

Purpose

The purposes of this thesis are: (1) to determine the dimensions of civil strife within sixteen Middle Eastern nations for the years of 1970, 1971, and 1972; (2) to specify the dimensions of socioeconomic attributes of these states; and (3) to measure the degree of association between the dimensions of socioeconomic variables and civil strife dimensions. It is hoped that these findings will shed some further light on the strength and validity of propositions stated by frustration-aggression theorists.

Methods

The following sources were systematically searched for the collection of data to be used in this project: The New York Times Index, Facts on File, Britannica Book of the Year, and United Nations publications.

Factor analysis was employed to cluster the variables, extract independent dimensions, and to determine the factor scores of nations on major dimensions. In the subsequent step, multiple

regression was used to determine the degree of association between socioeconomic attributes of states and their civil strife.

Findings

1. Civil strife in these Middle Eastern nations varies along four uncorrelated dimensions of turmoil, urban violence, civil war, and elite instability.

2. Socioeconomic attributes of these nations vary along five uncorrelated dimensions of urbanization, coercive potential, energy consumption, wealth, and cultural heterogeneity.

3. The dimensions of independent variables together account for 94 per cent of the total variation in urban violence, 90 per cent of turmoil, 31 per cent of civil war, and 27 per cent of elite instability.

4. Urbanization (a partial correlation of .65 controlling for the other dimensions of independent variables) and coercive potential (-.68 partial correlation) account for most of the variation in the urban violence dimension. Actually, the relation between coercive potential and urban violence is best seen as curvilinear. No significant associations emerge between these two dimensions of independent variables and either elite instability or civil war.

5. Urbanization and cultural heterogeneity have the highest partial correlations with turmoil (.56 and -.50, respectively).

6. Cultural heterogeneity is the only dimension that shows a moderate and positive correlation with elite instability.

Approved:

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ACKNOWLEDGMENTS

I would like to express special thanks, admiration, and much love to my parents who, although illiterate and never having the opportunity to educate themselves, realized the value of education and provided encouragement as well as financial support for my education. Also, to my brothers who gave me inspiration and continual encouragement to further my education I give my deepest appreciation.

My sincere gratitude goes to Dr. John W. Holcombe, the chairman of my thesis committee, who gave his time and effort to the preparation of this thesis far beyond the call of duty or my expectations. I am greatly indebted to Dr. Herbert C. Hannah and Dr. Robert E. Biles, the second and third readers, for their useful comments and advice on the final preparation of this manuscript. I also wish to acknowledge the chairman, Dr. Richard H. Payne, and faculty members Dr. Witold J. Lukaszewski and Dr. E. Larry Dickens of the Department of Government at Sam Houston State University from whom I had the opportunity to learn and broaden the scope of knowledge. Last, but not least, to my best friends, Mr. Rafiq Ahmed and Mr. Shrikant Parchure, I am much beholden for their brotherly-like concern and encouragement when needed.

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CHAPTER I

FRUSTRATION-AGGRESSION THEORY AND DIMENSIONS OF POLITICAL INSTABILITY

Frustration-aggression theory has found a strong appeal and utility as a conceptual framework of analysis among political scientists who are interested in investigating, both empirically and theoretically, the correlates of civil strife within nations.¹ The main proposition of this theory is that conflict behavior is caused by a psychological factor called "relative deprivation" and that violence varies directly in magnitude with the intensity of such deprivation. Relative deprivation is defined as the "actors' perceptions of discrepancy between their value expectations (the goods and conditions of life to which they think they are justifiably entitled) and value capabilities (the amount of goods and conditions of life which they think they are able to obtain and keep)."²

¹In this study the terms "civil strife," "domestic conflict," and "political instability" are used interchangeably.

²Ted R. Gurr, "A Causal Model of Civil Strife: A Comparative Analysis Using New Indices," American Political Science Review, LXII (December, 1968), 1104.

A natural response to the perceived deprivation is frustration or anger, and this anger then expresses itself in aggressive behavior against those individuals, groups, or institutions which are believed by the frustrated agents to be responsible for their deprivation. The types and magnitude of aggressive behavior are postulated to be determined by certain social factors, such as institutionalization, legitimacy, coercive potential, and facilitation, which are called mediating factors.³

By applying frustration-aggression theory as the conceptual framework of analysis, it is the intention of this project to investigate empirically the relationships between different types of domestic violence in the Middle East and the correlates of civil strife within these nations. It is hoped that a scientific answer to these questions would shed some light on the conceptual confusion surrounding the body of literature on political instability.

Definitions of Political Instability

The speedy advance of the physical sciences is due mainly to a tacit desire among scientists to make sure that they are talking about the same concepts in a given argument.⁴ They are of the

³Ted R. Gurr, "Psychological Factors in Civil Violence," in Anger, Violence, and Politics, ed. by Ivo K. Feierabend, Rosalind L. Feierabend and Ted R. Gurr (Englewood Cliffs, N. J.: Prentice-Hall, 1972), p. 37.

⁴Gerald Holton and Duane H. D. Roller, Foundations of Modern Physical Science (Reading, Mass.: Addison-Wesley, 1958), p. 218.

conviction that communication and cooperation are necessary conditions for the advancement of their disciplines. Preconditions for such cooperation and communication are to understand each other's language and to have a well-defined conceptualization schema. Thus, it is imperative to begin with a brief definition of the terms political instability, conflict, and violence, which are the basic concepts of this monograph.

Political systems are "those structured social relationships in which values are authoritatively allocated" or in which it is determined "who gets what, when and how."⁵ Politics is, then, the distribution of values by authority; it is the maintenance of compliance to the decisions of authority.⁶ Conflict is defined as a condition in a political system under which members hold different and mutually exclusive values.⁷ Conflict, then, results in violence among political actors if the maintenance of compliance (on the part of those

⁵David Easton, The Political System (New York: Knopf, 1953), pp. 129-134; and Harold D. Lasswell, Politics: Who Gets What, When, and How (New York: McGraw-Hill, 1936).

⁶Karl Deutsch, The Analysis of International Relations (Englewood Cliffs, N. J.: Prentice-Hall, 1968), pp. 17-20.

⁷Jessie Bernard, "Parties and Issues in Conflict," Journal of Conflict Resolution, I (June, 1957), 116; Ralph Dahrendorf, Class and Class Conflict in Industrial Society (Stanford, California: Stanford University Press, 1959), p. 135; and Johan Galtung, "Institutionalized Conflict Resolution," Journal of Peace Research, II, No. 4 (1964), 348.

who hold incompatible values) to the decisions of authority fails. Political violence is characterized by the physical injury or forceful subjection of certain individuals, groups, or property in order to alter the existing political system.⁸ Thus, political instability can be defined as a condition in which authority relationships break down, and expected compliance to the decisions of authority is replaced by political violence.

Frustration-aggression theory is the most widely used framework of analysis for the investigation of political instability. Ivo and Rosalind Feierabend, proponents of this model, define political instability as: "the degree or amount of aggression directed by individuals or groups within the political system against other groups or against the complex of office-holders and individuals and groups associated with them."⁹ Or similarly, civil strife is defined by Ted Gurr as: "all non-governmental attacks on persons or property that occur within the boundaries of an autonomous or colonial political unit."¹⁰

⁸Harold L. Nieburg, Political Violence (New York: St. Martin's Press, 1969), p. 13.

⁹Ivo K. Feierabend and Rosalind L. Feierabend, "Aggressive Behaviors Within Polities, 1948-1962: A Cross-National Study," Journal of Conflict Resolution, X (September, 1966), 250.

¹⁰Gurr, "A Causal Model of Civil Strife: A Comparative Analysis Using New Indices," 1107.

Regardless of whether social scientists investigate political violence, political instability, conflict behavior, or civil strife, it includes phenomena such as demonstrations, riots, strikes, coups, terrorism, civil war, revolution and guerrilla warfare. However, a close examination of some of the measures of political instability, such as demonstrations, riots and strikes, reveals that they do not constitute a direct breakdown of the political system. In fact, occurrence of such events may be interpreted as an acceptance of established authorities against whom protest is used as a bargaining instrument rather than a strategy to destroy them.¹¹ Thus, including such phenomena among indices of political instability seems to be problematic. Nevertheless, the results of factor analysis by various researchers indicate that these indices co-occur and constitute a dimension of their own.

There are basically two arguments underlying the question of the dimensionality of violent behaviors within nations. The first argument states that types of violence are independent and distinguishable in terms of their organization. For example, Rudolph Rummel stated:

It ... appears clear that the kind of spontaneous behavior represented by turmoil has little relationship to the organized,

¹¹Michael Lipsky, "Protest as A Political Resource," American Political Science Review, LXII (December, 1968), 1144-58.

cooperative kind of behavior represented by the revolution-subversion or the internal war dimensions. This spontaneous-planned distinction is clear in the results also. The independence between the two argues that different sufficient conditions or causes must be sought for turmoil, on the one hand, and revolution and subversion on the other.¹²

The second argument suggests that politically aggressive behaviors can be categorized according to the scale of violence involved. Thus, violence represented by turmoil (typically, demonstrations, riots, and strikes) are of low violence compared with those conflict behaviors represented by internal war, such as civil war, large-scale guerrilla warfare, and ethnic violence.¹³ In short, this argument holds that civil violence is unidimensional.

Cross-national analysis of civil strife is dominated by factor analytic interpretation of the dimensions of conflict behavior. Factor analysis, however, is purely empirical. As such, it depends on the researcher to provide theoretical interpretation to the results. The empirical study of political instability is plagued by a lack of consensus on the definition of certain basic concepts which are used by its practitioners. Distinctions made between different sets of variables by one analyst are not similar to those made by others. For

¹²Rudolph J. Rummel, "Dimensions of Conflict Behavior Within Nations, 1946-59," Journal of Conflict Resolution, X (March, 1966), 71.

¹³Gurr, "A Causal Model of Civil Strife: A Comparative Analysis Using New Indices," 1109.

example, Harry Eckstein, in his collection of data on twelve measures of domestic conflict across 113 nations for 1946-59, differentiates between small-scale and large-scale terrorism while such distinction is not made by others. Consequently, a meaningful comparison across dimensions which emerge in various research projects is difficult. Furthermore, the definitions of some variables, even within the same research, is sometimes ambiguous. As such, it becomes a matter of subjective judgment on the part of the researcher as to how to code certain apparently similar events. For example, Rudolph Rummel defines revolution as: "any illegal or forced change, or any successful armed rebellion whose aim is independence from a central government," and guerrilla war is defined as: "any armed activity, sabotage, or bombings carried on by independent bands of citizens or regular forces aimed at overthrow of the present regime."¹⁴ In fact, it becomes very difficult to differentiate among the types of violence falling under these definitions. It should be remembered, however, that even Albert Einstein believed that construction of precise and universal rules and standards of measurement in the social sciences is far more difficult than is the case in the physical sciences.¹⁵

¹⁴Rudolph J. Rummel, "Dimensions of Conflict Behavior Within and Between Nations," in Macro-Quantitative Analysis, ed. by John V. Gillespie and Betty A. Nesvold (Beverly Hills, California: Sage Publications, 1971), p. 45.

¹⁵James A. Bill and Robert L. Hardgrave, Jr., Comparative Politics: The Quest for Theory (Columbus, Ohio: Charles E. Merrill, 1973), p. 33.

Replication of another's work is a common practice in the physical sciences, and the need for such practice is equally great in the social sciences. Logically, however, one must pay a methodological price by accepting the conceptual definitions and operationalizations of the research design which is to be replicated.

Generalizations Concerning the Dimensionality of Political Violence

R. J. Rummel is the pioneer who made a comprehensive and systematic analysis of violence within and among nations. His main purpose was to determine the relationships between the dimensions of foreign conflict and domestic violence. Data were collected on nine indicators of domestic conflict behavior for seventy-seven nations for the time period 1955-57. Subsequent factor analysis results revealed the emergence of three dimensions explaining about 71 per cent of the total variance. Rummel labels the dimensions by the concepts turmoil, revolution, and subversion.¹⁶ The turmoil dimension includes demonstrations, strikes, riots, assassinations, and governmental crises. His revolution dimension includes strife aiming at the overthrow of a regime, and the subversive dimension represents guerrilla warfare.

Tanter, to provide further evidence on the three-dimensionality of domestic conflict, replicated Rummel's work for eighty-three

¹⁶Rummel, "Dimensions of Conflict Behavior Within and Between Nations," p. 61.

nations and for the time period 1958-60. The basic purpose of replication is to establish the strength and validity of the propositions derived by an original work. M. Sidman also argues that the best empirical test of the reliability of data is determined by replication.¹⁷

Tanter's replication of Rummel's work found only two dimensions, rather than the three dimensions found by Rummel. Turmoil and internal war are the labels given by Tanter to these two dimensions.¹⁸ His dimensions are generally similar to the turmoil and revolution dimensions observed by Rummel. Thus, the generalization made by Rummel that the domestic conflict behavior of nations varies along three uncorrelated dimensions, turmoil, revolution, and subversion, required a slight modification with respect to the third dimension, subversion. Tanter provides no explanation for the differences between his findings and Rummel's; of course, the different time periods studied may be sufficient reason.

Employing Rummel's nine indicators of domestic conflict and the data collected by Tanter for the time period 1958-60, Bwy made an extensive investigation of political instability within the nations of Latin America. His findings on the dimensionality of civil strife

¹⁷M. Sidman, The Tactics of Scientific Research (New York: Basic Books, 1960), p. 70.

¹⁸Raymond Tanter, "Dimensions of Conflict Behavior Within and Between Nations," Journal of Conflict Resolution, X (March, 1966), 50.

do not differ significantly from those found by Rummel and Tanter.¹⁹
See Table I.

To provide further evidence for his original findings, Rummel factor analyzed the data collected by Harry Eckstein on thirteen domestic conflict measures across 113 nations for 1946-59.²⁰ Orthogonally rotated factor analysis results indicated his original conclusions were substantiated for a different time-period and population. The results are shown in Table II.

The Feierabends and Norman G. Litell applied factor analysis to the data collected by Francis Hool on thirty indices of domestic conflict across eighty-four nations for the fifteen-year period of 1948-62. Nine factors emerged (Table III).²¹ There is a definite correspondence between the first two factors which emerged in this project and the factors found by both Rummel's and Tanter's works. However, it is difficult to explain why two major indices of civil strife, guerrilla warfare and civil war, fall on relatively unique factors in this study despite the consensus among other analysts that these two events are indices of the same dimension.

¹⁹Douglas P. Bwy, "Political Instability in Latin America," Latin American Research Review, III (Spring, 1968), 40.

²⁰Rummel, "Dimensions of Conflict Behavior Within Nations, 1946-59," 41.

²¹Feierabend and Feierabend, "Aggressive Behavior Within Politics, 1948-62: A Cross-National Study," 255.

TABLE I

A COMPARISON OF THE DIMENSIONS OF CIVIL STRIFE
REPORTED BY RUMMEL, TANTER, AND BWY*

Variable	Rummel ^a			Tanter ^b		Bwy ^c		
	Turmoil (1)	Revolu- tion (2)	Subver- sion (3)	Turmoil (1)	Internal War (2)	Organized Violence (1)	Anomic Violence (2)	Unlabeled (3)
Government								
Crisis	60	-21	04	53	47	83	13	12
Riots	79	-31	09	83	21	08	83	-03
Demonstrations	85	-17	-19	86	10	11	86	-23
Strikes	52	-60	-05	79	06	21	58	48
Purges	32	-71	-03	01	68	88	17	-22
Revolutions	09	-85	-13	09	89	61	32	55
Domestic								
Killed	23	-75	-42	37	78	85	03	-23
Assassinations	59	03	-66	59	41	20	29	-76
Guerrilla War	-04	-28	-90	35	74	76	10	16

*Decimal points for factor loadings are omitted in all tables in this thesis.

^aSource: Rudolph J. Rummel, "Dimensions of Conflict Behavior Within and Between Nations," in Macro-Quantitative Analysis, ed. by John Gillespie and Betty A. Nesvold (Beverly Hills, California: Sage Publications, 1971), p. 61.

^bSource: Raymond Tanter, "Dimensions of Conflict Behavior Within and Between Nations, 1958-60," Journal of Conflict Resolution, X (March, 1966), 50.

^cSource: Douglas P. Bwy, "Political Instability in Latin America," Latin American Research Review, III (Spring, 1968), 40.

TABLE II
 DIMENSIONS OF CIVIL STRIFE BASED ON
 ECKSTEIN'S CONFLICT DATA
 FOR 1946-59*

Variables	Revolution (1)	Subversion (2)	Turmoil (3)
Unequivocal Violence	55	25	-75
Warfare	22	78	-12
Turmoil	-02	11	-54
Riots	44	08	-74
Large-Scale Terrorism	21	46	-45
Small-Scale Terrorism	41	12	-66
Mutinies	73	26	-03
Coups	85	07	01
Plots	83	-04	-25
Administrative Action	57	-25	-31
Quasi-Private Violence	-26	-20	-59
Extended Violence	-18	83	-01
Unequivocal and Equivocal Violence	61	15	-74

*Source: Rudolph Rummel, "Dimensions of Conflict Behavior Within Nations, 1946-59," Journal of Conflict Resolution, X (March, 1966), 67.

Variables	Mass par- ticipation (Turmoil)	Palace revolution (Revolt)	Power struggle (Purge)	Riot	Election	Demon- stration	Imprison- ment	Civil war	Guerrilla warfare
Elections	29	-02	09	-18	70	-10	-17	-05	-23
Vacation of office	38	08	74	-14	20	-11	-15	-25	09
Significant change of laws	38	41	41	-01	31	15	-16	-23	-11
Acquisition of office	29	06	75	-19	15	-04	-25	-19	22
Crisis within a nongovern- mental organization	40	13	12	-21	04	-09	62	07	-23
Organization of opposition party	08	10	-02	02	56	36	19	-39	-10
Repressive action against specific groups	46	61	27	01	-03	16	12	04	12
Micro-strikes	67	00	-15	-26	-16	05	12	03	23
General strikes	73	13	04	-42	09	-06	03	08	-18
Macro-strikes	43	-22	-11	-35	15	-17	-33	-12	-19
Micro-demonstrations	61	19	-02	02	20	59	10	03	02
Macro-demonstrations	73	-01	00	26	06	19	18	-21	03
Micro-riots	46	11	-06	68	27	-03	-03	-15	11
Macro-riots	69	28	-04	33	33	02	04	-08	-05
Severe macro-riots	64	-03	-04	53	11	-19	-02	-20	-14
Arrests of significant persons	09	64	54	07	-14	-06	23	-10	-01
Imprisonment of significant persons	-14	12	49	17	-05	16	38	-33	-22
Arrests of few insignificant persons	42	09	05	-08	07	75	07	07	21
Mass arrests of insignificant persons	52	33	14	54	-12	-02	-01	05	01
Imprisonment of insignificant persons	26	-08	09	08	-12	34	64	-03	-14
Assassination	17	40	23	06	24	23	-07	-10	56
Martial law	11	71	03	03	15	09	-27	-06	-08
Execution of significant persons	-08	01	54	31	-26	14	-04	31	05
Execution of insignificant persons	01	-10	63	32	-07	12	-02	47	-02
Terrorism and sabotage	64	28	12	-21	13	-01	10	07	38
Guerrilla warfare	04	42	07	-19	19	-35	25	21	55
Civil War	-14	25	31	14	45	08	-08	60	02
Coup d'etat	03	69	07	01	-02	12	-40	07	-32
Revolts	06	75	-01	11	07	-01	-10	32	16
Exile	-09	40	00	03	-36	32	-19	-13	04

Source: Ivo K. Feierabend and Rosalind L. Feierabend, "Aggressive Behavior Within Politics, 1948-62: A Cross-National Study,"
Journal of Conflict Resolution, X (September, 1966), 255.

Donald G. Morrison and Hugh M. Stevenson, not fully satisfied with the theoretical interpretation of the dimensions of political instability given previously, constructed a set of indices which they thought were devoid of conceptual ambiguity surrounding earlier works.²² Factor analysis results of these indices are shown in Table IV.

A look at this last table reveals great similarity between the first three dimensions and those found by Rummel and the Feierabends. The differences seem to be only in the theoretical interpretation of their dimensions. As was noted earlier, Tanter's replication of Rummel's work exhibited two dimensions which explained 64 per cent of the total variance. However, Stevenson and Morrison in their critical evaluation of Tanter's study state that: "Tanter's labels are satisfactory for his two-factor structure, but these factors explain less than 50 per cent of the total variance and one wonders if Rummel's separation between revolution and guerrilla war might not have appeared in the rotation of more than two factors for the Tanter Table."²³ This is rather a misrepresentation of what actually was found. Looking back at Tanter's findings, it is clear that the two

²²Donald G. Morrison and Hugh Michael Stevenson, "Political Instability in Independent Black Africa," Journal of Conflict Resolution, XV (September, 1971), 362.

²³Ibid., 357.

TABLE IV

DIMENSIONS OF CIVIL STRIFE BASED ON MORRISON'S AND
STEVENSON'S DATA FOR AFRICAN NATIONS, 1960-1964

Variables	Turmoil	Elite	Communal	Rebellion	Ethnic
Turmoil:					
Riots	-41	69	-08	15	-06
Demonstrations	-65	19	42	02	-13
Strikes	-81	19	11	17	-02
Terrorism	-49	-11	-07	-19	28
Declarations	-73	02	33	28	-03
Turmoil	-91	35	12	12	04
Elite Instability:					
Plots	-02	98	-04	06	-04
Attempts	-08	-03	36	-06	52
Coup d'etat	-19	95	06	07	-08
Elite instability	-05	99	-00	06	-02
Communal Instability:					
Mutiny	-12	-04	82	17	-07
Civil war	-10	04	91	-07	20
Rebellion	25	46	-11	72	09
Irredentism	06	-04	-04	06	92
Ethnic violence	-19	-08	43	75	10
Communal instability	03	21	65	38	56
Revolt	-20	01	87	03	-06
Number killed	-13	04	97	02	01
Number killed per million	00	01	84	-04	06
Number killed per million (logarithm)	-24	11	66	24	40

TABLE IV (Continued)

Variables	Turmoil	Elite	Communal	Rebellion	Ethnic
Arrest	02	94	-02	27	00
Arrest per million	-16	29	-05	87	00
Arrest per million (logarithm)	-40	23	08	64	-07
Number of events	-24	95	12	13	03
Weighted instability	-04	97	16	15	12

Source: Donald G. Morrison and Hugh Michael Stevenson, "Political Instability in Independent Black Africa," Journal of Conflict Resolution, XV (September, 1971), 362.

dimensions of civil strife account for 64 per cent, quite a different figure than that given by Morrison and Stevenson. Thus, the finding of two dimensions of civil strife should still be given serious consideration.

Bwy not only was interested in investigating the relationship between types of domestic conflict behavior, but he also engaged in a search for the correlates of conflict behavior. Certain socioeconomic variables such as change in Gross National Product per capita and governmental expenditure on public health and welfare were taken by Bwy to measure systemic satisfaction. It was found that satisfaction measured by these variables is negatively associated with organized violence (guerrilla warfare, coups and purges). No significant correlation was discovered between satisfaction and anomic violence (demonstrations, strikes, and riots). Thus, anomic violence occurred regardless of the degree of change in socioeconomic development.²⁴

As was stated at the beginning of this chapter, it is postulated that the relationship between discontent and participation in strife is mediated by a number of intervening social factors, such as legitimacy of the regime, size of coercive force, institutionalization and facilitation. When size of armed forces (as measured by the

²⁴Bwy, "Political Instability in Latin America," 51.

percentage of GNP allocated to defense) was plotted against types of civil strife by Bwy, a curvilinear relationship emerged between the size of coercive force and anomic violence. Guerrilla warfare, revolution, and purges (which loaded highly on the organized violence dimension) occur regardless of the size of governmental force.

Gurr's employment of frustration-aggression theory to study the relationship between deprivation and aggressive behavior yielded generally the same results as that of Bwy's work. However, the procedure which Gurr set forth to investigate the relationship between frustration and aggression is not identical with that of Bwy's. Gurr constructed new indices of civil strife arranged according to the degree of violence involved.²⁵ The correlations he found between political, economic, and sociocultural traits thought to be the sources of frustration and types of civil strife are given in Table V. Legitimacy of the regime and institutionalization of the political system are negatively associated with the magnitude of civil strife, while facilitation (measured by past levels of civil strife and social and structural facilitation) seems to have a positive correlation. Bwy's findings indicate that there is a weak or no linear association between the size of coercive forces and organized violence; however, Gurr does not use the latter category. Nevertheless, a curvilinear

²⁵Gurr, "A Causal Model of Civil Strife: A Comparative Analysis Using New Indices," 1107.

TABLE V

CORRELATES OF CIVIL STRIFE REPORTED BY GURR, 1961-65

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Economic deprivation (+)* 1.00		.48	.83	-.02	-.17	-.16	-.36	-.09	.26	.32	.34	.31	.25	.44
2. Political deprivation (+)		1.00	.88	.08	-.18	.03	-.37	-.20	.33	.27	.44	.18	.30	.38
3. Short-term deprivation (+)			1.00	.04	-.20	-.07	-.42	-.17	.34	.34	.46	.28	.32	.48
4. Persisting deprivation (+)				1.00	-.04	-.21	-.14	-.37	-.04	.17	.29	.26	.27	.36
5. Legitimacy (-)					1.00	.25	.48	.02	-.05	-.15	-.29	-.23	-.29	-.37
6. Coercive force size (⁺)						1.00	.53	.27	.31	.04	-.23	-.11	-.01	-.14
7. Coercive potential (-)							1.00	.41	-.14	-.37	-.44	-.39	-.35	-.51
8. Institutionalization (-)								1.00	-.19	-.40	-.35	-.23	-.26	-.33
9. Past strife levels (+)									1.00	.41	.24	.16	.30	.30
10. Facilitation (+)										1.00	.42	.57	.30	.67
11. Magnitude of conspiracy											1.00	.30	.32	.59
12. Magnitude of internal war												1.00	.17	.79
13. Magnitude of turmoil													1.00	.61
14. Total magnitude of strife														1.00

*The positive and negative signs in parentheses summarize the directional relation between each independent variable and the dependent variables (11, 12, 13, and 14). Coercive force size has a positive and a negative sign; this indicates a curvilinear relation with the civil strife variables.

Source: Ted R. Gurr, "A Causal Model of Civil Strife: A Comparative Analysis Using New Indices," American Political Science Review, LXII (December, 1968), 1117.

relationship between the size of coercive forces and the magnitude of civil strife is found.

An Overview

Certain empirical facts and propositions seem to emerge from a comparison and systematic investigation of the various quantitative studies on political instability. First, there is a universal agreement among empirical analysts that types of conflict behavior can be distinguished according to the degree of their organization and intensity, and certain types of violence tend to co-occur and form dimensions of their own. Second, although there are different techniques to measure political instability within nations, factor analysis seems to dominate the quantitative studies of civil strife. Scholars are interested in reducing the complexity of the phenomena. The clustering power of this technique makes it a preferred tool of investigation. Third, frustration-aggression theory states that aggressive behavior is committed by angry individuals, and anger is caused by the perception of deprivation. The source of deprivation must be searched for in political, economic, and sociocultural traits of the society. Thus, a correlation exists between the relation of the individual to these traits of the society and his involvement with aggressive behavior.²⁶ Fourth, certain social factors such as

²⁶Strictly speaking, data on aggregate units cannot be used to infer how variables are related among individuals living in those aggregate units. To so infer, rather than to demonstrate using separate data on individuals, is to commit the so-called "ecological fallacy." See for example, W. Phillips Shively, The Craft of Political Research: A Primer (Englewood Cliffs, N. J.: Prentice-Hall, 1974), p. 122.

institutionalization, facilitation, legitimacy and the size of coercive forces within a particular society influence the expression of frustration.

Finally, it is the hope of this author that by employing factor analysis and frustration-aggression theory as a model of investigation on Middle Eastern nations, further light will be shed on the validity of certain generalizations made concerning the dimensions and correlates of civil strife.

CHAPTER II

THE RESEARCH DESIGN

This project focuses on the Middle Eastern nations for three reasons. First, various empirical attempts have been made to investigate the types and correlates of civil strife by concentrating exclusively on the nations of a particular region such as Latin American countries and black African nations, but no such attempt has been made with regard to the Middle Eastern nations. Thus, by applying similar procedures it is hoped that this research will be a further test of the validity of generalizations which have emerged from studies on political instability. Secondly, the increasing strategic and economic importance of this region to the rest of the world, in this writer's view, justifies scholarly interest in it. Finally, this author, being a native of the area under investigation, naturally has a special interest in an inquiry into the attributes of the nations within this region.

The basic objectives to be achieved in this research are as follows:

1. To determine the major dimensions of domestic violence and to evaluate the factor scores of nations on these dimensions. A

high factor score indicates that a nation has a great amount of the quality represented by that factor, as compared with the other nations studied.

2. To determine the major dimensions of the independent variables (grouped under domains of coerciveness, facilitation, education and health, culture and demography, and economics and politics) and to evaluate nations' factor scores on these dimensions.

3. To investigate the nature and the magnitude of relationships between the dimensions of civil strife and the dimensions of independent variables.

4. Finally, to predict the value of each nation on the dimensions of domestic violence, based solely on that nation's factor scores on the major dimensions of independent variables, and to compare the predicted values of civil strife with the actual values for the purpose of generalizations concerning the correlates of political instability.

Data Collection

The decision to collect data over the three-year period 1970, 1971, and 1972 was made for a number of reasons. First, it was intended that the data be of a recent period. Secondly, the collection and ordering of data for a period longer than three years is obviously a difficult task for a single researcher. Finally, many prominent analysts of political instability have limited their inquiry to a time

span of this length. For example, Rummel collected data for the years 1955 through 1957 in his investigation on the "Dimensions of Conflict Behavior Within and Between Nations."¹ Tanter replicated Rummel's work for only three years, 1958-60.² Bwy used Tanter's data to investigate political instability within Latin American nations.³

Data on the correlates of civil strife (independent variables) were collected mainly from such sources as: The United Nations Demographic Yearbook, Statistical Yearbook, Britannica Book of the Year, The Middle East and North Africa (Europa), World Military Expenditures and Arms Trade, and Statesman Book of the Year.⁴

The New York Times Index, Facts on File, and Africa Diary: Weekly Records of Events in Africa were systematically searched for event data on the indices of domestic violence. A host of other sources were consulted for further information on civil strife and its correlates.

¹Rudolph J. Rummel, "Dimensions of Conflict Behavior Within and Between Nations," in Macro-Quantitative Analysis, ed. by John Gillespie and Betty Nesvold (Beverly Hills, California: Sage Publications, 1971), pp. 48-84.

²Raymond Tanter, Dimensions of Conflict Behavior Within and Between Nations (Evanston: Northwestern University Press, 1964).

³Douglas Bwy, "Political Instability in Latin America," Latin American Research Review, III (September, 1968), 39.

⁴The full citation for each of these data sources is found in the bibliography.

Obviously, some small-scale incidents may have gone unreported, hence not included in this research. There is, frequently, estimation on the part of the reporters in some of the sources searched for data collection; thus, random or systematic errors may have occurred. Rummel, however, contends that these types of errors "might cause the correlation among data to be lower than they should be, but they would not create distortion of the factor structure."⁵

There is no missing data or estimation of data in this research except in one case, the length of railroads in Kuwait. This estimation was based on Kuwait's economic development and comparison with other nations of similar attributes.

The sample of analysis comprises these sixteen independent polities of the Middle East and North Africa: Algeria, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Saudi Arabia, Sudan, Syria, Tunisia, Turkey, and Yemen. All of these independent nations have a population over 800,000 and also enjoy a full membership in the United Nations. Because of these qualifications and lack of sufficient and reliable data, a few Middle Eastern nations, such as the Yemen Arab Republic (Sana), Oman, Bahrain, United Arab Emirates and Afganistan, are excluded from the sample of analysis.

⁵Rudolph J. Rummel, "Dimensions of Conflict Behavior Within Nations, 1946-59," Journal of Conflict Resolution, X (March, 1966), 66.

Measures of Civil Strife (Dependent Variables)

As was discussed earlier in the first chapter, political instability is a condition in a political system in which expected compliance with the decisions of authority is replaced by violence. Violence, however, takes several forms which could be differentiated according to its structural organization, intensity, and intention. Thus, the following three-fold typology of violence (developed by Morrison and Stevenson) is utilized in this study.

1. Elite instability. Elites are those who get the most of what there is to get in the distribution of values in a society; they hold authoritative positions. Elite instability is, then, violent removal of an individual(s) from the authoritative position by the other members of the elite.⁶ Violence included in this category is characterized by low intensity, a small number of participants, and specific intention. Most often, a thorough change in the redistribution of values is not expected. Plots, attempted coups, and coup d'etats fall within this category.

2. Communal instability. Any violence between two or more communal groups and a national government intended to bring a major

⁶Donald G. Morrison and Hugh M. Stevenson, "Political Instability in Independent Black Africa," Journal of Conflict Resolution, XV (September, 1971), 349.

change in the distribution of values is classified under this domain. Members of a communal group are usually of the same cultural heritage based on religion, language, history, or territory.⁷ Civil war, ethnic violence, and rebellion are the major types of violence within this category. Any such event with participation by fewer than a hundred people is not included. Although this cut-off figure is arbitrary, it is meant to distinguish between major and minor incidents. Also, the smaller the number participating, the less likely the event will be widely reported.

3. Mass instability (turmoil). Demonstrations, riots, and strikes are the major components of this domain. Most of the analysts of civil strife argue that these types of events are spontaneous, unorganized, or marked by a lack of specific purpose. However, such universal generalizations seem not to be justified with regard to the structural organization and intention of these events. Most strikes and demonstrations are planned with a clear goal(s), and membership is based on associational commitment.⁸ Again, any event of this type with less than one hundred participants is excluded.

Measures of the Correlates of Civil Strife (Independent Variables)

Twenty-five independent variables are grouped under five domains: (1) coerciveness, (2) facilitation, (3) education and health,

⁷Ibid.

⁸Ibid., p. 359.

(4) culture and demography, and (5) economics and politics. These are the domains which are frequently used by political analysts; hence, they have been given well-established definitions and meanings in the literature of political science. As such, a further interpretation and comment on their scope seems unnecessary. A list of all variables under these domains (as well as the dependent variables) is given in Appendix A of this research.

Methodology

The first cross-national application of the factor analysis technique in political science to study conflict was undertaken by Rummel in his work on "Dimensions of Conflict Behavior Within and Between Nations."⁹ In subsequent years, this method has been widely used by political scientists who are interested in building scientific theories.

Two techniques, factor analysis and multiple regression, are applied to the collected data in this research. A major function of the factor analysis technique is to reduce a larger number of variables to a smaller number of underlying dimensions so that they can be easily manipulated. It determines the direction and magnitude of interrelationships between variables and clusters together those

⁹Phillip M. Gregg and Arthur S. Banks, "Dimensions of Political Systems: Factor Analysis of a Cross-Polity Survey," The American Political Science Review, LIX (September, 1965), 603.

measures which covary with each other more than they do with the rest of the variables included in the analysis.¹⁰

By clustering variables into separate, empirically independent dimensions a researcher is able to make generalizations about the relationships between various measures. Through orthogonal rotation, factors are derived which have little or no correlation with each other.

Application of multiple regression is the next step in the analysis of data in this research. This is a method by which the relationship between independent and dependent variables can be determined. The assumption is that variation in a dependent variable is a function of variation in several independent variables.¹¹ The advantage of this technique is its power in enabling the analyst to observe the difference between actual and predicted values of dependent variables for each subject or nation. In this particular research, it will make it possible to discover which nations experienced violence more or less than they "ought to," thus forcing the analyst to provide some explanation for major deviations. The reason for applying factor analysis prior to regression analysis is to choose for the later analysis the dimensions which are independent of one another, thus giving more reliable regression results.¹²

¹⁰Rudolph J. Rummel, Applied Factor Analysis (Evanston: Northwestern University Press, 1970), pp. 12-32.

¹¹David C. Leege and Wayne L. Francis, Political Research (New York: Basic Books, Inc., 1974), pp. 343-363.

¹²Tanter, Dimensions of Conflict Behavior Within and Between Nations, p. 34.

CHAPTER III

CORRELATES OF CIVIL STRIFE

Measures of both civil strife and its correlates were separately factor analyzed and orthogonally rotated for the extraction of empirically independent dimensions. Major dimensions were selected on the basis of the total variance explained. Each of these factors was given a title based on theoretical interpretation of variables that loaded highly. Factor scores of each nation in the sample of analysis, for both dependent and independent factors, were obtained and regressed upon one another for determination of partial and multiple correlation coefficients between dimensions of dependent and independent variables. On the basis of these correlations the frequency and magnitude of civil strife was predicted; the accuracy of these predictions are presented in Appendix B.

Dimensions of Civil Strife

Thirteen variables were selected to measure various types of politically aggressive behaviors within Middle Eastern nations. The results of the intercorrelation analysis are shown in Table VI.

The clustering effects, though not quite distinctly patterned, are observable. Demonstrations seem to be correlated with riots

TABLE VI
SIMPLE CORRELATIONS AMONG VARIABLES OF CIVIL STRIFE
IN MIDDLE EASTERN NATIONS FOR 1970-72

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Demonstrations	1.00												
2. Riots	.85	1.00											
3. Strikes	.51	.10	1.00										
4. Terrorism	.45	.34	.83	1.00									
5. Declarations	.51	.64	.45	.52	1.00								
6. Plots	.25	.04	-.19	-.14	.07	1.00							
7. Attempted coups	-.30	-.23	-.20	-.04	-.04	.06	1.00						
8. Coup d'etats	-.07	-.11	-.13	-.19	-.01	.56	.22	1.00					
9. Civil War	-.20	-.15	-.17	.08	-.01	.30	.30	.44	1.00				
10. Rebellion	-.10	-.02	-.14	.12	.07	-.06	.38	.10	.34	1.00			
11. Ethnic Violence	.50	.58	.09	.32	.08	-.22	-.04	-.12	-.16	.45	1.00		
12. No. Killed per million	-.15	-.05	.00	.28	.23	.11	.71	.35	.75	.60	.08	1.00	
13. No. Arrested per million	-.17	.03	.05	.20	.43	.38	.58	.20	.26	.08	-.24	.62	1.00

(.85), declarations (.51), strikes (.51) and ethnic violence (.50).

There is almost no correlation between these variables and the variables measuring the number of people killed or arrested. On the other hand, unsuccessful coups and civil war are strongly associated with the number of people killed and moderately associated with the number of people arrested.

Next, the civil strife variables were factor analyzed to find out whether there is a smaller set of dimensions. The extracted factors were rotated orthogonally to satisfy the criteria of "simple-structure," that is, to maximize the high loadings and minimize the low loadings on each factor.¹

Four major empirically independent dimensions of political instability emerged explaining 56 per cent of the total variance, the results of which are presented in Table VII.

Turmoil is the label given to the first factor, which includes variables with high positive loadings such as riots (.92), demonstrations (.83), and ethnic violence (.71). This factor explains 18 per cent of the total variance. Turmoil is a concept given by almost every political analyst to denote conflict behavior such as those subsumed by this factor.

¹Dean K. Whitall, Handbook of Measurement and Assessment in the Behavioral Sciences (Menlo Park, California: Addison-Wesley Publishing Company, 1968), pp. 147-48.

TABLE VII
DIMENSIONS OF CIVIL STRIFE IN MIDDLE
EASTERN NATIONS FOR 1970-72*

Factor I <u>Turmoil (18%)</u>		Factor II <u>Urban Violence (15%)</u>	
Variable	Factor Loading	Variable	Factor Loading
2. Riots	92	3. Strikes	96
1. Demonstrations	88	4. Terrorism	90
10. Ethnic Violence	71		
Factor III <u>Civil War (12%)</u>		Factor IV <u>Elite Instability (11%)</u>	
Variable	Factor Loading	Variable	Factor Loading
9. Civil War	95	8. Attempted Coups	94
12. No. Killed per Million	66	12. No. Killed per Million	52

*In this table and Table IX all factor loadings of $\pm .50$ or greater are reported.

The second factor, due to the high loading of variables such as strikes (.96) and terrorism (.90), is named urban violence. Strikes and terrorism are phenomena which take place primarily in urban areas. Strikes require the existence of a big organization that has a large number of employees, and such organizations are normally in the heavily populated areas where human resources are easily available. Terrorism is also an act directed toward destruction of an important construction or the killing, kidnapping or attacking of politically significant persons. Thus, to achieve their

objectives they usually carry out their terroristic activities in urban areas, where a large number of high officials are available.

The third major factor includes the civil war variable (.96) and number of people killed per million of population (.66). This factor accounts for 12 per cent of the total variance. It is very interesting to note that the Feierabends, who reported a factor analysis of thirty domestic conflict measures, found that civil war loads highly on a unique factor.²

The last factor, elite instability, subsumes variables such as attempted coups d'etat (.94) and number of people killed per million (.52). The factor score of each state, the value each state has on each dimension in comparison with the rest of the entities, was determined and is reported in Table VIII.

TABLE VIII
FACTOR SCORES OF MIDDLE EASTERN NATIONS ON
FOUR DIMENSIONS OF CIVIL STRIFE

Factor I	Factor II	Factor III	Factor IV
Lebanon (3.07)	Israel (3.67)	Yemen (2.50)	Morocco (3.32)
Turkey (1.32)	Lebanon (.52)	Jordan (2.14)	Jordan (.91)

²Ivo K. Feierabend and Rosalind L. Feierabend, "Aggressive Behaviors Within Politics: A Cross-National Study," Journal of Conflict Resolution, X (September, 1966), 255.

TABLE VIII (Continued)

Factor I	Factor II	Factor III	Factor IV
Egypt (.85)	Jordan (.39)	Sudan (1.42)	Sudan (.72)
Tunisia (.36)	Egypt (-.20)	Lebanon (-.07)	Iraq (.70)
Syria (.15)	Turkey (-.22)	Tunisia (-.15)	Tunisia (-.14)
Jordan (.01)	Iraq (-.24)	Turkey (-.28)	Israel (-.18)
Morocco (-.20)	Sudan (-.25)	Iran (-.34)	Lebanon (-.30)
Algeria (-.36)	Libya (-.27)	Algeria (-.37)	Turkey (-.32)
Sudan (-.37)	Iran (-.35)	Kuwait (-.42)	Egypt (-.35)
Iran (-.56)	Syria (-.37)	Saudi Arabia (-.42)	Algeria (-.38)
Yemen (-.58)	Saudi Arabia (-.41)	Israel (-.43)	Libya (-.42)
Saudi Arabia (-.66)	Kuwait (-.41)	Morocco (-.50)	Saudi Arabia (-.44)
Kuwait (-.66)	Algeria (-.41)	Libya (-.56)	Kuwait (-.44)
Libya (-.72)	Morocco (-.46)	Egypt (-.66)	Syria (-.55)
Iraq (-.72)	Yemen (-.46)	Syria (-.84)	Yemen (-.86)
Israel (-.80)	Tunisia (-.53)	Iraq (-1.03)	Iran (-1.30)

One observable pattern in this table is that of a nation ranking high on several dimensions. For example, Lebanon occupies the highest position on the first factor, turmoil, second highest on factor II, urban violence, and fourth on factor III, civil war. Thus, the later eruption of civil war (1975) in Lebanon should not be of any surprise considering what was taking place prior to this date. It is interesting to note that Bwy in his study of political instability in Latin America finds that Cuba prior to the revolution against Batista (1959) scored the highest among twenty Latin American nations on the factor representing demonstrations, riots, strikes, and terrorism.³

On the other hand, there are examples of great disparity in the rankings of a nation. Yemen ranks low on three factors (eleventh on turmoil, fifteen on urban violence, and fifteen on elite instability), but it ranks highest on civil war. It would be difficult to find a better example illustrating that civil war is a separate factor.

Dimensions of Independent Variables

Twenty-five measures which might either facilitate or inhibit civil strife were selected as independent variables. After rotation five major dimensions emerged, accounting for 79 per cent of the total variance. The factor analysis results are shown in Table IX.

³D. P. Bwy, "Political Instability in Latin America: The Cross-Cultural Test of A Causal Model," Latin American Research Review, III (Spring, 1968), 44.

TABLE IX
DIMENSIONS OF INDEPENDENT VARIABLES
IN THE MIDDLE EAST

Factor I		
<u>Urbanization (29%)</u>		
Variable		Factor Loading
14. Population Density Per Square Kilometer		94
4. Number of Kilometers Surfaced Road Per 1,000 Square Kilometer of Area		94
5. Number of Kilometers of Railroad Tracks Per 1,000 Square Kilometers of Area		93
11. University School Enrollment Per 1,000 Inhabitants		82
20. Daily Newspapers Circulation Per 1,000 Population		79
12. Literacy Rate		77
16. Number of Organized Religions with at Least 1% of Population		72
18. Number of Political Parties		71
15. Per Cent of Urban Population		67
19. Political Discrimination		65
Factor II		
<u>Coercive Potential (19%)</u>		
Variable		Factor Loading
2. Defense Expenditure as Per Cent of GNP		95
6. Number of Hostile Adjacent Nations		92
7. Magnitude of Hostility		88
1. Number of Armed Personnel Per 1,000 Population		82
8. Distance From Tel-Aviv in Kilometers		53
Factor III		
<u>Energy (12%)</u>		
Variable		Factor Loading
24. Rate of Increase in Energy Consumption Per Capita		93
23. Energy Consumption Per Capita		92
9. Primary School Enrollment Per 1,000 Population		77
25. Rate of Increase in Consumer Price Index, 1968-1972		-60

TABLE IX (Continued)

Factor IV <u>Wealth (10%)</u>	
Variable	Factor Loading
21. Gross National Product Per Capita	88
10. Secondary School Enrollment Per 1,000 Population	85
Factor V <u>Cultural Heterogeneity (9%)</u>	
Variable	Factor Loading
17. Number of Languages Spoken by at least 1% of Population	80
13. Number of Inhabitants Per Physician	73
8. Distance From Tel-Aviv in Kilometers	56

The first factor includes ten variables which are indicators of urbanization. Population density, length of roads and railroads, number of university students, and urban population are some of the variables that are positively correlated with each other and also load highly on this factor. This dimension accounts for 29 per cent of the total variance and is labeled urbanization on the basis of variables which fall on this dimension.

Coercive potential is the label given to the second factor, which explains 19 per cent of the total variance. Four variables load highly on this factor. These variables are defense expenditure (.95), number of hostile adjacent nations (.92), magnitude of hostility (.88), and number of armed forces as 9 per cent of the population (.82). It seems that there is a strong correlation between the size of coercive potential and the magnitude of external conflict.

The number of hostile adjacent nations was included among independent variables because of the belief that this variable might serve as a facilitating medium for aggressive behavior by protecting guerilla or anti-regime elements from punishment by the government against which they acted. Thus, the higher the number of hostile adjacent nations, the easier it is to carry out struggles against regimes by dissatisfied individuals. In order to neutralize such a facilitating medium for aggressive behaviors, governments then seek to increase the size of their armed forces. Therefore, as the number of hostile adjacent nations increases, so does the size of coercive potential.

Energy consumption is the label given to factor III, which includes rate of increase in energy consumption (.93) and energy consumption per capita (.92) as its highest loading variables. This factor accounts for 12 per cent of the total variance. It is interesting to note that Gross National Product per capita falls on a different factor (factor IV entitled wealth) rather than clustering with energy consumption per capita. Petroleum is the major source of income in most of the Middle Eastern states. A significant portion of what they receive from exporting petroleum is invested in foreign banks or paid to buy military equipment, neither of which has an immediate impact in changing the traditional style of life for most people within their respective countries. Even that portion of petroleum income

which is invested internally can not be expected to be used efficiently due to deficiencies in management and ascriptive social structures. The net result is, then, that while a nation as a whole enjoys a high level of Gross National Product per capita, a major segment of the population still leads a traditional type of life which does not require the consumption of electricity or the use of other modern sources of energy. This is probably the explanation that can be given as to why there is no relationship between Gross National Product per capita and energy consumption.

The number of major languages spoken in a country loads highest on the final factor, cultural heterogeneity. The distance from a nation's capital to Tel-Aviv also appears on this factor, as it did on factor II.

Factor Scores

Several interesting patterns are observable based on the factor scores of these nations. As is shown in Table X, Lebanon ranks first on factor I and next to the last on factor III. Even though Lebanon enjoys the highest level of urbanization, its energy consumption in recent years has been fairly constant. Israel, on the other hand, scores very high on the dimensions of economic satisfaction (factors III and IV) and also ranks first on the factor representing coercive potential. Syria, also, exhibits a distinctive pattern by occupying the fourth position on factors I, II, and III but

TABLE X

MIDDLE EASTERN NATIONS' SCORES ON FACTORS
OF INDEPENDENT VARIABLES

Factor I	Factor II	Factor III	Factor IV	Factor V
Lebanon (2.80)	Israel (2.65)	Libya (3.57)	Kuwait (3.57)	Sudan (2.50)
Israel (2.03)	Jordan (1.30)	Israel (.96)	Israel (.70)	Morocco (1.64)
Morocco (.26)	Yemen (.95)	Algeria (.19)	Jordan (.13)	Israel (.77)
Syria (.08)	Syria (.53)	Syria (.01)	Iraq (.13)	Yemen (.70)
Sudan (.01)	Iraq (.32)	Tunisia (.00)	Iran (.11)	Algeria (.23)
Kuwait (-.13)	Saudi Arabia (.32)	Iraq (-.19)	Turkey (.06)	Iraq (.10)
Algeria (-.13)	Egypt (.24)	Iran (-.25)	Libya (.06)	Iran (.10)
Turkey (-.16)	Iran (.13)	Morocco (-.27)	Algeria (-.17)	Saudi Arabia (.01)
Iraq (-.19)	Sudan (-.38)	Saudi Arabia (-.28)	Tunisia (-.23)	Libya (-.08)
Tunisia (-.20)	Turkey (-.41)	Egypt (-.32)	Sudan (-.35)	Kuwait (-.14)
Egypt (-.31)	Libya (-.75)	Turkey (-.42)	Morocco (-.46)	Tunisia (-.60)
Libya (-.58)	Kuwait (-.80)	Jordan (-.55)	Yemen (-.65)	Lebanon (-.80)
Iran (-.59)	Tunisia (-.88)	Kuwait (-.55)	Saudi Arabia (-.65)	Jordan (-.98)

TABLE X (Continued)

Factor I	Factor II	Factor III	Factor IV	Factor V
Jordan (-.60)	Algeria (-.89)	Sudan (-.60)	Syria (-.70)	Syria (-1.00)
Saudi Arabia (-1.09)	Morocco (-1.09)	Lebanon (-.61)	Egypt (-.74)	Egypt (-1.15)
Yemen (-1.28)	Lebanon (-1.25)	Yemen (-.71)	Lebanon (-.80)	Turkey (-1.30)

ranking relatively low on the Gross National Product per capita and cultural heterogeneity factors.

The lack of correlation between Gross National Product and energy consumption, which was discussed earlier, is especially pronounced when the positions of Kuwait, Jordan, and Libya are examined on factors III and IV. While both Kuwait and Jordan are two of the top ranking nations on the Gross National Product dimension, they rank unexpectedly low on the energy dimension. On the other hand, Libya, Algeria, and Syria are the highest in energy consumption per capita and relatively low on the wealth dimension.

Regression and Partial Correlation Analysis

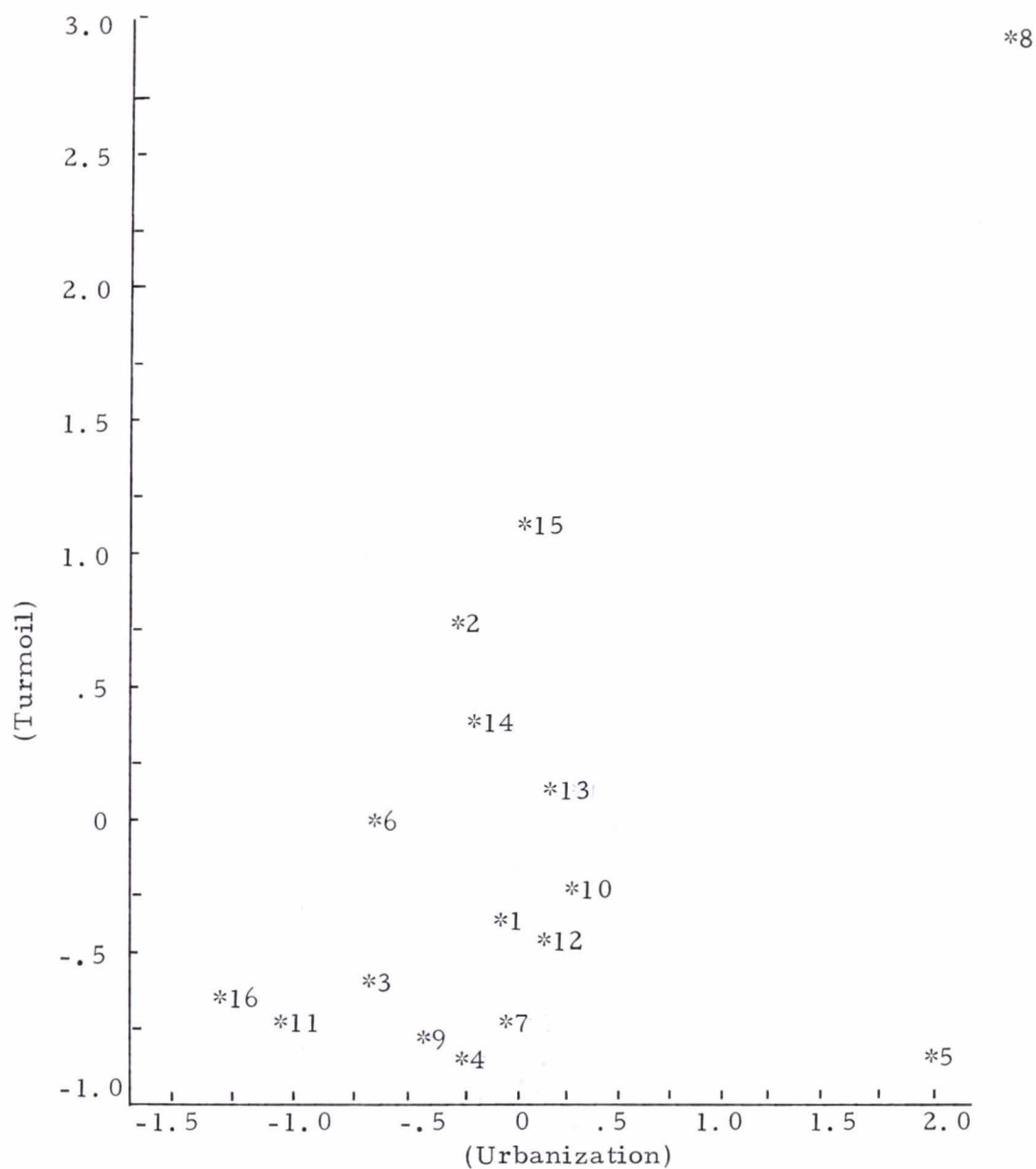
Regression and partial correlation analysis were employed to search for the strength of the relationships between dependent and independent factors and to predict the magnitude of civil strife within each polity. To achieve these objectives, the nations' scores

on the nine extracted factors of dependent and independent variables were regressed upon one another. The results are presented in Table XI. The multiple correlation of determination for turmoil is $R^2 = .90$. Thus, five factors of independent variables together explain ninety per cent of the total variance in the turmoil dimension. Urbanization and cultural heterogeneity are the two independent factors that explain most of the variation. The partial correlation coefficient between urbanization and turmoil is .56, which implies that as a nation's level of urbanization increases, the frequency and magnitude of conflict behavior represented by turmoil tends to increase. In other words, the relationship between these two dimensions shows a moderate, positive association. (Figure 1)

Egypt, Israel, and Turkey are three states that seem to present deviant cases to the linear relationship. Israel, while ranking second highest on the urbanization factor, experiences the lowest amount of turmoil. The only explanation that could be furnished is that Israel had scored a major victory against her neighboring hostile Arab countries in the now famous Six Day War of 1967. This victory gave the Israelis a strong sense of security, satisfaction, and called for more support and unity behind national leaders. Therefore, a period of tranquility and psychological satisfaction with the system was to follow. Egypt, on the contrary, was afflicted by a major and unexpected defeat in her war against an archenemy such as Israel.

TABLE XI
CORRELATES OF CIVIL STRIFE IN THE
MIDDLE EAST FOR 1970-72

Factor	1	2	3	4	5	6	7	8	9
1. Urbanization	1.00								
2. Coercive Potential	.00	1.00							
3. Energy	.00	.00	1.00						
4. Wealth	.00	.00	.00	1.00					
5. Cultural Heterogeneity	.00	.00	.00	.00	1.00				
6. Turmoil	.56	.36	-.33	-.33	-.50	1.00			
7. Urban Violence	.65	-.68	.20	.13	.09	-.02	1.00		
8. Civil War	-.26	-.28	-.31	-.11	.25	-.04	.03	1.00	
9. Elite Instability	.11	.17	-.12	.10	.45	-.04	.03	.03	1.00



- | | | | |
|------------|------------|------------------|-------------|
| 1. Algeria | 5. Israel | 9. Libya | 13. Syria |
| 2. Egypt | 6. Jordan | 10. Morocco | 14. Tunisia |
| 3. Iran | 7. Kuwait | 11. Saudi Arabia | 15. Turkey |
| 4. Iraq | 8. Lebanon | 12. Sudan | 16. Yemen |

Fig. 1.--The Relationship Between Urbanization and Turmoil

Demoralization of the populace due to their defeat coupled with the death of their celebrated hero, Nasser, in 1970 and the do-nothing policy of President Anwar Sadat against Israel created an intolerable situation to bear. Thus, frustration found its expression in aggressive acts represented by turmoil. An unexpectedly high level of turmoil in Turkey is, perhaps, due partially to the presence of foreign military bases in that country which provides an ideal nourishment for nationalistic movements. Secondly, the location of Turkey exposes her population to Western civilization with its material progress, thus causing a discrepancy between value expectations and value achievements. Thirdly, Turkey's decline in international status from the days of the Ottoman empire may contribute to the conditions for turmoil. Finally, disloyalty of armed forces to the Turkish regime provides discontented political groups or individuals with a more favorable opportunity for assault on the regime without the fear of retribution.

Cultural heterogeneity is negatively ($-.50$) associated with the magnitude of turmoil. The correlation reported, of course, is based on a linear relationship (note Figure 2). Thus, spontaneous acts of violence represented by turmoil seem to increase as cultural heterogeneity decreases; number of languages and number of people per physician were two independent variables that loaded highly and positively on cultural heterogeneity. Since turmoil is

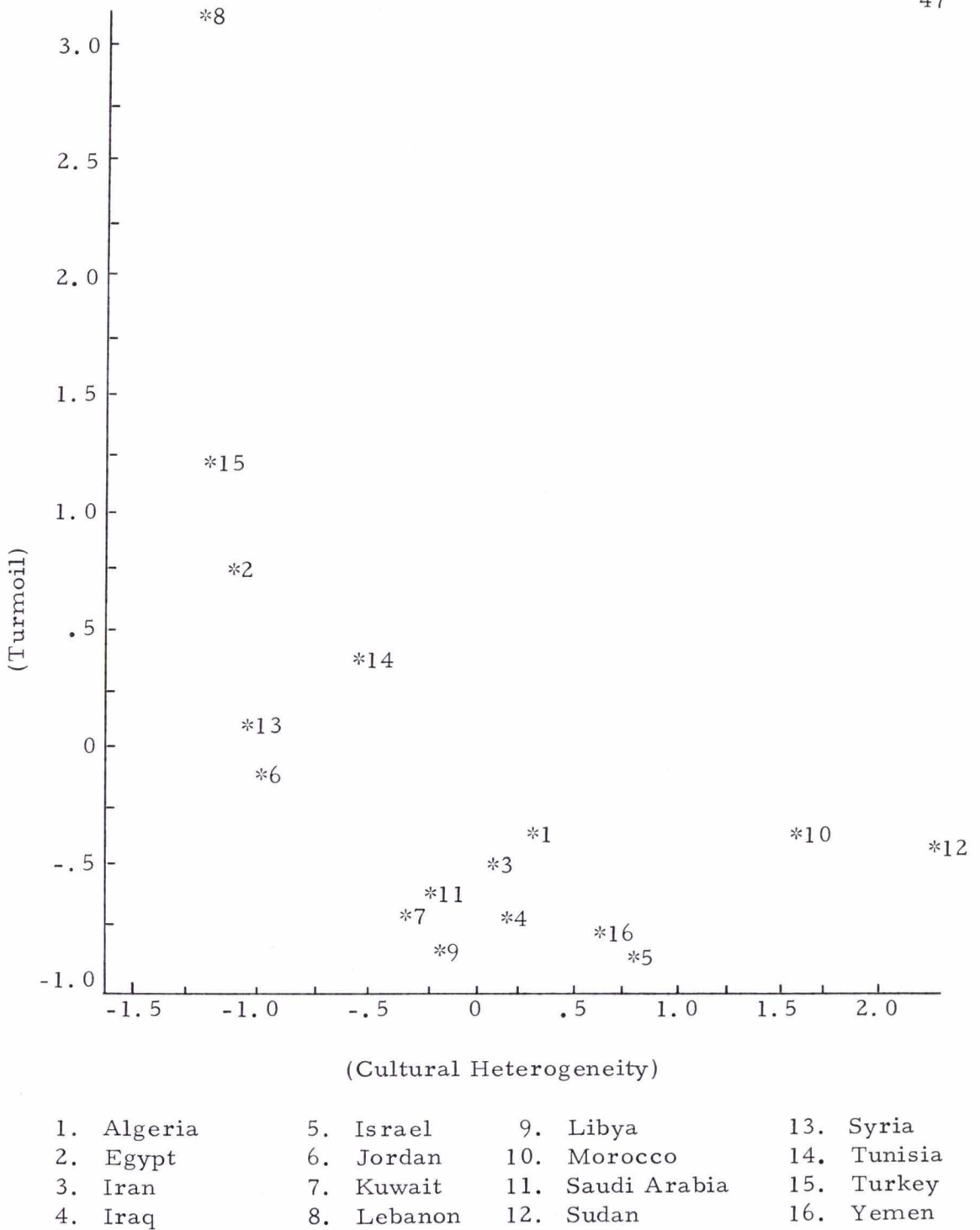


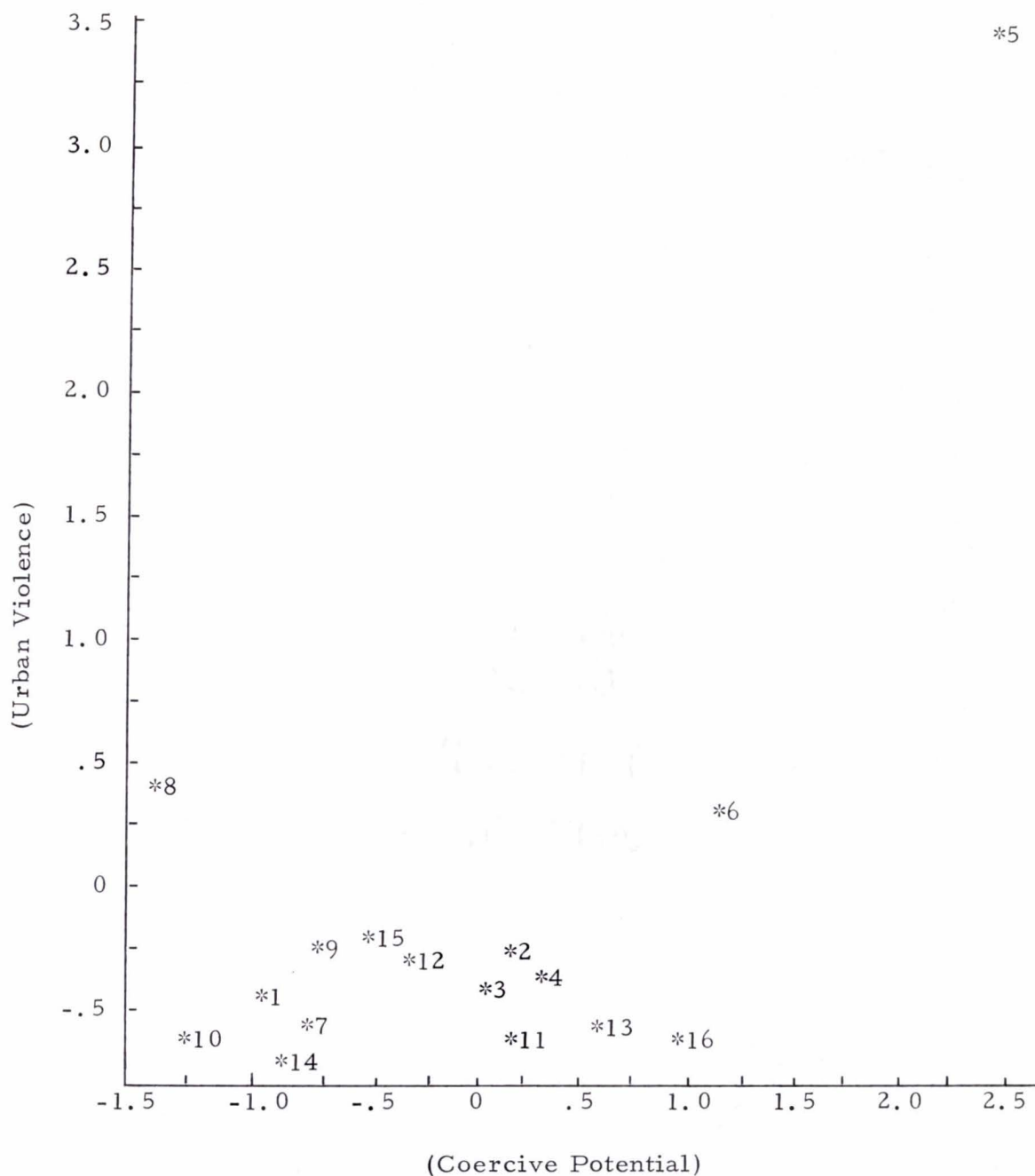
Fig. 2.--The Relationship Between Cultural Heterogeneity and Turmoil

negatively correlated with cultural heterogeneity, it could be deduced that decline of cultural heterogeneity (increased communications and awareness) promotes the rising of expectations. This, in turn, expresses itself in small-scale violences such as demonstrations, riots, and communal conflict.

Lebanon is the nation which deviates the most from the line of regression by experiencing an unexpectedly high level of turmoil. This is, perhaps, due to sympathy of the Arab population in Lebanon with the cause of other Arab states in their struggle against Israel, a struggle to which Lebanon's Christians remain indifferent. This produces a situation of conflict of interest between Moslems and Christians which eventually, in later years, grew into terroristic activity and open civil war.

The scatter-diagram in Figure 3 demonstrates a curvilinear relationship between size of armed forces and urban violence. This is consistent with the findings of Bwy, Gurr, and Gurr and Ruttenberg.⁴ Nations with a minimum allocation of Gross National Product to the armed forces are the states with minimum urban violence (except for Lebanon). Israel and Jordan are countries with the

⁴Ibid., 50; Ted R. Gurr, "A Causal Model of Civil Strife: A Comparative Analysis Using New Indices," American Political Science Review, LXII (December, 1968), 1118; and T. R. Gurr and Charles Ruttenberg, "The Conditions of Civil Violence," in Anger, Violence, and Politics, ed. by Ivo K. Feierabend, Rosalind L. Feierabend and Ted R. Gurr (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1972), pp. 46-47.



- | | | | |
|------------|------------|------------------|-------------|
| 1. Algeria | 5. Israel | 9. Libya | 13. Syria |
| 2. Egypt | 6. Jordan | 10. Morocco | 14. Tunisia |
| 3. Iran | 7. Kuwait | 11. Saudi Arabia | 15. Turkey |
| 4. Iraq | 8. Lebanon | 12. Sudan | 16. Yemen |

Fig. 3.--The Relationship Between Coercive Potential and Urban Violence

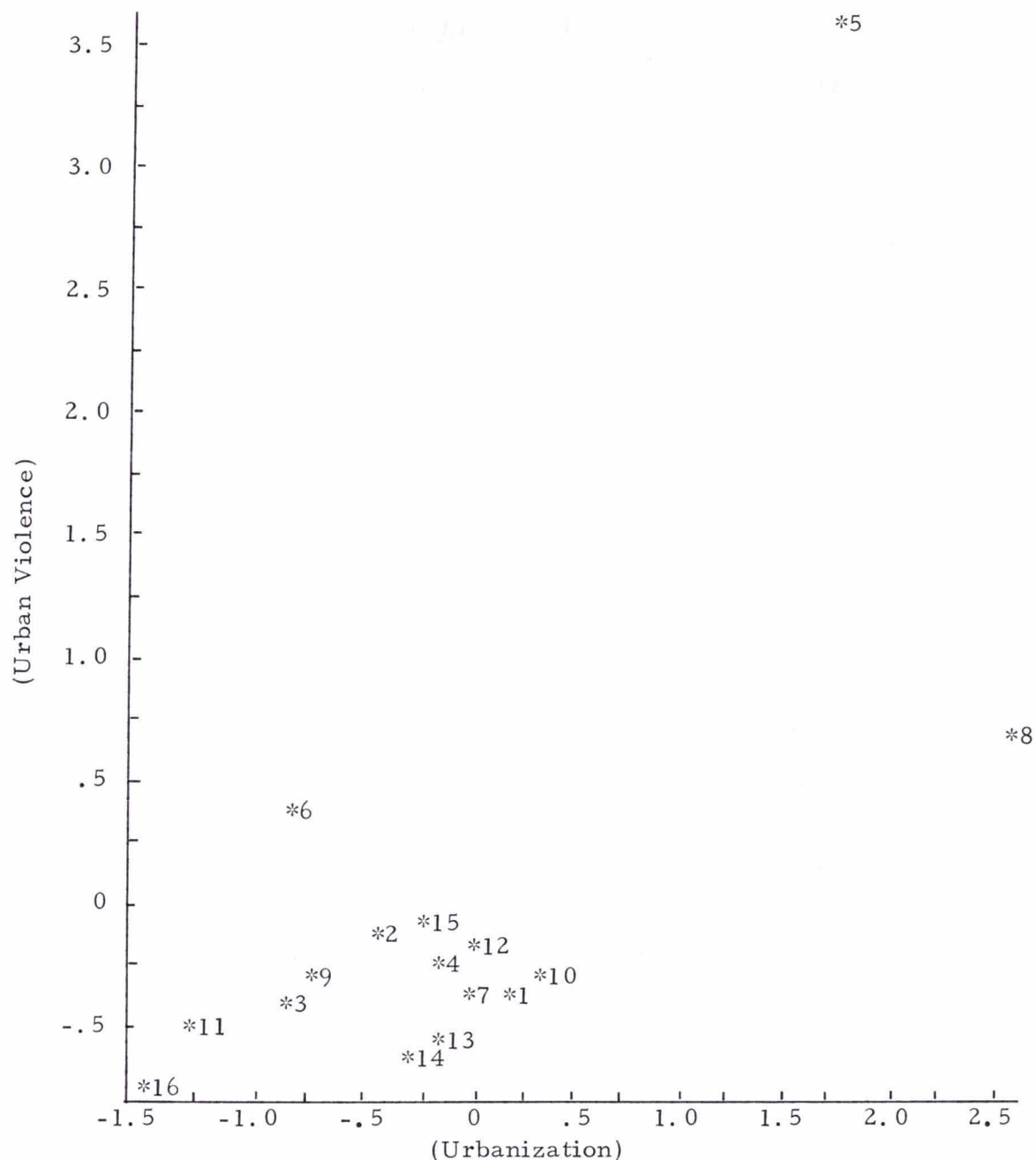
highest magnitude of external conflict (which loads highly on coercive potential). On the other hand, Syria, and Saudi Arabia are high on size of coercive potential but low on urban violence. Based on the curvilinear relationship between the size of armed forces and amount of urban violence, the three nations of Lebanon, Jordan, and Israel appear to have experienced more urban violence than they were "supposed to." Most of the terroristic activities within Israel and Lebanon were caused by Palestinians who were either infiltrating across borders and carrying out their subversive activities or were generally alien to these nations even though dwelling within them. In the case of Jordan, however, the nation went through a bloody civil war (1971); also, terrorism had become a common-day practice. Hence, the urban violence that was experienced by Israel, Lebanon, and Jordan might have been much lower had the Middle Eastern war of 1967 not been waged. It seems that the existence of hostile adjacent nations and external conflict had a facilitating impact on urban violence for these nations, even though the general association between coercive potential and urban violence was negative. Note that this is an exception to Rummel's general finding of no significant relation between internal and external strife.⁵

⁵Rudolph Rummel, "Dimensions of Behavior Within and Between Nations," in Macro-Quantitative Analysis, "ed. by John Gillespie and Betty Nesvold (Beverly Hills, California: Sage, 1971), p. 80.

The second factor which contributes most (.65) in explaining variation in the urban violence dimension is urbanization (Figure 4). Israel, Lebanon and Jordan display three exceptional cases with a higher frequency of urban violence than they are expected to have. The explanation seems to be based on the causes already mentioned with regard to the impact of external conflict and hostile adjacent nations as facilitating conditions for urban violence in these three countries.

Turmoil and urban violence are the two dimensions of civil strife that can be best accounted for by the five factors of independent variables. The multiple correlation coefficients for turmoil and urban violence are .95 and .97, respectively. Most of the variations are explained by the urbanization, coercive potential, and cultural heterogeneity factors. Urbanization has a positive correlation (.65) with urban violence and a positive correlation (.56) with turmoil but no significant correlation with the civil war and elite instability dimensions. Urban violence is the only dimension with which coercive potential displays a strong, negative relationship (-.68).

All factors of the independent variables, with the exception of cultural heterogeneity, appear to have negative impacts on the occurrence of civil war, but the individual associations are not strong enough to account for much of the variation. The multiple



- | | | | |
|------------|------------|------------------|-------------|
| 1. Algeria | 5. Israel | 9. Libya | 13. Syria |
| 2. Egypt | 6. Jordan | 10. Morocco | 14. Tunisia |
| 3. Iran | 7. Kuwait | 11. Saudi Arabia | 15. Turkey |
| 4. Iraq | 8. Lebanon | 12. Sudan | 16. Yemen |

Fig. 4.-- The Relationship Between Urbanization and Urban Violence

coefficient of determination is .31. The difference between the wealth of a nation, as indicated by Gross National Product per capita, and energy consumption per capita in their impact on civil strife becomes evident when they are correlated with civil war. Though both are negatively correlated with civil war, they vary considerably in their explanatory power (a partial correlation of $-.31$ for the energy factor and $-.11$ for the wealth dimension).

Cultural heterogeneity is the only factor that exhibits some moderate association ($.45$) with elite instability. Hence, it could be stated that an increased cultural heterogeneity is conducive to elite instability.

CHAPTER IV

SUMMARY AND CONCLUSION

The primary objective of this research was to determine the preconditions of civil strife within Middle Eastern nations. To achieve this, frustration-aggression theory, the most commonly used model in contemporary comparative analysis of political instability, was employed. The basic premise of this theory is that perceived deprivation is the cause of aggressive behavior of any type. A sense of deprivation grows among men when they perceive a discrepancy between their value expectations and capabilities.¹

Anger is thought to be the consequence of perceived deprivation which under certain circumstances expresses itself in aggression against the sources which are believed by the frustrated agent(s) to be the cause of their deprivation. The types and magnitude of aggression are hypothesized to be dependent upon certain sociopolitical factors such as coercive potential, facilitation, legitimacy and institutionalization of the political system; these serve either as facilitating or inhibiting media for the expression of

¹Ted R. Gurr, "Psychological Factors in Civil Violence," World Politics, XX (January, 1968), 245-78.

anger. Aggressive behaviors, according to the analysts of civil strife, are distinguishable from each other by their structural organization and the scale of violence involved.² Thus, demonstrations, riots, and strikes are characterized by a low scale of violence, spontaneous reaction and ambiguous objectives. Civil war and guerrilla warfare, on the other hand, have well-organized structure, are planned, have clear objectives and involve a high scale of violence. Military coups, plots, or attempted coups present another form of violence which is different from well-organized or spontaneous reactions in both duration, objectives and structural organization. Thus, based on structural organization of participants, scale of violence and objectives, various typologies of civil strife are formed. Factor analytic results, in fact, substantiate the existence of empirically independent dimensions of civil strife.

Thirteen variables which were thought to be clear in meaning and connotation were selected as the measures of civil strife. Data on these variables for sixteen Middle Eastern nations were collected and factor analyzed. After orthogonal rotation, four major dimensions emerged accounting for 56 per cent of the total variation. Each dimension was given a title based on theoretical interpretation of the variables which loaded highly. Turmoil, urban violence,

²Donald G. Morrison and Hugh M. Stevenson, "Political Instability in Independent Black Africa," Journal of Conflict Resolution, XV (September, 1971), 355-56.

civil war, and elite instability were the labels given to each dimension. As was expected, certain variables appeared to covary with each other more than they do with the rest of the variables included in this analysis. Thus, the proposition that there is a typology of civil strife and that this typology can be empirically substantiated by quantitative analysis of measures of civil strife was adopted and retained for the subsequent regression analysis for specification of the correlates of civil strife.

According to frustration-aggression theory, the source of frustration is a psychological variable called "relative deprivation" which is caused by the perception of discrepancy between value expectations and achievement which occurs when an individual's efforts to achieve his perceived proper and desired goals are thwarted by unjustifiable means, such as political, economic, or ethnic discrimination. Expression of frustration in aggression or types of aggression, however, is determined by certain mediating social factors such as institutionalization, facilitation, and coercive potential. Based on these theoretical arguments, twenty-five variables which were thought to be indices of social mediating factors were selected. After collection of data, using mainly United Nations publications, these variables were factor analyzed. Five major factors emerged explaining 79 per cent of the total variance; urbanization, coercive potential, energy, wealth, and cultural heterogeneity were

the titles given to these extracted factors. Factor scores of each nation were determined and retained for the regression analysis.

In order to determine whether a relationship exists between independent and dependent variables included in this research, regression analysis was employed. Factor scores of nations on independent dimensions were regressed upon their factor scores on dependent dimensions. Five factors of independent variables together explained 90 per cent of the total variation for turmoil. Urbanization and cultural heterogeneity were the two factors which explained most of the variation; urbanization had a positive association with turmoil, while a negative correlation emerged between cultural heterogeneity and turmoil.

It seems, from these findings, that a decline in cultural heterogeneity is associated with rising expectations among hitherto isolated peoples. Hence, as society moves away from tradition toward modernity a certain degree of conflict behavior in the form of small-scale violence becomes almost inevitable. This conclusion is further supported by the positive association between urbanization and turmoil. In short, demonstrations, riots, and small-scale ethnic violence seem to be more characteristic of more developing than less developing societies.

The dimension of civil strife with the greatest amount of variation explained is urban violence, indicated by strikes and

terrorism. The multiple correlation coefficient for this dimension is .97 ($R^2 = .95$). Urbanization and coercive potential are the only two factors that are strongly associated with urban violence. But together they account for 89 per cent of the variation. No significant associations emerge between urban violence and the other independent factors: energy, wealth and cultural heterogeneity. Thus, terrorism occurs in more, as well as less, developed societies. When factor scores of nations on the urbanization and coercive potential dimensions were separately plotted against urban violence, a positive and a negative linear relationship emerged respectively. Actually, the relation between coercive potential and urban violence is probably best seen as curvilinear. Nations with a low level of coercive potential as well as those with the largest size of armed forces were those witnessing minimum levels of urban violence. The highest levels of urban violence were experienced by nations with middle-range coercive potential. Discontented people tend to express their frustration in sabotage or underground activities if they can not express their dissatisfaction openly and in a more peaceful manner. At the very low level of coercive potential or repressiveness, frustrated people do not have any fear of retribution by the government; thus, they feel no reason for underground activities since they can express their dissatisfaction openly. Hence, nations with minimum

levels of coercive potential or repressiveness tend to be those experiencing a minimum of urban violence.

The multiple correlation coefficient for the civil war dimension was .56, and it was .52 for elite instability. Cultural heterogeneity is the only dimension which is positively and moderately associated with civil war; thus, a tentative conclusion is that civil war is more likely to occur in societies with a heterogeneous culture and certain low levels of governmental expenditure on the well-being of the people (as indicated by inhabitants per physician).

In short, findings in this research indicate that: (1) civil strife within Middle Eastern nations varies along four uncorrelated dimensions of turmoil, urban violence, civil war, and elite instability; (2) socioeconomic attributes of these nations vary along five uncorrelated dimensions of urbanization, coercive potential, energy consumption, wealth, and cultural heterogeneity; (3) these dimensions of independent variables together account for 90 per cent of turmoil, 94 per cent of urban violence, 31 per cent of civil war, and 27 per cent of elite instability; (4) urbanization and coercive potential account for most of the variation in urban violence; (5) cultural heterogeneity is the only dimension that shows a major relationship with elite instability; and (6) urbanization and cultural heterogeneity are the only two dimensions that exhibit major associations with the turmoil dimension.

One of the basic criticisms of this research and other cross-national studies of civil strife is that conclusions are not based on a direct test of relevant psychological variables which are hypothesized to be the causes of conflict behavior. For instance, it is necessary to find out whether aggressive behaviors were committed by the genuinely frustrated actors as implied to be the case by frustration-aggression theory. However, it does not seem to be feasible to ask individuals whether they have been involved in subversive activities or ever contemplated overthrowing a regime and whether their act was due to their frustration with the establishment or to satisfy their own egocentric desires. Still, there is another problem which plagues research of this kind and that is foreign instigation of covert activities against regimes which are considered unfriendly. Hence, it seems rather unrealistic to argue that any single event such as an anti-government demonstration, sabotage or military coup is due solely to internal political, cultural or economic deprivation. It is hoped that more rigorous theories and methodologies will be developed in order to better account for all conditions which have either direct or indirect bearing on domestic conflict behavior. This is necessary if the literature on civil strife is to move beyond tentative conclusions.

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APPENDIX A

LIST OF VARIABLES

Dependent Variables

Domain I: Turmoil

1. Demonstrations: any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority.
2. Riots: any violent demonstration or clash of more than 100 people involving the use of physical force.
3. Strikes: collective cessation of work by at least 100 industrial or service workers to protest the policies or authorities.
4. Terrorism: organized violent activity on the part of a small group of citizens directed toward harassment of the government. Bomb plants, sabotage, assassinations, and isolated guerrilla activities are types of violence included in this category.
5. Declarations: emergency measures such as imposition of martial law, curfews, and prohibitions against public assembly.

Domain II: Elite Instability

6. Plots: events in which announcement or admission is made by the political elite that a plot to overthrow the government has been discovered.
7. Coup d'etat: any illegal or forced change of top governmental elite by a small elite group.

8. Attempted coups: unsuccessful coup d'etat.

Domain III: Communal Instability

9. Civil War: all-out war between two or more organized major segments of the population. Each segment has its own government and the entire nation becomes involved.
10. Ethnic violence: a short-lived clash between two antagonistic communal groups in which more than 100 people were involved.
11. Rebellion: an event in which an identifiable communal group by resorting to violent means seeks to gain increased autonomy from the national government.

Domain IV: Casualties

12. Number killed

<u>Score</u>	<u>Number killed</u>
1	25
2	100
3	1,000
4	1,001

13. Number arrested

<u>Score</u>	<u>Number arrested</u>
1	10
2	100
3	1,000

Note: The definitions of variable one through eleven are taken from the following sources: Rudolph Rummel, "Dimensions of Conflict Behavior Within and Between Nations," in Macro-Quantitative Analysis, ed. by John Gillespie and Betty Nesvold (Beverly Hills, California: Sage, 1971), pp. 51-52; and Donald Morrison and Hugh Stevenson, "Political Instability in Independent Black Africa," Journal of Conflict Resolution, XV (September, 1971), 350-54.

Independent Variables

Domain I: Coerciveness

1. Number of armed personnel per 1,000 population.
2. Defense expenditure as per cent of Gross National Product.
3. Number of coups (successful or unsuccessful), 1960-69.

Domain II: Facilitation

4. Number of kilometers of surfaced roads per 1,000 square kilometer of area.
5. Number of kilometers of railroad track per 1,000 square kilometer of area.
6. Number of hostile adjacent nations.
7. Magnitude of hostility.

Score

Hostile action

1	=	Diplomatic breakdown
2	=	Threat to use force
3	=	Actual military confrontation

8. Distance from Tel-Aviv in miles.

Domain III: Education and Health

9. Primary school enrollment per 1,000 inhabitants.
10. Secondary school enrollment per 1,000 inhabitants.
11. University school enrollment per 1,000 inhabitants.
12. Literacy rate.
13. Number of inhabitants per physician.

Domain IV: Culture and Demography

14. Population density per square kilometer.
15. Per cent of urban population.
16. Number of organized religions with at least 1% of population.
17. Number of languages spoken by at least 1% of population

Domain V: Economics and Politics

18. Number of political parties.
19. Political discrimination.

0 = Most political elite positions or participatory activities are open to all groups.

1 = Some significant political elite positions or participatory activities are closed to some groups.

2 = Most political elite positions or most participatory activities are closed to some groups.

20. Daily newspaper circulation per 1,000 population.
21. Gross National Product per capita.
22. Rate of increase in Gross National Product per capita.
23. Energy consumption per capita.
24. Rate of increase in energy consumption per capita.
25. Rate of increase in consumer price index, 1968-1972.

APPENDIX B

ACTUAL AND PREDICTED VALUES OF FOUR CIVIL STRIFE DIMENSIONS BASED ON MULTIPLE REGRESSION RESULTS

TABLE XII

TURMOIL

Country	Actual Value	Predicted Value	Residual
1. Algeria	-0.36	0.13	0.49
2. Egypt	0.85	0.64	-0.21
3. Iran	-0.56	-0.38	0.18
4. Iraq	-0.72	-0.26	0.46
5. Israel	-0.80	-0.73	0.07
6. Jordan	0.01	-0.20	-0.21
7. Kuwait	-0.66	-0.69	-0.03
8. Lebanon	3.07	2.86	-0.21
9. Libya	-0.87	-1.15	-0.28
10. Morocco	-0.18	-0.03	0.15
11. Saudi Arabia	-0.66	-0.38	0.28
12. Sudan	-0.36	-0.77	-0.41
13. Syria	0.15	0.56	0.41
14. Tunisia	0.36	0.57	0.21
15. Turkey	1.31	0.81	-0.50
16. Yemen	-0.58	-0.99	-0.41

TABLE XIII
URBAN VIOLENCE

Country	Actual Value	Predicted Value	Residual
1. Algeria	0.41	0.65	0.24
2. Egypt	0.19	0.30	0.11
3. Iran	0.35	0.31	-0.04
4. Iraq	0.24	-0.08	-0.32
5. Israel	-3.67	-3.42	0.25
6. Jordan	-0.39	-0.32	0.07
7. Kuwait	0.41	0.28	-0.13
8. Lebanon	-0.52	-0.66	-0.14
9. Libya	0.27	0.17	-0.10
10. Morocco	0.46	0.53	0.07
11. Saudi Arabia	0.41	0.57	0.16
12. Sudan	0.25	0.19	-0.06
13. Syria	0.37	-0.23	-0.60
14. Tunisia	0.53	0.80	0.27
15. Turkey	0.22	0.57	0.35
16. Yemen	0.46	0.34	-0.12

TABLE XIV
CIVIL WAR

Country	Actual Value	Predicted Value	Residual
1. Algeria	-0.37	-0.19	0.18
2. Egypt	-0.66	0.05	0.71
3. Iran	-0.34	0.28	0.62
4. Iraq	-1.03	0.21	1.24
5. Israel	-0.43	-0.01	0.42
6. Jordan	2.14	0.41	-1.73
7. Kuwait	-0.42	-0.45	-0.03
8. Lebanon	-0.07	-0.99	-0.92
9. Libya	-0.56	-1.20	-0.64
10. Morocco	-0.49	0.19	0.68
11. Saudi Arabia	-0.42	0.51	0.93
12. Sudan	1.42	0.75	-0.67
13. Syria	-0.84	-0.05	0.79
14. Tunisia	-0.15	-0.31	-0.16
15. Turkey	-0.27	-0.27	0.00
16. Yemen	2.49	1.06	-1.43

TABLE XV
ELITE INSTABILITY

Country	Actual Value	Predicted Value	Residual
1. Algeria	0.37	-0.24	-0.61
2. Egypt	0.35	0.48	0.13
3. Iran	1.28	0.02	-1.26
4. Iraq	-0.70	0.01	0.71
5. Israel	0.17	0.08	-0.09
6. Jordan	-0.91	0.69	1.60
7. Kuwait	0.44	0.26	-0.18
8. Lebanon	0.30	-0.33	-0.66
9. Libya	0.42	0.40	-0.02
10. Morocco	-3.32	-1.05	2.27
11. Saudi Arabia	0.44	0.07	-0.37
12. Sudan	-0.72	-1.30	-0.58
13. Syria	0.55	0.46	-0.09
14. Tunisia	0.14	0.11	-0.03
15. Turkey	0.32	0.49	0.17
16. Yemen	0.86	-0.15	-1.01

Vita was removed during scanning