A COMPARISON OF TWO METHODS: MULTIPLE SCALOGRAM ANALYSIS AND FACTOR ANALYSIS, FOR ANALYZING UNITED NATIONS VOTING BEHAVIOR

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ABSTRACT

A COMPARISON OF TWO METHODS, MULTIPLE SCALOGRAM ANALYSIS AND FACTOR ANALYSIS, FOR ANALYZING UNITED NATIONS VOTING BEHAVIOR

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The major concern of this investigation was a comparison of the utility of two statistical methods, multiple scalogram analysis and factor analysis, for the study of United Nations voting patterns. The two methods were compared on the basis of the internal logical consistency of the issue clusters disclosed by each. The data consisted of 34 roll-call votes cast by 74 nations during the Twelfth United Nations General Assembly, as tabulated from the official records of the Plenary Meetings for 1956-57.

Although both methods are statistical techniques of classification, they differ in procedure and result in different issue clusters when used with these data. Multiple scalogram analysis is a technique recently developed by Lingoes (1960) which calculates multiple scales of the Guttman variety from a group of individual response patterns. Factor analysis is a multivariate technique more familiar to psychologists which produces clusters derived from the correlation matrix.

Multiple scalogram analysis produced four dimensions, or clusters, encompassing 32 of the 34 issues. Factor analysis resulted in six factors with the varimax rotation and four factors with the quartimax rotation. Each cluster was searched for a logically consistent underlying thread of continuity by examining the debate arguments and implications of each issue within the cluster.

Factor analysis, particularly the quartimax rotation, was found to give clusters of issues most nearly congruent with logical expectations. The four factors found with quartimax were:

- 1. A "Protection of Smaller Nations" factor
- 2. An "Admission of Communist China to the United Nations" factor
- 3. A "Racial Discrimination in South Africa" factor
- 4. A "Housekeeping" factor.

The first consisted of issues dealing with colonial territories, such as Togoland and West Irian, and the physical well-being of small nations, such as the protection of Syria from Turkey. The highest loading issues of the second and third factors included all the ballots cast on the topics named. The fourth factor consisted of issues requiring little physical or psychological commitment by the members, such as spreading information on modern nuclear weapons or accepting Trusteeship

Council reports.

Multiple scalogram analysis, on the other hand, was found more difficult to interpret. It was necessary to examine each debate closely to arrive at the following interpretations of the four dimensions. Dimension I appeared to be related to strengthening the United Nations and United Nations Charter principles. The issues were chiefly procedural or involved racial discrimination in South Africa (related to human rights). Dimension II was labeled a "Hot" Cold War cluster. Issues as diverse as arms regulation, the admission of Communist China, and the geographical distribution of the United Nations Secretariat were linked together by a common communist bloc argument for proper representation of all views. Dimension III was similar. Issues concerning international trade, the United Nations Emergency Force, and the threat to Syria were all linked together by communist bloc speeches identifying these as examples of Western "aggression." The common element of Dimension IV appeared to be the salience of In each issue, from arms regulation to the termination of the Trusteeship Agreement in French Togoland, the problem was immediate or delayed action.

However, another use of multiple scalogram analysis was demonstrated. The score given to each nation on each dimension can be used to give a strict quantitative definition

of voting blocs. Voting blocs obtained on two dimensions were examined and compared with four different types of national alignments discussed by Hovet (1960): caucusing groups, geographical distribution groups, regional groups, and common interest groups. The superiority of this approach lies in a strict definition of voting blocs in terms of nations' actual behavior and in allowing blocs of different membership to appear as different matters come under consideration. The ease of identifying and studying voting blocs is a valuable asset of multiple scalogram analysis.

Political science may benefit from using these methods for quantification of United Nations or other voting bloc study, an area they have heretofore almost neglected.

Psychology's methodologists will find value in a comparative demonstration of the advantages and disadvantages of two of their techniques on a new type of data.

Charles F. Wrigley
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DEDICATION

To Phyliss Kasper and Donald Wilkins for their kind and understanding patience.

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INTRODUCTION

Caught in the movement toward integration within the social sciences during the recent decade, the sister disciplines of psychology and political science have recently moved together to find themselves complementarily occupying several overlapping fields of interest. The merging of the two has been, perhaps, furthered by the recognition and knowledge that psychology has made two major contributions which, possibly, have been causative factors in opening new areas of fruitful study within political science. The first of these contributions is its theoretical notions of developmental influences on behavior. The value of these hypotheses for political science is reflected in the work of Lazarsfeld, Berelson, and Gaudet (1944) on public voting patterns and, more specifically, in Hyman's (1959) work on political socialization. second contribution has been its more sophisticated analytic methodology, which has often proved applicable to political science, helping the researcher develop and check conceptual schemes with manageable and verifiable data. One of the most direct and easily observable sorts of data in political behavior is the vote, an overt behavioral expression of a political attitude which, in spite of varying degrees of

intensities, cross-pressures and underlying causative factors, must be displayed in a rigidly defined set of categories presumably representing alternative choices of action to the balloter.

Although Rice proposed using the vote as an index of political attitude and developed some methods for doing so in 1928, it is only recently that psychological methods of quantitative ordering have been applied to the vote with any great frequency. Recent quantitative work has included Belknap's (1958) scale analysis of legislative behavior of United States Senators, to be discussed in more detail later, and the agreement method utilized by Truman (1959) in his analysis of the same legislators. Another method of quantitative ordering, factor analysis, had its first appearance as a possible method of investigating political voting data in 1932 with Thurstone's discussion of it and his suggestions that it might be fruitful in the quantitative study of voting The usefulness of this method was demonstrated by blocs. Thurstone and Degan (Fruchter, 1954, pp. 176-79) who analyzed voting records of nine U.S. Supreme Court justices over 115 cases for evidence of bloc voting among them. Factor analysis has also been applied to the U.S. Congress by Harris (1948). Osgood, Suci and Tannenbaum (1957) used factor analysis as the principal technique for their semantic differential analysis

of characteristic attributes of Stevenson Democrats, Eisenhower Republicans, and Taft Republicans during the 1952 election.

Recently, Schubert (1961) utilized such a multi-dimensional technique as the basis of a psychological model to clarify understanding of judicial attitudes within the U.S. Supreme Court.

The purposes of this paper are two-fold. Two of the psychological methods for combination and classification of data, factor analysis and multiple scalogram analysis, have been applied to an area of political science new to rigorous quantitative analysis, the voting behavior of the delegates in the United Nations General Assembly. It is felt that the results will be of value to both disciplines. To psychology they offer a new opportunity for testing the applicability and effectiveness of its methods, as well as a demonstration of the advantages and disadvantages of each in the logical, conceptual ordering of this new form of data. A new means for studying the relationship of institutions and their pressures upon attitudes will also be of interest to psychologists.

Political scientists, on the other hand, will find a new, quantitative, empirical ordering of behavioral data which should aid in developing scientific understanding of the United Nations General Assembly. Recently, the United Nations has become the focus of an increasing amount of attention by

thinkers in political science as they speculate upon the possibility of a theory of international relations. For each directive describing how such a theory should be formulated, there may be found at least two rebuttals. Yet, in spite of Almond and Coleman's (1960) comparative analysis of the developing areas and Lipset's (1960) studies of conditions enhancing the maintenance of democracy, there seems to have been little use made of quantitative and empirical data in discussions of foreign relations.

Concerning the United Nations, there are numerous articles dealing with topics such as the manifestation of the principles of collective security within the organization, the theory of its administrative proceedings, and the extent to which the organization approaches its ideals. The principal empirical researches on the voting patterns within the United Nations yet done are the analyses of bloc voting patterns by Thomas Hovet, Jr. (1960) and Geoffrey Goodwin (1960). begin their analyses on the basis of a preconception of what a voting bloc is. They view caucusing groups as equivalent to voting blocs and proceed with their analyses by describing each group and the types of issues, as they define them, upon which the caucusing groups do and do not vote with any solidarity. Riggs (1958), however, expresses bloc voting as a percentage of agreement score, in order to give a criterion

of relative cohesiveness whereby groups of different sizes can be put on a comparable basis. Although this statistical definition of a bloc must be applauded, his description of the types of issues wherein cohesiveness is examined is also qualitative and substantive.

However, it is implicitly recognized that the attitude of a nation, as manifested in the ballot cast by its delegate, will vary from positive to negative with the issue under consideration, and that blocs or alignments consequently vary with different types of issues. Therefore, the caution made by Hovet (1960, p. 22) is worthy of notice:

It is not sufficient simply to analyze the roll-call votes collectively; they also must be considered in relation to their subjects, and more especially in generalized subject categories, particularly if the analysis is to be used as a basis for contemplating future trends. This does not mean that votes should not be considered individually in relation to the specific issue and the special circumstances; rather, it means that if these particular issues are to be generalized upon for contemplating future trends they have to be organized into subject and type categories.

Herein a search is made for a quantitatively defined, statistical classification of issues which is somewhat congruent with our a priori ideas of which ones logically represent the same attitude. That such quantification is valuable and necessary as the first step in scientific understanding of any discipline is pointed out by Rice (1928, p. 3) as follows:

. . . the quantitative expression of social fact is to be preferred for scientific purposes whenever it can be used. It reduces individual bias to a minimum, permits verification by other investigators, reduces and at the same time makes evident the margin of error, and replaces the less exact meanings of descriptive words with the precision of mathematical notation.

Multiple scalogram analysis and factor analysis are statistical methods of classification. All previous investigators appear to have grouped issues on a common-sense basis or to have ignored their differences. The factor analytic studies of Osgood, et. al., (1957) and Harris (1948), mentioned earlier, merely group the voting patterns of all congressmen over all issues. Similarly, the agreement method for defining voting blocs described by Rice (1928) and Truman (1959) merely calculates the percentage of agreement votes cast between selected pairs of individuals, without considering that different kinds of problems and issues may call forth different alignments. Belknap's scale analysis of the legislative behavior of U.S. Senators, on the other hand, does recognize that differences do exist. However, to complete his analysis he arbitrarily selects several votes upon one item, the Taft-Hartley Bill, as completely representative of one type of issue, without considering that other issues may also contain similar elements. It is hoped that separation of issue categories by the more sophisticated quantitative techniques such as those demonstrated here overcomes these limitations.

Psychology will benefit from the demonstration of advantages and disadvantages of two of its methods as an attempt is made to bring logical ordering into issue types as categories are mathematically defined. It is hoped that this will also point the way, for political scientists, to a remedy of the distressing state of "empirical theory" in this area, which has been decried so vehemently by Hoffman (1959).

METHODOLOGY

The analyses of United Nations' voting behavior comprising the main body of this discussion utilized the statistical techniques of multiple scalogram analysis and factor analysis. The central focus will be a comparison of the results obtained with the two methods. The data for these analyses consisted of the roll-call votes cast during the Twelfth United Nations General Assembly, as tabulated from the official records of the Plenary Meetings for 1956-57. It is recognized that these ballots are the only ones of which an official record is kept and comprise only about 20% of the resolutions considered by the Assembly (Hovet, 1960, p. 16). This, however, does not invalidate their usefulness for this sort of analysis, since the matters put to a roll-call vote are usually those regarded as the most important by the United Nations General Assembly members. A roll-call ballot must be specifically requested by some nation before any deviation is made from the more common show-of-hands or the adopted-without-objection balloting used on the largest proportion of the issues considered.

During the Twelfth General Assembly, 34 roll-call ballots were cast. The votes of 74 of the 82 members were

used, the remaining eight being excluded from the analysis because of their absence for three or more roll-call ballots. Remaining absences were tabulated with the majority.

Although a United Nations member may cast his rollcall vote in any of three categories (i.e., in favor, against, or abstain), this initial trichotomy was changed to a dichotomy for this analysis because multiple scalogram analysis requires dichotomous data. Thus, the abstentions were treated as votes against the majority, either "for" or "against" as the case happened to require. The reasoning was, simply, that those who abstained when a vote was cast on a particular resolution, while they did not vote against the majority, obviously had reservations about definitely aligning themselves with it. Thus they could not be counted among the majority's supporters. This categorization was retained for the factor analysis even though this procedure will work with multichotomous data, as it was felt that comparable data would facilitate comparing the results.

Analyses

Both of the methods employed here are statistical techniques of classification. However, the two methods utilize different procedures, rest on different theoretical bases, and the assumptions of each possess certain advantages

which should be pointed out at this time.

Multiple Scalogram Analysis

Multiple scalogram analysis is a technique recently developed by Lingoes (1960) which produces multiple scales of the Guttman variety. Guttman scales are used widely in social psychology. By means of these the unidimensionality of a group of attributes is inferred from the degree of consistency of the individual response patterns. The ideal criterion of consistency is that agreement with any item is accompanied by agreement with all other, less extreme items and disagreement with all those which are more extreme. In this analysis, the unidimensionality of a group of United Nations issues would be calculated by utilizing the vote of each state, i.e., of each national delegate, on each issue.

Each unidimensional scale, therefore, represents a continuum of cumulative difficulty, similar to the Bogardus Social Distance Scale. In the Bogardus Social Distance Scale, most individuals will willingly condone and agree with the first item or items (such as the propriety of admitting a Negro as a visitor to his country or to employment in his occupation) and move across a continuum of acceptance of the Negro to a point where nearly all respondents agree, among themselves, that they would not admit a Negro to close kinship

by marriage (Murphy, Murphy, and Newcomb, 1937, p. 899).

Or, to use an example of a hypothetical scale in the field of international relations, most nations, including the U.S. and the U.S.S.R., would probably agree with a statement that the arms race produces an excessive degree of world tension. However, various proposals for discussion of disarmament and the inspection of nuclear stockpiles would, and do, receive less consensual endorsement, and an extreme proposal that would immediately end all military expenses and disarm the world would, probably, be disagreed with and voted against by most of the nations, including the larger world powers.

Guttman begins the formation of his scales by selecting a group of items which he feels, by a priori judgment, are unidimensional and should call forth consistent response patterns. He proceeds to accept or reject his initial assumption according to whether or not they do form a single scale. While multiple scalogram analysis is an extension of the Guttman form of scaling, its major advantage is that it differs from the standard Guttman procedure: one can begin with any group of items, without having a preconception of the common attributes involved in the issue categories. From the array of items, a succession of scales is selected. Thus, the final result may easily be a succession of scales, like that found in Appendix B. The left pole of a scale is the

item upon which there is the highest consensus among the responses of the individual balloters; the next item, while representing somewhat lower consensus, is the one for which the greatest number of individual members cast votes that agreed with their first ballots. Each succeeding item is linked to the one preceding it in this manner; the items in the center of the continuum, thus, represent those of lowest consensus before the scale continues toward the right pole with issues eliciting increasing negative consensus. In other words, if the general opinion was "yes" concerning the issues at the left end of the scale, the items in the middle represent those upon which opinion was most divided, and those at the right end represent those upon which the majority opinion was "no."

The scale ends when no more issues can be added without causing a designated percentage (the criterion here being
10%) of the individual balloters to respond with votes which
would cause an "error" in their response arrays. As in
Guttman scaling, an error is produced by an inconsistent
response. This refers to the repetition of a response, for
example a "yes," at a point following that at which an opposing
response, like a "no," has already been given.

Each dimension, therefore, represents an attitudinal continuum upon which each individual balloter has a threshold.

Up to this threshold point his opinion, as manifested in his vote, will allow him to accept the attitude required. Beyond this point he will reject it as too extreme. The score of each individual balloter thus represents the number of votes of acceptance he cast, or the threshold point beyond which his opinion changed.

The negative sign placed before some of the issues represents a reflected score, i.e., an issue upon which the responses were reversed in order to allow them to scale. good example of what a reflected score means is found in an amendment to the resolution concerned with the discussion of the admission of Communist China to the United Nations. original draft resolution proposed that the United Nations reject placing such a discussion on the year's agenda, and scaled in Dimension II with other votes taken upon this item. The amendment, however, proposed that the word "reject" be changed to "accede to" and, while scaling in the same dimension, was reflected. The majority vote, against the amendment in this case, was thus reversed and tabulated as a "for" ballot in order to allow the greatest number of respondents to remain consistent in their response patterns. Since it is logical that any nation voting "yes" on the original proposal would vote "no" on the amendment, a reflected score represents the vote which would have appeared had the phrasing of the

issue been reversed. Thus, since the reflected scores here all occur at the right ends of the dimensions, they may be seen as artifacts of the original data indicating that none of the original items were phrased to allow direct sampling at the opposite end of the continuum.

The scalogram method has three major analytical advantages when used for the purposes demonstrated here. The first of these, as mentioned earlier, is that it requires no a priori conception of a unitary dimension, but allows calculation of a succession of unitary scales from the response array of any group of items, thus enabling the researcher to build concepts upon statistically and quantitatively defined bases. The second advantage is that the separation of the issue categories is made through direct calculations from the data of the original response array, instead of upon correlations, as in factor analysis. The third advantage of multiple scalogram analysis is its finished product, wherein categorizations of both issue types and response patterns are easily noted and prepared for interpretation.

The major disadvantage of this technique lies in the fact that each item may appear in only one dimension; once an item has scaled it is automatically removed from the group and not given a chance to scale elsewhere. Thus, as will be noted in the discussion of the results of this analysis,

certain items appear in one dimension when logically they might as well appear upon another where other, similar items are found. For this reason, correlations of each item with each dimension were calculated, an operation which demonstrated that in such not clearly logical cases, a fairly high correlation existed with other dimensions.

Factor Analysis

The factor analysis technique begins with the correlation matrix of each item with each other item, rather than with the actual response array used in multiple scalogram analysis. As Wilkins (1962) shows, this correlation matrix may contain artifacts resulting from special peculiarities of the phi coefficient, which may be a disadvantage of the analysis. However, the principal components factor analysis operations were performed on the data at hand, utilizing both the quartimax (Neuhaus and Wrigley, 1959) and varimax (Kaiser, 1958) rotational methods.

The basic idea underlying factor analysis is that the separate factors represent noncorrelated dimensions. Each factor, therefore, supposedly represents a distinct basic thread of continuity which ties together the various issues most highly loaded on that factor. The loading of each issue on each factor would represent the correlation of that issue

with the "pure" case of underlying unity, which is what the factor supposedly represents, if such a "pure" case could be shown to exist. The procedure assumes that there is usually more than one motivational component which must be taken into consideration before a ballot can be cast on any single issue, e.g., frequently the reactions of one's own national government, one's allies, and one's enemies may all be calculated and weighed. Thus, the user of factor analysis, in cases such as this, must search each factor for the higher loading issues, to discover and interpret which of the several considerations made over all the issues is the unifying, latent component, or variable, in this particular factor.

The results of these factor-analytic operations, which appear as six factors for the varimax rotation and four factors in the case of quartimax, may be found in Appendices C and D. The two rotations differ in the way in which they go about fitting the axes to the variables. Both of these rotations are orthogonal; that is, the resulting factors are uncorrelated. However, varimax strives to produce factors containing a wide variation of loadings; i.e., on each factor some variables will be highly loaded and others not at all, so that the variables are split into distinct groups. Quartimax, on the other hand, strives to concentrate as much as possible of the variance of each variable into one loading with no restriction

as to the factor upon which the variable is loaded. Thus, the quartimax rotation often gives a large general factor, as happened here, whereas varimax makes such a general factor nearly impossible to obtain, due to the way it attempts to spread the variance.

The major advantage of factor analysis over multiple scalogram analysis in analyzing this type of data is one which has also proved to be important in the use of factor analysis for other types of data in psychology: this technique does not require a variable, e.g., an issue, to score in only one dimension (or factor), as multiple scalogram analysis does. In fact, any issue is assumed to include more than one independent component as contributing factors in a delegate's decision as to how his vote is cast. That a variable may be, and often is, multi-dimensional is taken into account as the separate variables are put together and load in different ways to form the individual, independent components.

RESULTS

Both multiple scalogram analysis and factor analysis are techniques for classifying the selected United Nations issues into clusters, which are referred to as "dimensions" in multiple scalogram analysis and "factors" in factor analysis. This section will be devoted to a close and detailed examination of each dimension, or factor, in turn, to see exactly what issues do cluster together in each form of analysis. We hope this will enable us to see why delegates' votes are often different from what we might expect by knowing merely the name of the issue. Following the detailed examinations, each cluster can be summarized and viewed as a whole, allowing us to identify the salient feature that possibly serves each as the underlying thread of continuity.

Multiple Scalogram Analysis

In the scalogram analysis of the 12th General Assembly of the United Nations, four dimensions appeared, encompassing 32 of the 34 issues. The tables and relevant key may be found in Appendix B. For the purposes of this interpretation, each dimension will be viewed as a continuum representing a specific kind of problem which has been faced by the General Assembly. Each pole, therefore, represents one extreme of the opinion:

the left (first issue to appear on a dimension) and the right (last issue of the dimension) being the issues where there is the greatest amount of consensus among members, respectively in favor and against the opinion represented. The middle issues are those upon which there is the least consensus. It has been noted in Chapter Two that one of the peculiarities of the scalogram method of analysis is the "reflected" score. In the ensuing examination, we shall see that the scores at the right end of each dimension have been reflected, further demonstrating that after a certain point most of the members do not accept the underlying principle being considered in the dimensional scale.

Dimension T

The first dimension is the largest and is composed of 16 issues, which will be discussed in the order of consensus in which they appear along the continuum. Issue #1 of this dimension is the vote taken on Agenda Item 66, the peaceful coexistence of states. The draft resolution urged the member states to strengthen international peace by taking individual measures to settle their disputes peacefully and to attempt to maintain policies of non-aggression and non-intervention in the affairs of others. Issue #2 is Draft Resolution I of the Report of the Economic and Security Council, proposing

that an Economic Commission be set up for Africa. Remembering that three such commissions, with work focused in Europe,
Latin America, and Asia and the Far East, already existed at this time, we might anticipate little disagreement among members as to the establishment of this commission. Issue #3 represents the vote taken on Agenda Item 51, concerning the geographical distribution of the United Nations Secretariat staff, which merely requested that the Secretary-General continue to follow the policy of giving appropriate preference to nationalities which form a disproportionately small part of the Secretariat, in making the appointments.

Issue #4 again refers to a collective administrative action to be recommended by the Assembly, but on a more touchy subject: spreading information about armaments. The resolution called for the Assembly to form a commission to enlighten the people of the world as to the dangers of the armaments race and the destructive effects of modern weapons. Although Poland and a few other nations objected, on the grounds that any measure that did not actually prohibit nuclear weapons and tests was woefully deficient, the objection was apparently considered irrelevant by the majority of the voting members.

Issue #5 represents a question of a seemingly very
different nature. This vote centered on the situation in the

Trust Territories of the Cameroons under the British and under the French administrations. We can assume that its significance was the conflict of the principles of colonialism versus self-determination and human rights. The resolution recommended a restoration of peace and a lessening of tension allegedly caused by the struggle for independence in the area under French administration, as well as an effort to terminate the trusteeships of both areas as quickly as possible. This issue marks the beginning of a large cluster of questions falling together within the first dimension in an interesting manner.

Thus, <u>Issue #6</u> of the first dimension deals with the establishment of a Good Offices Committee on South-West Africa, to be composed of the United Kingdom, the United States, and one other to be elected by the Assembly, to discuss giving international status to this territory.

Issue #7 represents one of the votes taken on the future of Togoland under French administration. On the surface this ballot concerns a minor procedural matter, that of voting on two of the paragraphs separately. But, examining the substance of the argument, one finds that the question is really that of providing for the termination of the Trustee-ship Agreement of the Territory of Togoland if such a move were requested by the new Togoland Legislative Assembly. Those objecting to this provision held that it was premature

to refer to the termination of the trusteeship before the proper conditions had been fulfilled. This vote was actually designed so that the rest of the draft resolution could be passed without saying anything about ending the trusteeship status of the area.

Issues #8 and #9 again concern non-self-governing territories, and propose the setting up of a six-man committee to study the problem of transmitting information about them. These issues seem to center on whether the General Assembly is competent to require the administering states to transmit such information, or whether this is an interference in the domestic jurisdiction of these states. Vote #9 is a procedural question: whether or not this motion is important enough to be put to a two-thirds vote, while #8 represents a vote on the draft resolution as a whole.

Issue #10 is a vote taken on the inclusion of Agenda Item 62, the question of West Irian (West New Guinea) on the agenda. This was another long-standing political dispute whose inception was Indonesia's former status as a colony of the Netherlands; a question of self-determination was now involved.

Issue #11 represents something of a break in this cluster, for it is concerned with Agenda Item 68, the composition of the General Committee of the General Assembly. Noting the

increased membership of the General Assembly, the resolution outlines a motion for increasing the number of Vice Presidents of the Assembly and a pattern for electing them, allowing for a redistribution of the vice-presidencies on the basis of equitable geographical representation so as to "balance" the Assembly's vital steering organ. While the distribution of the seven Main Committee Chairmen on the General Committee was to remain the same, it was recommended that thirteen Vice-Presidents be elected according to the following pattern: four from the Asian and African states, one from the Eastern European states, two from the Latin American states, two from the Western European and other states, and the five permanent members of the Security Council.

The next four issues deal with some of the basic principles stated in the United Nations Charter, those of human rights. Issues #12 and #13 are concerned with Agenda Item 61, the treatment of people of Indian origin in the Union of South Africa. Item #12 concerns placing this on the agenda; Item #13 presents the substance of a draft resolution which appeals to the Government of the Union of South Africa to enter into negotiations with the governments of India and Pakistan to solve this problem. Issues #14 and #15 are also concerned with human rights in the Union of South Africa. Item #14 represents another vote on forming the agenda, and

Item #15 is the vote on Agenda Item 60, dealing with race conflict in South Africa allegedly resulting from the "apartheid" policies of the Government of the Union of South Africa. The resolution appeals to the government to revise those of its policies which are designed to perpetuate or increase racial discrimination. This is, once again, basically a conflict of the proper domestic jurisdiction of states with the higher issue of human rights.

The <u>final issue</u> of Dimension I returns to the question of the composition of the General Committee which appeared earlier. This vote was on an amendment to insure that at least one of the four representatives of the Asian and African states or the two from Western Europe should be from a Commonwealth country, without altering the proposed geographical distribution of the seats. Naturally, several members objected to the amendment, saying it was against the U.N. principles to break down barriers.

Summary of Dimension I. Dimension I appears to be a cluster of issues concerned with problems of strengthening the United Nations and upholding broad principles, such as self-determination and human rights, embodied in the U.N. Charter. The first three issues represent general, procedural topics requiring no concrete action from the various Member

States, such as supplying money or information. As expected, the endorsement of peaceful coexistence, of a commission similar to others already approved, and of "representative" distribution on the Secretariat staff does engender a high degree of consensus. The fourth issue is similar in that it also hits on a matter of collective action of presumable benefit to the people of the world, without requiring sacrifices of any kind from the individual members.

At this point, however, we reach the problem of strengthening the United Nations by upholding the U.N. Charter's trusteeship and human rights principles. Issues 5, 6, 7, 8, 9, and 10 are concerned with problems of colonial possessions and self-determination for trusteeship territories. Items 12, 13, 14, and 15 are concerned with alleged infringements of the Universal Declaration of Human Rights and the Charter. Items 11 and 16 are measures for altering the General Committee, the steering organ of the Assembly.

It may be a poor prognosis for the future of international organizations to note that except for Item #11,

Item #7 and all those following it are reflected. This

implies that beyond this point most of the members did not

vote to implement these principles of the U.N. Charter when

they appeared to be in opposition to their individual interests.

Dimension II.

Turning now to Dimension II, we find that it includes eight issues, seven of which are apprently concerned with basic problems of "hot" areas in the cold war between the two major powers. The <u>first issue</u> involved Agenda Item 24, a recommendation to enlarge the Disarmament Commission by 14 members. The U.S.S.R., denouncing the existing commission as not representative of all viewpoints, had earlier proposed its dissolution and the establishment of a permanent commission composed of all the U.N. members. Whereas the United Statescentered bloc felt that the proposed smaller commission would result in more fruitful negotiations, the U.S.S.R. still objected on the grounds that it was not properly representative.

The <u>second</u> <u>issue</u> involved a draft resolution embodied in Agenda Item 23, the report of the United Nations Commission on the unification and rehabilitation of Korea. The resolution confirmed two objectives of the United Nations: peaceful establishment of a unified, independent, and democratic Korea under a representative form of government, and the restoration of peace and security in the area. It then called specifically upon the communist authorities to adopt these objectives.

Again, the U.S.S.R. objected to this on grounds of representation, saying that the important interested nations

(Communist China and North Korea) had no part in making such decisions.

The third issue returns to a section of Agenda Item
24, other portions of which have appeared earlier. The complete item is concerned with the regulation, limitation, and balanced reduction of all armed forces and armaments. This particular section embodied a draft resolution calling for the immediate suspension of nuclear tests and the reconvening of a sub-committee to make definite recommendations for international control and inspection of both ground and aerial components of existing nuclear weapon stores. As in the former issue, it gave the opportunity for communist attacks on both Western "aggression" and attempts by the U.S. to impose her ideas on the whole world.

The <u>next four votes</u> were also seized by the communist bloc as an opportunity to denounce Western "aggression" and values, and as a chance to return again to the principle that the United Nations must make decisions based on representation of all peoples affected by them. The question is the placement on the agenda of a discussion on the inclusion of Communist China in the U.N. The resolution presented to the Assembly consisted of two paragraphs, the first recommending that the Assembly reject India's request to place the question on the agenda, and the second stating that

the General Assembly would not consider any proposal to exclude
the Government of the Republic of China or to seat the Central
People's Government of the People's Republic of China.

Vote #4 of Dimension II is on the adoption of paragraph 2, and
Vote #5 on the adoption of the draft resolution as a whole.

Vote #6 is on the adoption of paragraph 1; Vote #7 is the rejection of an amendment to change the word "reject" to "accede to.'

Although the U.S.S.R. again argued non-representation on the eighth and final issue of this dimension, the issue itself appears to be little related to the rest of Dimension II. It covers a vote on an amendment connected with Agenda Item 51, the geographical distribution of the U.N. Secretariat staff, of which the vote on the draft resolution as a whole appeared in Dimension I. The amendment, proposed by Bulgaria, was to make sure that at least three posts would be given to members making minimum contributions to the budget, with the stated purpose of setting forth a definite and practical guide for broadening representation on the Secretariat staff. During the discussion of this amendment, the U.S.S.R. delegate made a special point that this would establish a minimum guide to help combat the existing situation wherein 50% of all posts were filled by the U.S., U.K., and France. It is notable that this argument was not made during the discussion of the main resolution (which appeared in Dimension I). The amendment

thus appears to have special, salient features of its own which are consistent with the other issues of the dimension in which it scaled.

Summary of Dimension II. Dimension II, therefore, with the exception of the final item, encompasses what we have termed "hot" cold war issues, wherein the question is not a conflict between desires to expand the influence of communist or non-communist states, as might be assumed from the titles of the issues alone, but a matter of affording appropriate representation to all states affected by them. Representation of all viewpoints is one of the U.N. Charter principles. The peculiarity of the items appearing in this dimension is that upon each of these issues the U.S.S.R. or some other communist bloc nation made a special point in the pre-ballot debates that the viewpoints they supported would rectify the unequal representation in the U.N. or, in the case of the first item, in the commission under debate. The dimension measures the degree of acceptance of the propriety of the existing U.N. set-ups. The U.S. and its allies appeared to be more content with the status quo than the Russian bloc. The first two issues, which were reflected, indicate that the majority voted against the Russian argument, in these two cases representing the side voting in favor of the resolution.

Our only problem with this interpretation lies with the third item, upon which the communists argued that it was merely an attempt to legitimize U.S. "aggression." Recognizing this, we shall proceed and return later to this problem.

Dimension III

Dimension III covers five issues. <u>Issue #1</u> centers on the approval of an Agreement on the Organization for Trade Cooperation, embodied within the Economic and Security Council's recommendations for the expansion of international trade. The resolution as a whole recommended lower tariffs, attention to land-locked countries, and lowering of trade barriers through this Agreement. The vote was cast after the U.S.S.R., Bulgaria, and others had objected on the grounds that the Agreement was a device of the industrial capitalists to restrict the trade of the under-developed nations and, furthermore, that the U.N. had had no connection with the agreement, most of the members had not been included in it, and the General Assembly had never considered approving it.

Issue #2 arose under Agenda Item 65, the U.N. Emergency Force. The problems of financing it bring up once again the jurisdiction of the U.N. over the individual states. The resolution was to authorize the Secretary General to spend, at his discretion, up to 13.5 million dollars on the Force

until December of 1957, and to provide a scale of assessments under which all Member States were to bear the expenses. The communist bloc argued that the financial burden should be borne by the states who caused it to be incurred, using the issue as part of their campaign against Western "aggression" and protesting the use of force in the Middle Eastern disputes.

The next two issues are concerned with Agenda Item 69, threats to the security of Syria and to international peace.

The immediate problem concerned a concentration of Turkish troops on Syria's border, and Syria had appealed to the U.N. for help. The U.S.S.R. again used the opportunity to denounce Western "aggression," stating that the United States' "prodding" of Turkey to attack Syria was another demonstration of U.S. military strategy. During the discussion, King Saud of Saudi Arabia offered to mediate. Vote #3 was taken on a motion to adjourn the discussion until the results of the mediation were known, and #4 added an amendment to adjourn for "not more than three days."

As in the other dimensions, our <u>final issue</u> appears to present a different matter; it is Agenda Item 62, the question of West Irian (West New Guinea), which also appeared in Dimension I when the question of placing it on the agenda was considered. The resolution declared that the dispute between Indonesia and the Netherlands endangered peaceful

development of the area, and invited the two nations to settle it in accordance with the principles of the U.N. Charter.

Once again, the main arguments concerned colonialism versus self-determination. However, the problems of disturbing the peace and the requests of Indonesia for protection against the use of force by the Netherlands receive more attention now than formerly.

Summary of Dimension III. As in Dimension II, there is a peculiarity in the communist bloc arguments on these items. Here, four of the five issues are specifically identified as examples of Western "aggression" against weaker nations, while in the last, the same point is implied by Indonesia's request for protection. Whether or not this interpretation is actually accepted by the voting members, we find the last three reflected, indicating a change in the majority viewpoint as the issues approached the end of the continuum.

Dimension IV

Dimension IV consists of three issues, two of which return us to sections of items which have already appeared.

Issue #1 returns us to Agenda Item 24 on the regulation of armaments and armed forces, this vote being taken on a recommendation to suspend nuclear and thermo-nuclear tests immediately. The appeal was specifically directed to the U.S., United

Kingdom, and U.S.S.R. It afforded the U.S.S.R., while endorsing immediate suspension, an opportunity to denounce the apparent unwillingness of the two Western Powers either to suspend or prohibit these tests. Issue #2 concerns the definition of aggression. The resolution asked for members' comments, and for a special committee to be formed, composed of the 22 members who had joined the Assembly since the study began, to give their ideas on aggression to the existing committee. The U.S.S.R. opposed the resolution, saying it was merely a Western block to an immediate solution of the problem. Issue #3 represents another vote on the draft resolution concerning the future of Togoland under French administration; a procedural vote on this matter appeared in Dimension I. This resolution provided for free elections to a Togoland Legislative Assembly in 1958, under U.N. supervision and universal suffrage, following which the Togoland Government and U.N. Administration Authorities could plan to end the Trusteeship when Togoland wished. The delegate from Ghana argued that an immediate vote on terminating the Trusteeship Agreement would only confuse the people of Togoland. Ghana held that the question should be delayed until the people had had the Legislative Assembly election and were, thus, more accustomed to democratic processes.

Summary of Dimension IV. In spite of its seemingly heterogeneous character, this dimension contains issues sharing one major common element: each issue focuses on a problem of immediacy or delay. No such problem was found in issues scaling elsewhere. This is true for the first item, which might otherwise more logically seem related to Dimension II or Dimension III; the second item, which could have scored in Dimension I or Dimension II; and the third item, which could have scored in Dimension I, if the time factor had not been the specific focus of the debates. Thus, the left pole represents the majority view that action should be delayed, while the reflected right pole represents the majority view that action should be immediate.

Problem Issues

Two issues did not appear on any scale. One was a question of self-determination for Cyprus, concerning the desirability of negotiations while there was tension in the area. This is not unlike the problem of West Irian in substance, and it is hard to see why this item did not join the West Irian item in some dimension. The second nonscaled item was a motion concerning the dissolution of the Disarmament Commission and the establishment of a new, permanent one, which is the substantive converse of the first item in Dimension II.

For some reason, the votes rejecting this motion did not match the votes on the other dimensions, while the motion adopted following its rejection gained enough consensus to mark the beginning of a new scale.

It is apparent throughout that one or two issues frequently appear in a dimension which tend not to fit into the interpretation given, which raises some doubt as to the adequacy of the interpretations. Some examples of these are Items 4, 11, and 16 of Dimension I, Item 3 of Dimension II, and Item 5 of Dimension III. The appearance of unexplainable items at the ends of a continuum is not a very disturbing factor, since the inherent character of scalogram analysis allows issues representing a high degree of consensus to scale with almost anything else. However, the appearance of such items in the middle of two of our scales poses another problem. An ad hoc explanation of underlying meanings can be pushed only so far without straining credibility. For this reason another, different, search for similarity which might affect members' interpretation of issues was made, using factor analysis.

Factor Analysis

The results for the varimax and quartimax rotations may be found in Appendices C and D, respectively. Tables

list the issues with the highest loadings on each of the six varimax factors and the four quartimax factors. By selecting about half of these highest loading issues for detailed discussion, each of the six varimax factors and the four quartimax ones could be characterized by a recurrent theme, exactly as has been done for the dimensions appearing on multiple scalogram analysis. Since each issue and its implications has been discussed in detail earlier, a brief description should suffice to indicate the flavor of each factor. It will be noted throughout the discussion that the varimax results are sometimes difficult to interpret, whereas the quartimax rotation gives factors which are more easily explained than the multiple scalogram analysis dimensions.

Varimax Rotation

Factor I. The first factor has been labeled a "Protection of Smaller Nations" cluster. Six issues have been chosen to represent it. Five of these center around specific problems of the protection of small, underdeveloped nations. The first two are concerned with the threat to Syria allegedly posed by Turkish troops encamped on her border. The third centers around a threat to peace in another area of the world, West Irian, which also appears to be related to the problem of small nations' security. The fourth is a vote

upon the establishment of a Good Offices Commission for South-West Africa to discuss awarding international status to the territory. The fifth is concerned with a procedural resolution to divide two paragraphs in the resolution planning termination of the Trusteeship Agreement on French Togoland. The final issue of this factor outlines the plan for electing thirteen Vice-Presidents to the General Committee of the General Assembly, to make representation more equitable in the light of increased U.N. membership. This may be seen as a protection of the political interests of smaller nations. The remaining highly loaded issues involve a similar theme.

Thus, on the first factor, items which scattered in two different places on multiple scalogram analysis have been gathered together to give one grouping relating to the physical and psychological security of smaller nations.

Factor II. The six issues loading .80 or higher on the second factor are all found in the second, or "hot" cold war dimension of multiple scalogram analysis. With some reservations, this factor has also been tentatively labeled a "Hot-Cold War" cluster. The four votes taken upon the admission of Communist China are here, as well as the one concerned with the unification and rehabilitation of Korea, and that concerned with the suspension of nuclear tests and a

committee to discuss the inspection of disarmament. The remaining issues appear to encompass other items on the question of proper representation which were also found on the cold war scalogram dimension, as well as a few colonial problems.

Factor III. Here, six issues have loadings of .60 or higher. The first four are those concerned with racial problems and the treatment of people of Indian origin in the Union of South Africa. The next issue has appeared earlier on Factor I; it is the question of equitable representation on the General Committee of the General Assembly. However, it seems fitting that this should appear along with other questions concerning the just treatment of minority peoples, as it is highly probable that more than one consideration is made when the votes upon issues are cast. The final issue loading above .60 on this factor centers around placing the question of West Irian on the agenda. Although there does not seem to be any simple explanation for the relegation of this matter to this factor, that it is related to the question of the General Committee's composition is apparent from their correlation of .685. Likewise, there are correlations from .628 to .680 of this issue with the first four issues. The other, weaker loading issues of this factor demonstrate a

similar phenomenon.

Factor IV. Five issues have loadings of .40 or greater on the fourth factor. The best label that may be placed upon it is "Global Improvement." The first item is the issue of taking collective action to inform the people of the world about the destructive effects of modern weapons. The second is that of accepting the report of the Trusteeship Council on the situation in the British and French Cameroons. The third is the question of financing the United National Emergency Force. The fourth relates to the problem of expanding international trade, and the fifth to the geographical distribution of the United Nations' Secretariat staff. Thus, this factor is even more difficult to explain than the last. seems to be no underlying homogeneity among the arguments; there is little similarity among the issues or their implications; the actions required of the Member States range from financial support to mere approval. Even the label finally selected fails to explain the second issue.

Factor V. This factor has been tentatively labeled "Tension Reduction." It is represented by four issues, of which only two received loadings above .50. On the whole, these issues appear to represent a factor of world tension items, both general and specific. The problem of self-

determination for Cyprus and the consequent tension in the area as a threat to peace appears first, although it is difficult to understand why the similar problems of Syria and West Irian did not load as highly on this factor. second item represents a move toward lessening general world tension by suspending nuclear tests. The third item is again the question of providing for self-determination of French Togoland. Although this issue received a strong loading in Factor I, its weaker loading here may indicate that an unnoticed bit of tension and conflict was present when the issue reached a vote. The final, weakly-loading item of this factor is the question of allotting more time for study to the committee on defining aggression. Thus, as with the previous factor, the chosen label does not easily encompass all of the items chosen to represent the factor.

Factor VI. The sixth and final factor is the smallest, for only three of the issues load above .30. It seems that this is most probably an administrative or "house-keeping" factor, wherein items requiring little or no commitment to action on the part of the Member States tend to receive the highest loadings. The three highest loading items are those concerned with the geographical distribution of future appointees to the United Nations Secretariat staff, the

endorsement of the resolution for peaceful coexistence, and the enlargement of the Disarmament Commission.

Summary of the Varimax Solution. A phenomenon similar to that noted earlier in the use of multiple scalogram analysis is apparent: a few seemingly unexplainable items remain within each factor. Again, there are also factors where the explanation and interpretation of its underlying unity may appear a bit unreasonable, as if the explanation were being stretched to encompass all the issues. However, the quartimax results solve many of these problems.

Ouartimax Rotation

Factor I. There were nine issues with loadings of .80 or higher on the first factor. This has been labeled "Protection of Smaller Nations," as was the first varimax factor. The exceptionally high cut-off point has been chosen because, as is apparent from Appendix D, the first cluster resulted in a somewhat general factor wherein 19 of the 34 issues held loadings of .60 or higher. With the exception of the third, sixth, and ninth issues, each of those selected for discussion was concerned with colonial problems. The first and fifth issues were centered on the question of terminating the Togoland Trusteeship Agreement; the committee under discussion in the second issue was concerned with

according international status to this territory. The fourth and eighth issues were concerned with the legality of requiring Member States to furnish the General Assembly with information about the non-self-governing territories within their respective jurisdictions. The question of West Irian was also a colonial matter, an issue which, as was noted in the previous discussion of the multiple scalogram results, appeared to belong with other colonial issues although it did not cluster with them either in the multiple scalogram method of analysis or the varimax rotation.

The third, sixth and ninth issues, on the other hand, were concerned with the physical well-being of smaller nations. The problem of the purported threat to Syria from Turkey concerned an allegedly imminent attack. Those of defining aggression and the establishment of a permanent and effective Disarmament Commission centered around problems of future attack. The remaining items carry out a similar theme.

Each of these issues primarily concerned the physical and psychological security of the smaller nations. The larger powers were given the opportunity to show themselves as cognizant and respectful of the problems of areas now developing into potential United Nations members, thereby making a bid for future support from these nations when each obtains a vote.

Factor II. The second factor is neat and clear-cut.

Of the 34 issues considered, the only ones to receive a loading of .60 or higher are the four concerned with including the admission of Communist China on the Assembly's agenda. The remaining items are issues shown in the multiple scalogram analysis to be related to these first four.

Factor III. The third factor is also neat, for the only items receiving a loading of .60 or higher here are those concerned with the agenda formation and discussion of the problems of racial conflict and treatment of people of Indian origin in the Union of South Africa. The other issues found in this factor are also found in the same dimension of multiple scalogram analysis.

Factor IV. The fourth factor appears to be made up, as was the final factor of varimax, of general "housekeeping" matters wherein little physical or psychological commitment is required of the various Member States and there is, thus, no strong feeling engendered on either side. This indifference is fairly clear, since only one issue loads above .60.

Examination of the three highest loading issues will provide a sample of the type of matter that contributes to this factor. The first issue was approving the establishment of a committee to disseminate information about the destructive effects of

modern weapons. The second called for approval of a report from the Trusteeship Council about the situation in the British and French Cameroons, and this issue's loading of .651 on the first factor demonstrates the probability that more than one point was taken into consideration when it was voted on. The third issue, the matter of adequate representation of the staff of the United Nations Secretariat, received its highest loading here.

Thus, although a few of the 34 issues did receive their highest loadings on this factor, the high frequency of relatively low loadings supports the assertion that it may represent a type of issue where little concern is felt, the type of issue which appears on the first half of Dimension I of multiple scalogram analysis.

Summary of Analyses

Thus it is evident that, with the voting data of the Twelfth Session of the General Assembly, the quartimax rotation of factor analysis gives the most clear-cut and readily interpretable clusters of the three methods. The same factor analysis operations were subsequently performed by this author on the roll-call votes of the Thirteenth Session of the same assembly, of which the multiple scalogram results were obtained from the work of Brown and Wrigley (1961).

Examination of this session resulted in the same conclusions, that the quartimax rotation was the most easily interpreted. As before, the scalogram dimensions can be explained only by assumptions about the underlying implications of debate arguments and quasi-hypotheses as to how the diverse issues can be bound by a similar thread, while the factor analysis groups show clusters of issues with similar titles, apparent at a glance. The differences between the two rotations are less striking in the Thirteenth Session: both give four factors, the second, third, and fourth being identical in terms of the issues covered. The differences between the highest-loading items in the first factors of the two rotations, although small, support the previous conclusion that quartimax is superior for this type of data. To find out whether the striking similarity of the two rotations in the Thirteenth Session is due to some idiosyncrasy of that session, or whether the difference between the two produced by the data on the Twelfth Session is typical of all such United Nations data would, of course, require further analyses on other sessions.

FURTHER UTILIZATION OF MULTIPLE SCALOGRAM ANALYSIS

One other feature of multiple scalogram analysis makes it particularly valuable when used with this type of data. This feature, which may be seen in Appendix B, is the score given to each country on each dimension. Countries whose delegates have voted alike along a dimension receive the same score. One of the several new and potentially exciting uses of these scores in examining voting blocs within the United Nations will be demonstrated.

The phenomenon of bloc voting in the United Nations has been recognized for a number of years both by the lobbyists within the organization and by its observers, but only recently has it come to be the subject of detailed study. We can assume that the structure of the United Nations, wherein group decisions are based upon majority vote, and not unanimous agreement, is one in which bloc alignments are likely to occur. We can infer this from our knowledge of the political bargaining that goes on in legislative bodies in the United States. This discussion will attempt, therefore, in a limited and tentative manner, to further the empirical analysis of the similarities and differences of these voting groups in

the United Nations by calling attention to statistical insights gained from the country scores along multiple scalogram analysis dimensions.

For the purpose of this analysis, a voting bloc is defined as a cluster of countries whose mathematical scores, computed from the votes each cast on aspecified series of issues, were identical. This approach allows blocs of different membership to appear as various matters come under This mathematical definition of blocs, allowed consideration. by multiple scalogram analysis, is felt to be an advance over the work of others studying the United Nations (Hovet, 1960; Goodwin, 1960) who define their blocs as caucusing groups and do not take voting patterns into account. In our study, the first and second dimensions of multiple scalogram analysis revealed two distinct sets of blocs for the two different These will be found on the following two types of issues. It will be noted that although fourteen different scale scores were obtained on the first dimension, the number of blocs has been reduced to nine through combining some of the sparsely populated middle ranks, without damaging the relative rankings of the blocs along the continuum. were combined to allow the width of each dimension to be comparable, to facilitate the analysis that follows.

Strengthening of U.N. Charter Principles Voting Blocs on Dimension I: Figure 1.

			Scal	Scale Score Received	ceived			
	4	5 & 6	7 & 8	9 & 10 1	11 & 12	13 & 14	15	16
			Scal	Scale Score Allocated	located			
	2	3	4	5	9	7	æ	6
	Burma	Afghani-	Ecuador	Brazil	Cuba	Argentina	Australia	Finland
	Cambodia	stan	E]	Chile	Denmark	Austria	Belgium	France
	Egypt	Bolivia	Salva-	Colombia	Israel	China	Canada	Italy
	Ethiopia	Ceylon	dor	Ireland	Norway	Nicaragua	New	Dom.
	Gu a te-		Japan	Laos	Sweden	Turkey	Zealand	Republic
	mala	Rica	Liberia	Pakistan	U.S.A.		Spain	Luxembourg
	Indonesia Ghana	Ghana	Malaya	Paraguay			U.K.	Netherlands
	Iraq	Greece	Panama	Peru				Portugal
_	Saudi	India	7	Thailand				
-	Arabia	Iran		Vene-				
		Libya		zuela				
	_	Mexico						
		Nepal						
		Sudan					-	
		Tunisia						
		Uruguay						
		Yemen						
		Yugo-						
		slavia						

"Hot" Cold War Issues Figure 2. Voting Blocs on Dimension II:

U			Γ			
		8		6	Argentina Australia Australia Austria Belgium Bolivia Brazil Canada China Colombia D. Republic Ecuador El Salvador France Guatemala Italy Luxembourg Netherlands New Zealand Nicaragua Panama Paraguay Peru Spain Thailand U.K. U.S.A.	Venezuela
		7		∞	Costa Rica Cuba Iran Iraq Japan Mexico Turkey	
		9		7	Greece Liberia Libya Malaya	
	Received	5	<u>Allocated</u>	9	Ethiopia Pakistan	
	Score	4	Score	2	Denmark Norway Portugal Sweden	
	Scale	3	Scale	4	Ireland Israel Laos Tunisia	
		2		3	Вигта	
		1		2	Cambodia Ceylon Egypt India Indo- nesia Nepal Saudi Arabia Syria Yemen Yugo- slavia	
		0		1	Afghani- stan Albania Bulgaria Byelo- russia Czechosla- vakia Finland Ghana Hungary Coland Kraine S.S.R. J.S.S.R.	

Comparison With Other Types of National Groupings

Four different types of national groupings are discussed by Hovet (1960) as having presumable influence upon the voting of their members, since the members demonstrate some degree of solidarity in voting patterns: caucusing groups, geographical distribution groups, common interest groups, and regional groups. When the representatives of these groups are located within our mathematically defined blocs, the voting of each of the four different types of groups, as tested by the Kolmogorov-Smirnov two-sample test (Siegel, 1956), has shown a difference beyond the .001 level of significance between that group and the rest of the Assembly. That each group does vote with a significant degree of solidarity is evident, and the results of multiple scalogram analysis can now be used to demonstrate how it is possible to determine the relative influence of each type of national grouping on voting on different types of issues.

Caucusing Groups. A caucusing group is defined by

Hovet as "any group of member states in the Assembly which

has some degree of formal organization, holds fairly regular

meetings, and is concerned with substantive issues and related

procedural matters before the sessions of the General Assembly"

(1960, p. 13). As mentioned earlier, both he and Goodwin use

such groups as the basis of their descriptions of bloc voting to the almost complete exclusion of all else. At the time of the Twelfth Session, there were eight caucusing groups; Figures 3 and 4 of Appendix E show where each lined up on our two dimensions. Some overlap of the Asian-African group with both the Arab and Commonwealth groups will be noted; certain countries belonged to two or more caucusing groups.

Geographical Distribution Groups. Our other three types of groups are also delineated from the definitions and membership enumerations given by Hovet. Thus, we find five "geographical distribution" groups with no overlap of member-The distributions of these over our blocs are shown in Figures 5 and 6 in Appendix E. These groups are not truly geographically distributed, by any means, but Hovet states that they are referred to in this manner within the Assembly "because diplomatic tact prevents them from being called, more rationally, political compromise groups with some reflection of geographical areas" (1960, p. 33). Any real geographical division would, no doubt, switch the positions of several nations (i.e., place China in the Asian group and the United States and Canada with the rest of the Western Hemisphere). Hovet's divisions are accepted only because precisely these groups exist, by either formal or informal arrangement, and

meet to discuss matters of concern to them, such as the geographical allocations of various committee seats.

Common Interest Groups.

Common interest groups might be defined as groups of states which, although not bound together by any sort of formal arrangement or membership in a regional body, nevertheless have some elements in common which tend to provide a common outlook on certain types of issues before the General Assembly. Whether these common interest groups actually exist may be a moot question; some observers indicate that they do exist and have an influence (Hovet, 1960, p. 44).

Hovet's "common interest groups" were examined. The relevant charts are Figures 7 and 8 of Appendix E, and show that common interests do seem to correlate with the votes.

This is particularly apparent for the Moslem States and the Arab League in Dimension I, and for the other three common interest groups in Dimension II.

Regional Groups. The fourth type of group is the regional group, a group of United Nations members bound "together either by common membership in a regional organization not connected directly with the United Nations, or by common participation in important regional conferences which, while not establishing any permanent organization, nevertheless draw participating countries together in establishing an agreement on principles of mutual consent" (Hovet, 1960, p. 39). From the large number of such existing groups, ten have been selected as representative of the principal

kinds and purposes of such groups from those Hovet described as the more important regional arrangements. These are some of the ones most frequently encountered in corridor conversations of the delegates around the U.N. The sample under consideration includes four groups purportedly organized primarily around economic objectives, four purportedly centered on security objectives, and two with mixed objectives. The relevant charts for these groups are also in Appendix E, as Figures 9 and 10.

The first economic group is the Organization for European Economic Cooperation, which was established by the Committee of European Economic Recovery in 1947 for the joint administration of economic aid under the Marshall Plan (Hartmann, 1951, p. 284). The European Coal and Steel Community was founded in 1951 for the purposes of economic expansion, development of employment, and improved living standards for its members by means of a common market, the abolishment of export-import duties, etc. ("Professor Telders" Study Group, 1954, pp. 328-59). The Colombo Plan, also put into effect in 1951, supported the cooperative economic development of southern and south-eastern Asia. The Bandung Conference of 1955 was also based on the aims of economic and cultural cooperation, as well as a discussion of human rights (Pullen, 1956, p. 741).

The next group of organizations stands in sharp contrast, as each is based completely on the premise of a need for security alliances. The Western European Union, commonly known as the Brussels Alliance, was formed in 1948 for the peace-time coordination of armed forces and adequate security conditions, giving express recognition of the superiority of U.S.S.R. military potential over that of any one of the members alone (Hartmann, 1951, pp. 295-99). NATO, in 1949, the Anzus Council of 1951, and SEATO of 1954 were also established to provide a common defense against armed attack (Woodrow Wilson Foundation, 1953, pp. 51-61).

The purposes of the last two regional alliances considered here are mixed, according to their formal aims, and encompass the realms of both economics and security. The Arab League was formed in 1945 as a group concerned with cultural, social, economic, and financial affairs, but later added a treaty of joint defense to the agreement (Davis, 1953, pp. 527-37). The stated purposes of the Organization of American States, established in 1948, include both common action in the event of aggression and economic, social, and cultural development of the member nations ("Prof. Telders" S.G., 1954, pp. 359-98).

Utilization of Results

These data may now be combined into one table which represents the proportion of the members of each group who voted as a bloc (i.e., received the same score) on each type of issue. Some interesting observations may be made from the data, and three different uses of such findings will be demonstrated. First of all, they may be used as an empirical check upon some of the general statements made by other observers. As a demonstration of this, we shall examine several statements made by Goodwin (1960) concerning various caucusing groups.

- 1. He states that the Asian-African nations are equivocal on cold war issues and pathologically suspicious of Western colonialism. By examining our groups which include these nations, we find that they are, indeed, somewhat divided on cold war issues, voting with only 40% solidarity on Dimension II. However, there is no more evidence of unitary "pathological" suspicion of the West, as inferred from the solidarity of their voting behavior, than in the case of NATO, the EEC, the Commonwealth, or others.
- 2. He also states that this Asian-African group has as one of its aims the extension of charter provisions,

Table 1. Percentage of Each Group with Identical Scores

Caucusing Groups	No. of Members	Dimension I	Dimension II
Communist Group	9	100	100
Arab Group	8	50	62.5
Asian-African Group	25	40	40
Benelux Group	3	66.6	100
Commonwealth Group	10	50	44.4
Latin American Group	18	33.3	83.3
Scandinavian Group	3	100	100
Western European Group	5	80	100
Other (no caucusing			
group)	10	20	40
Geographical Distribu- tion Groups			
Eastern European Group	10	80	90
Asian and African Group	25	40	40
Latin American Group	18	33.3	83.3
Western European Group	16	31.2	56.2
Permanent members of the		3272	00.1
Security Council	5	20	80
Common Interest Groups			
Moslem States	13	46.1	46.2
Arab States	8	50	62.5
Big Three	3	33.3	100
Trust Administrators	7	42.8	100
Colonial Powers	10	50 -	90
Anti-Colonial States	23	33.3	33.3
Regional Interest Groups			
Economic			
Organization for Euro- pean Economic Cooper-			
ation European Coal and Steel	13	38.5	53.8
Community	5	80	100
Colombo Plan	16	25	37.5
Bandung Conference	23	43.5	43.2

Table 1.--Continued.

Regional Interest Groups	No. of Members	Dimension I	Dimension II
Security			
Western European Union NATO Anzus Council SEATO	6 13 3 7	66.6 38.5 66.6 42.8	100 61.5 100 85.7
Mixed			
Arab League Organization of	8	50	62.5
American States	19	31.6	84

- a fact for which there is no evidence on the basis of the Dimension I data presented here.
- 3. We can firmly support Goodwin's statement that the communist group is a bloc in the true sense of the word, voting together all of the time. We can add the observation that, upon the issues at hand, the Scandinavian caucusing groups operates like a bloc as much as the communist one does.
- 4. Concerning the Commonwealth, he says that it does not constitute a bloc; from the data here we can see, however, that on both types of issues it constitutes a solidarity vote as strongly as do several of the groups Goodwin admits.

5. The Latin American group is characterized by Goodwin as amenable to the United States on cold war issues but little inclined to display a solid front on colonial issues. His assumption is supported by the difference in solidarity the group displays between our two dimensions.

Although the data presented thus far could also be used to check on the stability of the voting patterns of individual countries (such as those Goodwin designated as "anti-colonial," "neutral," and "floating" within the Asian-African group), or to indicate possible movements like the division of the Asian-African caucusing group into two separate parts (which did, in fact, occur the year after the one described here), we shall merely point out this possibility and move on to other considerations.

Discussion of Analytic Problems

Let us now proceed to an examination of these groupings in and of themselves, to demonstrate the relative influence of each and their complex interactions which make analysis of this sort so difficult. Within our caucusing groups, excluding the communist bloc for the obvious reasons that it is never expected to display anything less than 100% consensus, it will be noted that a greater degree of solidarity was

displayed by all, except the Commonwealth, on Dimension II than on Dimension I. One possible hypothesis is that group solidarity is inversely related to group size, since the three smallest groups (Benelux, Scandinavian, and Western Europe) receive the highest solidarity rating, while the two largest groups (Asian-African, and Latin American) receive the lowest.

African and Latin American, have identical membership with the caucusing groups. It is interesting that both display consensus in Dimension I which is very low compared to that of the other caucusing groups, and that the Asian-African group was also relatively low on Dimension II. When these groups are compared with other geographical groups, however, the picture changes. On Dimension I, these two groups would rank first and second in degree of consensus if we excluded the Eastern European group in which eight of the ten members are also communist bloc members.

Among our common interest groups, as among our geographical groups, there appears to be very little relationship between size of group and degree of consensus. On Dimension I, all such groups have 50% or less solidarity, while all but the two largest groups (Moslem States and Anti-Colonial states) make a large increase when the cold war issues of Dimension II are considered. It could be hypothesized that

beyond a certain size a group is likely to contain too many divergencies of interest for solid bloc voting. However, it appears more reasonable to assume that consensus is related to the importance the issues have to a group's members. Thus, the Big Three, the Trust Administrators, and the Colonial Powers seem much more concerned with the cold war than with implementing the U.N. Charter ideals. A few of the reasons these cold war issues have more salience will be seen when we examine the regional groups.

When the regional groups were examined, the solidarity of "security" coalitions on cold war issues is evident. the issues of Dimension I, these groups demonstrate no appreciable solidarity beyond that shown by the economic groups, but a great increase in solidarity within Dimension II is easily seen. One economic group, the European Coal and Steel Community, achieved 100% solidarity in Dimension II, for which the explanation may be that each member of this group also holds membership in no less than two security organizations, the Western European Union and NATO. Thus we see that a complex interaction of factors (i.e., the number, purposes, and overlapping of membership groups) may be at work here. An avenue for further study may be opened by the preparation of some sort of mathematical description of the relative influence of each upon different kinds of issues.

SUMMARY

The major concern of this investigation was a comparison of the utility of two statistical methods, multiple scalogram analysis and factor analysis, for the study of United Nations voting patterns. The two methods were compared on the basis of the internal logical consistency of the issue clusters disclosed by each. The data consisted of 34 roll-call votes cast by 74 nations during the Twelfth United Nations General Assembly, as tabulated from the official records of the Plenary Meetings for 1956-57.

Although both methods are statistical techniques of classification, they differ in procedure and result in different issue clusters when used with these data. Multiple scalogram analysis is a technique recently developed by Lingoes (1960) which calculates multiple scales of the Guttman variety from a group of individual response patterns. Factor analysis is a multivariate technique more familiar to psychologists which produces clusters derived from the correlation matrix.

Multiple scalogram analysis produced four dimensions, or clusters, encompassing 32 of the 34 issues. Factor analysis resulted in six factors with the varimax rotation and four factors with the quartimax rotation. Each cluster

was searched for a logically consistent underlying thread of continuity by examining the debate arguments and implications of each issue within the cluster.

Factor analysis, particularly the quartimax rotation, was found to give clusters of issues most nearly congruent with logical expectations. The four factors found with quartimax were:

- 1. A "Protection of Smaller Nations" factor
- 2. An "Admission of Communist China to the United Nations" factor
- 3. A "Racial Discrimination in South Africa" factor
- 4. A "Housekeeping" factor.

The first consisted of issues dealing with colonial territories, such as Togoland and West Irian, and the physical well-being of small nations, such as the protection of Syria from Turkey. The highest loading issues of the second and third factors included all the ballots cast on the topics named. The fourth factor consisted of issues requiring little physical or psychological commitment by the members, such as spreading information on modern nuclear weapons or accepting Trusteeship Council reports.

Multiple scalogram analysis, on the other hand, was found more difficult to interpret. It was necessary to examine each debate closely to arrive at the following interpretations

of the four dimensions. Dimension I appeared to be related to strengthening the United Nations and United Nations Charter principles. The issues were chiefly procedural or involved racial discrimination in South Africa (related to human rights). Dimension II was labeled a "Hot" Cold War cluster. as diverse as arms regulation, the admission of Communist China, and the geographical distribution of the United Nations Secretariat were linked together by a common communist bloc argument for proper representation of all views. Dimension III was similar. Issues concerning international trade, the United Nations Emergency Force, and the threat to Syria were all linked together by communist bloc speeches identifying these as examples of Western "aggression." The common element of Dimension IV appeared to be the salience of time. issue, from arms regulation to the termination of the Trusteeship Agreement in French Togoland, the problem was immediate or delayed action.

However, another use of multiple scalogram analysis was demonstrated. The score given to each nation on each dimension can be used to give a strict quantitative definition of voting blocs. Voting blocs obtained on two dimensions were examined and compared with four different types of national alignments discussed by Hovet (1960): caucusing groups, geographical distribution groups, regional groups,

and common interest groups. The superiority of this approach lies in a strict definition of voting blocs in terms of nations' actual behavior and in allowing blocs of different membership to appear as different matters come under consideration. The ease of identifying and studying voting blocs is a valuable asset of multiple scalogram analysis.

Political science may benefit from using these methods for quantification of United Nations or other voting bloc study, an area they have heretofore almost neglected.

Psychology's methodologists will find value in a comparative demonstration of the advantages and disadvantages of two of their techniques on a new type of data.

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APPENDIX A

ISSUES VOTED UPON DURING THE 12TH GENERAL ASSEMBLY

APPENDIX A

ISSUES VOTED UPON DURING THE 12TH GENERAL ASSEMBLY*

	(China)		09
Vote <u>Tabulations</u>	In favor72 Against0 Abstaining1	In favor37 Against0 Abstaining1 (Belgium)	In favor69 Against0 Abstaining4 (Cambodia, Guatemala, Indonesia,
Sketch of the Issue	Recommendation for peaceful coexistence of states.	Proposal for an Economic Commission for Africa, included in the Report of the Economic and Security Council.	Request that the Secretary-General continue to conform to past recommendations of giving appropriate preference to nationalities forming disproportionately small parts of the Secretariate in making of appointments to the staff of the Secretariat of the UN.
Document No.	A/3802	A/3740	A/3797
Agenda Item Number	99	12	51
Chronological Agenda Item Order of Vote Number	34	19	32
Item <u>Number</u>	ч	7	m

ı			
Vote Tabulations	In favor64 Against9 Abstaining1 (Syria)	In favor55 Against0 Abstaining15	In favor45 Against10 Abstaining18
Sketch of the Issue	Section of draft resolution on the regulation, limitation, and balanced reduction of all armed forces and all armaments, calling for collective action to inform and enlighten the peoples of the world as to the dangers of the armaments race, and particularly as to the destructive effects of modern weapons.	Report of the Trusteeship Council on the situation in the Trust Territories of the Cameroons under British administration and the Cameroons under French administration, encompassing recommendations for the restoration of peace in the French Cameroons and termination of the objectives of the Trusteeship System in both.	Establishment of a Good Offices Committee on South West Africa to discuss according this territory an international status.
Document No.	A/3729	A/L.241	A/3701
Agenda Item Number	24		38
Chronological Order of Vote	12	30	10
Item Number	4	гv	ø

Vote Tabulations	In favor27 Against38 Abstaining9	In favor37 Against27 Abstaining8 (Argentina, China, Equador, Ireland, Japan, Laos, Thailand,	In favor34 Against32 Abstaining7 (Cambodia, Equador, El Salvador, Ireland, Japan, Laos, Panama)	In favor45 Against18 Abstaining11
Sketch of the Issue	Motion to subject to a divided vote Paragraphs 7 and 8 of the report on the future termination of the Trusteeship Agreement for the Territory of Togoland under French administration.	Transmission of information about non-self-governing territories.	Motion to subject the question of the formation of a six man committee to study the problem of transmission of information about non-self-governing territories to a two-thirds vote.	Formation of the agenda: Inclusion of Item 62, the question of West Irian (West New Guinea).
Document No.		A/3733		A/3644
Agenda Item Number	37	35	35	ω
Chronological Order of Vote	26	18	17	ĸ
Item <u>Number</u>	7	ω	o	10

Vote <u>Tabulations</u>	In favor47 Against1 (China) Abstaining25	In favor57 Against1 (France) Abstaining16	In favor59 Against0 Abstaining15
Sketch of the Issue	Pattern for the composition of the General Committee of the General Assembly, giving the following pattern for the election of the thirteen Vice-Presidents: 4 from Asian and African states 1 from an Eastern Euro- pean state 2 from Western European and other states 5 from among the Permanent members of the Security Council	Formation of the agenda: Inclusion of Item 61, the treatment of peoples of Indian origin in the Union of South Africa.	Appeal to the Government of the Union of South Africa to negotiate with the governments of India and Pakistan concerning the treatment of peoples of Indian origin in the Union of South Africa.
Document No.	A/3781	A/3643	A/3732
Agenda Item Number	89	ω	61
Chronological Dorder of Vote	53	7	22
Item Number	11	12	13

Vote Tabulations	<pre>In favor58 Against7 (Australia, Belgium, France, Luxembourg, Portugal, Spain, United Kingdom) Abstaining9</pre>	<pre>In favor55 Against6 (Australia, Belgium, France, Luxembourg, Portugal, United Kingdom) Abstaining13</pre>	In favor57 Against0 Abstaining16
Sketch of the Issue	Formation of the agenda: Inclusion of Item 60, the question of race conflict in South Africa resulting from the policies of "apartheid" of the Govern- ment of the Union of South Africa.	Appeal to the Government of the Union of South Africa to revise her policies "apartheid" which cause racial conflict, in view of the principles of the world.	Amendment to a recommendation for the composition of the General Committee of the General Assembly to make at least one of the four representatives of Asian and African states or one of the two representatives of Western Europe from a Commonwealth Country.
Document No.	A/3628	A/3722	A/L.242
Agenda Item Number	ω	09	89
Chronological Order of Vote	ı	21	2 8
Item	14	15	16

Vote <u>Tabulations</u>	In favor54 , Against9 Abstaining10	In favor49 Against9 Abstaining15	In favor49 Against9 Abstaining15
Sketch of the Issue	Section of draft resolution In favor on the regulation, limitation, Against9 and balanced reduction of Abstaining armed forces and armaments, encompassing a motion by Canada, India, Japan, Paraguay, and Sweden to enlarge the existing Dis- armament Commission by 14 members.	Affirmation of the UN objectives in the Korean problem: the peaceful, establishment of a unified, independent, and democratic Korea under a representative form of government and restoration of international peace and security in the area.	Section of draft resolution on the regulation, limitation, and balanced reduction of all armed forces and all armaments, calling for the conclusion of an international convention of armaments and the prohibition of atomic, hydrogen and other weapons of mass destruction, including the reconvention of a subcommittee to study the inspection problems.
Document No.	A/L.236	A/3746	A/3729
Agenda Item Number	24	23	24
Chronological A Order of Vote	15	23	11
Item Number	17	18	19

Vote Tabulations	In favor43 Against26 Abstaining6 (Cambodia, Israel, Laos, Portugal, Saudi Arabia, Tunisia)	In favor42 Against26 Abstaining6 (Cambodia, Israel, Laos, Portugal, Saudi Arabia, Tunisia)	In favor40 Against27 Abstaining7 (Cambodia, Israel, Laos, Pakistan, Portugal, Saudi Arabia, Tunisia)	In favor28 Against37 Abstaining9
Sketch of the Issue	Formation of the agenda: Paragraph 2 of the resolution on Communist China, to decide not to consider any proposal to exclude the Government of the Republic of China or seat the Central People's Government of the People's Republic China.	Formation of the agenda: The complete draft resolution on the question of the seating of Communist China.	Formation of the agenda: Paragraph 1 of the resolution on Communist China, to <u>reject</u> India's request to place discussion on the agenda of this session.	Formation of the agenda: Motion by India to amend the resolution on the question of the discussion of the inclusion of Communist China by changing the word "reject" to "accede to."
Document No.	A/3670	A/3670	A/3670	A/L.224
Agenda Item Number	Φ	ω	ω	ω
Chronological Order of Vote	.	7	ιΩ	4
Item Number	70	21	22	23

Vote Tabulations In favor17 Against39			U.S.S.R.)	In favor46 Against11 Abstaining17	۳۶ (
Sketch of the Issue Amendment to the draft resolution on the geo-	graphical distribution of the staff of the UN Secretariat recommending that three posts be given to members making minimum contributions to the budget. Section of Report of Economic	mending the expansion of international trade and the reduction of trade barriers through lower tariffs,	special attention to land- locked countries, and organ- izations like the General Agreement on Tariffs and Trade, or the Organization for Trade Cooperation.	Resolution concerning the UN Emergency Force: an expression of appreciation of the member states' contributions to the Force, an	approval of the allocation of costs, an authorization for the Secretary-General to spend up to \$13.5 million more on the Force (until Dec. of 1957) as he sees necessary, and the sees necessary, and the	approval of expenses being borne by the UN members according to the scale of assessments.
Document No. A/L.244	A/3740			A/L.235		
Agenda Item Number 51	12			25		
Chronological Order of Vote 31	20			16		
Item Number 24	25			26		

Vote Tabulations	In favor29 Against30 Abstaining14	In favor32 Against10 Abstaining32	In favor37 Against26 Abstaining11	In favor23 Against30 Abstaining18
Sketch of the Issue	Amendment of "not more than three days" added to a motion to adjourn discussion of the complaints about threats to the security of Syria and to international peace until the results of the mediation by King Saud were known.	Adjournment of the discussion of the complaints about the threats to the security of Syria and to international peace, after above amendment passed.	Invitation to the Nether- lands and Indonesia, as the parties concerned in the question of West Irian (West New Guinea), to settle this dispute which endangers peaceful develop- ment of the area in accord	Section of draft resolution on the regulation, limitation, and balanced reduction of armed forces and armaments, recommending suspension of testing of thermo-nuclear weapons.
Document No.			A/3757	A/L.232
Agenda Item Number	6 9	69	62	24
Chronological order of Vote	ω	σ	24	13
Item Number	27	58		30

Vote Tabulations	In favor39 Against21 Abstaining14	In favor46 Against1 (Ghana) Abstaining27	In favor9 Against42 Abstaining22	In favor28 Against22 Abstaining22
Sketch of the Issue	Formation of a Committee of the 22 new UN Members to give their views on the problem of defining ag- gression and the placing of this question on the agenda not earlier than the 14th Session.	Plan to hold free elections, under universal suffrage and a supervising UN Commissioner to the Legislative Assembly in French Togoland.	Section of draft resolution on the regulation, limitation, and balanced reduction of armed forces and armaments, encompassing a motion by the USSR to dissolve the existing Disarmament Commission and establish a Permanent Disarmament Commission Composed of all the UN Members.	Request that the principle of self-determination be applied to the people of Cyprus.
Document No.	A/3756	A/3751	A/L.230	A/3794
Agenda Item Number	4.2	37	24	28
Chronological A Order of Vote	25	23	14	33
Item Number	31	32	33	34

*Formal statement of each resolution may be found in the Official Records of the General Assembly, 12th Session, Annexes, 1957.

APPENDIX B

MULTIPLE SCALOGRAM ANALYSIS RESULTS OF THE 12TH GENERAL ASSEMBLY

APPENDIX B

MULTIPLE SCALOGRAM ANALYSIS RESULTS OF THE 12TH GENERAL ASSEMBLY

		Dimension I
	<u>Nation</u>	Issues 1-17*
1.	Afghani s tan	1111110000000000
2.	Albania	1110000000000000
3.	Argentina	1111111111011110
4.	Australia	111111111111110
5.	Austria	1111111111100110
6.	Belgium	101111111111111
7.	Bolivia	1111100010000000
8.	Brazil	1111111110000001
9.	Bulgaria	1110000000000000
10.	Burma	111100000000000
11.	Byeloru ssi a	1110000000000000
12.	Cambodia	110110000000000
13.	Canada	111111111111110
14.	Ceylon	1111100000000000
15.	Chile	1111111111000000
16.	China	011111111111001
17.	Colombia	1111111110100000
18.	Costa Rica	111111000000000
19.	Cuba	1111111110100001
	Czecho s lavakia	1110000000000000
	Denmark	1111111111100001
22.	Dominican Republic	1111111111111111
23.	Ecuador	1111111100000000
24.	Egypt	1111000000000000
25.	El Salvador	1111111000000000
	Ethiopia	1111000000000000
27.	•	1111111111111111
28.	France	111111111111111
29.	Ghana	111111000000000
30.	Greece	1111100000000000
31.	Guatemala	1101100000000000
32.	Hungary	1110000000000000
33.	India	111110000000000
34.	Indonesia	110110000000000
35.	Iran	1101110000000001
36.	Iraq	1111000000000000
37.	Ireland	1111111100100000

	<u>Nation</u>	Dimension I Issues 1-17
38.	Israel	1111111011100001
39.	Italy	11111111111111111
40.	Japan	1111111100000000
41.	Laos	1111111101000000
42.	Liberia	1111111001000000
43.	Libya	1111100000000000
44.	Luxembourg	11111111111111111
45.	Malaya	1111110011000000
46.	Mexico	1111110000000000
47.	Nepal	1111100000000000
48.	Netherlands	11111111111111111
49.	New Zealand	1111111111111110
50.	Nicaragua	1111111111110011
51.	Norway	1111111111100001
52.	Pakistan	1111110110100000
53.	Panama	1111111000000000
54.	Paraguay	1111111111000000
55.	Peru	1111111110000010
56.	Poland	1110000000000000
57.	Portugal	1111111111111111
58.	Romania	1110000000000000
59.	Saudi Arabia	1111000000000000
60.	Spain	1111111111111110
61.	Sudan	1111100000000000
62.	Sweden	1111111111100000
63.	Syria	1110000000000000
64.	Thailand	1111111110000000
65.	Tunisia	1111110000000000
66.	Turkey	1111111111110110
67.	Ukraine S.S.R.	1110000000000000
68.	U.S.S.R.	1110000000000000
69.	United Kingdom	1111111111111110
70.	U.S.A.	1111111111100010
71.	Uruguay	1111100010000000
72.	Venezuela	1111111111000000
73.	Yemen	1111100000000000
74.	Yugoslavia	1111100000000000

^{*}Appropriate keys may be found in Appendix A.

Nation Number	Dimension II Issues 17-24	Dimension III Issues 25-29	Dimension IV Issues 30-32
1.	0000000 0	01110	111
2.	0000000	00000	111
3.	11111111	11111	000
4.	11111111	11111	000
5.	11111111	11111	110
6.	11111111	11111	000
7.	11111111	11000	111
8.	11111111	11001	000
9.	0000000	00000	111
10.	10000001	11000	111
11.	00000000	00000	111
12.	00100000	00111	110
13.	11111111	11101	000
14.	10000000	11000	110
15.	11111111	10111	000
16.	11111111	10111	000
17.	11111111	01111	000
18.	11111110	11100	000
19.	0111111	11111	000
20.	0000000	00000	111
21.	11100001	11111	000
22.	11111111 .	11111	000
23.	11111111	10111	000
24.	10000000	00000	111
25.	11111111	10100	000
26.	11111000	00000	000
27.	0000000	11111	100
28.	11111111	11111	000
29.	0000000	11010	111
30.	11111100 11111111	11000	011
31. 32.	0000000	00000	1Í1
32.	10000000	00000 11000	111 111
34.	10000000	11000	111
35.	11111110	11110	111
36.	11111110	00000	111
37.	01100001	01111	110
38.	01100001	01111	000
39.	11111111	11111	000
40.	11011111	11111	100
41.	11100000	11110	100
42.	01111110	11111	100
43.	11111100	10000	111
44.	11111111	11111	000
·	*****	* * * * *	000

Nation <u>Number</u>	Dimension II Issues 17-24	Dimension III Issues 25-29	Dimension IV Issues 30-32
45.	01111110	10010	100
46.	11111101	00001	110
47.	10000000	10110	111
48.	1111111	11111	000
49.	1111111	11111	000
50.	1111111	11111	100
51.	11100001	11111	000
52.	01111001	11110	001
53.	1111111	00111	010
54.	11111111	01111	000
55.	1111111	11111	110
56.	0000000	00000	111
57.	11100001	01111	000
58.	0000000	00000	111
59.	10000000	00000	111
60.	1111111	11111	000
61.	1000000	00000	111
62.	11100001	11111	100
63.	1000000	00000	111
64.	1111111	11110	000
65.	11100000	00000	110
66.	11111110	11111	000
67.	0000000	00000	111
68.	0000000	00000	111
69.	1111111	11111	000
70.	1111111	11101	000
71.	11111111	11111	100
72.	11111111	11111	000
73.	10000000	00000	111
74.	10000000	01000	111

Scale Scores

	<u>Nation</u>	Dimension I	Dimension II	Dimension III	Dimension IV
1.	Afghanistan	6	0	3	3
2.	Albania	3	0	ō	3
3.	Argentina	14	8	5	0
4.	Australia	15	8	5	0
5.	Austria	13	8	5	2
6.	Belgium	15	8	5	0
7.	Bolivia	6	8	2	3
8.	Brazil	10	8	3	0
9.	Bulgaria	3	0	0	3
10.	Burma	4	2	2	3
11.	Byelorussia	3	0	0	3
12.	Cambodia	4	1	3	2
13.	Canada	15	8	4	0
14.	Ceylon	5	1	2	2
15.	Chile	10	8	4	0
16.	China	13	8	4	0
17.	Colombia	10	8	4	0
18.	Costa Rica	6	7	3	0
19.	Cuba	12	7	5	0
20.	Czechoslavaki	.a 6	0	0	3
21.	Denmark	10	4	5	0
22.	Dominican				
	Republic	5	8	5	0
23.	Ecuador	5	8	4	0
24.	Egypt	4	1	0	3
25.	El Salvador	7	8	2	0
26.	Ethiopia	4	5	0	0
27.	Finland	16	0	5	1
28.	France	16	8	5	0
29.	Ghan a	6	0	3	3
30.	Greece	5	6	2	2
31.	Guatemala	4	8	0	3
32.	Hungary	3	0	0	3
33.	India	5	1	2	3
34.	Indonesia	4	1	2	3 3
35.	Iran	6	7	4	
36.	Iraq	4	7	0	3
37.	Ireland	9	3	4	2
38.	Is rael	11	3	4	0
39.	Italy	16	8	5	0
40.	Japan	8	7	4	1
41.	Laos	9	3	4	1

	<u>Nation</u>	Dimension I	Dimension II	Dimension III	Dimension IV
42.	Liberia	8	6	5	1
43.	Libya	5	6	1	3
44.	Luxembourg	16	8	5	0
45.	Malaya	8	6	2	1
46.	Mexico	6	7	1	2
47.	Nepal	5	1	3	3
48.	Netherlands	16	8	5	0
49.	New Zealand	15	8	5	0
50.	Nicaragua	14	8	5	1
51.	Norway	12	4	5	0
52.	Pakistan	9	5	4	1
53.	Panama	7	8	3	1
54.	Paraguay	10	8	4	0
55.	Peru	10	8	5	2
56.	Poland	3	0	0	3
57.	Portugal	16	4	4	0
58.	Romania	3	0	0	3
59.	Saudi Arabia	4	1	0	3
60.	Spain	15	8	5	0
61.	Sudan	5	1	0	3
62.	Sweden	11	4	5	1
63.	Syria	3	1	0	3
64.	Thailand	9	8	4	0
65.	Tunisia	6	3	0	2
66.	Turkey	14	7	5	0
67.	Ukraine S.S.R	t. 3	0	0	3
68.	U.S.S.R.	3	0	0	3
69.	United				
	Kingdom	15	8	5	0
70.	U.S.A.	12	8	4	0
71.	Uruguay	6	8	5	1
72.	Venezuela	10	8	5	0
73.	Yemen	5	1	0	3
74.	Yugo sla via	5	1	1	3

APPENDIX C

VARIMAX RESULTS OF THE 12TH
GENERAL ASSEMBLY

APPENDIX C

VARIMAX RESULTS OF THE 12TH GENERAL ASSEMBLY

Loading	Agenda <u>Item No</u> .	Issue	MSA Dimension
		Factor I	
.684	69	Complaints about threats to Syria and international peace draft resolution	III
.623	69	Complaints about threats to Syria and international peaceamendment	III
.589	62	Question of West Irian	III
.582	38	Establishment of a Good Offices Commission for South-West Africa	ı
.580	37	Future of Togoland under French administrationprocedural vote	I
.553	68	Composition of General Committee of General Assemblydraft resolution	I
.507	35	Transmission of information about non-self-governing territories-draft resolution	
.446	37	Future of Togoland under French administrationdraft resolution	IV
.434	68	Composition of General Committee of General Assemblyamendment	I
.425	8	Inclusion of the question of West Irian on the agenda	I
.414	24	Enlargement of the existing Disarmament Commission	II
.410	24	Formation of new Disarmament Commission of all UN members	
.408	35	Transmission of information about non-self-governing territoriesprocedural vote	I

Loading	Agenda Item No.	<u> Issue</u>	MSA Dimension
		Factor II	
.906	8	Inclusion of the question of representation of China on agendaparagraph 2	II
.906	8	Inclusion of the question of representation of China on agendadraft resolution	II
.885	8	Inclusion of the question of representation of China on agendaparagraph 1	II
.859	23	Question of unification and rehabilitation of Korea	II
.833	8	Inclusion of the question of representation of China on agendaamendment	II
.808	24	Suspension of nuclear tests and committee to study inspection problem	II
•653	24	Formation of new Disarmament Commission of all UN members	
.631	51	Geographical distribution of UN Secretariat staff amendment	ı
.554	37	Future of Togoland under French administrationdraft resolution	n IV
. 542	38	Establishment of a Good Offices Commission for South-West Africa	a I
.518	54	Question of defining aggression	IV
.516	37	Future of Togoland under French administrationprocedural vote	I
		Factor III	
.920	8	Inclusion of treatment of people of Indian origin on agenda	e s
.917	8	Inclusion of race conflict in South Africa on agenda	I

	Agenda		MSA
Loading	Item No.	<u> Issue</u>	Dimension
.897	61	Treatment of peoples of Indian origin in Union of South Africa	I
.881	60	Race conflict in South Africa from "apartheid" policies	I
.622	68	Composition of General Committee of General Assemblydraft resolution	ī
.604	8	Inclusion of question of West Irian on agenda	I
.510	35	Transmission of information about non-self-governing territoriesprocedural vote	I
.470	35	Transmission of information about non-self-governing territoriesdraft resolution	I
.445	68	Composition of General Committee of General Assemblyamendment	I .
.434	62	Question of West Irian	III
		Factor IV	
.704	24	Informing peoples of world about effects of modern weapons	: ,
.684	13	Report on situation in British and French Cameroons	I
.586	65	Financing U.N. Emergency Force	III
.501	12	Expansion of international trade	III
.448	51	Geographical distribution of UN Secretariat staffdraft resolution	ı
.380	24	Enlargement of the existing Disarmament Commission	II
.372	58	Question of Cyprus	
.329	69	Complaints about threats to Syri and international peacedraft resolution	a III

Loading	Agenda Item No.	<u> Issue</u>	MSA Dimension
		Factor V	
.926	58	Question of Cyprus	
.779	24	Suspension of nuclear tests	IV
.480	37	Future of Togoland under French administrationdraft resolution	n IV
.406	54	Question of defining aggression	IV
.337	51	Geographical distribution of UN Secretariat staffdraft resolution	I
.332	8	Inclusion of question of West Irian on agenda	I
.324	60	Race conflict in South Africa from "apartheid" policies	ī
.322	35	Transmission of information about non-self-governing territories-draft resolution	
.313	35	Transmission of information about non-self-governing territories-procedural vote	
		Factor VI	
.543	51	Geographical distribution of UN Secretariat staffdraft resolution	I
.390	66	Endorsement of peaceful coexistence	I
.373	24	Enlargement of the existing Disarmament Commission	II

APPENDIX D

QUARTIMAX RESULTS OF THE 12TH
GENERAL ASSEMBLY

APPENDIX D

QUARTIMAX RESULTS OF THE 12TH GENERAL ASSEMBLY

Loading	Agenda Item No.	<u>Issue</u>	MSA Dimension
		Factor I	
.911	37	Future of Togoland under French administration procedural vote	I
.883	38	Establishment of a Good Offices Commission for South-West Africa	a I
.871	69	Complaints about threats to Syria and international peaceamendment	III
.866	35	Transmission of information about non-self-governing territoriesdraft resolution	I
.852	37	Future of Togoland under French administrationdraft resolution	n IV
.848	54	Question of defining aggression	IV
.843	62	Question of West Irian	III
.817	35 ′	Transmission of information about non-self-governing territories-procedural vote	
.809	24	Formation of new Disarmament Commission of all UN members	
.797	69	Complaints about threats to Syria and international peace draft resolution	TTT
.768	51	Geographical distribution of UN Secretariat staffamendment	111
.763	23	Question of unification and rehabilitation of Korea	II
.757	8	Inclusion of question of West Irian on agenda	I

Loading	Agenda Item No.	Issue	MSA Dimension
.737	24	Suspension of nuclear tests and committee to study inspection	II
.735	68	Composition of General Committee of General Assembly draft resolution	I
.709	24	Suspension of nuclear tests	IV
.674	58	Question of Cyprus	
.651	13	Report on situation in British and French Cameroons	I
.618	65	Financing U.N. Emergency Force	III
		Factor II	
.817	8	Inclusion of the question of representation of China on agendaparagraph 2	II
.817	8	Inclusion of the question of representation of China on agendadraft resolution	II
.796	8	Inclusion of the question of representation of China on agendaparagraph 1	II
.681	8	Inclusion of the question of representation of China on agendaamendment	II
.506	23	Question of unification and rehabilitation of Korea	II
.477	24	Enlargement of the existing Disarmament Commission	II
.458	24	Suspension of nuclear tests and committee to study inspection problem	II

<u>Loading</u>	Agenda Item No.	<u> Issue</u>	MSA Dimension
		Factor III	
.812	8	Inclusion of race conflict in South Africa on agenda	I
.793	8	Inclusion of treatment of peoples of Indian origin on agenda	I
.785	61	Treatment of peoples of Indian origin in the Union of South Africa	I
.750	60	Race conflict in South Africa from "apartheid" policies	I
.396	68	Composition of the General Committee of the General Assemb draft resolution	ly
.385	8	Inclusion of question of West Irian on agenda	I
.306	12	Establishment of an Economic Commission for Africa	I
		Factor IV	
.632	24	Suspension of nuclear tests	Į
.570	13	Report on the situation in British and French Cameroons	ı
.484	51	Geographical distribution of UN Secretariat staffdraft resolution	ı
.477	65	Financing the U.N. Emergency Force	III
.428	12	Expansion of international trad	e III
.383	24	Enlargement of the existing Disarmament Commission	II
.302	58	Question of Cyprus	

APPENDIX E

DISTRIBUTIONS OF VARIOUS TYPES OF

NATIONAL GROUPINGS ON

DIMENSIONS I AND II

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Asian-African	Syria		
nations			
Latin-American		·	D. Republic
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Western European		lia	Italy
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			Netherlands
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security council			
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Geographical Distribution Groups in Dimension I

	1				Carlo				
astern	A 11	2	3	4	5	6	7	8	9
Suropean tions	Albania Bulgaria Byelorussia Czechoslavakia Hungary Poland Romania Uk.S.S.R.		Yugoslavia						Finland
sian-African ations	Syria	Burma Cambodia Egypt Ethiopia Indonesia Iraq Saudi Arabia	Afghanistan Ceylon Ghana India Iran Libya Nepal Sudan Tunisia Yemen	Japan Liberia Malaya	Laos Pakistan Thailand		Turkey		
Patin-American ations		Guatemala	Bolivia Costa Rica Mexico Uruguay	Ecuador El Salvador Panama	Brazil Chile Colombia Paraquay Peru Venezuela	Cuba	Argentina		D. Republic
Vestern European ations	1		Greece		Ireland	Denmark Israel Norway Sweden	Austria	Australia Belgium Canada New Zealand Spain	Italy Luxembourg Netherlands Portugal
ermanent mem- ers of the ecurity council	U.S.S.R.					U.S.A.	China	U.K.	France

Geographical Distribution Groups in Dimension II

_	1	2	3	4	5	6	7	8	9	
Eastern European nations	Albania Bulgaria Byelorussia Czechoslavakia Finland Hungary Poland Romania Uk. S.S.R.	Yugoslavia								
Asian-African nations	Afghanistan Ghana	Cambodia Ceylon Egypt India Indonesia Nepal Saudi Arabia Sudan Syria Yemen	Burma	Laos Tunisia		Ethiopia Pakistan	Liberia Libya Malaya	Iran Iraq Japan Turkey	Thailand	
Latin-American nations								Costa Rica Cuba Mexico	Argentina Guatemala Bolivia Nicaragua Brazil Panama Chile Paraguay Colombia Peru D. Republic Uruguay Ecuador Venezuela El Salvador	
Western European nations			Portugal	Ireland Israel	Denmark Norway Sweden		Greece		Australia Austria Belgium Canada Italy Luxembourg Netherlands New Zealand	
Permanent members of the Security Council	U.S.S.R.			The state of the s					Spain China France U.K. U.S.A.	

Common Interest Groups in Dimension I

	1	2	3	4	5	6	7	8	9
Moslem States	Syria	Egypt Indonesia Iraq Saudi Arabia	Afghanistan Iran Libya Tunisia Sudan Yemen		Pakistan		Turkey		
Arab League	Syria	Egypt Iraq Saudi Arabia	Libya Tunisia Sudan Yeman						
Big Three						U.S.A.		U.K.	France
Trust Adminis- trators						U.S.A.		Australia Belgium New Zealand U.K.	France Italy
Colonial Powers						U.S.A.		Australia Belgium New Zealand Spain U.K.	France Italy Netherlands Portugal
Anti-Colonial States	Albania Bulgaria Byelorussia Czechoslavakia Hungary Poland Romania Syria Uk.S.S.R. U.S.S.R.	Burma Cambodia Egypt Ethiopia Indonesia Iraq Saudi Arabia	Afghanistan Ceylon Ghana India Iran Libya Nepal Sudan Tunisia Yemen Yugoslavia	Liberia Malaya	Laos Pakistan Thailand				

Common Interest Groups in Dimension II.

	1	2	3	4	5	6	7	8	9
Moslem States	Afghanistan	Egypt Indonesia Saudi Arabia Sudan Syria Yemen		Tunisia		Pakistan	Libya	Iran Iraq Turkey	. 9
Arab League		Egypt Saudi Arabia Sudan Syria Yemen		Tunisia			Libya	Iraq	
Big Three							-		France
									U.K. U.S.A.
Trust Adminis- trators									Australia Belgium France Italy New Zealand U.K.
Colonial Powers					Portugal				U.S.A. Australia Belgium France Italy New Zealand Spain U.K. U.S.A.
Anti-Colonial States	Afghanistan Albania Bulgaria Byelorussia Czechoslavakia Ghana Hungary Poland Romania Uk.S.S.R. U.S.S.R.	Cambodia Ceylon Egypt India Indonesia Nepal Saudi Arabia Sudan Syria Yemen Yugoslavia	Burma	Laos Tunisia		Ethiopia Pakistan	Liberia Libya Malaya	Iran Iraq	Thailand

	1	2	3	4	5	6	7	8	9
conomic Organization for European Economic Cooperation					Denmark Norway Portugal Sweden	0	Greece	Turkey	Austria Netherlands Belgium U.K. France Italy Luxembourg
European Coal and teel Community									Belgium France Italy Luxembourg Netherlands
		Cambodia Nepal Ceylon Saudi Arabia Egypt Sudan India Syria Indonesia Yemen	Burma	Laos		Pakistan	Malaya	Japan	Australia Canada New Zealand Thailand U.K. U.S.A.
Bandung Conference	Afghanistan Ghana	Cambodia Ceylon Egypt India Indonesia	Burma	Laos		Ethiopia Pakistan	Liberia Libya	Iran Iraq Japan Turkey	Thailand
ecurity Western European Union							1		Belgium Netherlands France U.K. Italy Luxembourg
NATO	A contract of the contract of			- 2 10 2 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7	Denmark Norway Portugal		Greece	Turkey	Belgium Netherlands Canada Luxembourg France U.K. Italy U.S.A.
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SEATO						Pakistan	And the state of t		Australia Thailand France U.K. New Zealand U.S.A.
Arab League		Egypt Syria Saudi Arabia Yemen Sudan		Tunisia			Libya	Iraq	
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Common Interest Groups in Dia

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Moslem States	Syria		
Arab League	Syria		
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Colonial Powers	ŧ	alia um Zealand	France Italy Netherlands Portugal
Anti-Colonial States	Albania Bulgaria Byelorussia Czechoslava Hungary Poland Romania Syria Uk.S.S.R.		



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Colonial Powers			U.S.A.
Colonial Powers			Australia
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nti-Colonial States	Afghani Albania		Thailand
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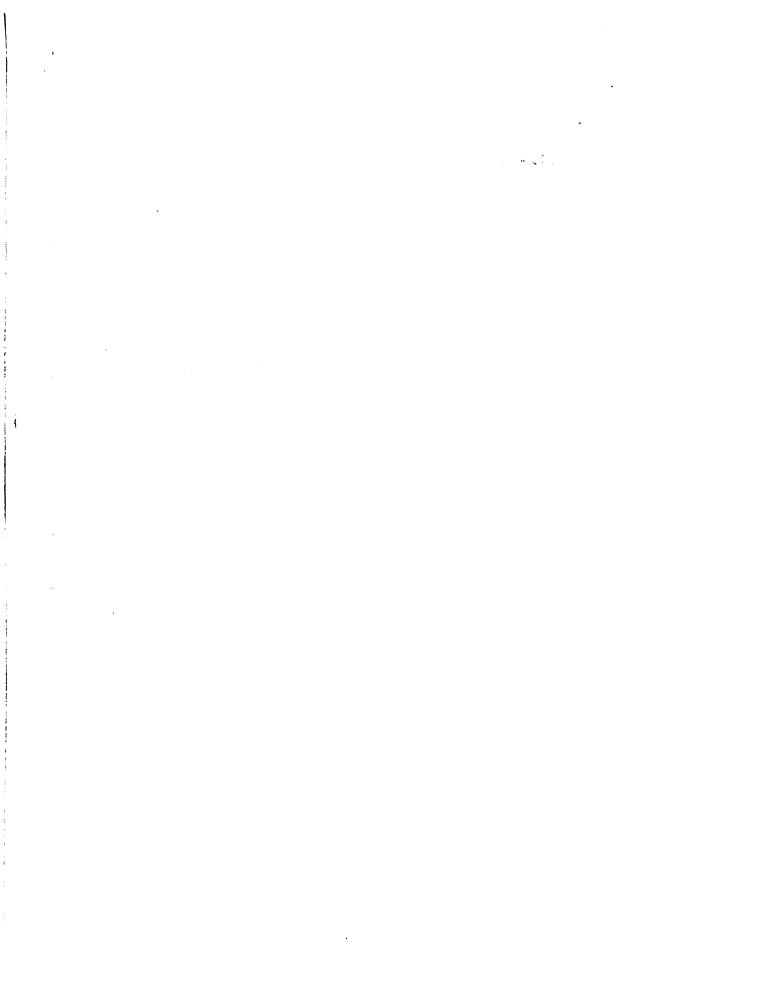
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