

## Measuring Friendship and Hostility among Communist Powers: Some Unobtrusive Measures of Esoteric Communication<sup>1</sup>

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### INTRODUCTION

One of the major shifts in the international politics of the 1960's was the Sino-Soviet conflict and the subsequent tendency of communist bloc members to seek more or less independent lines. Abundant efforts were devoted to the study of this change (see Table 1). Investigators of both historical and content-analytical persuasions have commented on the massive data sources presented by the historical record of the period. The purpose of this paper is to propose and justify some, new economical, "unobtrusive" (Webb *et al.*, 1966) perceptual measures for assessing international friendship and hostility in intracommunist bloc relations. Using the exchange of formal letters by decision makers<sup>2</sup> of three East Asian communist allies—Peking, Pyongyang and Moscow<sup>3</sup>—these measures will be derived from quantification scaling procedures applied to various characterizations of this correspondence.

Many students of international relations have focused their efforts on the analysis of international perceptions (Holsti, 1965; Holsti, North, and Brody, 1968; Zinnes, 1968; and Choucri, 1969). In his review article of this field of study, Brody writes:

<sup>1</sup>I wish to gratefully acknowledge the constant guidance and help offered by Hayward R. Alker, Jr., and the comments and suggestions of Nazli Choucri, James S. Coleman, and Lucian W. Pye as well as an anonymous reader.

<sup>2</sup>Decision makers include central decision makers, external decision makers and force decision makers according to the terminology of the literature of International Simulation (Guetzkow *et al.*, 1963). These include organizational bodies like the Central Committee of the Communist Party of China as well as individuals. Titles or positions of an individual are crucial to judge whether a letter is included to our data source. Thus, the letter where Liu Shao-ch'i appears as "Funeral Chairman, Liu Shao-ch'i" is not included. Also, both a sender and a receiver of a letter must be decision makers as defined above. Otherwise, a letter is not subject to our analysis.

<sup>3</sup>The People's Republic of China, the Democratic People's Republic of Korea and the Union of the Soviet Socialist Republics are the formal names of these states. I use Peking, Pyongyang and Moscow for convenience. In February 1950, Peking and Moscow concluded the treaty of friendship and alliance. In July 1961, Pyongyang, and Moscow, and successively, Pyongyang and Peking concluded the treaties of the same kind.

But why discuss perceptions at all? If nations followed a sort of perverse golden rule and 'did to others what was done to them' the study of interstate relations would be substantially simplified. To the extent that such a principle of reciprocity does not predict, we are motivated to search for other sources of explanation. (Brody, 1966, p. 334.)

The fact is that reciprocity is not the case or at best only a partial aspect of international process. Therefore, plentiful data are needed (Coombs, 1964). Furthermore, in order to tackle accurately complicated interaction of international perception, indicators must be as unobtrusive as possible. Put differently, indicators must be as free as possible from "noise." The search for unobtrusive measures seems to have been overlooked for these 10 years primarily because of the dominance of mass-data-based analysis (Stone *et al.*, 1967; Moses *et al.*, 1967). This paper is an attempt to demonstrate the usefulness of unobtrusive measures which are not necessarily based on mass data collection for the study of international friendship-hostility assessment.

The basic assumption of the present analysis is that certain qualitative aspects of international communications and how they are treated in the process can be realistically interpreted as reflecting underlying dimensions of international friendship and hostility. The aspects we will look at include: (1) How many friendly and salient letters are exchanged between decision makers during 1961-1966 (or friendly and salient letter flow: FASLF); (2) more esoterically, what kind of political themes are referred to in letters exchanged on the national anniversary of each country (or appeals to shared principles: ASP); (3) how these letters are treated in terms of newspaper coverage and letter wording (or journalistic attention: JAT).

Our dimensionalizing procedures are quantification scaling procedures, quantification scaling IV and quantification scaling III (hereinafter abbreviated QS-IV and QS-III, respectively). The basic idea of QS-IV is to assign spatially meaningful locations to individuals derived from sociometric distances or proximities among them. In order to construct what we shall call friendship-hostility maps (I and II), QS-IV will be applied to six yearly matrices, each element of which is a proximity measure, the number of friendly and salient letters sent and received between decision makers that year. The resulting dimensions will be called friendly and salient letter flow measures (FASLF). The basic idea of QS-III is that, for any asymmetric data matrix of individual characteristics, it provides a way of spatially representing, in a meaningful way, a joint plot of individuals and variable categories, each treated as single points. In order to construct what we shall call friendship-hostility maps (III-V), QS-III is applied to the matrix, each element of which is 1 or 0 according to whether an individual does or does not evidence a categorical data characteristic. The resulting dimensions will be called the measures of appeals to shared principles and journalistic attention (ASP/JAT).

In the rest of this paper, after a review of data sources for the three East Asian communist powers, we will first discuss the conceptual basis or

data theory underlying our measure construction efforts. Then, we will provide a short nonmathematical explanation and suggest the considerations which lead us to choose these analysis procedures over others. Thirdly, we will explain operationalizing procedures for FASLF and ASP/JAT measures. Then, the results will be presented. Two major substantive findings which are more or less different from historians' judgment are the following: (1) In 1964, Peking seemed less friendly to Pyongyang while Pyongyang seemed more friendly to Peking. This asymmetry of the degrees of friendliness seemed to lead to an end to the Peking-Pyongyang honeymoon of 1963; (2) despite the sometimes-seen characterization of Pyongyang's policy after 1965 as pro-Soviet policy, Pyongyang's policy seems to be better phrased as the "middle-of-the-road" policy or "positive neutral" policy. This seems to be evidenced by the generally low degree of friendliness toward both Peking and Moscow in 1965-1966 compared with the "passive neutral" policy of 1961 (Cho, 1967), when the high degree of friendliness toward Peking and Moscow was observed. On the other hand, the major trends, much discussed by historians, toward a loosening of bloc cohesiveness are discovered by both FASLF and ASP/JAT measures. The major, and on occasion asymmetric, bloc differences are detectable in 1961-1966, which most historians now retrospectively agree to have been the period of the first public eruptions in the Sino-Soviet dispute. The correct and prompt identification of such polycentrism that such an analysis as ours might have made possible adds to our belief in the validity and usefulness of the measures we propose.

## DATA ALTERNATIVES

### *Data Sources*

Four general approaches to measuring international friendship and hostility exist in the international relations literature, each focused on a particular kind of data: diplomatic correspondence (Holsti, 1965; Holsti, North, and Brody, 1968; Zinnes, 1968; and Chourci, 1969), event chronologies (McClelland, 1968; Moses *et al.*, 1967; Azar, 1970; and Gamson and Modigliani, 1971), public opinion surveys (Merritt and Puchala, 1969), and international transactions (Russett, 1963; and Alker and Puchala, 1969). Each tradition has its own uses and limitations: multiindicator research is clearly needed to validate or invalidate their findings (Campbell and Fiske, 1959).

From this perspective, however, we shall focus on the utility of diplomatic correspondence published by the three East Asian communist powers, leaving the attempt of validation in another paper (Inoguchi, in preparation). The kind of diplomatic correspondence we will deal with is the formal letters exchanged between the decision makers of Peking, Pyongyang and Moscow. These letters are printed in the organs of the communist party of each country: *Jenmin jihpao* (People's Daily), *Rodong shinmun* (Labor News), and *Pravda* (Truth). The occasions on which these formal letters have

been exchanged include most typically: anniversaries of communist parties, military forces, treaties and agreements, the establishment of diplomatic relations and historical national events of special significance for her leaders, including birthdays and deaths, visits to other countries, party congresses, changes or reappointments to positions in party and government. Less routine events, such as natural disasters, polemics, satellite launching, and nuclear bomb experiments have also occasioned correspondence. These letters are ordinarily short except for the cases of polemic nature like the Sino-Soviet dispute. Words, phrases and styles are formalized. (See Appendix 1, a letter from Peking to Moscow on November 7, 1965, which is a relatively long one for this kind of letter.)

Now the considerations which lead me to prefer this kind of data over other kinds of data are spelled out below. First, the often held view that there is very little important information about communist affairs is not necessarily true. The problem is sometimes not the paucity of information and the inaccessibility of elites, but the paucity of ideas for making use of this potentially fruitful information.<sup>4</sup> Public information of communist countries provides us with great advantages: (1) because of the strong control of mass media by party-state, it must be safe to think that articles appeared in the official newspapers basically represent leadership views;<sup>5</sup> (2) furthermore, among channels of international communication between state-societies, an official, formal, intergovernmental, interparty, interelite, or interdecision maker communication channel seems most important.

Second, if our interest lies in unobtrusively measuring decision maker's perception, it is better to get data with as little "noise" as possible. This

<sup>4</sup>This view is held, for instance, by Oksenberg (1969). Arguing "Sources and Methodological Problems in the Study of Contemporary China," he forcefully concludes:

First, the China field does not face a scarcity of sources. The real problem is to cope with the diversity. Second, in order to penetrate beyond the limits of any single source, research must be based upon several different sources. Conclusions are most sound when supported by convergent data from several sources. Third, no methodological panacea can solve the research problems we have been discussing. The problem can be handled only with the intelligence, imagination, and total familiarity with the sources. Increased use of computers, quantitative content analysis, and other advanced research technique cannot eliminate the problems; the danger is that they may camouflage them (p. 605).

As for the first one, I agree. As for the second one, I agree. As for the third one, I would say that the problem can be handled only with the intelligence, imagination, total familiarity with sources, *and* scientific methodology.

<sup>5</sup>See, for instance, Inkeles (1950), Yu (1964), and Holsti (1968, pp. 639-640). One might ask, "How about trial balloons?" Trial balloons are considered to represent a possible choice among alternatives. Another might ask, "How about the case of *Jenmin jihpao* of 1966 when *Chiehfan chünpao* (military organ) charged *Jenmin jihpao*? This case represents the diversity of opinions among leadership and subsequent leadership changes. By leadership views is never meant that there are only definite views. There is much diversity.

consideration leads us not to be concerned with third parties' perceptions as bases for analysis. Thus, we do not use events chronologies derived from the *New York Times Index* or other such sources.<sup>6</sup> For the same reason, I do not rely on translation, the usual strategy in crossnational content analysis (Merritt, 1970). This does not mean that I reject the use of secondary sources and translations in other situations.<sup>7</sup>

Finally, given an initial commitment to content analyze public documents, the need for cross-national comparability<sup>8</sup> argues strongly in favor of using only official correspondence in measuring friendship and hostility. If we took a broader data strategy, it would be even more difficult to find crossnationally comparable materials. This consideration leads us not to treat a vast amount of publicized party and governmental documents like personal statements of leaders, resolutions of, and reports at, party congresses or Central Committee plena, articles in the party press, government statements and articles in official or semiofficial journals (Griffith, 1967). Again, I must hasten to say that I do not necessarily reject the use of these documents in other situations or for other purposes.

*Concepts for Coding Published Diplomatic Correspondence:  
Friendly and Salient Letter Flow, Appeals to Shared  
Principles and Journalistic Attention*

In this study we shall construct and use measures of these qualitative concepts: friendly and salient letter flow (FASLF), appeals to shared principles (ASP), and journalistic attention (JAT). These concepts are assumed to be highly relevant to the dimension of friendship and hostility between

<sup>6</sup>To use the *New York Times* means to use the people of the *New York Times* as "respondents" to the "questionnaire" of open-end format. Those who take event chronologies as a data source often use the *New York Times Index* (See McClelland, 1968; Azar, 1970; and Gamson and Modigliani, 1971). Also, conflict behavior studies by Rummel and others use the *New York Times Index*. (See e.g., Rummel, 1965.) The question is sometimes raised about the fact that they employ questionable data in spite of their very sophisticated analysis technique. (See e.g., Hilton, 1970.)

<sup>7</sup>Indeed, in the twin paper, I hope to establish the degree of correspondence between my official communication measures and other measures derived from event chronologies and international transactions as a multimethod way of validating these measures.

<sup>8</sup>See Merritt (1970). Comparability here meant is a bit different from that used in Moses *et al.* (1967). They want to "compare the messages or the acts of given country in two or more different crises in which it was a participant." Thus, they assume that the documents they use to describe crisis events well. A similar problem exists in gathering event data. See Azar (1970) and Gamson and Modigliani (1971) for the discussion of the problem of source coverage. As for the method of paired comparisons, Azar (1970) used Thurstone's technique which makes a parametric assumption in constructing interval scaled measures. Guttman's technique has no such assumption. See Guttman (1946), Torgerson (1958) and David (1963).

states that we are ultimately trying to measure. In various ways they reflect the esoteric characteristics of communist elites toward stylized ideological communications. In other words, we are assuming that what is tapped by these concepts reflects underlying dimensions of friendship and hostility fairly well.

Friendly and salient letter flow is defined as the frequency of the friendly letters between decision makers which are printed in at least one of the *Jenmin jihpao*, *Rodong shinmun*, and *Pravda*. It seems that they do not print a letter in a newspaper if they do not think it to be worth printing or if they do not like it. In a controlled press, such omissions can be important as exceptional inclusions. Thus, there were 235 letters printed by only one of the two parties and 161 letters printed by both during 1961-1966. These letters are all favorable or friendly in a usual sense. The number of unfavorable or hostile letters is very small ( $N=18$ ). The number of letters which were not printed by either side is, obviously, unknown. In the newspapers we deal with, there are only 18 unfriendly letters out of 396 letters, and these unfriendly letters are found only between Peking and Moscow. In other words, there is no unfriendly letter found between Peking and Pyongyang, and between Pyongyang and Moscow. This fact provides a strong rationale for using the frequency of the favorable letters printed in the newspapers since we are interested in constructing the measures of friendliness (or more accurately speaking, a measure of unfriendliness) from natural measure of proximity or closeness (in this case, friendly and salient letter flow). Put another way, we are assuming that, in centrally controlled societies, friendly letters which are printed in the official newspapers are politically salient.

Appeals to shared principles are themes referred to in a letter exchanged between decision makers. They are assumed to be appeals to the sender's policy or the positive reply to these appeals in formalized words and phrases. The 15 principles dealt with in this study include: construction of socialism (if a letter evidences this category, then it is coded 1; otherwise 0), peace keeping and consolidation, mutual friendship, unity and solidarity of the Socialist Camp, antiimperialism, blows to imperialism, struggle for national liberation, unification of fatherland (Korea), social progress, welfare and prosperity, peaceful coexistence and peaceful competition, consolidation of national defense, self reliance and independence, and antirevisionism.<sup>9</sup>

Why are these seemingly stereotyped words and phrases so important in the esoteric communication of the communist world? Let us illustrate the importance of the principles by an example.

<sup>9</sup>These are relatively extensive lists of frequently appeared principles. See Appendix 2 for the definition. In order to enable the comparison over time overspecification of the principle is avoided. For instance, "a joint action against imperialism" is included in "antiimperialism."

A letter from Pyongyang to Moscow was printed both in *Rodong shinmun* and *Pravda* on November 7, 1962. The letter appealed to the principle of consolidation of national defense. But the reference to this principle in the letters to Moscow ceased until February 23, 1965. It would be safe to think that, carefully observing the Soviet handling of the Cuban missile crisis, Pyongyang became doubtful about Moscow's solid military commitment to a small communist country like Cuba and North Korea. On February 7, 1965, the U.S. bombing of North Vietnam began. This action must have posed a serious threat to all East Asian communist countries. Again, it would be safe to think that Pyongyang's appeal for consolidation of national defense in the letter to Moscow on February 23, 1965 means the *de facto* reapprochement, if not total, of Pyongyang and Moscow as well as Pyongyang's resolute determination against the United States and expectation of Moscow's military assistance. On the other hand, during 1963 and 1964, Pyongyang appealed to this principle in the letters to Peking. Even after the U.S. bombing of North Vietnam, Pyongyang continued to do so. It would be safe to think that Pyongyang returned from "anti-Moscow" policy to the "middle-of-the-road" policy *vis-à-vis* Moscow and Peking in 1965. The point is that these seemingly conventional words mean or suggest policy action (Zagoria, 1962; Griffith, 1967; Ra'anana, 1969; Brzezinski, 1967, and Schurman, 1970) and that these words are often used according to a specific audience (Bauer, 1958).

Journalistic attention is defined in terms of newspaper coverage and letter wording which indicate high salience. Because such decisions usually reflect official governmental policies, this is assumed to be indicative of high salience of a sender and a receiver. There are eight variables (or 21 variable categories) of journalistic attention. These include the following: (1) whether a letter is printed in either one of the two newspapers concerned (if a letter evidences this category, then it is coded 1; otherwise 0) or in both (if a letter evidences this category, then it is coded 1; otherwise 0); (2) on what page of a newspaper the letter is printed: on page 1, on page 2 or on some other page; (3) what kind of relationship the letter has *vis-à-vis* other letters, if any, on the same page of the newspaper: up/left, down/right, or irrelevant; (4) gap between the date written down in the letter and the date of the newspaper on which the letter is printed: none/one day, two days, or more days; (5) space assigned to the letter in a newspaper: large, medium or small; (6) length of the letter in terms of the number of periods and exclamation marks: long, medium or small; (7) special salutation: present or absent; (8) cheers: present or absent.

To the best of my knowledge, these aspects tapped by the notion of journalistic attention have not been systematically explored before (Russett, 1963). It may be strange that, although a lot of attention is paid to this kind of phenomena in Kremlinology, their efforts are not so systematized as is

required in "quantitative" content analysis (Zagoria, 1962; Griffith, 1967; Ra'anan, 1969; Brzezinski, 1967; and Schurman, 1970).

But, if one looks only at one letter casually, he might conclude that these aspects do not seem to be significant at all. Let us illustrate this point.

It seems to be accepted fairly well that in 1963 and 1964 Peking and Pyongyang were very friendly. But there seems to be asymmetry on the degrees of friendliness toward each other. The comparison between some aspects of diplomatic correspondence on national anniversaries of Peking and Pyongyang in 1963 and 1964 seems to show the importance of the aspects of journalistic attention. The number of the principles appealed to in the letters from Peking to Pyongyang decreased from 1963 to 1964, while the number of the principles appealed to in the letter from Pyongyang to Peking increased from 1963 to 1964. From these we may infer that Peking was not so friendly to Pyongyang as Pyongyang was to Peking. This inference can be confirmed by looking at journalistic attention: how the letter from Peking to Pyongyang is printed in *Rodong shinmun* in 1964. In spite of the fact that the letter from Peking to Pyongyang is fairly short, the space assigned to this letter in *Rodong shinmun* is large; the heading for the letter is big. Thus, it would be safe to think that, despite Peking's lower degree of acceptance of, or responsiveness to, Pyongyang in 1964, Pyongyang seemed to be as earnest as in 1963.

### METRICIZING ALTERNATIVES

To construct measures for measuring international friendship and hostility, I use two versions of quantification scaling: QS-IV and QS-III.<sup>10</sup>

#### *QS-IV As Operationalizing Procedure for Generating FASLF Measures*

The basic idea of QS-IV is to assign spatially meaningful locations to individuals derived from sociometric proximity of social friendship measure (Hayashi, 1952; and Abelson, 1964). The fact that we have a natural measure of proximity as an input and that we want a distance or proximity plot as an output leads us to choose QS-IV over other methods. FASLF measures are

<sup>10</sup>QS-III was originally derived from Guttman and generalized by Hayashi, who proposed other three quantification procedures than QS-III in order to handle different types of problems. One of them is QS-IV. One of the other two procedures can be included in a general linear model of Fennessey type with nominally scaled dependent variable (Fennessey, 1968). The other can be called a linear discriminant function with nominally scaled independent variables and nominally scaled dependent variables. As for the entire picture of these procedures, see Hayashi's papers in the *Annals of the Institute of Statistical Mathematics* (Tokyo).



derived from six yearly  $3 \times 3$  asymmetric matrices each element of which is the yearly total of friendly and salient letters except for diagonal elements which are all 0. To each of these matrices QS-IV is applied. Since we are dealing with natural measure of proximity, the nontrivial second dimension seems to tap the residual elements in the sociometric matrix in this case and hence it turned out to be unnecessary to include the nontrivial second dimension.

Since we are interested in the change of friendliness over a period of time, it is necessary to take into account the efficiency of explanation of each dimension. Thus, we scale eigenvectors so that each variance is equal to the eigenvalue divided by the trace of a matrix.<sup>11</sup> Another operation is made in order to standardize the difference of the sums of the letters each year. The underlying assumption of this operation is that the larger the rate of friendly and salient letters the more friendly the pair of states-parties involved. The obtained measures show relative positions among the three countries in terms of friendliness and hostility. In short, we obtained one-dimensional numerical values each year, which represent each country's position *vis-à-vis* others in terms of friendliness and hostility. Then, we calculate the difference of each value assigned to each country each year. The values thus obtained are FASLF measures. FASLF measures are more accurately speaking the measures of unfriendliness or distance. For the sake of simplicity, abbreviation is used such that FASLF ( $xy$ ) stands for the measure of friendliness between  $x$  and  $y$ , derived from friendly and salient letter flow, quantified by QS-IV, where  $x$  and  $y$  are either Peking, Pyongyang or Moscow.

### *QS-III As Operationalizing Procedure for Generating ASP/JAT Measures*

The basic idea of QS-III is that, without any *a priori* statistical assumptions about data distribution, it allots quantitative scores to quantitative individuals and variable categories so as to maximize the correlation coefficient between scores for these individuals and variable categories.<sup>12</sup> The

<sup>11</sup>One might ask, "Why not  $\lambda$  rather than  $\lambda/\text{tr}E$ ?" This is because some constant  $c$  ( $c < 0$ ) is added to each nondiagonal element of the matrix  $E$  without changing the value of eigenvectors and the value of  $\lambda/\text{tr}E$  in order to make the eigenvalue positive.

<sup>12</sup>The literature of QS-III includes Guttman (1941, 1950 and 1954), Hayashi (1950 and 1952), Torgerson (1958), Aoyama (1965), Kyogoku (1967), Takabatake (1968), Alker (1969), Yasuda (1969), and Hayashi *et al.* (1970). Aoyama (1965) demonstrated that QS-III is a kind of canonical correlation analysed with dummy variables. Kendall and Stuart (1967) has shown in a different way the same method as QS-III as applied to  $r \times c$  contingency table. Furthermore, Kyogoku (1967) has proposed a method to make QS-III applicable to  $n$ -way contingency table like  $n$ -mode factor analysis. Some recent progress beyond QS-III has been made by Guttman-Lingoes. See Guttman (1968) and Lingoes (1968). MAC-II is equivalent to QS-III. Inoguchi (1970a) applied it to the data of cross national survey of *Images of the World in the Year 2000*. Inoguchi (1970b) is the detailed account of the larger work on which this paper is based.

fact that we have nonmetric data as an input and that we want a multi-dimensional, spatial, joint plot as an output leads us to choose QS-III over other methods.

ASP/JAT measures are constructed from the  $69 \times 36$  asymmetric matrix each element of which is a response to each category of the variables (i.e., 1 or 0). Since the measurement procedure I follow is "unorthodox," some explanation is necessary. The main difference from the usual quantitative content analysis procedure is that I never aggregate the data being analyzed, i.e., we apply QS-III directly to a qualitative data matrix.<sup>13</sup> There are two reasons why this is possible. One is that, because of the style and length of the letters we deal with, counting the frequency of the same principle in a letter does not seem important.<sup>14</sup> The other is the ability of QS-III to handle qualitative data.

As will be shown later, we get two important dimensions: friendship *vs.* unfriendliness and bloc unity *vs.* independence. Luckily enough, these two dimensions give us a fairly adequate summary of the data matrix at least for our purposes. For the two dimensional spatial representation, it is necessary to take into account the efficiency of explanation of each dimension. Thus, we scale eigenvectors so that each variance is equal to each eigenvalue. In short, we obtained two-dimensional numerical values, which represent each letter's position *vis-à-vis* others in terms of friendliness *vs.* hostility and bloc unity *vs.* independence. For the sake of simplicity abbreviation is used such that ASP/JAT(*x:y-z*) stands for the measure of perception on the dimensions of friendship *vs.* unfriendliness or bloc unity *vs.* independence by *x* of a letter from *y* to *z*, derived from appeals to shared principles and journalistic attention, quantified by QS-III, where *x*, *y*, and *z* either Peking, Pyongyang or Moscow.

<sup>13</sup>See, for example, the Stanford content analysis studies where the assumption is made that the more frequent, the more important. This problem may remind us of Chomsky's criticism against Skinner. Chomsky argues about Skinner's notion of "response strength" like this:

For example, 'if we are shown a prized work of art and exclaim *Beautiful!*, the speed and energy of the response will not be lost on the owner.' It does not appear totally obvious that in this case the way to impress the owner is to shriek *Beautiful* in a loud, high-pitched voice, repeatedly, and with no delay (high response strength). It may be equally effective to look at the picture silently (long delay), and then to murmur *Beautiful* in a soft, low-pitched voice (by definition, very low response strength). (Chomsky, 1959, p. 135)

As for the discussion on quantitative *vs.* qualitative content analysis, see Pool (1959) and Holsti (1968).

<sup>14</sup>By saying this I never mean that frequency counting must always be rejected. I want to emphasize that the measurement strategy is more realistically constructed according to situation-specific complexities.

## QUANTIFICATION SCALING RESULTS

As of August 1971, no global conference of communist parties has been held since the Moscow conference of 81 communist parties in 1960.<sup>15</sup> Despite the chorus of socialist solidarity of the conference, events since then seem to show the opposite. The triangle between Peking, Pyongyang, and Moscow during 1961-1966 experienced rapid change and great upheaval. Historians now recognize that there were four major trends in the Peking-Pyongyang-Moscow triangle during 1961-1966: the intensifying conflict between Peking and Moscow with the temporal slight reduction of tensions in 1964 and 1965, the rapprochement between Peking and Pyongyang from the Cuban missile crisis up to the change of the Soviet leadership in October 1964, Pyongyang's return to the "middle-of-the-road" policy since the intensified Vietnam war, and the complete isolation of Peking after August 1966. A summary of six experts' reorganization in terms of the change in the degree of friendship and hostility is presented in Table 1.<sup>16</sup> With these experts' friendship-hostility assessment, our results will be compared and gross convergence and some differences between experts' and our interpretations will be shown.

*FASLF Measures*

Now we turn to FASLF measures. Since FASLF measures are the measures of unfriendliness, the higher the value of FASLF( $xy$ ), the more unfriendly  $x$  and  $y$ .

FASLF( $ck$ )s seem to represent the "actual" degree of friendliness fairly well. Particularly the rapidly shortened distance from 1961 to 1963 is noteworthy. The trend of widening distance from 1963 to 1966 is also reasonable. The FASLF( $ck$ ) of 1964 seems greater than I expected. But, as will be shown later in Fig. 3 of ASP/JAT measures, it seems that the friendliness between Peking and Pyongyang decreased in 1964 to a significant degree. The FASLF( $ck$ ) of 1965 is different from historians' judgments. Yet, since the year of 1965 is so full of different moves in East Asian communist countries partly because of the intensification of the Vietnam war, particularly the U.S. bombing of North Vietnam which accelerated the move toward "a joint action against imperialism" and, as a corollary, partly because Pyongyang did not want to antagonize either one of Peking and Moscow, the FASLF( $ck$ )

<sup>15</sup>The communist conference of June 1969 enjoyed quite a number of representatives of the communist parties in the world. But it cannot be called that the conference is global in the sense that several influential communist parties did not participate in the conference.

<sup>16</sup>Since historians' argument is not necessarily explicitly clear in terms of friendliness and hostility, the coding involves my interpretation of their description and explanation.

TABLE 1  
Historians' description in terms of friendship-hostility<sup>a</sup>

Peking- Pyongyang	1961	1962	1963	1964	1965	1966
Koh 1969	neutral	more friendly	more friendly	more friendly	less friendly	less friendly
Cho 1967	more friendly	more friendly	more friendly	as friendly as 1963	less friendly	less friendly
Kun 1964/67	more friendly	more friendly	more friendly	more// less friendly	less friendly	less friendly
Peking- Moscow	1961	1962	1963	1964	1965	1966
Brzezinski 1967	less friendly	less friendly	less friendly	less// more friendly	more// less friendly	?
Griffith 1964/66	less friendly	less friendly	less friendly	less// more friendly	less friendly	?
Hinton 1966/70	less friendly	less friendly	less friendly	less// more friendly	less friendly (?)	less friendly
Pyongyang- Moscow	1961	1962	1963	1964	1965	1966
Koh 1969	neutral	unfriendly	less friendly	less friendly	more friendly	more friendly
Cho 1967	less friendly	less friendly	less friendly	as friendly as 1963	more friendly	as friendly as 1965 (?)
Kun 1964/67	more friendly	less friendly	less friendly	less// more friendly	more friendly	more friendly

<sup>a</sup>// means that there is a turning point within a year so that there are two more or less opposite characteristics, each based on the different periods. In 1964, that is the change of the Soviet leadership. In 1965, that is the beginning of the US bombing of North Vietnam. Agreement ratio with FASLF measures is 46.7% while that with ASP/JAT measures of the first dimension (i.e., friendship vs. unfriendliness) is 67.8%. After taking account of the reasons spelled out later, the agreement ratios with both FASLF and ASP/JAT measures of the first dimension (i.e., friendship vs. unfriendliness) become 86.7%.

of 1965 seems reasonable. The FASLF(*ck*) of 1966 does reflect the worsened relationship between Peking and Pyongyang, caused primarily by China's Cultural Revolution.

FASLF(cs)s seem to reflect very well the “actual” degree of friendliness between Peking and Moscow. The widening split from 1961 to 1963 is very reasonable. After the relative, temporal mitigation of controversies of 1961, the Cuban missile crisis and the Sino-Indian border conflict raised the intensity of the conflict. It reached its zenith when the Sino-Soviet talks at Moscow resulted in a wider split. Until the change of the new Soviet leadership in October 1964, the tension increased. Since that time, a new move began to reduce conflict to a certain extent. The FASLF(cs) of 1964 is, however, a kind of average of these two opposite characteristics because the unit of FASLF measures is year. The new move was accelerated by the intensification of the Vietnam war in 1965. The FASLF(cs) of 1966 is the greatest of all as was expected.

FASLF(ks)s too seem to reflect the “actual” degree of friendliness. Particularly two things are worth noting. First, Pyongyang and Moscow were very unfriendly in 1963 as reflected in the FASLF(ks) of 1963 very well. This move away from Moscow began after the Cuban missile crisis of 1962. Second, since the intensification of the Vietnam war and the change of the Soviet leadership, Pyongyang seems to have returned to the “middle-of-the-road” policy *vis-à-vis* Peking and Moscow as reflected in the FASLF(ks)s of

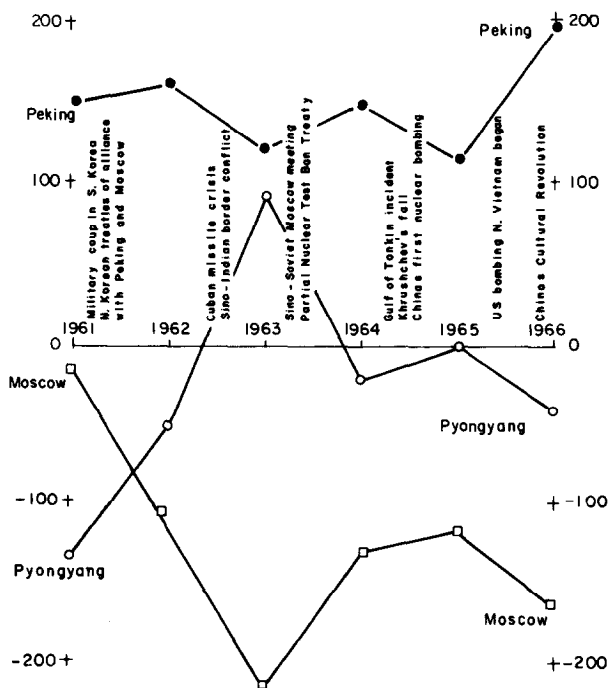


Fig. 1. Friendship-hostility map I: point representation of FASLF measures.

1964 to 1966, although the FASLF(*ks*) of 1964 seems to overemphasize the new move toward the partial rapprochement between Pyongyang and Moscow.

In sum, it can be said that FASLF measures do reflect fairly well the "actual" degree of unfriendliness between Peking, Pyongyang, and Moscow. The divergences from the historians' judgments seem to be mainly due to: (1) averaging two opposite characteristics within a year (the case of the FASLF(*cs*)s of 1964 and 1965); (2) debatable historians' judgments (the case of the FASLF(*ck*) of 1964); (3) overemphasis of the tendency of rapprochement (the case of the FASLF(*ks*)s of 1964 and 1965). After these corrections, 86.7% of the comparable table entries correspond.

### *ASP/JAT Measures*

ASP/JAT measures consist of two dimensions. Table 2 shows the eigenvectors of the first and second dimensions.

The first dimension is clearly that of friendship vs. unfriendliness. The following variables are particularly important to this dimension: the space

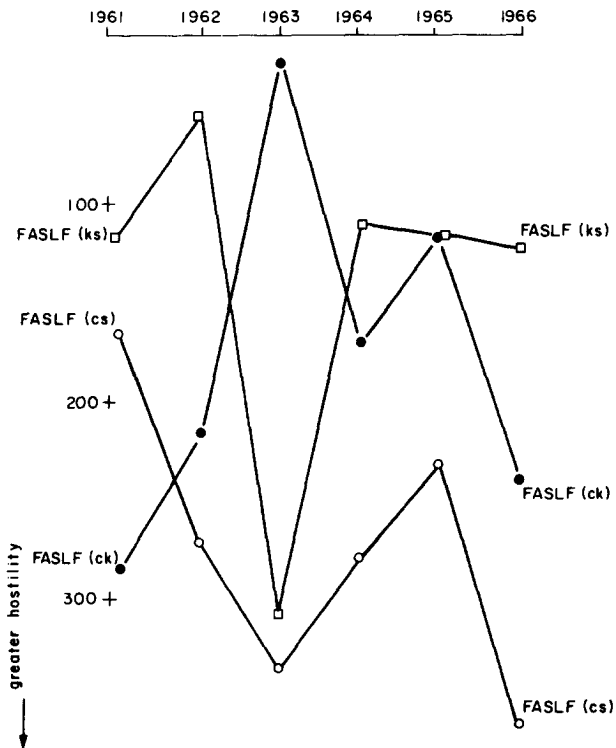


Fig. 2. Friendship-hostility map II: distance representation of FASLF measures.

TABLE 2

Two-dimensional values assigned to variable categories of ASP/JAT

	First dimension	Second dimension
1. construction of socialism	-0.07	-0.00
2. peace keeping-consolidation	0.17	0.03
3. mutual friendship	-0.12	0.03
4. unity-solidarity of the Socialist Camp	0.14	0.31
5. superiority of the Socialist Camp	0.78	0.20
6. antiimperialism	0.15	-0.05
7. blows to imperialism	0.81	0.21
8. struggle for national liberation	0.32	-0.02
9. unification of fatherland (Korea)	-0.26	-0.81
10. social progress	0.63	-0.09
11. welfare-prosperity	0.07	-0.13
12. peaceful coexistence-peaceful competition	-1.71	2.21
13. consolidation of national defense	0.91	0.44
14. selfreliance and independence	0.24	-1.03
15. antirevisionism	0.73	-0.90
16. a letter printed in both papers	-0.09	0.00
17. a letter printed in one of the two papers	-2.69	1.65
18. a letter printed on page 1	-0.21	-0.17
19. a letter printed on page 2	-0.07	-1.76
20. a letter printed on other page	0.03	0.63
21. the relationship a letter has <i>vis-à-vis</i> other letter(s) on the same page: up/left	-0.59	0.45
22. <i>ibid</i> : down/right	0.18	-0.25
23. <i>ibid</i> : irrelevant	-0.11	0.01
24. gap between the date written down in a letter and the date of the paper on which the letter is printed: none/one	-0.21	0.07
25. <i>ibid</i> : two days	0.66	-0.22
26. <i>ibid</i> : more days	-2.14	-0.10
27. space assigned to a letter in a page: large	0.54	0.28
28. <i>ibid</i> : medium	0.35	0.10
29. <i>ibid</i> : small	-1.25	-0.30
30. length of a letter: long	0.63	0.72
31. <i>ibid</i> : medium	0.45	-0.42
32. <i>ibid</i> : small	-1.16	-0.17
33. special salutation: present	0.34	-0.10
34. <i>ibid</i> : absent	-0.57	0.15
35. cheers: present	-0.51	1.06
36. <i>ibid</i> : absent	0.03	-0.40

assigned to a letter in a newspaper, the length of a letter, special salutation, superiority of the Socialist Camp, blows to imperialism, consolidation of national defense, and antirevisionism. There are a few categories which show a somewhat extreme value. They include: the second category of the variables of whether a letter is printed either by one of the two or by both, the third

category of the gap between the date written down in a letter and the date of the newspaper in which a letter is printed, and peaceful coexistence-peaceful competition. This is explained by the tendency that QS-III tends to assign extreme values to those categories the frequency (column sum) of which is extremely small. Thus, these values should be somewhat discounted in assessing their implications.

We name the second dimension "bloc unity vs. independence." It provides strong evidence for attractiveness of a multidimensional perspective. The following variables are particularly important to this dimension: whether a letter is printed on either page 1, page 2, or other, cheers, unity and solidarity of the Socialist Camp, unification of fatherland (Korea), selfreliance and independence, and antirevisionism.<sup>17</sup>

On these two dimensions of friendship vs. unfriendliness and bloc unity vs. independence are spatially located twelve perception triples. Although QS-III allows us a joint plot, we did not do that simply because that makes figures messy.

The major trends of the change of the relations between Peking and Pyongyang seem to be well reflected in four perception triples of both sides.

During 1961-63 a move toward the fourth quadrant: friendship and independence, is seen. In other words, Peking and Pyongyang rapidly got friendly and at the same time revolted against bloc unity as envisaged by Moscow. The squares the vertices of which consist of the positions of four perception triples of these years are small as compared with others: perceptions of both sides in terms of friendship-unfriendliness, and bloc unity-independence are relatively symmetric. In other words, reciprocity seems to be relatively well realized. Particularly in 1963 the four perception triples between Peking and Pyongyang show congruent pattern. In 1964, however, symmetry broke. While ASP/JAT(*k:k-c*) is more friendly and more bloc-unity-concerned, ASP/JAT(*c:c-k*) is less friendly and more independence-concerned. It seems that the rapprochement began to erode in 1964 in spite of the harsh charge against Moscow by Peking and Pyongyang in this year. This point is different from the six experts' interpretation. The ASP/JAT(*k:k-c*) of 1964 is far more friendly than the ASP/JAT(*c:c-k*) of that year. That means, it can be inferred, that Pyongyang was more concerned with Peking than Peking was with Pyongyang. In 1965, despite the intensification of the threat of the United States to all East Asian communist countries, there seemed to be more diversity rather than unity. In Pyongyang's letter to Peking, the principle of antirevisionism disappeared, and the principle of consolidation of national

<sup>17</sup>A preliminary test of comparing our result about how much importance each variable has in terms of friendship vs. unfriendliness and of bloc unity vs. independence, and an expert's judgment showed that the majority were in agreement, but that the expert tended to obscure the difference between the two dimensions. It would be very rewarding to follow up the test more systematically.



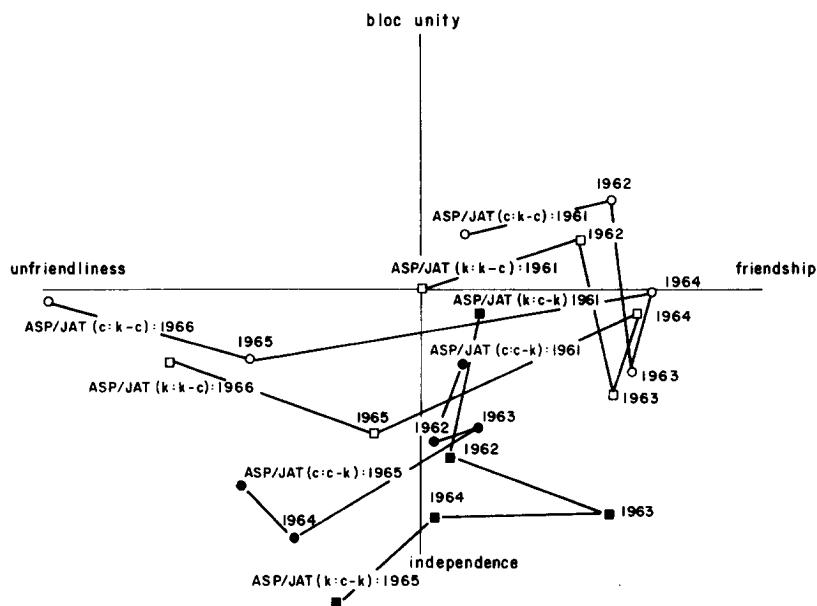


Fig. 3. Friendship-hostility map III: Peking-Pyongyang perception triples of ASP/JAT measures.

defense was appealed to in the letter to Moscow but not in the letter to Peking. In 1966, Peking seems to have failed to send a letter to Pyongyang on the anniversary of the liberation of Korea since we cannot find it both in *Jenmin jihpao* and *Rodong shinmun*.

Four perception triples between Peking and Moscow during 1961-1963 remained relatively stable except for the ASP/JAT(*s:s-c*) and ASP/JAT(*c:s-c*) of 1962. This may indicate that ASP/JAT measures are not sensitive to the increasing tension between them during this period. But this is reasonable in the sense that the formal diplomatic correspondence in the national anniversary is the last stand for maintaining the seemingly friendly façade. More important than this is that the ASP/JAT(*c:c-s*)s of 1962 and 1963 are more independence-concerned than before. The extreme deviation of the ASP/JAT(*s:s-c*) and ASP/JAT(*c:s-c*) of 1962 is mainly due to Moscow's reference to the principle of peaceful coexistence-peaceful competition in the letter to Peking. Though a bit extreme, this is reasonable in the sense that Moscow was able to appeal for this principle because Moscow may have anticipated this appeal would not be so incongruent or so uncomfortable to the leadership group, or at least a part of it, of Peking at that time. The extreme disparity between the ASP/JAT(*c:c-s*) and ASP/JAT(*s:s-c*) of 1964 is due to the radical change of the situation during the time when these two letters were exchanged: the change of the Soviet leadership and the intensification of the Vietnam war. The ASP/JAT(*c:c-s*) of 1964 does reflect Peking's

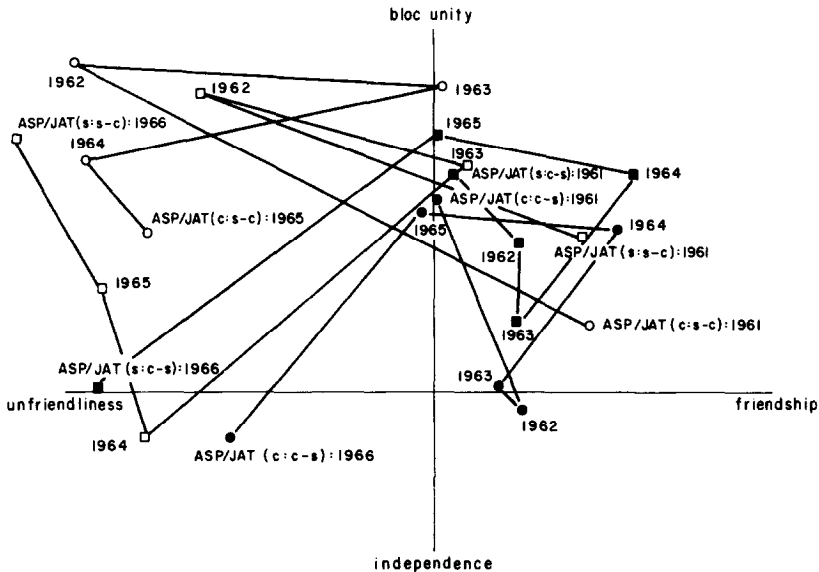


Fig. 4. Friendship-hostility map IV: Peking-Moscow perception triples of ASP/JAT measures.

new approach to Moscow after Khrushchev's fall. The ASP/JAT(s:s-c) of 1964 does reflect the unfriendly posture of the last phase under the leadership of Khrushchev. The ASP/JAT(c:c-s) and ASP/JAT(s:s-c) of 1965 show almost the same disparity. Having in mind the continuation of the 'debate' in Peking about the basic policy line during 1965-1966, and having in mind that the group who asserted a partial rapprochement with Moscow was still strong in late 1965, we can understand that the location of the ASP/JAT(c:c-s) of 1965 seems reasonable. After the outburst of the Red Guards since August 1966, almost every foreign relationship with communist countries worsened extremely. A hostile relationship is well reflected by the perception of both sides of 1966.

In sum, despite the temporal tactical moves in Peking and Moscow around the late 1964 and 1965, the relationship between them seems to worsen year by year during 1961-1966.

The move toward greater friendship of the ASP/JAT(k:k-s) and ASP/JAT(s:s-k) of 1962 is reasonable because Pyongyang's estrangement from Moscow became conspicuous only after the Cuban missile crisis. Restraint seems to be important to explain the behavior of smaller countries *vis-à-vis* a great power. The ASP/JAT(k:k-s) of 1963 seems to be explained by this like the ASP/JAT(c:c-s) of 1961-1963. For the year 1963 seems to have been the worst for the relationship between Pyongyang and Moscow as is judged by the six experts. However, we must also note here that the ASP/JAT(k:k-s) of

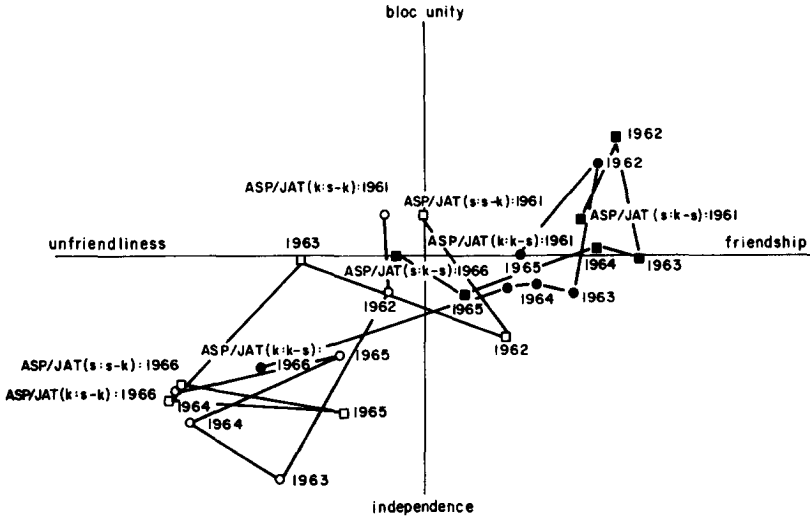


Fig. 5. Friendship-hostility map V: Pyongyang-Moscow perception triples of ASP/JAT measures.

1963 moved toward more independence. The principles of consolidation of national defense and unity of the Socialist Camp, both of which were appealed to in 1962, disappeared in 1963. Both of these principles revived in 1965 and 1966 in Pyongyang's letter to Moscow. The ASP/JAT(s:s-k) of 1965 is very interesting. The move in the direction of friendship reflects the consideration which came from the intensification of the Vietnam war. Yet, judging from the perceptions of 1964 and 1965, it seems that "a joint action against imperialism" was not enough to get Pyongyang and Moscow together completely. The four perception triples between Pyongyang and Moscow of 1961 are generally higher in the degree of friendliness than those of 1965 and 1966. This fact suggests that Pyongyang's neutral policies in 1961 and in 1965-1966 are very different. This is why we prefer looking at Pyongyang's policy in its own terms to in either pro-Moscow or pro-Peking terms which tends to obscure the point. Pyongyang's assertion of independence seemed very strong while Moscow's policy to retain the leadership of the Socialist Camp seemed also strong. The ASP/JAT(k:k-s) and ASP/JAT(s:s-k) of 1966 seems to show this dilemma.

In sum, it can be said that ASP/JAT measures do reflect fairly well the "actual" degrees of friendliness and bloc diversity between Peking, Pyongyang and Moscow.

The divergence from the historians' judgments seems to be mainly due to: (1) extreme QS-III scores due to low cell frequencies (the cases of the ASP/JAT(s:s-c) and ASP/JAT(c:s-c) of 1962); (2) debatable historians' judgment (the case of the ASP/JAT(c:c-k) and ASP/JAT(k:c-k) of 1964); (3)

the presence of a turning point within a year (the case of the ASP/JAT measures of 1962 between Pyongyang and Moscow). After these corrections, 86.7% of the comparable table entries correspond.

### CONCLUSION

Seeking unobtrusive measures of international friendship and hostility perception, we have proposed and justified two new perceptual measures: FASLF and ASP/JAT. Four things must be noted: (1) the data sources were chosen to reflect friendship and hostility of decision makers with as little noise as possible; (2) in defining our measures, we have tried to use insights of the experts' literature on esoteric communication in coming up with more discriminating measures than a more "theory free" content analysis approach would suggest; (3) no lumping procedures were permitted in order to avoid the problems of aggregation; (4) the statistical methods, QS-IV and QS-III, which do not assume a certain type of data distribution were used in order to reproduce the original data matrix as faithfully as possible in a dimensional perspective.

The two points that more or less diverge from some of the experts' assessments are the following: (1) The relationship between Peking and Pyongyang in 1964 showed asymmetry in terms of the two dimensions of friendship *vs.* unfriendliness and of bloc unity *vs.* independence, thus their relationship in 1964 showed ominous signs for the subsequent departure from the rapprochement of 1963. Many experts seem to overlook this asymmetry of the degree of friendliness probably because they do not compare documents in so systematic a way as to enable us to distinguish subtle difference through time; (2) Pyongyang's policy toward Peking and Moscow after 1965 is not understood well in either pro-Moscow or pro-Peking terms. Experts often seem to have been so much astonished by the Sino-Soviet conflict and the earlier tendency to brand other parties and countries in this term seems to have conditioned the way in which they look at documents and thus they often seem to overlook a simple aspect: increasing selfassertion and maneuvering of nonmajor bloc members. These two points were clarified by using the procedures which enable us to quantitatively assess qualitative aspects of international friendship-hostility perception, based on untranslated, primary documents.

Other than these two, gross convergence was found between the six experts' and our interpretations. This includes an increasing conflict between Peking and Moscow during this period, a rapprochement between Peking and Pyongyang in late 1962 and 1963, a clear isolation of Moscow in this triangle in 1963, and a clear isolation of Peking in this triangle in 1966. Furthermore, it was shown that, due to the change of the Soviet leadership and the intensification of the Vietnam war, together with other factors, there was a move toward the relaxation of tension between Peking and Moscow in late 1964 and 1965, and finally that the degree of friendliness in this triangle during this period decreased substantially.

At the same time, however, some drawbacks have been observed. First, the FASLF(*ks*) of 1964 seems to overemphasize the new move toward the partial rapprochement between Pyongyang and Moscow. Second, the ASP/JAT(*k:k-s*)s and ASP/JAT(*c:c-s*)s of 1962 and 1963 do not seem to be very sensitive to the degree of friendliness. Third, the ASP/JAT(*s:s-c*) and ASP/JAT(*c:s-c*) of 1962 are given a somewhat extreme value. In sum, 13.3% of the comparable table entries do not correspond.

Despite these drawbacks, FASLF and ASP/JAT measures seem to reflect fairly realistically the degree of friendliness in quantitative terms. The success here may be attributed to our strategy of seriously coping with situation-specific complexities rather than to that of seeking for generally applicable research design. In other words, this strategy has started with looking at empirical world carefully and then seeking for adequate research design and operationalizing procedures which are considered to best fit the empirical questions we are concerned with in terms of the modelling assumptions. This is derived, it can be said, from the same motivation of *Unobtrusive Measures: Nonreactive Research in the Social Sciences* by E. T. Webb *et al.*

But the adoption of this strategy, in turn, poses a limitation. This research design has a limited applicability to relations among centrally controlled societies sharing many basic ideological tenets. Thus, this may not be applied directly to the study of the international communication process between, say, the United States and Japan. However, this may not be taken as an intrinsic drawback of this study. The spirit of this study may be phrased like this: *politics rather than statistics takes command* (Schurman, 1970). The dominating principle of political statistics is that of increasing political understanding (Alker, 1969).

#### APPENDIX 1: LETTER FROM PEKING TO MOSCOW ON NOVEMBER 7, 1965<sup>18</sup>

Moscow

Comrade L.I. Brezhnev, First Secretary of the Central Committee  
of the Communist Party of the Soviet Union,

Comrade A.I. Mikoyan, President of the Presidium of the Supreme  
Soviet of the U.S.S.R.,

Comrade A.N. Kosygin, Chairman of the Council of Ministers of  
the U.S.S.R.,

On the occasion of the 48th anniversary of the Great October Socialist  
Revolution, we, on behalf of the Chinese Communist Party, the Chinese

<sup>18</sup> This translation is taken from *Peking Review* (November 12, 1965).

Government and the Chinese people, extend our warm greetings to you, to the Communist Party of the Soviet Union, the Government of the U.S.S.R. and the fraternal Soviet people.

Forty-eight years ago, the proletariat and working people of Russia, under the leadership of the great Lenin and the glorious Bolshevik Party, staged an armed uprising; overthrew the reactionary rule of the landlord class and the bourgeoisie and established the first state of the dictatorship of the proletariat in the world. The Great October Socialist Revolution ushered in a new era in the history of mankind. Over the past 48 years, the liberation struggles of the oppressed peoples and nations throughout the world have surged forward, developed vigorously and scored victory after victory. History has proved and will continue to prove that no force on earth can block the victorious advance of the people of various countries along the bright path of the October Revolution.

Since the first day of the victory of the October Revolution, the great Soviet people have withstood severe trials of every description and displayed great courage and heroism. They defeated armed intervention by international imperialism and the counter-revolutionary rebellion of the landlord class and the bourgeoisie at home and, in a short historical period, built their fatherland into a powerful socialist country. During World War II, the Soviet people, united as one and fearing no sacrifice, smashed the mad onslaughts of the Hitlerite fascists and defended and consolidated the Soviet state power. The great victory of the Soviet patriotic war opened up an even broader path for the oppressed peoples and nations of the world in their cause of liberation. The Chinese people always rejoice from the bottom of their hearts at the great achievements of the fraternal Soviet people. They sincerely hope that the Soviet people will, in the days to come, continue to advance along the glorious path of the October Socialist Revolution and score new victories.

The great friendship between the Chinese and Soviet peoples has been formed in protracted revolutionary struggles. It is everlasting and unbreakable. Whatever the circumstances may be, the Chinese people will, as before, wage a joint struggle together with the fraternal Soviet people, on the basis of Marxism-Leninism and proletarian internationalism, to safeguard and strengthen the friendship and unity between the Chinese and Soviet peoples, oppose U.S. imperialism—the most vicious enemy of the people of the whole world—and its followers, and strive for the victory of the cause of world peace, national liberation, people's democracy and socialism.

Long live the Great October Socialist Revolution!

Long live the great friendship and unity between the Chinese and Soviet peoples!

Mao Tse-tung, Chairman of the Central Committee of the Communist Party of China,

Liu Shao-chi, Chairman of the People's Republic of China,

Chu Teh, Chairman of the Standing Committee of the National People's Congress of the People's Republic of China,

Chou En-lai, Premier of the State Council of the People's Republic of China.

November 6, 1965, Peking

## APPENDIX 2: DEFINITION OF VARIABLE CATEGORIES

### *Appeals to Shared Principles (ASP)*

1. construction of socialism: explicit expression of construction of socialism and construction of socialist society-economy.
2. peace keeping and consolidation: explicit expression of peace keeping, maintenance and consolidation. The phrases like "peaceful unification of fatherland (Korea)" or "peaceful resolution of conflict" are not included.
3. mutual friendship: explicit expression of friendship, amity and unity between the states, the parties and the peoples of a sender and a receiver of a letter.
4. unity and solidarity of the Socialist Camp: explicit positive expression of unity and/or solidarity of the Socialist Camp, communist parties and socialist-communist forces.
5. superiority of the Socialist Camp: explicit positive evaluation of the strength of the Socialist Camp, communist parties and socialist-communist forces.
6. antiimperialism: explicit expression of hostility and confrontation against imperialism, the Imperialist Camp, reactionaries, aggressors and enemies.
7. blows to imperialism: explicit negative evaluation of the strength of imperialism, the Imperialist Camp, reactionaries and enemies.
8. struggle of national liberation: explicit expression of struggle of national liberation.
9. unification of fatherland (Korea): explicit expression of unification of fatherland (Korea).
10. social progress: explicit expression of the progress of society, human beings and human society.
11. welfare and prosperity: explicit expression of welfare, happiness, prosperity and the improvement of the standard of living.

12. peaceful coexistence and peaceful competition: explicit expression of peaceful coexistence and peaceful competition. But the reference with negative evaluation of it is not included.
13. consolidation of national defense: explicit expression of national defense and consolidation of national defense force.
14. selfreliance and independence: explicit expression of selfreliance, independence, autarky and independent unification.
15. antirevisionism: explicit expression of hostility against revisionism.

*Journalistic Attention (JAT)*

1. whether a letter is printed in either one of the two newspapers concerned or in both (two categories).
2. on what page of a newspaper the letter is printed: on page 1, on page 2, or on some other page (three categories).
3. what kind of relationship the letter has *vis-à-vis* other letter(s), if any, on the same page of the newspaper: up/left, down/right, or irrelevant (three categories).
4. gap between the date written down in the letter is printed and the date of the newspaper on which the letter is printed: none/one day, two days or more days (three categories).
5. space assigned to the letter in a newspaper: large, medium or small (three categories). Classification is made according to the principle of almost equal number of letters in each category in each newspaper.
6. length of the letter in terms of the number of periods and exclamation marks: long, medium or small (three categories). Classification is made according to the principle of almost equal number of letters in each category in each newspaper.
7. special salutation: whether an adjective is present or absent on "Comrade X" (two categories).
8. cheers: whether the phrase "Long Live X" is present or absent (two categories).

REFERENCES

- Abelson, R. P. (1964), Mathematical models of the distribution of attitudes under controversy, in "Contributions to Mathematical Psychology," 141-160, (N. Frederiksen and H. Gulliksen, Eds.), Holt, Rinehart, and Winston, N.Y.
- Alker, H. R., Jr. (1969), Statistics and politics: the need for causal data analysis, in "Politics and the Social Sciences," 244-313, (S. M. Lipset, Ed.), Oxford University Press, N.Y.



- Alker, H. R. Jr., and D. Puchala. (1968), Trends in economic partnership: The North Atlantic area, 1928-1963, in "Quantitative International Politics: Insights and Evidence," 287-316, (J. D. Singer, Ed.), Free Press, N.Y.
- Aoyama, H. (1965), *Damī hensū to sūryōka hō e no ōyō* (Application of dummy variables to quantification scaling), *Tōkei Sūri Kenkyūjo Ihō*, (Annals of the Institute of Statistical Mathematics), 13, 1-12 and 135-137.
- Azar, E. (1970), Analysis of international events, *Peace Research Reviews*, IV.
- Bauer, R. A. (1958), The communicator and the audience, *Journal of Conflict Resolution*, II:1, 67-77.
- Brody, R. A. (1966), Cognition and behavior: A model of international relations, in "Experience, Structure and Adaptation," 321-348, (O. J. Harvey, Ed.), Springer, N.Y.
- Brzezinski, Z. K. (1967), "The Soviet Bloc: Unity and Conflict," Praeger, N.Y.
- Campbell, D. T., and D. W. Fiske. (1959), Convergent and discriminant validation by the multitrait-multimethod matrix, *Psychological Bulletin*, 56, 81-105.
- Cho, M. Y. (1967), *Die Entwicklung der Beziehungen zwischen Peking und P'yongyang: 1949-1967*, Otto Harrassowitz, Wiesbaden.
- Chomsky, N. (1959), A review of skinner's *verbal behavior*, *Language*, 35, 26-58.
- Choucrist, N. (1969), The perceptual base of nonalignment, *Journal of Conflict Resolution*, XIII, 57-74.
- Coombs, C. (1964), "A Theory of Data," Wiley, N.Y.
- David, H. A. (1963), "The Method of Paired Comparisons," Charles Griffin, London.
- Fennessey, J. (1968), The general linear model: A new perspective on some familiar topics," *American Journal of Sociology*, 74, 1-27.
- Gamson, W. A., and A. Modigliani. (1971), "Untangling the Cold War: A Strategy for Testing Rival Theories," Little, Brown, and Co., Boston.
- Griffith, W. F. (1964), "The Sino-Soviet Rift," M.I.T. Press, Cambridge, Mass.
- Griffith, W. F. (1966), Sino-Soviet relations, 1964-1965, *China Quarterly*, 25, 3-143.
- Griffith, W. F. (1967), "Communist esoteric communications: *Explication de Texte*," Center for International Studies, M.I.T., Cambridge, Mass.
- Guetzkow, H., C. F. Alger, R. A. Brody, R. C. Noel, and R. C. Snyder. (1963), "Simulation in International Relations," Prentice-Hall, N.J.
- Guttman, L. (1941), The quantification of a class of attributes: A theory and methods of scale construction, in "The Prediction of Personal Adjustment," 319-348, (P. Horst, Ed.), Social Research Council, N.Y.
- Guttman, L. (1946), An approach for quantifying paired comparisons and rank order, *Annals of Mathematical Statistics*, XVII, 144-163.
- Guttman, L. (1950), Principal components of scale analysis, in "Measurement and Prediction: Studies in Social Psychology in World War II," 4, 312-361, (S. A. Stouffer, L. Guttman, E. A. Suchman, P. F. Lazarsfeld, S. A. Star, and J. A. Clausen), Princeton University Press, Princeton, N.J.
- Guttman, L. (1954), "The Principal Components of Scalable Attitudes," in *Mathematical Thinking in the Social Sciences*, 216-257. (P. F. Lazarsfeld, Ed.), Free Press, N.Y.
- Guttman, L. (1968), A general nonmetric technique for finding the smallest coordinate space for a configuration of points, *Psychometrica*, 33, 496-506.
- Hayashi, C. (1950), On the quantification of qualitative data from the mathematical-statistical point of view, *Annals of the Institute of Statistical Mathematics*, 2, 1.
- Hayashi, C. (1952), On the prediction of phenomena from qualitative data and the quantification of qualitative data from the mathematical-statistical point of view, *Annals of the Institute of Statistical Mathematics*, 3, 69.
- Hayashi, C., I. Higuchi, and T. Komazawa. (1970), "Jōhō Shori to Tōkei Sūri" (Information Processing and Statistical Mathematics), Sangyo Tosho, Tokyo.
- Hilton, G. (1970), The 1914 studies—A re-assessment of the evidence and some further thoughts, *Peace Research Society: Papers*, XIII, 117-141.

- Hinton, H. C. (1966), "Communist China in World Politics," Houghton Mifflin, Boston.
- Hinton, H. C. (1970), "China's Turbulent Quest," Macmillan, N.Y.
- Holsti, O. R. (1965), The 1914 case, *American Political Science Review*, 59, 365-378.
- Holsti, O. R. (1968), Content analysis, in *The Handbook of Social Psychology*, 2, 596-632, second edition. (G. Lindzey and E. Aronson, Eds), Addison-Wesley, Reading, Mass.
- Holsti, O. R., R. North, and R. A. Brody. (1968), Perception and action in the 1914 crisis, in "Quantitative International Politics: Insights and Evidence, 121-158. (J. D. Singer, Ed.), Free Press, N.Y.
- Inkeles, A. (1950), "Public Opinion in Soviet Russia: A Study in Mass Persuasion," Harvard University Press, Cambridge, Mass.
- Inoguchi, T. (1970a), "Attitudes toward War and Peace: A Quantification Scaling Analysis," project: *Images of the World in the Year 2000*, European Coordination Center for Research and Documentation in Social Science, Vienna; paper presented to the International Sociological Association meeting, Verna, Yugoslavia, September 1970.
- Inoguchi, T. (1970b), "Kokusaikankei no Sūryō Bunseki: Pekin-Heijō-Mosukuwa, 1961-nen-1966-nen (A Quantitative Analysis of International Relations: Peking-Pyongyang-Moscow, 1961-1966), Gannando, Tokyo.
- Inoguchi, T. (in preparation), "A multi-indicator approach to friendship/hostility assessment: Peking, Pyongyang and Moscow in the 1960's."
- Kendall, M. G., and A. Stuart. (1967). "The Advanced Theory of Statistics," Vol. II, second edition, Charles Griffin, London.
- Koh, B. C. (1969), "The Foreign Policy of North Korea," Praeger, N.Y.
- Kun, J. C. (1964), Nordkorea, in "Die Satelliten Pekings: Nordvietnam, Nordkorea," (Kux, E. and J. C. Kun), Kohlhammer, Stuttgart.
- Kun, J. C. (1967), North Korea: Between Moscow and Peking, *China Quarterly*, 31, 48-58.
- Kyogoku, J. (1967), N-gen dosū bunpu no sūryōka ni tsuite, (On a method of quantifying n-way frequency tables), *Tōkei Sūri Kenkyūjo Ihō*. (Annals of the Institute of Statistical Mathematics), 15, 140-160.
- Lingoes, J. (1968), The multivariate analysis of qualitative data, *Multivariate Behavioral Research*, 3, 61-94.
- McClelland, C. A. (1968), Access to Berlin: The quantity and variety of events, 1948-1963, in "Quantitative International Politics: Insights and Evidence," 159-186, (J. D. Singer, Ed.), Free Press, N.Y.
- Merritt, R. L. (1970), "Systematic Approach to Comparative Politics," Rand McNally, Chicago.
- Merritt, R. L., and D. Puchala. (1969), "Western European Perspectives in International Affairs: Public Opinion Studies and Evaluations," Praeger, N.Y.
- Moses, L. E., R. A. Brody, O. R. Holsti, J. B. Kadane, and J. S. Milstein. (1967), Scaling data on international action *Science*, 156, 3778, 1054-59.
- Oksenberg, M. (1969), Sources and methodological problems in the study of contemporary China, in "Chinese Communist Politics in Action," 577-606. (A. D. Barnett, Ed.), University of Washington, Seattle.
- Pool, I. S., ed. (1959), "Trends in Content Analysis," University of Illinois Press, Urbana, IL.
- Ra'anana, U. (1968), Peking's foreign policy 'debate,' 1965-1966, in "China in Crisis," 2, "China's Policies in Asia and America's Alternatives," 23-71, (T. Tsou, Ed.), University of Chicago Press, Chicago.
- Rummel, R. J. (1965), A field theory of social action with application to conflict within nations. *General Systems*, 10, 183-211.
- Russett, B. M. (1963), "Community and Contention: Britain and America in the Twentieth Century," M.I.T. Press, Cambridge, Mass.

- Schurman, F. (1970), "Ideology and Organization in Communist China," second edition, University of California Press, Berkeley, Calif.
- Stone, P. J., D. C. Dunphy, M. S. Smith, and D. M. Ogilvie. (1966), "The General Inquirer: A Computer Approach to Content Analysis," M.I.T. Press, Cambridge, Mass.
- Takabatake, M. (1968), "Applications of 'quantification' scaling to sociopolitical data," mimeo. Rikkyo University, Tokyo.
- Torgerson, W. S. (1958), "Theory and Methods of Scaling," Wiley, N.Y.
- Webb, E. T., D. T. Campbell, R. D. Schwartz, and L. Sechrest. (1966), "Unobtrusive Measures: Nonreactive Research in the Social Sciences," Rand McNally, Chicago.
- Yasuda, S. (1969), *Shakai Tōkeigaku* (Social Statistics), Maruzen, Tokyo.
- Yu, F. T. C. (1964), "Mass Persuasion in Communist China," Praeger, N.Y.
- Zagoria, D. S. (1962), *The Sino-Soviet Conflict, 1956-1961*. Princeton University Press, Princeton, N.J.
- Zinnes, D. A. (1968), The expression and perception of hostility in prewar crisis: 1914, in "Quantitative International Politics: Insights and Evidence," 85-119. (J. D. Singer, Ed.), Free Press, N.Y.