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ABSTRACT

Analytical strategies for examinining attitudinal data about teacher brinkmanship behavior collected in a semantic-differential format, and delineating the qualitative distinctions among types of brinkmanship behavior are suggested. Teacher brinkmanship is described as behavior which expresses dissatisfaction with facets of the roles teachers are expected to perform; this dissatisfaction is typically manifested so as not to threaten those responsible for administering the situation. Twelve types of behavior are assigned to three categories: (1) subversive or exaggerated obedience; (2) tightroping; and (3) boundary testing. The evaluation of brinkmanship is accomplished by measuring teachers' attitudes toward brinking acts of their colleagues rather than by direct observation of teachers engaged in brinkmanship. Variations of two techniques for two-mode factor analysis, pooled R-technique and pooled T-technique factor analysis, are developed and compared. The pooled R-technique may be submitted to factor-analytic procedures satisfying any of three different objectives: reducing variables to a more manageable set; exploring the feasibility of additional attitudinal parameters; or validating the existence of a conjectured set of attitudinal parameters. When a reasonable amount of certainty exists about the attitudinal dimensions underlying the domain of brinking acts, the pooled T-technique factor analysis can be used. (Author/MH)

Development and Comparison of Analytical Techniques for Measuring Attitudes Toward Teacher Brinkmanship Behavior

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Abstract of a paper presented at Annual Meeting of American Educational Research Association, San Francisco, April 10, 1979.

This paper suggests analytical strategies for both (1) examining attitudinal data about teacher brinkmanship behavior collected in a semantic-differential format, and (2) delineating the qualitative distinctions among types of brinkmanship behavior. Variations of two particular techniques for two-mode factor analysis, "pooled" R-technique and "pooled" T-technique factor analysis, are developed and compared. The advantages of the proposed "pooled" techniques over the more typically applied "extended" techniques for summarizing three-mode data with the intent of subjecting it to two-mode factor analysis are summarized. The discussions are illustrated where possible with empirical data.

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Description of Teacher Brinkmanship Behavior

Teachers display a variety of behaviors, some related to the roles associated with their positions in the schools. Included within these behaviors frequently are expressions emanating from teachers that convey their displeasure with facets of the role they are expected to perform. Goffman (1961) suggests that expressions of dissatisfaction usually convey some indignation and scornful detachment or aloofness from the presumed role one has assumed. In the case of the teacher, this may amount to some disdainful expression of resistance or hesitation to comply with behavior anticipated and expected by the school system or its administrative

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system because it is beneath the teacher's dignity. Typically the actions and expressions of dissatisfied teachers are skillfully selected so as not to threaten individuals responsible for administering the situation. Expressions of this type of behavior directed toward the administration of the school have been termed "teacher brinkmanship" acts by Licata and Willower (1975).

Such teacher acts may include i) performance ordinarily in front of an audience, (ii) employment of a disguise usually to avoid negative sanctions, (iii) expression of disdain in a satirical or humorous nature, (iv) improvisation or extemporaneous social behavior and w/ little risk of performers losing face (Licata and Willower 1975, p. 2). Additionally these researchers have categorized the domain of teacher acts of brinkmanship as 'subversive obedience,' 'tightroping,' and 'boundary testing.' The first is essentially rule obeying the behavior involves compliance with the letter of a regulation in an exaggerated way. Tightroping is neither rule obeying nor disobeying; however because of its overt satirical nature negative sanction sometimes may result. Role disobeying behavior that will result in negative sanction unless adequately protected through humor and satire is termed boundary testing

Problems With Assessing Behavior

Assessing teacher brinkmanship behavior in a systematic fashion possesses some difficulty. In general employing observers to perceive the presence or degree of brinking by teachers indirectly

influences the actions of teachers, either encouraging or discouraging such behavior. The intrusion of strangers, or even colleagues instructed in techniques of rating, and trained to assess specific aspects of brinking acts, affects the behavior of teachers being observed. Moreover, genuine brinking acts are spontaneous, and as such, likely to occur at any instance, either in the presence or absence of an audience. Similarly, the introduction of video recording apparatus into the many facets of the school day of a teacher creates apprehension and influences behavior. In summary, not only does assessment of teacher brinkmanship behavior require sophisticated and sensitive observers or raters, but some teachers are prone to over emphasizing or dramatizing their performance in front of audiences, while others tend to suppress some of their more risk-taking behavior and antics in the presence of strangers, prohibiting accurate appraisal of behavior.

In a very real sense the validity of teacher behavior of observational data is suspect. For this reason, some researchers have turned to assessing teachers' attitudes toward brinking acts of their colleagues, rather than contending with the problems and dilemmas associated with detecting the propensity and quality of brinkmanship acts, and subsequently classifying such acts according to an array of attributes. It may be argued that with greater and more incisive insights into the nature and structure of attitudes maintained toward teacher brinkmanship behavior, more reasonable examinations of behavior correlates and antecedent conditions precipitating such behavior can be made. Accordingly, this paper is confined to assessing attitudes of teachers toward their colleagues'

acts of brinkmanship.

Rationale For Measuring Attitudes

Social psychologists, educational psychologists, and sociologists have clarified the origin and nature of attitudes and their relation to perception, thought, learning, motivation, and overt behavior. Green (1954) has successfully argued that an attitude is a psychological construct, or latent variable, inferred from observable responses to stimuli, which is assumed to mediate consistency and covariation among these responses. The aspects of responses which define attitudes include tendencies to approach or avoid learned stimuli, identified as goals or objects, to regard them favorably or unfavorably, and to experience pleasant or unpleasant affect associated with them, over a wide range of intensity. Attitudes may be inferred from choices implicit in overt behavior as when an individual consistently supports one policy. Additionally, attitudes may be inferred from expressive or symbolic behavior which overt choice is implied or indirectly expressed, as on questionnaires, in interviews, or by observation of overt behavior related but not identical to the choice in question.

According to Green (1954) the aspect of an attitude that characteristic of all attitude measurement is *response covariation*. In each method of attitude measurement, covariation among responses is related to variation of an underlying latent attitude variable, defined by intercorrelations among the responess. Green distinguishes attitudes from other psychological variables in terms of the *set of social objects* that forms the reference class of an attitude. The content of an attitude is determined by the responses comprising it;

the set from which these are drawn is called an attitude universe, a concept developed by Guttman. Conceptually, attitude measurement involves sampling attitude universes and then measuring the universes by means of samples. Each psychological scaling method either states or implies a mathematical model that relates the responses, which Green calls observed variables, to the attitude or latent variable. Attitude measurement is thus a matter of selecting a scaling *method* by which response data can be related to attitude variables.

Operationalizing Attitudes Toward Teacher Brinkmanship

A specimen study conducted with 168 subjects drawn from graduate education courses at the University of Houston provides the basis for the application of numerous empirical procedures developed and discussed throughout the remainder of this paper. By integrating the speciman data with the suggested procedures and giving specific examples, distinctions in the focus of various techniques and subtle rearrangements of the data required by the strategies developed may be communicated to the applied researcher in more readily comprehensible fashion.

In the context of teacher brinkmanship behavior, the set of *stimulus objects* forming Green's reference class for attitudes was comprised of the three types of brinkmanship behavior differentiated by Lisata and Willower (1975). To improve accuracy in subsequent identification of both the array of attitudes involved, and the distinguishability of the three types of brinkmanship behavior, a number (a multiple of the three types) of exemplar teacher brinkmanship behaviors was generated. Paragraph summaries of

each of the three types of brinkmanship behavior were developed using a technique advocated by Licata and Willower (1975). Forty teachers from various school districts participated in workshops wherein the types of brinking were described and distinguished. Then the teachers were instructed to recall incidents and behaviors involving teachers that were classifiable in each of the three types of brinkmanship behavior. From the several examples suggested, four behaviors each were subsequently designated as the best examples of subversive-obsequence, tightroping, and boundary-testing behaviors on the part of teachers. Afterward, twelve single-paragraph, descriptive summaries of the designated teacher brinking behaviors were developed. These summaries represented the reference class for the attitudes to be measured.

The *responses* in the speciman data, or observed variables according to Green, were collected in a semantic-differential format popularized by Osgood, Suci, and Tannenbaum (1957). Essentially each observed variable was an adjectival scale or continuum conveyed by two purportedly opposite adjectives. The respondent's task was to indicate to what degree the continuum characterized or described (in a modifying sense) his feeling or opinion about a teacher behavior indicative of a specific type of brinking. Although psycholinguistic research has focused extensively on interpretative parameters for semantic material, that is not necessarily the objective in applying a semantic differential format for the instrumentation developed in the speciman study. Rather, the intent was to assess teachers'

attitudes toward semantically described behaviors that systematically underlie the covariation in responses on the adjectival scales selected.

In adapting the semantic differential format to assess attitudes toward each of the twelve brinking behaviors of teachers, it should be noted that the particular selection of adjectival scales employed depends upon the particular purpose of the study; there are not standard or conventional scales that apply equally well across all studies. However, the recurrent dimensions of meaning in Osgood's research were judged to possess some generalizability as attitudinal modifiers of the twelve teacher behaviors described in the specimen study. Accordingly, eighteen adjectival scales were selected to represent in an equally stratified sense the 'evaluation,' 'activity,' and 'potency' dimensions of semantic meaning. The adjectival scales were systematically located in the instrument constructed, insuring a randomized sequence of the three dimensions within each of six consecutive blocks of scales. The instrument was comprised of 18 scales appearing in the same order on each of 12 pages, the top of each page containing a brief summary of a teacher brinkmanship behavior.

The *scaling model* examined in this paper addresses covariation among responses or adjectival scales in identifying latent attitude variables, and is an implementation of the suggestions offered by Thurstone (1947), Guilford (1956), and Cattell (1957). A conventional approach in applying the factor-analytic procedures

advocated by these psychometricians is to reduce the rank of variance-covariance matrix defined by the adjectival scales. However, a variety of *objectives* in applying these procedures exist. These hierarchical objectives range from reduction of variables to a more parsimonious set, to exploration and refinement of tentatively identified attitude variables, through verification of the existence of a conjectured set of attitude variables. Each in turn may be coupled with alternative *perspectives* from which to view systematic covariation. That is, one may consider the systematic covariation among the adjectival scales, the teacher brinkmanship behaviors, or conceivably the interaction of both simultaneously. Each of these perspectives suggests a specific procedural approach. The remainder of this paper considers the different perspectives, emphasizing the array from the three objectives potentially addressed by any perspective elected.

Development of the Initial Two Alternative Perspectives

The data of the speciman study may be organized according to three modes ala Cattell (1966): (i) adjectival scales, (ii) teacher brinkmanship behaviors, and (iii) respondents (teachers enrolled in graduate education courses). Variations of two particular techniques for two-mode factor analysis are developed and suggested as analytical strategies for examining attitudinal data about teacher brinkmanship collected in the Osgood format. Considering the 18 adjectival scales as variables and treating the 12 brinkmanship behaviors X 168 respondents as replicates, pooling appropriately, a "pooled"

R-technique factor analysis may be undertaken. The evolved dimensions would be concerned with traits, e.g., Osgood's (1957) dimensions of semantic meaning, especially pertinent to describing and distinguishing teacher brinkmanship behavior.

Alternatively, by considering the 12 teacher brinkmanship behaviors as variables and treating the 18 adjectival scales X 168 respondents as replicates, pooling appropriately again, a "pooled" T-technique factor analysis may be conceived. The focus of the dimensions underlying the covariation among the brinkmanship behaviors is more ecological in nature, e.g., delineation to some degree of the qualitative distinctions in types of brinkmanship behavior suggested by Licata and Willower (1975).

Moreover, these two perspectives impose assumptions that may be employed to argue a constructive and purposeful sequence for measuring and examining teachers' attitudes toward teacher brinkmanship behavior. The "pooled" R-technique, wherein 12 X 168 replicates are involved, implies an independent rating for each brinkmanship behavior within each respondent. Some researchers may elect to calculate a matrix of intercorrelations among the adjectival scales of order 18 X 18 based upon an extended "total" number of 12 (168) replicates, R_T, without checking the comparability of the twelve R_j's, each developed separately on basis of responses to a particular brinkmanship behavior. The problem with dimensionalizing R_T rather than R_W, developed by pooling R_j across the twelve behaviors, is that dimensions under-

lying the extended R_T explain covariation between brinkmanship behaviors as well as systematic covariation among the adjectival scales. Hence confounded attitudinal dimensions are developed which may be of little utility when employed as the basis upon which contrasts in specific behaviors are subsequently attempted.

Significance tests to determine whether correlation matrices differ are available (Maxwell, 1959; Borouch and Dutton, 1970; Morrison, 1976) and should be of assistance in eliminating this problem. In the situation where some but not all R_j's are comparable, the analysis suggested above is conducted within each subset of behaviors. Hence, when belief in one universal set of attitudes that is equally appropriate in referring to all behaviors is not warranted, an analysis of separate R_w matrices insures the capability of operationalizing distinct configurations of attitudes, each suitable to respective subsets of brinkmanship behaviors.

There is however, another more logical rather than statistical assumption made when applying the "pooled" R-technique. Namely, one is presumably confident that the brinkmanship behaviors employed are representative of the brinkmanship-behavior-type domain and adequately stratified across the domain. Hence it is important to insure that the summaries include a multiple of behaviors representing the universe of conjectured types of brinkmanship acts. When this condition is satisfied,

an empirical type of objective of "pooled" R-technique factor analysis is met, that of attempting to minimize the number of variables for further research, while also maximixing the amount of information involved in the analysis. The original set of adjectival-scale variables is reduced to a much smaller set of abstract, latent variables accounting for most of the reliable variance and covariance among the original set. This smaller set of abstract variables is employed as operational representatives of attitudinal constructs underlying the original complete set of adjectival-scale variables. This process amounts to essentially applying "pooled" R-technique factor analysis for a *data reduction* objective.

In the case of the speciman study, the "pooled" R-technique was applied to the inter-adjectival scale correlation matrix which was pooled across the 12 brinkmanship behaviors. This matrix was reduced in rank using a principal components extraction followed by rotation to the varimax criterion of Kaiser (1958). Five factors meeting Guttman's weakest lower bound criterion (1954) were extracted and respectively accounted for 28.4%, 17.4%, 11.9%, 10.4% and 8.4% of the total variance of adjectival scales in the pooled correlation matrix. The initial three factors were similar to those identified by

Osgood et al., and were respectively labeled "evaluation," "activity," and "potency." The fourth factor was indicative of the aesthetic nature of various brinking activities, defined primarily by the adjective scales "small-large," "beautiful-ugly," and "sharp-dull." The fifth factor was defined essentially by the scales "dishonest-honest" and "strong-weak." It appeared to focus on moral strength perceived in brinking behaviors, and perhaps is a type of valuing which is moral. Whereas the first three factors were generally disjoint, both the fourth and fifth factors appeared from the nature and degree of factorial complexity of the adjectival scales defining them to be variations of teachers' valuing of brinkmanship behavior. These two types of valuing differ from ascribing merit, evaluation in the strict sense identified by Osgood et al.

If the fourth and fifth dimensions, resembling aesthetic and ethical judgment about brinking acts, are included in the presence of the three traditional dimensions of semantic meaning identified in research stimulated by Osgood, a second objective in applying "pooled" R-technique factor analysis may be addressed. This *exploratory* objective is satisfied when data are searched for the existence of possible qualitative and quantitative distinctions; new constructs and hypotheses for future theory and research typically arise as a result of pursuing this objective. The contribution of exploratory research is, of course, completely dependent upon adequately pursuing the results in future research studies so as to corroborate or reject hypotheses developed.

Consequently, a reasonable pursuit for future research into attitudinal constructs underlying perceptions of teacher brinkmanship behavior is to hypothesize the existence of at least five dimensions: the three traditionally identified underlying semantic meaning, evaluation, activity, and potency, and two additional dimensions specific to the judgmental quality of the substance being rated, aesthetics and ethics. The test of this hypothesis might best be executed applying maximum-likelihood factor-analytic procedures such as those suggested by Jöreskog (1966, 1967, 1969) and Jöreskog and Lawley (1968). If the hypothesis is tenable, the various factors determined to exist in a new sample will represent the qualitative distinctions theoretically evolved within the present speciman study. If one adjectival scale is hypothesized to be more related to one factor than another, this and other conjectured quantitative distinctions can also be tested with the above mentioned procedures. This application of "pooled" R-technique factor analysis serves to meet a third and final *confirmatory* objective. In summary, the "pooled" R-technique conception of data may be submitted to factor-analytic procedures satisfying any of three different objectives of either reducing variables to a moremanageable set. exploring the feasibility of additional attitudinal parameters, or validating the existence of a conjectured set of attitudinal parameters.

Strategies for Distinguishing Types of Brinkmanship Behavior

With the successful delineation of a set of attitudinal dimensions, defensible in terms of at least one of the above

objectives, and presumably the latter one, the attention of the research typically turns to considering the relative distinctions that may be drawn among the brinkmanship behaviors in terms of each attitudinal dimension. An attractive strategy involves assigning each subject a score estimated on each of the evolved attitudinal dimensions for each behavior. In the context of our speciman study, this was accomplished by regressing the 18 adjectival scale responses for each and every subsequent behavior upon the five attitudinal dimensions; essentailly 60 scores were calculated for each subject according to Thurstone's (1935) least-squares-regression-estimation procedures. This resulted in five scores for each behavior, standardized across the "respondents," employed in the "pooled" R-technique analysis, i.e., 12 behaviors X 168 subjects. This standardizing across both subjects and behaviors permits calculation of an average and standard error for each behavior and facilitates comparison with the grand mean of all 12 behaviors in terms of any specific attitudinal dimension. However, because the 12 behaviors have been assessed by the same 168 subjects, the intercorrelation among the 12 behaviors were calculated for each of five attitudinal dimensions. Following this, simultaneous confidence intervals were constructed about each brinkmanship-behavior average on each attitudinal dimension according to procedures available in Stevens (1972, 1973), and Morrison (1976). This strategy aided in distinguishing the brinkmanship behaviors by systematically ordering all 12 behaviors in terms of the various orthogonal attitudes. At this point, not only can a descriptive profile of the subjects' differential attitudes regarding each of the

behaviors be developed, but behaviors indicative of each of the three specific types of brinkmanship suggested by Licata and Willower (1975) may be scrutinized for similarity in attitude profile when considering the sample of subjects as a whole.

The simultaneous confidence intervals constructed about the mean of each brinkmanship behavior summary in the speciman study that did not encompass the grand mean for an attitudinal dimension are portrayed in Figure 1. It appeared that the 168 teachers sampled varied most in ascribing moral judgments about the 12 brinkmanship behaviors, particularly where 'boundary-testing' behavior types were concerned. The next greatest variability among the teachers was in terms of the aesthetic attitudinal dimension which distinguished primarily 'tightroping' type of behaviors, and to a somewhat lesser degree 'boundary-testing' and 'subversive-obedience' types of brinking. It is noteworthy that teachers seemingly varied least in distinguishing the brinkmanship behaviors in terms of the attitudinal dimension of evaluation ala Osgood. This perhaps has previously been the most easily retrievable dimension in research using a semantic differential format to delineate attitudes, and accounts for more than a third of the systematic variance in adjectival scales in the speciman study. But this research suggests that of the large amount of systematic variation among individuals that delineated evaluation, exceedingly little was of a systematic nature contributing to distinctions in the brinkmanship behaviors. In fact, of the three traditional dimensions adapted from Osgood's research findings, the potency attitudinal dimension supports the largest amount of variability of teacher distinguishability

of brinkmanship behavior.

Collectively, these findings suggest that teachers are capable of ascribing explosiveness to brinkmanship behavior, but do not evaluate or ascribe activity to them with the same systematic intensity. To the contrary, the greatest distinguishability of brinkmanship behaviors is in terms of aesthetic and ethical considerations, which are perhaps the more contemporary and substantively appropriate facets of the amorphous concept of evaluation.

The method of analysis employed to this point — "pooled" R-technique factor analysis, followed by the development of contrasts associated with the brinkmanship behaviors in terms of the attitudes delineated — is not the only procedure which can be employed to develop qualitative distinctions among the brinkmanship behaviors. In particular, when a reasonable amount of certainty exists about the attitudinal dimensions underlying the domain of brinking acts, such as following a confirmatory "pooled" R-technique factory-analytic determination of these attitudes, attention may focus on verifying the existence of types of brinkmanship behavior. This may be accomplished with the assistance of "pooled" T-technique factor analysis.

Attention under this second alternative perspective is considering systematic covariation within the set of social objects, such as covariation among the 12 brinkmanship behaviors in the speciman study. From this second perspective "pooled" T-technique factor analysis is applied to reduce the rank of variance-covariance matrix among the brinkmanship behaviors themselves. Included in

the assumptions made in applying this analytical perspective is the belief that each respondent has made separate and independent ratings on each adjectival scale. In instances where this is questionable the statistical tests given by Maxwell (1959) and Morrison (1976) and cited earlier in the paper may be used to assess the comparability of the eigtheen 12 X 12 interbehavior correlation matrices developed separately for each adjectival scale. The matrix properly subjectable to factor analysis in this instance is again R_w, this time the 12 X 12 interbehavior correlation matrix pooled across the 18 adjectival scales. Recall the extended R_T, the 12 X 12 interbehavior correlation matrix developed by some researchers considering the 18 adjectival scales X 168 subjects as replicates, confounds the systematic covariation among the adjectival scales with the covariation among the 12 brinkmanship behaviors. Dimensions or qualitative distinction evolved by these researchers will differ from those established by following the "pooled" T-technique procedures outlined above. Of course, if conformability across the adjectival scales does not exist, distinct qualitative configurations of the brinkmanship behaviors appropriate to respective subsets of adjectival scales, and hence potentially restrictive attitudinal dimensions, may be established. This useful information would not come to the attention

of researchers considering a total rather than pooled-within-adjectival-scale intercorrelation matrix of behaviors.

An additional assumption, parallel to the second assumption made under the "pooled" R-technique factor analysis, influences the sequence in which both variations of R- and T-technique factor analysis may be conducted. The assumption here is that the adjectival scales are known to be representative and exhaustive of the attitudinal domain under consideration. Typically this would be a more stringent assumption to satisfy as construed under "pooled" T-technique than under "pooled" R-technique factor analysis. That is, selection of a comprehensive set of adjectival scales exhausting the attitudinal domain required for "pooled" T-technique analysis is more difficult to attain than designation of a comprehensive set of brinkmanship behaviors or social objects about which the attitudes are expressed. The implication is clear. If a "pooled" T-technique analysis is anticipated, "pooled" R-technique analyses should precede it to enhance the likelihood of adequately delineating the attitudinal domain. Moreover, confirmatory factor analysis should be included among the "pooled" R-technique factor analyses conducted.

It is at this point where a second study with adjectival scales marking the five tentatively delinated attitudinal dimensions must be conducted in a sample similar to the speciman study. Caution should be exercised in developing and including an equal number of adjectival scales stratified across the evaluation, activity, potency, aesthetics, and ethics dimensions. After subjecting these data to a "pooled" R-technique confirmatory

factor analysis, the question of the construct validity of the qualitative distinctions in types of brinkmanship behavior suggested by Licata and Willower (1975) may be examined. The objectives of a series of "pooled" T-technique factor analyses obviously could range from data reduction, wherein collections of brinkmanship behaviors would be aggregated with little scientific merit supporting the categorization; to exploratory analysis, through which the ecological typologies of brinkmanship may be accurately developed; and conclude with confirmation of the conjectured array of qualitatively distinct types of brinkmanship behavior and associated quantitative distinctions in terms of attitudinal parameters of the respondents.

Consideration of a Third Perspective

Simultaneous treatment of systematic covariation among the adjectival scales and the teacher brinkmanship behaviors results in a third perspective cited earlier in this paper. A proper analysis of these two sources of systematic covariation and their interaction suggests application of a factor-analytic technique which has not been thoroughly explored. Tucker (1963, 1964, 1966) has considered this general problem in what he calls the three-mode factor analysis model. He has presented an ingeneous and computationally involved procedure for conceiving of a set of data organized in three "observational modes." In the context of our speciman study, his solution involves separate factor structures underlying what he would term the "intrinsic modes" of subjects or teachers, their attitudes toward brinkmanship behavior, and types of brinkmanship behavior. Additionally, there is a central, or core, three-mode matrix which links

together the three separate structures spanning each intrinsic mode, and possess a fourth factor structure.

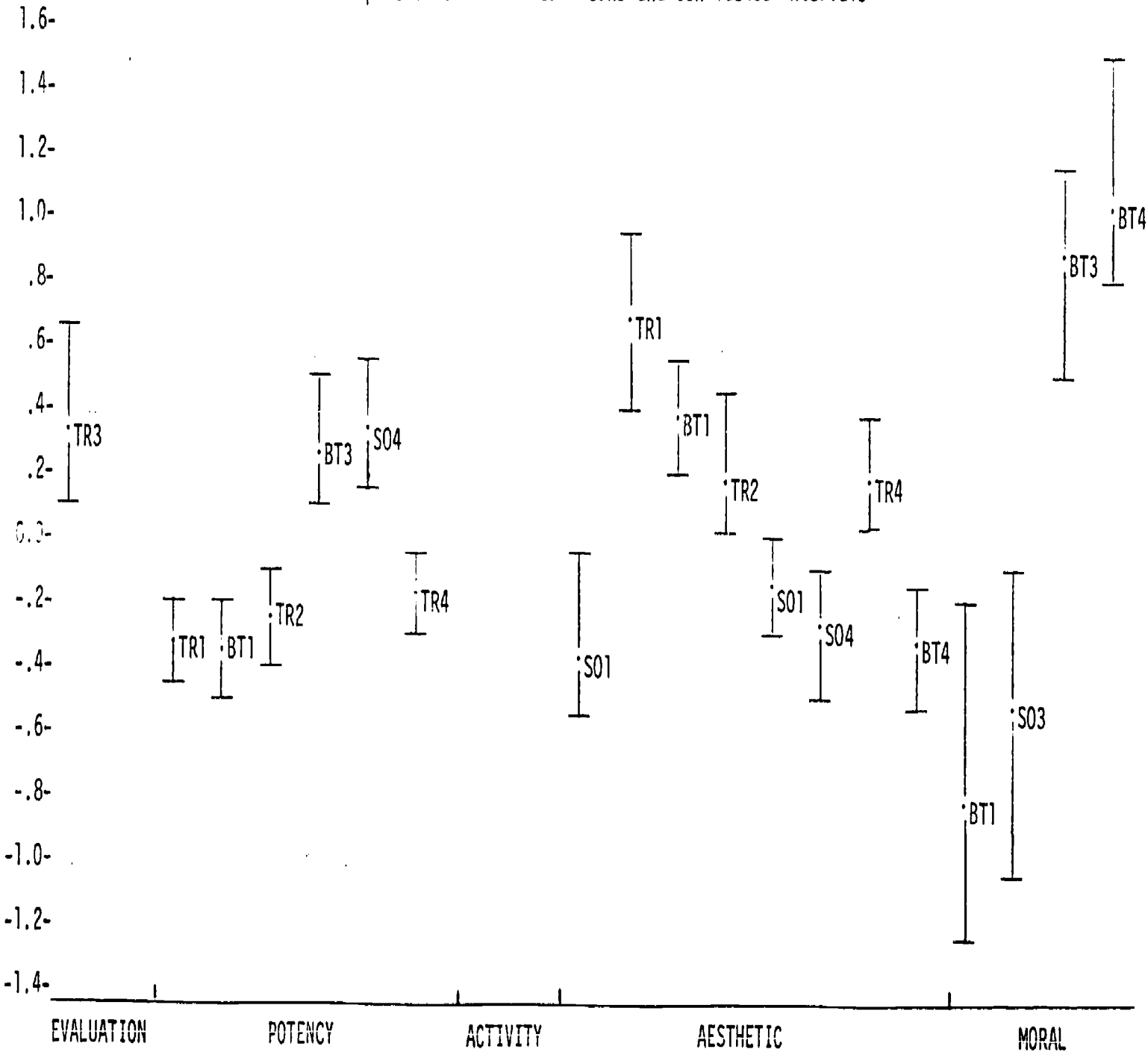
The method assumes in general that lower order of the modes than represented in the observed data matrix exist, and the problem then is to solve for the collection of lower order structure matrices including the core matrix, as a basis for reproducing the observed three-mode data matrix. The basic equation for an observed datum relates the observed three mode matrix to the intrinsic structures, for example

$$X_{ijk} = \sum_{m} \sum_{p} \sum_{q} a_{jm} b_{jp} c_{kq} g_{mpq}$$

where i represents a particular subject or teacher, j is an arbitrary adjectival scale, k represents a specific brinkmanship behavior, p is an "idealized" attitude toward brinkmanship behavior, and q indicates an "idealized" type of brinkmanship behavior. According to the third perspective, our interest would focus upon the attitude structure matrix, $[b_{jp}]$, the brinkmanship behavior intrinsic structure matrix, $[c_{kg}]$, and the core structure matrix, $[g_{mpq}]$. When considering the heirarchical array of objectives in applying analytic procedures cited earlier, it would appear as though the exploratory level is the highest attainable, given the present stage of development of three-mode factor analysis.

FIGURE 1

Brinkmanship-behavior Summaries' Means and Confidence Intervals



NOTE: "SO"=subversive-obedience; "TR"=tight-roping; "BT"=boundary-testing. The numbers indicate which summary each confidence interval is for, e.g.—"BT3" represents the confidence interval about the mean on a factor for the third boundary-testing paragraph-summary.

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