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Footnotes

1. Portions of this paper were presented at the Southeastern Psychological Association convention, New Orleans, March, 1976.

2. In attition to the measures described, the index contained sections designed to measure moods, social competence, and attitudes toward the discussion topic. These measures were not described or results reported due to their low importance and space limitations. A complete description of the index and results can be obtained from the second author.

Attribute Generality and the Inference Process in Impression Formation

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Abstract. This research focused on the role of general attributes (those used by an observer to characterize many persons) in the attribute inference process. Descriptions of eight acquaintances obtained from 66 subjects were coded such that the generality of each attribute employed by a subject could be determined. Each subject made inferences based on his selected general and specific attributes, and then rated the original and inferred attributes on a set of bipolar adjective scales. It was found that inferences based on a general attribute were more similar in meaning to the original attribute than were inferences based on a specific attribute. Implications of this finding for a reconceptualization of the impression formation process were discussed.

The process by which a person develops a cognitive representation of another person has been conceptualized theoretically in terms of two distinct component processes--attribute selection and attribute inference (cf. Schneider, 1973; Warr & Knapper, 1968). According to this analysis, the individual first selectively attends to various qualities of the actor and then infers the existence of other, unobserved qualities on the basis of his initial observations. Unfortunately, research into the nature of each of these processes has proceeded largely along independent lines. The present study was planned as a first step in exploring the relationship between these components of impression formation.

An observer's selection of an actor's attributes is a function both of the distal stimulus properties of the actor and of the observer's propensity to select certain attributes in each actor he attempts to comprehend. Thus, while an observer might select a particular attribute to refer to only one or a few actors, he might note the occurrence of some other attribute in a variety of different actors. Those attributes selected most frequently--general attributes--possess cognitive structural properties that have implications for the inference process. It has been reported, for example, that observers make more articulated (discriminating) judgments of actors on the basis of general than specific attributes (Wegner, 1975), that individual differences in cognitive structural articulation are related to differences in the proportion of general attributes characterizing the cognitive structure (Scott, 1974), and that the proportion of general attributes employed by the observer increases with development (Wegner, 1975). One way to interpret these findings is to suggest that general attributes are more abstract and better defined than are specific attributes. If an attribute is defined in cognitive structure as the common quality of all the persons it represents, then variation in the generality of attributes corresponds to variation in their definitional stability.

An individual's inference of one attribute from another is dependent upon the semantic similarity of the two attributes, and upon the definitional stability of each attribute. An inference would not be made unless the two attributes were consistently seen as similar in meaning. Given the proposed link between the generality and definitional stability of attributes, it can be suggested that general attributes provide the observer with more substantial channels of inference than do specific attributes. Inferences from general attributes should retain much of the meaning of the general attribute,

whereas inferences from specific attributes should be less likely to retain such meaning. This rationale provided the major hypothesis of the present study. It was expected that, for each observer, the judged semantic distance between a given attribute and those inferred from it would be less when the given attribute was general than when it was specific.

Method. A 2 x 3 within-subjects design was employed in the analysis of the effects of attribute generality (general vs. specific stimulus attribute) and order of inferences (first, second, and third inferences from the stimulus attribute) upon the dependent measure, the semantic distance between the stimulus attribute and the inferred attribute. Sixty-six undergraduate males and females served as subjects.

The procedure for selecting a sample of each subject's general and specific attributes was similar to that employed by Wegner (1975). Each subject was first asked to provide the names of eight acquaintances in response to role descriptions specifying age (peer or older person), sex, and valence (liked or disliked person). Subjects were then instructed to write down ten "important characteristics" of each stimulus person. The attributes elicited in this manner were subsequently coded in terms of 50 attribute categories that were derived from inspection of the total attribute population (e.g., intelligence, creativity, popularity, sincerity, friendliness, etc.); each category included both an attribute and its negation. Judgmental agreement between two coders, calculated as the number of identical categorizations divided by the number of attributes, was 82% in a sample of 15 subjects' protocols.

The generality of each attribute employed by a subject was then determined. Attribute categories used in describing three or more stimulus persons were considered general for that subject; attribute categories used in describing only one of the stimulus persons were considered specific. Thus, a particular attribute category could be general for some subjects and specific for others; honesty, for example, was general for 19 subjects, specific for 26 subjects, and intermediate for the remaining 16. A similar pattern was observed for all attribute categories; that is, no category was exclusively general or specific for all subjects. From each subject's set of general and specific attributes identified through this procedure, two general and two specific attributes were randomly selected.

When a subject returned for further testing, he was asked to infer additional attributes on the basis of each selected attribute. The instructions read: "Give at least three characteristics which describe a person who is _____." After following this procedure for each of the four selected attributes, the subject made ratings of all the selected and inferred attributes. Five 7-point bipolar adjective scales were provided for this purpose (good-bad, hard-soft, friendly-unfriendly, smart-stupid, and strong-weak). These scales were chosen because of their frequent appearance as major dimensions in multidimensional representations of social cognitive structure (cf. Warr & Knapper, 1968). The semantic distance between the originally selected (general and specific) attributes and their corresponding inferences was assessed with a measure of profile distance similar to that introduced by Osgood and Suci (1952). This index, for a particular pair of attributes, was the mean across rating scales of the squared distance between the respective scale responses. The index could vary from 0 to 36, with higher values indicating greater distance between ratings of attributes. Since two such measures were obtained from a subject for each of the six conditions of the 2 x 3 design, the subject's mean score in each cell was used as the final measure.

Results. A 2 x 3 within-subjects analysis of variance performed on the profile distance measure revealed a significant main effect for attribute generality, $F(1,65) = 27.61$, $p < .001$. The mean profile distance between a general attribute and its associated inference was 1.74, whereas the comparable distance between specific attribute and inference was 2.72; a general attribute, as contrasted with a specific attribute, was found more likely to engender inferences that retain the meaning of the original attribute. This finding is clearly supportive of the major hypothesis of the present study.

The main effect for order of inference also attained significance, $F(2,130) = 7.99$, $p < .001$; the interaction effect was not significant. Subsequent trend analyses of the main effect by means of orthogonal comparisons revealed that the sequence of mean profile distances for first, second, and third inferences ($M = 2.10$, 2.06, and 2.59, respectively) contained a significant linear component, $F(1,65) = 8.81$, $p < .005$, and a significant quadratic component, $F(1,65) = 6.96$, $p < .01$. Although the interpretation of this result might prove intriguing, the reader must be warned that it was not predicted in advance.

Since the profile distance measure described earlier is sensitive not only to covariation between rating profiles, but also to the similarity between mean ratings of the two attributes, it could be argued that any variables which differentially inflate the mean ratings of specific or general attributes might also act to confound the measurement of semantic similarity. If, for example, general attributes were typically evaluative in nature while specific attributes were not, it might be expected that ceiling effects due to extreme scale ratings of both general attributes and their inferences would be interpreted as semantic similarity. In an analysis designed to eliminate such ceiling effects as a possible explanation of the results, a measure of implication strength (Warr & Knapper, 1968, p. 153) was computed for each subject's general and specific attributes. This index is the mean absolute deviation of all scale ratings of an attribute; as such, it is conceptualized as a measure of the strength with which the attribute implies one or the other of the scale anchors. It is also, however, an index of rating extremity. If general attributes have greater implication strength than specific attributes, then a ceiling effect interpretation of the semantic similarity results would be appealing. This was not the case. A t-test for repeated measures performed on the subjects' mean implication strength values for general and specific attributes ($M = 1.58$ vs. 1.50) revealed that the difference was not significant, $t(65) = 1.13$, $p > .20$.

Discussion. Overall, the results of this study indicate that inferences based on a general attribute are more similar in meaning to the original attribute than are inferences based on a specific attribute. This result appears uncontaminated by the possible biasing influence of differential implication strengths of either general or specific attributes. As such, the finding provides a sound empirical link between the processes of attribute selection and attribute inference. It seems that those attributes of others selected most often by an observer play an important role in his implicit personality theory. The unobserved qualities of the actor which an observer infers from such general attributes are similar to the observed qualities of the actor; in contrast, the unobserved qualities inferred from specific attributes are less likely to correspond with the observer's initial characterization of the actor. In this sense, then, the most stable and enduring conceptions of persons are those based on general attributes. The cognitive representation of an actor in terms of general attributes ensures that further inferences about the actor will not stray far from the characteristics originally observed.

It is interesting to note that the results of the implication strength analysis (which was initially undertaken for methodological reasons) shed some light on the relationship between past and present conceptualizations of the impression formation process. In previous studies, attention has most often been focused upon those attributes that heavily influence the tone of total impressions. Thus, in the classic study by Asch (1946), and in the subsequent related investigations by Warr and Knapper (1968) and others, the attributes of interest were those having high levels of implication strength; it was frequently suggested that such attributes were central to interpersonal cognition because of their considerable impact on the nature of inferences. Perhaps because of this emphasis, investigators have repeatedly failed to differentiate between the dimensions of generality and centrality, and have proposed that the two measures reflect the same underlying construct (see, e.g., Schneider, 1973). Yet in light of the present formulation of attribute generality--wherein the generality of an attribute is interpreted as an indicant of its definitional stability--there seem few logical grounds upon which to equate generality and centrality. Definitional stability implies only that an attribute will be closely associated with a certain set of semantically similar attributes; it does not imply that an attribute will be associated with many other attributes or that it will evoke extreme inferences. Given this analysis, and the present finding that general and specific attributes do not differ in implication strength, it must be suggested that the attribute properties of generality and centrality are both conceptually and empirically distinct.

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Footnote

A Semantic Basis for Evaluative Trait Judgments

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A measure of trait inter-relatedness derived from correlations, across subjects, between evaluative ratings of separate traits was (a) examined in terms of its ability to provide a satisfactory representation of the semantic structure underlying judgments of a set of traits and (b) compared to a trait-sorting task measure of stimulus co-occurrence. Results suggested that evaluative intercorrelations provide a better measure of semantic similarity than provided by trait-sorting. Reasons for this superiority are discussed.

An enduring problem in person perception/impression formation research involves the development of an appropriate methodology for representing the psychological and semantic structure of personality trait adjectives and relating this structure to the evaluative judgment process. One common method involves the development of inter-trait distances or similarities, which are then analyzed by multidimensional scaling methods (e.g. Rosenberg, Nelson, & Vivekananthan, 1968; Rosenberg & Sedlak, 1972). The dimensions identified by this procedure are considered to represent the "implicit personality theory" (cf. Schneider, 1973) which is used in forming evaluative impressions.

More recently, Bryson (1974) has demonstrated that intercorrelations, across people, between evaluative judgments of different trait stimuli provide an apparent measure of semantic relatedness which also may be analyzed by multidimensional techniques, such as factor analysis. Further applications have demonstrated that such correlational measures may be employed to differentiate between meaning change and averaging as the sources of context effects in evaluative impression formation (Bryson & Franco, in press). The present research examines the utility of these evaluative intercorrelations of semantic similarity, using a more diverse set of stimuli, and compares this measure to the more common trait-sorting procedure.

Method. Twenty pairs of apparently synonymous adjectives, representing a wide range of evaluative scale values and meanings, were selected by the experimenters.[2] These 40 separate traits were randomly ordered for presentation, with synonyms widely separated. Evaluative judgments of persons described by each of these traits were made by 115 introductory psychology students, run in two large groups (24 subjects were subsequently discarded for careless responding). An additional 30 subjects performed the trait sorting task, using the methods in Rosenberg et al. (1968).

Results and Discussion. A 40x40 correlation matrix was constructed by computing correlations, across subjects, between the evaluative ratings of the separate traits. Values in this matrix were consistent with the hypothesis that meaning similarity is adequately represented by evaluative rating intercorrelations. The average inter-synonym correlation (z-transform for averaging) was .58 ($p < .001$), while the average value across all