The effect of evaluative dispositions and amount and credibility of information on forming impressions of personality

MARTIN F. KAPLAN*
Northern Illinois University, De Kalb, Ill. 60115

An experiment is reported in which Ss varying in evaluative dispositions, or initial impressions existing prior to presentation of stimulus traits, rated sets of traits of varying size. High or low credibility was ascribed to traits via instructions. Positive dispositions were associated with greater positivity of ratings. This disposition effect was more pronounced under low credibility instructions. Both findings were in agreement with previous findings and with a weighted average model of information and disposition integration. Contrary to predictions, an increase in the number of like-valued traits did not reduce the disposition effect. Several alternatives were advanced to account for the latter unexpected finding.

Several recent papers have investigated the effect of evaluative dispositions on forming impressions of personality (Kaplan, 1970, 1971a, 1971c). Dispositions refer to generalized evaluative responses to others, which exist prior to acquaintance with any given stimulus person and are independent of specific stimulus information. Such dispositions have been variously referred to in the literature as elevation (Cronbach, 1955), global dispositions (Gage & Cronbach, 1955), positivity bias (Zajonc & Burnstein, 1965), or response bias (Kaplan, 1967). The present study investigates two dimensions of stimulus information, credibility and amount of information, and their modifying effect on magnitude of disposition effects in impression formation.

Specific predictions concerning the combining of dispositions and stimulus information were derived from a weighted average model of information integration (Anderson, 1967). In this model, the person impression (R) is an average of the initial impression (I_o) and the scale values of stimuli (A). This initial impression, or impression existing prior to presentation of stimulus information, is determined largely by evaluative disposition (Kaplan, 1971c). Other factors, however, such as the context in which ratings are being made, may also exert an influence. Factors other than disposition are assumed to be randomly distributed in the present design. In the combination process, I_o and A are inversely weighted ($1 - w$ and w, respectively). Mathematically, this model may be

stated as follows:

$$R = \frac{kwA}{kw + (1-w)} + \frac{(1-w)I_o}{kw + (1-w)} \quad (1)$$

Note that the term on the left, the stimulus term, is also weighted by k, the number of traits in a set describing a single person. Note also the simplifying condition that all traits in a set are of the same scale value. Since the disposition and stimulus terms combine in a weighted average, the effect of I_o on the response should decrease with increments in amount or weight of information. This implication of the model allows for several predictions:

(1) Positive dispositions, compared to negative dispositions, should lead to more positive person impressions, independent of stimulus likability level.

(2) The magnitude of the disposition effect should diminish with increase in weight associated with trait information. A necessary precondition would be that disposition level and trait information assume different values.

(3) Where trait valuation and disposition differ and where w is constant over variations in k, the magnitude of the disposition effect should diminish with increase in number of traits associated with the stimulus person.

Predictions 1 and 2 have been verified elsewhere (Kaplan, 1971c). The purpose of the present study is to replicate the earlier results and to extend this analysis to ratings of varying set sizes, a test of Prediction 3.

SUBJECTS

A large pool of students in the introductory psychology course were

asked to take a continued association test[1] early in the semester as a course requirement. They were asked to list words in continued association which could be used to describe other people's behavior. The mean number of words written in the allotted 6-min period was approximately 40. Each of the first 12 words emitted was subsequently scored as high, medium, or low in likability by four judges. Likability criteria consisted of Anderson's (1968) norms, words contained in the favorability or unfavorability subscales of the Adjective Check List (Gough & Heilbrun, 1965), and additional words agreed upon by all four judges.

Positive initial impression Ss (I_o+) were those emitting five or more high likability and one or less low likability responses. The opposite pattern identified negative initial impression Ss (I_o−). Sixty Ss, half of each I_o type, were requested to appear in the experiment for extra course credit. Ss were assigned randomly to one of two instruction conditions so that 15 I_o+ and 15 I_o− Ss served in each condition. Sex of S was balanced across I_o groups and instruction conditions.

PROCEDURE

Four levels of trait likability were identified on the basis of Anderson's (1968) norms. The mean ratings of traits designated as highly likable (H), moderately likable (M+), moderately dislikable (M−), and highly dislikable (L) ranged from 5.11 to 5.27, 3.57 to 3.66, 2.28 to 2.37, and .84 to .92, respectively, based on a 7-point scale (0-6). Eight traits from each level of likability were selected and combined into 2 sets of two and 2 sets of four traits at each level, generating 16 experimental sets. Eight filler sets, consisting of either H, M+ or L, M− traits, of Set Size 2 or 4, were added. The resultant 24 trait sets were presented for rating in random order, preceded by 4 practice sets (2 each of H, M+ and L, M−). Ss rated the person described by each set on a 19-point likability scale (0-18).

All Ss were told that the traits were supplied by acquaintances of the stimulus person, who had been asked to rate, from "guess" to "certain," the likelihood that the stimulus person did, in fact, possess the given trait. Ss in the high-credibility condition were told that the traits being presented had been rated as "certain." Ss in the low-credibility condition were told that the traits were all from the "guess" end of the scale. They were further told that the purpose of the experiment was to see what happens when people have to form judgments of others based only on unreliable information. No S expressed an
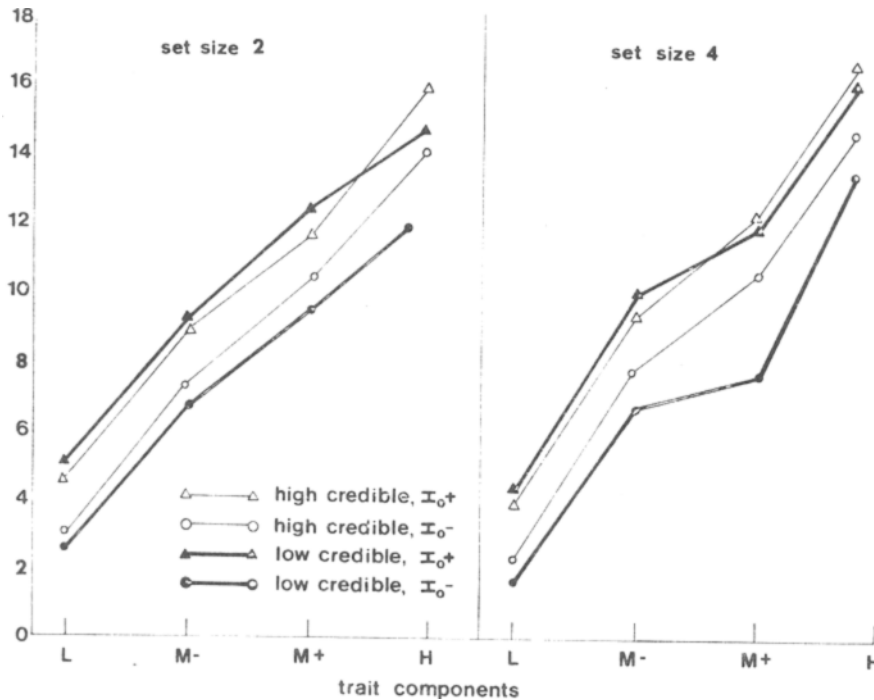
Fig. 1. Person impressions as a function of number and likability of trait components, credibility instructions, and initial impression.

inability to form judgments on this basis.

To summarize the design, I_o+ and I_o- rated sets of two and four traits at each of four likability levels, under either high or low credibility instructions.

RESULTS

The factorial nature of the design allowed for direct test of the predictions by means of analysis of variance. Since no effects were noted for replications, data were pooled over replications for further analysis.

Data were analyzed by means of a four-way analysis of variance, with I_o and credibility treated as between-Ss factors and traits and set size as repeated measures. Relevant data for all three predictions appear in Fig. 1.

Prediction 1

The first prediction was that positive dispositions should lead to more positive person impressions, independent of stimulus likability level. Statistically, this requires a main effect for I_o and a nonsignificant I_o by Traits interaction. Figure 1 is in agreement with both predictions. The rating curves for I_o+ are generally more elevated than those for I_o-, and the two sets of curves are essentially parallel. These observations are supported by the obtained ANOVA effects for I_o and I_o by Traits $(F = 55.26, \; df = 1/56, \; p < .01, \; and F = .44, df = 3/168, respectively).$

Prediction 2

It was further expected that the magnitude of the disposition effect would diminish with an increase in weight or credibility of trait information. The corresponding ANOVA test of this prediction is the I_o by Credibility interaction, which should be significant. Figure 2 confirms this prediction; differences between I_o groups were maximized when credibility was low. This observation is supported by the obtained ANOVA for the I_o by Credibility interaction $(F = 4.18, df = 1/56, p < .05).$

That the I_o by Credibility by Traits interaction was negligible $(F = .32, df = 3/168)$ indicates that the effect of trait weighting on I_o differences was uniform for trait evaluation levels—a necessary condition for the weighted average model.

Prediction 3

The last prediction was that an increase in set size should reduce rating differences due to I_o. This expectation was not confirmed, i.e., the magnitude of differences between I_o+ and I_o- was not reliably different in ratings of sets of two and four traits, as reflected in a negligible Initial Impression by Set Size interaction $(F = .86, df = 1/56).$

Supplementary Findings

A marginal tendency may be noted for responses to be more extreme when high weight was associated with traits. In ANOVA terms, this effect of weight upon extremity is reflected in a Credibility by Traits interaction. As in an earlier experiment (Kaplan, 1971c), data were suggestive of this interaction $(F = 2.10, \; df = 3/168, p < .10).$ The form of this interaction should be such that ratings of H sets are more positive, and ratings of L sets are more negative when credibility is high. The data in Fig. 1 conform to this expectation, with the exception that I_o- Ss rated L sets *less* negatively when highly credible. This departure from model expectations is not readily interpretable from the data.

Assuming that I_o levels were less extreme than the most extreme traits, i.e., H and L, the weighted average model requires that responses be more polar when either weight or number of traits is increased. The former effect, i.e., the interaction between weight and trait values, has already been noted, although not without qualifications. Relevant to the latter implication, the relative slopes of response curves for Set Sizes 2 and 4 suggest that ratings were more polarized in sets of four traits. This observation was supported by a significant Traits by Set Size interaction in ANOVA $(F = 6.03, df = 3/168, p < .01).$ The presence of a three-way interaction between traits, set size, and credibility instructions further suggests that the magnitude of this set size effect is contingent upon weight associated with the traits, the increment in polarity with greater set size being *less* under low credibility instructions $(F = 2.68, \; df = 3/168, p < .05).$ Thus, the polarizing effect of added information is lessened when weight is minimized. Rosenbaum & Levin (1968) report similar findings when weight was manipulated by source value, underscoring the equivalence of source valuation and discounting instructions in producing weight changes.

DISCUSSION

Confirmation of the first two predictions suggests that evaluative dispositions exert an effect upon person impressions and, more important, that an averaging rule governs the combination of disposition and stimuli into an impression. Further implications of this averaging rule were also confirmed. Responses to sets of extreme traits were more polar when associated weight was increased or, with weight held constant, when number of traits in a set increased. Further, the polarizing effect of increase in set size was attenuated by decreased weight. These findings are in accord with an averaging model when dispositions are evaluatively less extreme than are stimuli. Support for the averaging rule

is particularly striking, since the study represents a conceptual replication of an earlier study (Kaplan, 1971c), in which findings were essentially similar. The previous study differed from the present in several respects. First, credibility was manipulated by means of source prestige rather than instructions. Second, credibility constituted a *within-S* comparison. Finally, set size was not varied.

A last implication was unconfirmed, providing the most notable departure from the weighted average model. The model treats amount of information as a weighting factor for the information term, suggesting that the magnitude of the I_o effect should be diminished with greater set size. The experiment failed to confirm this expectation. Several alternatives may be advanced to account for lack of confirmation:

(1) The model could be modified so that I_o combines with trait information as an additive constant, summing with the product of information combination. The generalized form of this model has been suggested by Anderson as follows:

$$J = C + w_k s_k \qquad (2)$$

where J is the judgment, s_k and w_k the value and weight of the kth item in the set, and C a constant which may include response biases (Anderson & Shanteau, 1969). Treating I_o as a constant is, however, inconsistent with the finding of diminishing I_o effects with increasing w_k.

(2) It is possible that I_o+ and I_o- differ in valuations of individual traits as well as initial impression.[2] If so, an Initial Impression by Set Size effect would not necessarily follow from Eq. 1. Further data are needed on the evaluations of traits per se by I_o+ and I_o-.

(3) A last possibility is that the added traits in Set Size 4 were somewhat redundant with earlier traits. Recently collected data suggest a good deal of connotative overlap between traits within likability levels (Kaplan, 1971b). Conceivably redundancy was increased in the larger set size to the extent of reducing the effect of added traits on the magnitude of I_o differences. It is clear that stricter controls for redundancy are needed in future research.

In conclusion, dispositions appeared to combine with traits according to a weighted averaging rule, independent of trait level. The relative contribution of the two components was a function of the weight associated with traits. The major departure from expectations relates to whether or not the number of traits acts as a weighting factor for information. The fact that set size does increase the relative contribution of trait information to the response implies a weighting function, but the effect of set size on individual differences due to disposition is unclear and requires further study.

REFERENCES

ANDERSON, N. H. Averaging model analysis of set-size effect in impression formation. Journal of Experimental Psychology, 1967, 75, 158-165.

ANDERSON, N. H. Likableness ratings of 555 personality trait words. Journal of Personality & Social Psychology, 1968, 9, 272-279.

ANDERSON, N. H., & SHANTEAU, J. C. Information integration in risky decision making. Technical Report No. 6, Center for Human Information Processing, University of California, La Jolla, 1969.

CRONBACH, L. J. Processes affecting scores on "understanding of others" and "assumed similarity." Psychological Bulletin, 1955, 52, 177-194.

GAGE, N. L., & CRONBACH, L. J. Conceptual and methodological problems in interpersonal perception. Psychological Review, 1955, 62, 411-423.

GOUGH, H. G., & HEILBRUN, A. G., JR. *Joint manual for the adjective check list and the need scales for the ACL.* Palo Alto, Calif: Consulting Psychologists Press, 1965.

KAPLAN, M. F. Repression-sensitization and prediction of self-descriptive behavior: Response vs. situational cue variables. Journal of Abnormal Psychology, 1967, 72, 354-361.

KAPLAN, M. F. Response hierarchy, reception, and the process of person perception. Human Relations, 1971a, 24, 189-199.

KAPLAN, M. F. Forming impressions of personality: The effect of the initial impression. Psychonomic Science, 1970, 18, 255-256.

KAPLAN, M. F. The determination of trait redundancy in personality impression formation. Psychonomic Science, 1971b, 23, 280-282.

KAPLAN, M. F. Dispositional effects and weight of information in impression formation. Journal of Personality & Social Psychology, 1971c, 18, 279-284.

ROSENBAUM, M. E., & LEVIN, I. P. Impression formation as a function of the relative amounts of information presented by high and low credbility sources. Psychonomic Science, 1968, 12, 349-350.

ZAJONC, R., & BURNSTEIN, E. Structural balance, reciprocity, and positivity as sources of cognitive bias. Journal of Personality, 1965, 33, 570-583.

NOTES

1. The reader may refer elsewhere (Kaplan, 1970, 1971c) for a fuller discussion of this technique.

2. Norman Anderson, personal communication, February 1970.