The Integration of Self-Descriptions and Descriptions by Outside References in the Evaluation of Job Applicants

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Recommended Citation

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Dolezal, Jeanette M., and Irwin P. Levin (Department of Psychology, The University of Iowa, Iowa City, Iowa 52242). The Integration of Self-Descriptions and Descriptions by Outside References in the Evaluation of Job Applicants. *Proc. Iowa Acad. Sci.* 82(2): 140-143, 1975.
A study was conducted to determine how different types of information are combined to arrive at evaluations of hypothetical job applicants. Sixty subjects were asked to evaluate nine applicants for the position of elementary school principal. The information describing each applicant included a letter of self-description and from one to three letters from outside references. Results can be summarized as follows: (1) evaluative ratings of job applicants were directly related to the value (level of favorability) of the information contained in the outside letters of reference and the value of the information contained in the self-description; (2) the greater the number of favorable outside letters, the higher was the evaluation; (3) the relative weight or importance of a given self-description or outside reference was dependent upon the other pieces of information with which it was combined. A mathematical model which assumes that subjects average the values of the various types of information provided a good description of the applicant evaluation process.
INDEX DESCRIPTORS: Evaluation of Job Applicants; Self-Descriptions.

This study represents an extension of a current line of research in which subjects are presented several pieces of information from a variety of sources and are required to make a single judgment or decision based on the varied information. In a common task of this type, subjects are asked to form an impression of how much they would like or dislike each of a series of hypothetical persons described by sets of personality trait adjectives (e.g., Rosenbaum and Levin, 1968). The present task is related to this, with subjects being asked to evaluate hypothetical job applicants. This general area of research is known as *information integration* because it is concerned with describing how information is combined or integrated in a variety of judgmental and decision-making tasks. Anderson (1971, 1974) has provided extensive reviews of this research.

The present study employs the methodology and analytic procedures of research on information integration to investigate a class of variables affecting the evaluation of job applicants. Subjects were asked to evaluate hypothetical applicants for the position of elementary school principal. For each applicant the subjects were given a set of information consisting of a self-description written by the applicant himself plus one or more letters of reference from outside sources. These letters of reference will be referred to as "other-descriptions" to contrast them with "self-descriptions." As is typically the case in studies of information integration, the variables of interest—in this case, favorability level of self-descriptions, favorability level of other-descriptions and number of other-descriptions (outside letters of reference)—were manipulated in a factorial design so that each combination of levels of the variables was included. This permits data analyses which determine the effect of each

variable and the interactions between variables. These analyses are then used to evaluate the information integration process operative in the present task. Later in this paper, a mathematical model analogous to those used in previous studies of information integration (Levin, 1974a; Levin, Schmidt and Norman, 1971) will be employed as a heuristic device for describing the results of the present study.

PREDICTIONS AND EMPIRICAL QUESTIONS

In some cases, the effects of the variables of interest can be predicted directly on the basis of previous research and common-sense intuition. In other cases, predictions are not so straightforward. Pigage and Tucker (1952) studied job evaluations and found that the more positive the information contained in letters of reference, the more favorable was the response. Brewer (1968) found that an increase in the number of favorable letters of reference produced a more positive response. The same effects were predicted for the present study. However, previous studies of job applicant evaluations have not included self-descriptions as a factor. This is a novel aspect of the present study and a number of outcomes are possible. Subjects evaluating hypothetical job applicants may give higher ratings to applicants with more favorable self-descriptions than to those with less favorable self-descriptions. On the other hand, subjects may tend to discredit persons who appear to be overly self-praising. The information contained in a self-description may be evaluated in terms of whether or not it is supported by the information contained in the other-descriptions, and the effect of this variable would then depend on how the two types of information are combined.

METHOD

Design

A 2 X 3 X 3 factorial design was employed, with variations in content of self-descriptions and other-descriptions, and number of other-descriptions (outside letters of refer-

ence). In the terminology of information intergration, this latter variable will be referred to as "set size" because it defines the size of the set of information to be evaluated. Type of other-description (high praise, H; moderately good, M; or neutral, N) and set size (n = 1, 2 or 3) were within-subject factors, with each subject receiving all nine combinations of levels of each factor. Different groups of subjects received different levels of self-description. Half of the subjects received a high praise self-description and half received a moderately good self-description. The levels of each factor were determined in a prestudy where actual letters of reference for the job of elementary school principal were modified to achieve varying levels of favorability. A group of 333 students rated the degree of favorability of each letter and the levels chosen for the final study were those that were distinct and discriminable and had high levels of agreement among the judges. The mean ratings on a 20-point scale were as follows: high praise self-description, 18.9; moderately good self-description, 15.2; H other-description, 19.1; M other-description, 15.8; N other-description, 9.3.

Sixty students from introductory psychology classes at The University of Iowa participated in the main study.

Procedure

Each subject in both the high praise and moderately good self-description groups was given nine folders; each folder contained letters describing the qualifications of a different job applicant for the position of elementary school principal. The letters for a given applicant included a self-description plus one to three other-descriptions (letters of reference from other sources).

For the high praise group, each folder contained a high praise self-description. Three of these folders contained the high praise self-description plus one additional letter of recommendation provided by a former employer. This letter was either H, M, or N in value. Three other folders each contained the high praise self-description plus two letters of recommendation, one from a former employer and one from a former professor. These letters were either both H, both M, or both N in value. The final three folders each contained a high praise self-description plus three letters of recommendation, one from a former employer, one from a former professor and one from a colleague. The three letters were either all H, all M, or all N in value.

Each subject in the moderately good group was also given nine folders. The information in these folders differed from the information provided in the folders for the high praise group only in that the letters of self-description were moderately good instead of high praise. The letters of recommendation provided by others were the same as for the high praise group.

Subjects in each group were told that each of the nine folders corresponded to a person who was applying for the position of elementary school administrator (principal). They were asked to consider each person independently of all others and to decide how well each person would serve in the capacity of principal by rating him on a 20-point scale. For example, if they thought the person was very poorly qualified for this position, they were told to rate him 1. On the other hand, if they thought the person was very highly qualified and would be extremely competent in this position, they were asked to rate him 20. For intermediate levels they were to use the numbers between 1 and 20.

Social skills were to be their prime consideration in evaluating each applicant. They were told that in order to serve well in this position the person must be highly competent in getting along with other people, both young and old, since he would be interacting with students, faculty, and parents.

Subjects were instructed that for practical reasons it was not always possible to obtain the same amount of information (outside letters of reference) for each applicant. They were told that all the information about the applicant was contained in a single folder. They worked at their own pace and put their rating of an applicant on the last sheet in the folder. The self-description was always the first item of information in a given folder. The remaining information was shuffled for each subject, as was the order of presentation of folders.

RESULTS AND DISCUSSION

The mean for each cell of the design is presented in Table 1.

TABLE 1. MEANS FOR EACH CELL OF THE DESIGN
Set Size

High Praise Self-Description

		1	2	3	
Other-Descriptions	H	12.600	16.033	17.067	15.233
	M	12.233	14.900	14.800	13.978
	N	10.400	12.300	12.133	11.611
		11.744	14.411	14.667	13.607

Moderately Good Self-Description

		1	2	3	
Other-Descriptions	H	13.567	13.867	17.367	14.933
	M	11.133	11.733	13.400	12.089
	N	6.300	6.333	7.767	6.800
		10.333	10.644	12.844	11.274

The effect of level of other-description was statistically significant, $F(2, 116) = 98.84$, $p < .01$, and confirmed predictions. It can be seen in Table 1 that as the favorability of the information in the other-descriptions increased, the subjects' ratings of the applicant also increased.

The effect of level of self-description was also statistically significant, $F(1, 58) = 10.46$, $p < .01$. From an examination of Table 1, it appears that subjects tended to take the self-descriptions at face value rather than discrediting them, since higher ratings tended to be assigned to applicants presenting high praise self-descriptions than to those presenting moderately good self-descriptions. An exception can be seen for H other-descriptions at set size 1. This will be discussed later.

The interaction of other-description and self-description was significant, $F(2, 116) = 14.54$, $p < .01$, and is illustrated in Figure 1. The converging curves show that as the degree of favorability of the other-descriptions increased, the difference between the ratings given to applicants who present different types of self-description decreased, and vice versa. This finding can be explained by assuming that subjects average the information contained in self-descriptions and other-descriptions, thus leading to a tradeoff relationship or balance between the two types of information. When one type of information is extreme in value, that type of information has an increased effect and the other type of information has a diminished effect. This is con-
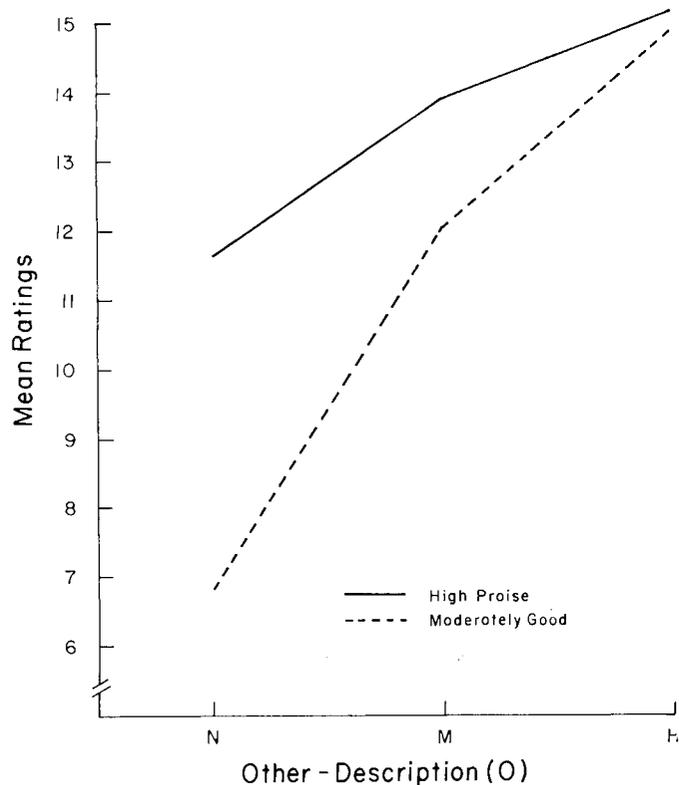
Figure 1. Mean ratings as a function of self-description and other-description.
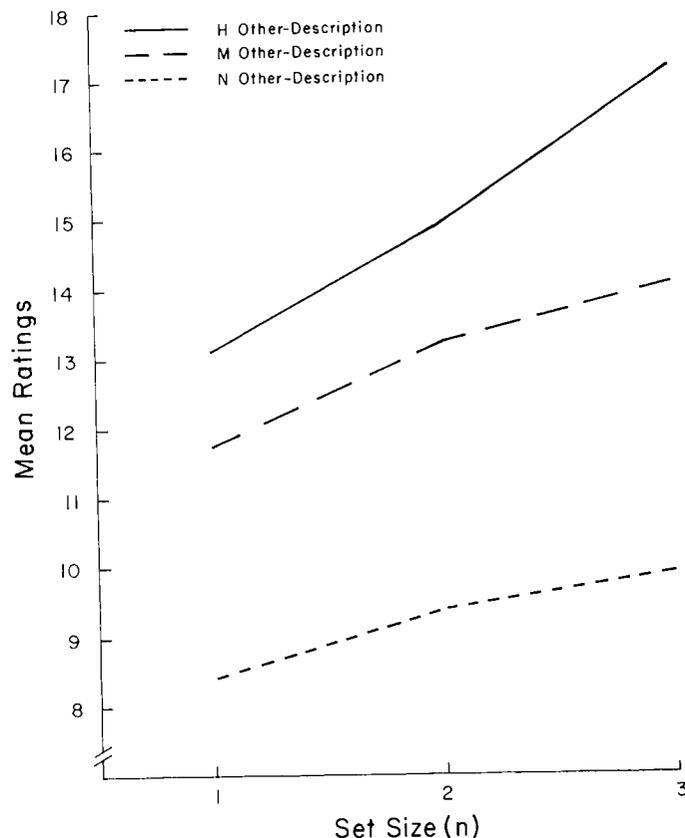

Figure 2. Mean ratings as a function of other-description and set size.

sistent with Anderson's (1967) conclusion that neutral or moderate information has less weight than more extreme information when information of differing values is averaged.

Set size was found to have a statistically significant effect, $F(2, 116) = 34.50$, $p < .01$. As set size increased, the mean rating increased. However, the magnitude of this effect was found to vary depending on the type of other-description and the type of self-description being considered. These interactions are described below.

The interaction of set size and other-description was of borderline statistical significance at the .05 level, $F(4,232) = 2.34$, and appears to be systematic in nature. The interaction is plotted in Figure 2. The diverging curves seen in Figure 2 illustrate the following two points: (1) differences in mean ratings for different levels of other-descriptions increased as set size increased; (2) the degree of increase in mean rating response as set size increased was greatest for high praise other-descriptions and least for neutral other-descriptions. Analogous results have been obtained in studies of personality impression formation and have been explained by assuming that a relatively neutral initial expectancy or response disposition is averaged with the values of the information presented the subjects (Anderson, 1967; Levin, Schmidt and Norman, 1971). The resulting average is thus increased as the number of favorable pieces of information presented is increased. This would account for the present finding.

The interaction of set size and self-description was statistically significant, $F(2, 116) = 7.34$, $p < .01$, and is illustrated in Figure 3. This figure shows that the difference between the high praise self-description group and the moderately good self-description group increased from set size 1 to set size 2 and decreased from set size 2 to set size 3. The decreased difference between groups as set size increased from 2 to 3 is consistent with the assumption that information presented in self-descriptions and information presented in other-descriptions is averaged. As the number of other-descriptions is increased, the relative effect of self-descriptions is diminished. A depressed mean rating at set size 1 for the high praise group (particularly for an H other-description) prevents this effect from occurring when set sizes 1 and 2 are compared. Subjects in the high praise group may have tended to discount the high praise self-description when only one other-description was given, resulting in a relatively low rating at that point.

The set size X other-description X self-description interaction did not approach statistical significance. The relevant graphs are shown in the top part of Figure 3.

CONCLUSIONS

In the present task both self-descriptions and references from outside sources were important in determining eval-
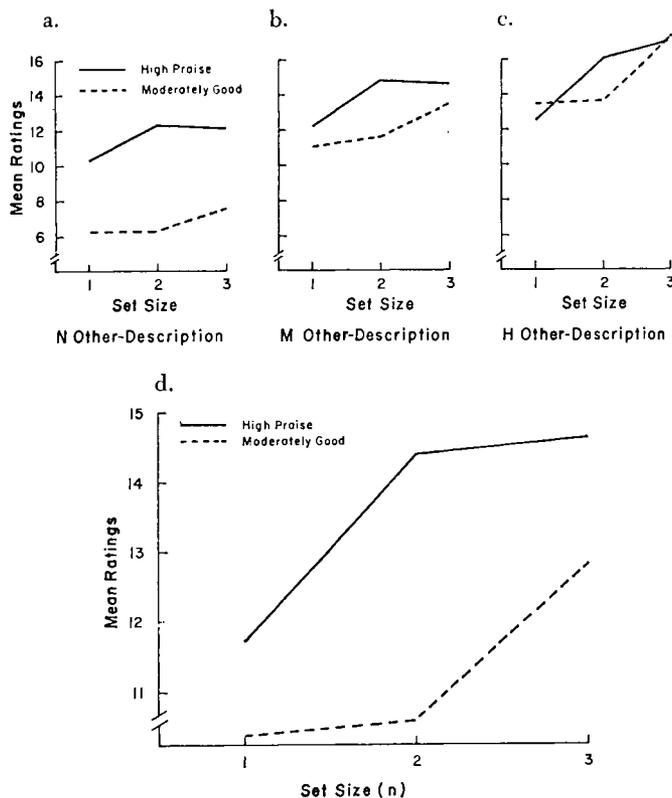
a.   b.   c.

Figure 3. Mean ratings as a function of self-description and set size at each type (N, M and H) of other-description (a, b and c) and summed over other-descriptions (d).

uations of hypothetical job applicants. A tenable hypothesis is that the two types of information are combined through an averaging process. This fits well with recent findings from a variety of judgmental and decision-making tasks. For example, Anderson (1971) concluded that averaging models provide a good description of personality impression formation and certain types of attitude change; Levin (1974a) showed that price information was combined by an averaging process when comparing alternative stores; and Levin (1974b) showed that personal and outside opinions are combined by an averaging rule when arriving at a joint decision. An averaging model which describes the influence on job applicant evaluations of varying levels of self-description and varying levels and numbers of other-descriptions has the following form:

$$R = \frac{w_O I_O + w_S I_S + n\, w_R I_R}{w_O + w_S + n w_R}$$

where R is the evaluative rating response; I_O, I_S, I_R are the favorability levels of the subject's initial expectancy, the information contained in the self-description, and the information contained in the other-descriptions, respectively; w_O, w_S, and w_R are the relative weights or levels of importance of these components of the rating response; and n is the set size. Note that the denominator is the sum of the weights and

serves to "normalize" the model so that it has the form of an averaging model and implies that an increase in the influence (weight) of one factor (i.e., self-description or other-description) produces a concomitant decrease in the influence of the other factor. In this form, the model can account for the major findings of the present study. With additional constraints on the parameter values—e.g., by assuming that the weights w_S and w_R are directly related to the values of I_S and I_R—other details can be handled. The model can be used to provide a framework in which to study other variables affecting job applicant evaluations. For example, the credibility of the sources supplying letters of reference can be studied by examining changes in the weight parameter, w_R, as a function of source credibility (Rosenbaum and Levin, 1968).

Studies of the present type are, of course, several steps removed from actual job selection procedures. For one thing, subjects in the present study were not actually evaluating real applicants. Rather, they were making paper-and-pencil responses in a laboratory setting. Secondly, the variables chosen for study represent only a portion of those that are operative in actual job selection. Evaluation of letters of reference is often a screening device to be followed by personal interviews, aptitude tests, etc. Nevertheless, the screening process is an important component of job applicant selections. Subjects in the present study responded systematically to the information presented by putting themselves in the role of an employer. The nature of the information was controlled to a far greater extent than would have been possible in a field setting. It remains for future research to determine the correspondence between laboratory-derived principles of information processing and those principles that apply to decision-making outside the laboratory.

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