

Affective Disposition and the Letter of Reference

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The present study attempted to determine the relationship between affective disposition and the favorability of letters of reference. We hypothesized that individuals with positive dispositions would write more favorable letters than would individuals with less positive or neutral dispositions. In addition, we also hypothesized that length of letter would partly mediate the relationship between affective disposition and letter favorability. To test these hypotheses, two studies were conducted. In order to present letter writers with a controlled stimulus, Study 1 entailed having 110 undergraduate students write letters of reference for two hypothetical job candidates in a laboratory setting. In order to test the generalizability of the laboratory study, Study 2 involved 95 faculty members who submitted three recent letters of reference they had written. Results showed that affective disposition was related to the favorability of letters of reference in both studies. Results also revealed that length of letter partly mediated the relationship between affective disposition and letter favorability. © 1998 Academic Press

The reference report is somewhat of an enigma. On the one hand, it is one of the most widely used methods of personnel selection. Muchinsky's (1979) review of the literature indicated that between 82 and 99% of employers use reference reports in their selection decisions. Furthermore, most employers consider references an essential part of the selection process, particularly for high-skill or professional jobs (Sleight & Bell, 1954). On the other hand, despite widespread use, reference reports also appear to rank among the least valid

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selection measures (Muchinsky, 1979). Unlike other selection methods, very little research has investigated factors affecting the validity of reference reports. As Muchinsky (1979) noted nearly 20 years ago, "Of all the more commonly used personnel selection devices, reference reports are the most under-researched. A thorough search of psychology, management, and personnel literature reveals a paucity of studies on reference reports with empirical studies being particularly scarce" (p. 287). Despite repeated calls for more studies on references (Smith & George, 1992), it remains a neglected area of research.

There have been a few exceptions (Browning, 1968; Knouse, 1983; Mosel & Goheen, 1958, 1959; Peres & Garcia, 1962). One general conclusion from this small body of research is that most reference reports are highly favorable to the subject of the reports. Indeed, this lack of variation is one factor that is commonly argued to account for the poor validity of reference reports (Muchinsky, 1979). Another factor argued to lead to poor validity is the low inter-rater reliability that exists between references (Muchinsky, 1979). In terms of one of the principal forms of reference reports, letters of recommendation, Baxter, Brock, Hill, and Rozelle (1981) found that letter writers provide highly personalized information that is not shared by other writers even if the subject of the letters is the same. In interpreting their results, Baxter et al. (1981) noted, "The results are more directly a function of letter writers' idiosyncrasies than of the students' qualities" (p. 300). Baxter et al.'s study provides an interesting suggestion: If the letter of reference is, in part, a reflection of the writer, it is relevant to ask what characteristics of the letter writer might be related to the written product.

The purpose of the present study is to investigate one aspect of the reference provider, affective disposition, which represents the relatively stable tendency to evaluate the environment based on one's emotional make-up (Judge, 1992). Although reference reports can take many forms, our focus in this study is on one of the most common: the letter of reference. Drawing from theory in the area of person perception, and related research in the areas of performance evaluation and the employment interview, we hypothesize a link between affective disposition and the favorability of letters of reference. Literature supporting this hypothesis is reviewed next.

Because writing letters of reference is the product of an evaluative process, similar in this respect to performance appraisal or interviewer decision-making, research in these areas may shed light on the possible dispositional basis of letters of reference. Like the reference letter, performance appraisals are subject to the cognitive processes the rater uses in reaching decisions about subjects (Landy & Farr, 1980). As Wherry and Bartlett (1982) proposed in their theory of rating, evaluations about others can be a function of bias in how original perceptions about others are evaluated when they are retrieved from memory. In introducing his model of cognitive processes in the performance appraisal process, Feldman (1981) noted that dispositional factors in the rater can influence these cognitive processes. It seems likely that one of these dispositional

factors is whether the rater tends to evaluate objects, events, or people in a generally positive or negative manner.

In fact, basic person perception research has revealed that affect plays a central role in the processing of information about others. Research by Fiske (1982) shows that affective labels are attached to factual information about persons which is stored in memory. When thoughts about a particular person are accessed from memory, the perceivers' affective orientation toward the target may be the first piece of information retrieved. According to Longenecker, Jaccoud, Sims, and Gioia (1992), two types of affect may influence the cognitive processing of information about employees or job applicants. One type of affect is differentiated affect. This type of affect is dependent upon who (i.e., employee or applicant) constitutes the target and is typically operationalized as liking. As the target of observation changes, so too does the differentiated affect of the perceiver. Research indicates that liking is an important correlate of performance (Tsui & Barry, 1986) and interview (Dipboye, 1992) ratings.

The other type of affect discussed by Longenecker et al. (1992) is undifferentiated affect. Undifferentiated affect represents general feelings not specifically directed at a single person such as mood (state affect) or affective disposition (trait affect). Although much less research has been done on undifferentiated affect, several studies have linked mood of the evaluator to decisions about subordinates (Longenecker et al., 1992) and job applicants (Baron, 1993), as well as to evaluations of job satisfaction (Brief, Butcher, & Roberson, 1995).

These areas of research suggest a possible dispositional basis of letters of reference. If undifferentiated affect influences performance ratings and interviewer evaluations, it seems reasonable to expect that similar tendencies will be displayed on the part of letter writers. In short, the same affect-laden cognitive processes that influence supervisors and interviewers should also generalize to letter writers. Writing letters of reference forces writers to retrieve information previously acquired and encoded into memory and it is likely that affective information is acquired, encoded, and retrieved as a result of this person perception process (Fiske, 1982). Because affective disposition is reflected in the tendency to be accepting versus critical of others, it seems likely it will influence the evaluation of information about others (Judge, 1992), including how letter writers evaluate the subject of their letters. In fact, a recent study supports this argument by finding that affective disposition was correlated with faculty member's evaluation of job candidates and their ratings of co-workers (Merritt & Davis, 1994).

Thus, there is some indirect evidence that suggests a positive relationship between affective disposition and the favorability of letters of reference. In short, if variation in letters of reference is directly a function of individual differences among writers of the letters (Baxter et al., 1981), it seems likely that one of those individual differences is the affective disposition of the writer. Accordingly,

H1: Affective disposition will be related to the favorability of letters of reference such that positively disposed writers will write more favorable letters than negatively disposed writers.

Influence of Length of the Reference Letter

One issue that has not been discussed to this point is what a favorable letter of reference means. Typically, one would consider favorable letters to be those that contained many positive descriptions and few negative ones. In fact, Peres and Garcia (1962) found that the favorability of letters could be described in terms of the adjective descriptions contained in the letters. However, given the positive tone of most letters, others have suggested that length of the letter may be more indicative of the true attitude of the letter writer. As Wiens, Jackson, Manaugh, and Matarazzo (1969) argued, “. . . number of words written in a letter of recommendation might be more explicit as an index of a writer's true attitude toward the person about whom he was writing than was the content of the letter per se” (p. 264). Their results, as well as those of an earlier study (Mehrabian, 1965), support this argument. On the basis of this evidence, it seems reasonable to expect that length of the letter of reference will be related to its perceived favorability. Furthermore, if affective temperament is related to the favorability of the reference letter, and if length of the letter is indicative of its favorability, it seems likely that positively disposed individuals will write longer letters than those less positively disposed. In such a situation, length of the reference letter could be expected to mediate, at least in part, the relationship between affective disposition and the favorability of the reference letter. Accordingly,

H2: Length of the letter of reference will: (a) be positively related to its favorability; and (b) partially mediate the relationship between affective disposition and letter favorability.

METHOD OVERVIEW

The hypotheses were tested using two separate studies. The first study involved a laboratory experiment in which subjects wrote letters of reference for two hypothetical bank employees. The second study was a field study in which participants were asked to contribute actual letters of reference they had written. The laboratory study offers the advantage of presentation of a controlled stimulus such that letter writers were evaluating the same person in the same context. However, because the laboratory study may lack realism, a field study was conducted as it has the advantage of studying actual letters of reference.

In estimating the relationship between affective disposition and the favorability of letters of reference, several control variables were taken into account. Past research suggests work experience of the rater positively influences performance ratings (Landy & Farr, 1980). Therefore, work experience of the letter writer was controlled in both studies. Given the possibility of contrast effects that have been reported in the interview literature (Wexley, Sanders, & Yukl, 1973), in the laboratory study we controlled for the order in which applicants were presented to the subjects. Finally, Carlson (1967) pointed out that individuals' evaluations might be influenced by the amount of evaluating experience they have. Thus, we controlled for letter writing experience of the subjects.

METHOD: STUDY 1

Setting and Subjects

Subjects were undergraduate students at a large Midwest university enrolled in an introductory management course. Participation in the study was voluntary. Students choosing to take part were awarded extra credit towards their course grade. The sample consisted of 120 subjects of whom 52% were male and 88% were White. (Listwise deletion subsequently reduced the sample size to 110.) As was expected with a student sample, only 9% had previous experience writing letters of recommendation. Average age of subjects was approximately 22 years and average total work experience was 5.2 years.

Procedure

The study consisted of 16 individual sessions. Participants each attended one 45-min session. Each session included the showing of two brief videos depicting two hypothetical bank employees performing a routine transaction. The transaction involved the bank employee accepting a check deposit from a customer as well as giving the customer a small amount of cash. Employee quality was controlled by one bank employee being a good performer and one being an average performer. The actor portraying the good employee welcomed the customer to the bank, made small talk while performing the transaction, and counted out the bills as they were given to the customer. In contrast, the average employee simply called for the next person in line, made no attempt to converse with the customer, and presented the cash to the customer in a lump sum. The order in which the videos were shown was alternated in the sessions in order to assess any impact the order might have on subject's evaluation of the bank employees. Also, to avoid confounding quality of the employees with sex differences, both employees were male.

Prior to watching the respective videos, subjects were provided with background information on each employee (a resume and performance appraisal that had been completed by the employee's former supervisor). This information was tailored to match the performance level of the employee. For example, the good employee had two years of banking experience while the average employee had only one year. The good employee had a slightly higher GPA and his performance appraisal score was slightly higher than that of the average employee. For the purposes of this experiment, subjects were asked to assume they had worked with each of the employees during the summer and were now being asked to write a letter of recommendation for each employee. In order to simulate the selection process, subjects were told that both employees were applying for teller positions in other banks. Also, subjects were told that the employees were applying at different banks so they were not competing for the same job. No time limit was placed on writing the letters and, likewise, no guidelines were given as to how long the letters should be.

In addition to watching the videos and writing the letters of reference, subjects filled out a brief survey that was used to assess affective disposition. As

with the video, the administration of the survey was alternated. Half of the subjects completed the survey prior to participating in the experiment and half completed the survey after the experiment. Again, this was done to determine if the order in which subjects completed the survey had any effect on their evaluations. There was no significant difference in average ratings between those subjects completing the affect survey before the experiment and those completing the survey after the experiment.

Finally, a manipulation check was conducted to ensure that the subjects felt the two employees were of different quality. The manipulation check was performed by having subjects rate each employee on a scale of 1 = *unacceptable; not recommended* to 5 = *exceptionally qualified: highest recommendation*. The mean rating for the good employee was 4.47 and the mean rating for the average employee was 3.38. This difference was highly significant ($t_{117} = 11.27$, $p < .001$), indicating that subjects did find differences between the employees and the manipulation was successful.

Measures

Affective disposition. Affective disposition of subjects was measured with the Neutral Objects Satisfaction Questionnaire (NOSQ), which is based on a measure originally developed by Weitz (1952). The NOSQ assesses affective disposition by asking respondents to rate their satisfaction with a list of 25 neutral objects common to everyday life (e.g., the way people drive, local newspapers, movies being produced today). Affective disposition was defined as the average response to the 25 items on the NOSQ, using a 1 = *dissatisfied*, 2 = *neutral*, 3 = *satisfied* scale. Judge and Bretz (1993), among a sample of industrial workers, found that the NOSQ displayed favorable psychometric properties (all items significantly loaded on a single factor) and was quite stable over time ($r = .75$ over a 6-month period). In comparison, measures of positive affectivity (PA) and negative affectivity (NA) were somewhat less stable ($r = .63$ in both cases). Judge and Carter (1995), among a sample of college students, also found that all NOSQ items loaded on a single factor. They also reported that, over a 6-week period, the NOSQ was significantly more stable ($r = .79$) than measures of trait-PA ($r = .59$) or trait-NA ($r = .61$). When the NOSQ and measures of PA and NA were collected at the same point in time, Judge and Carter found moderate correlations between the NOSQ and PA (average corrected $r = .31$) and NA (average corrected $r = -.29$). When the measures were separated by four weeks, the correlations were slightly lower (average $r = .28$ for PA and average $r = -.25$ for NA). In the present study, the coefficient α reliability estimate of the NOSQ was $\alpha = .76$.

Favorability of letter. Favorability of letters was assessed by three raters. Letters were rated on a scale of 1 = *extremely negative* to 10 = *extremely positive*. Prior to actually evaluating the letters, raters were trained and read a random sample of five letters before they began the rating process. Ratings were made independently with no discussion between raters regarding the

assignment of ratings. Because dispositional tendencies are most clearly revealed by individuals' decisions over time or across situations (Epstein, 1977), and to simplify presentation of the results, favorability of the letter represented the average favorability of the two letters. In order to determine whether raters were consistent in their evaluations of the letters, we estimated interrater reliability using several methods. The coefficient alpha reliability estimate of the three ratings was .82 for the good employee letters and .91 for the average employee letters. Using the Spearman–Brown formula, we found a reliability coefficient of .83 for the good employee and .93 for the average employee.

Other measures. Length of letter was measured by counting the average number of words in the first three rows and multiplying this figure by the number of rows in the letter.¹ Previous experience writing letters of reference was assessed with the question "Have you written a letter of recommendation before?" Answers were coded on a 1 = *yes*, 0 = *no* scale. Total work experience was determined by the question "How many years of total work experience do you have?" Work experience was reported in years and months.

METHOD: STUDY 2

Setting, Subjects, and Procedure

Subjects were full-time faculty members at a large Midwest university. Seventy-six percent of the sample was male and 90% were White. All had previous experience writing letters of reference with the mean number of letters written being estimated at 110. Average age of subjects was 48.1 years and mean total work experience was 23.3 years.

Surveys were mailed to a random sample of 1,000 full-time faculty members. A cover letter included with the survey asked participants to fill out the brief survey and return it along with up to three recent letters of reference they had written. Participants were assured in the cover letter that individual responses would be completely confidential. The response rate was 14.6% for a total of 146 participants. Of the 146 faculty who returned at least one letter and survey, 132 returned at least two letters, and 108 returned three letters. Of the 108 faculty who returned at least one letter, 13 surveys contained incomplete data. Thus, there were 95 observations containing full data (three letters and a completed survey) that could be included in the analyses.

The low response rate may be attributed to the private and personal nature of letters of reference. Accordingly, the results may have been biased by whether those who returned surveys generally write good reference letters. Although we cannot directly answer this question, a partial answer can be revealed by

¹ In order to determine the accuracy of this method, using a random sample of letters, we correlated our method of measuring letter length with the actual (exact) number of words in each letter. Because the number of words measured with our method was very highly correlated with the actual number of words (average $r = .98$ across the two studies), we considered our method acceptable.

comparing the number of letters returned by a participant and the mean favorability of all the subject's letters. If letter favorability is related to the number of letters a participant supplies, we would expect those returning three letters to have a higher mean favorability rating on their letters than would those who returned one or two letters. Likewise, participants providing two letters would be expected to have a higher mean favorability rating than those providing just one letter. However, results indicated that the average favorability ratings did not vary according to how many letters the subjects returned. This indicates that number of letters returned was unlikely to have been related to letter favorability.

Despite the low response rate, participants appear to be representative of the sample as a whole. A random sample of non-respondents revealed that 76% were male, which exactly matches the percentage of respondents who were male. ANOVA results comparing the representation of respondents and non-respondents across the nine colleges in the university indicated no significant differences. These results suggest that the sample is representative of the full population, at least with respect to these attributes. The purpose of the reference letters was as follows: nonacademic job = 29%; academic job = 27%; graduate school = 20%; grant, scholarship, or award = 16%; promotion or advancement = 8%. ANOVA results for a test of letter favorability by purpose of letter indicate letter purpose had no significant influence on letter favorability.

Measures

Affective disposition. Affective disposition was assessed using the same measure as in Study 1, the NOSQ. In this study, the internal consistency of the NOSQ was $\alpha = .76$.

Favorability of letter. As in Study 1, favorability of letters was assessed by three independent raters. Each letter was rated on the same 1 = *extremely negative* to 10 = *extremely positive* scale that was used in Study 1. Consistent with the previous study, favorability of the letters was assessed by computing the average rating across the three letters. Although using all three letters meant losing a significant portion of the sample, this did not appear to influence the results as average ratings of favorability were similar for the three letters. Interrater reliability was evaluated in the same way as in Study 1. The coefficient α , based on the correlations between raters, was .81 for the first letter, .82 for the second letter, and .82 for the third letter. Using the Spearman–Brown formula to assess interrater reliability, we found reliability coefficients of .82 for the first letter, .84 for the second letter, and .84 for the third letter.

Other measures. Length of letter was again determined by counting the average number of words in the first three rows and multiplying this figure by the number of rows in the letter. Previous experience writing letters of reference was assessed with the question "Approximately how many letters of recommendation have you written before?" Total work experience was determined by the question "How many years of total work experience do you have?" Work experience was reported in years and months.

RESULTS

Table 1 presents the descriptive statistics and intercorrelations of the variables in both studies. Examination of the means and standard deviations suggests possible departures from normality. Accordingly, we computed skewness and kurtosis statistics for these variables. For both samples, experience and number of letters written were significantly skewed and kurtotic. However, when we normalized these variables by computing their natural log, the correlations with other variables were not altered. Therefore, we retained the untransformed measures.

Multiple regression analysis was used to test both hypotheses. In order to provide unbiased estimates of the true relationships between the independent and dependent variables, Hunter's (1992) regression program was used to correct the correlations between affective disposition and ratings of letter favorability for unreliability. Coefficient alpha reliabilities were used to correct the affective disposition measure while the Spearman-Brown reliabilities were used to correct ratings. Once these corrections were made, standardized regression coefficients were computed. To avoid problems inherent in statistical significance testing (Cohen, 1994; Schmidt, 1996), 95% confidence intervals are drawn around the standardized regression coefficients. In order to determine the degree to which length of letter mediates the relationship between affective disposition and favorability of the reference letter (H2), two regressions were estimated for each study. One equation included length of the letter as an independent variable while the other equation excluded length of letter. If there is an association between length of letter and favorability of the reference letter, and the regression coefficient on affective disposition drops substantially when length of letter is controlled, H2 is supported. Within each regression, all variables were entered into each equation simultaneously.

TABLE 1
Descriptive Statistics and Intercorrelations (Uncorrected) of Study Variables

Variable	M	SD	1	2	3	4	5	6	M	SD
1. Affective disposition	2.38	0.23	—	.10	-.11	—	.00	.17	2.44	0.21
2. Total work experience (years)	5.12	3.03	-.04	—	.33	—	-.16	.03	23.31	11.66
3. Experience writing letters	0.09	0.29	-.16	-.01	—	—	.08	.16	109.69	206.57
4. Strong applicant presented first	0.56	0.50	.06	.03	.00	—	—	—	—	—
5. Length of letter (words)	153.31	45.18	.33	.01	-.09	-.01	—	.44	323.98	174.08
6. Average favorability of letter	7.87	0.89	.29	-.09	-.02	-.22	.45	—	7.85	0.54

Note. Correlations for laboratory study (listwise $N = 110$) appear below the diagonal; correlations for field study (listwise $N = 95$) appear above the diagonal. Correlations are uncorrected. For both studies, the response scale for affective disposition is 1 = *Dissatisfied*, 2 = *Neutral*, and 3 = *Satisfied*. For the laboratory study, the response scale for experience writing letters is 1 = *Yes, I have written a letter of recommendation*, 0 = *No, I have not written a letter of recommendation*; for the field study, this variable reflects the total number of letters written in the past. Strong applicant presented first is coded 1 = *Yes*, 0 = *No*. For both studies, the response scale for average favorability of letter is 1 = *Extremely negative* to 10 = *Extremely positive*.

Table 2 contains the regression estimates predicting favorability of the letter of reference for the laboratory study. The confidence intervals for work experience and previous experience writing letters included zero. Conversely, the confidence intervals for the variable representing the strong applicant being presented to subjects first, length of letter (for the first equation), and affective disposition, excluded zero. This latter set of results indicates that these variables do, in fact, influence letter favorability. Affective disposition shows a moderate, nonzero relationship with letter favorability, but the relationship is stronger when length of letter is excluded from the equation. In fact, the β coefficient for affective disposition is 38% weaker when letter length is controlled. Thus, results in this study support both H1 and H2. The table also shows that the independent variables explained 36% and 20% of the variance in letter favorability.

Table 3 contains the regression results for the field study. The results are relatively consistent with those of the previous study. With the exception of previous letter writing experience in the second regression, the confidence intervals for the control variables included zero while length of letter and affective disposition had nonzero effects on favorability of the letter of reference. Unlike Study 1, however, controlling for length of letter had little effect on the relationship between affective disposition and letter favorability. The coefficient for affective disposition is only 8% weaker when length of letter is controlled. Thus, as in Study 1, H1 is supported. However, contrary to the results of Study 1, H2 is only partially supported. Length of letter is related to the judged favorability of the letter (H2a), but length of letter does not appear to mediate much of the relationship between affective disposition and letter favorability

TABLE 2
Regression Estimates Predicting Favorability of Letters of Reference:
Laboratory Study

	Controlling for length of letter		Not controlling for length of letter	
	β	95% CI	β	95% CI
Total work experience	-.09	(-.27, .09)	-.08	(-.27, .11)
Previous experience writing letters	.06	(-.12, .24)	.05	(-.15, .25)
Strong applicant presented first	-.25*	(-.42, -.08)	-.26*	(-.45, -.07)
Length of letter	.41*	(.22, .60)	—	—
Affective disposition	.24*	(.02, .46)	.38*	(.16, .60)
<i>R</i>		.60		.45
<i>R</i> ²		.36		.20
<i>N</i>		110		110

Note. 95% CI denotes 95% confidence interval around standardized regression coefficients corrected for unreliability.

*Denotes coefficients with confidence intervals excluding zero.

TABLE 3

Regression Estimates Predicting Favorability of Letters of Reference: Field Study

	Controlling for length of letter		Not controlling for length of letter	
	β	95% CI	β	95% CI
Total work experience	.03	(-.18, .24)	-.07	(-.30, .16)
Previous experience writing letters	.16	(-.05, .37)	.23*	(.01, .46)
Length of letter	.48*	(.30, .66)	—	—
Affective disposition	.23*	(.01, .46)	.25*	(.01, .50)
<i>R</i>		.56		.31
<i>R</i> ²		.31		.10
<i>N</i>		95		95

Note: 95% CI denotes 95% confidence interval around standardized regression coefficients corrected for unreliability.

*Denotes coefficients with confidence intervals excluding zero.

(H2b). The regressions also explain a smaller proportion of the variance in letter favorability compared to Study 1.²

DISCUSSION

Past research on reference reports has focused on their validity and on the value of such reports as descriptors of the person being recommended (Baxter et al., 1981; Muchinsky, 1979; Peres & Garcia, 1962). This literature has generally found that letters of recommendation are not particularly reliable or valid. It has even been suggested that the reference report may tell more about the reference provider than the person being recommended (Baxter et al., 1981). The focus of this study was on one type of reference report, the letter of reference, and one aspect of the reference provider, affective disposition. Results from two separate studies indicated that affective disposition was related to the favorability of letters of reference. Thus, positively oriented letter writers do write more favorable letters.

In addition to investigating a link between affective disposition and favorability of the letter of recommendation, we also found that length of the letter was related to the judged favorability of the letter of recommendation. However, letter length mediated the relationship between affective disposition and letter favorability only in the laboratory study. Thus, positively oriented letter writers do write more favorable letters but it is not clear whether this process occurs

² The uncorrected regressions estimating the relationship between affective disposition and letter favorability provided results similar to those reported in Tables 2–3. For Study 1, the uncorrected standardized regression coefficients on affective disposition were $\beta = .29$ (not controlling for length of letter) and $\beta = .17$ (controlling for length of letter). For Study 2, the respective uncorrected regression coefficients were $\beta = .19$ and $\beta = .18$. The confidence intervals for all of these coefficients excluded zero. Thus, although both corrected and uncorrected regression results produced nonzero effects, because the uncorrected coefficients are downwardly biased (by failing to correct for measurement error), the corrected results are presented in Tables 2–3.

because positive references write longer letters. It would seem likely another factor explaining the dispositional effect is the increased tendency of letter writers to use more positive words, and fewer negative words, in describing the targets. Though these results are interesting, they do not address the causal relationships among affective disposition, letter length, and letter favorability. Thus, we have been careful to interpret our results as correlational rather than causal.

The effect sizes for affective disposition were not large. To some extent, this is to be expected. Favorability of letters was evaluated in a rigorous manner that was independent of the letter writer. Furthermore, the process of writing letters is arguably a "strong" situation with many motives and contextual dynamics that are not easily observed. In the letter writing process, the strength of the situation may limit a person's willingness to discuss negative aspects of the person they are describing and push them to disclose only the positive or less negative characteristics of the individual. The impact of situational strength may work to diminish the observed relationship between affective disposition and letter favorability. However, the results do indicate that affective disposition is one factor that is related to letters of reference.

The results of these studies would appear to have practical implications for both employers and applicants. For employers, the results suggest that letters of reference cannot always be accepted as completely impartial reports about the applicants' worthiness for the position. Most employers probably already know this. However, it is not only that references may have many conscious motives in writing their letter, such as advancing the interests of the subject due to friendship or mentorship biases, they may also have subconscious biases that influence their reports. Thus, a scaling factor may need to be applied when interpreting reference letters. For example, if the positivity vs. negativity of the letter writer is known, the employer may implicitly or explicitly discount letters by positive people and vice versa. For applicants, there is even a clearer implication. It would appear that applicants who choose letter writers with a positive disposition stand a better chance of having a favorable letter written about them. Thus, there would seem to be reasons, all else equal, to find letter writers with a positive affective temperament and avoid seeking recommendations from less positive references, particularly if the reader of the letter is unfamiliar with the letter writer.

Both studies have limitations. The obvious concern with Study 1 is external validity. Asking college students to write letters about hypothetical job applicants raises questions about the degree to which this is representative of the actual letter writing process. Significant efforts were undertaken to make the letter writing process as realistic as possible. Specifically, videos and accompanying materials were carefully produced to give subjects a realistic view of the target's job performance. Nevertheless, subjects were inexperienced at the process of writing letters and subjects did not personally know the targets they were evaluating.

Study 2 also has limitations. First, the low response rate, and the fact that the applicants may have selected only positive letter writers (who would write

favorable letters), raises the possibility of nonresponse bias. However, the fact that the means for affective disposition and letter favorability were very similar in Study 2 and Study 1 (where response bias was not an issue) argues against the hypothesis that only positive letter writers responded, or only positive letters were returned.³ A second limitation is that it was not possible to collect information on the subjects of the letters. Therefore, it is possible that dispositional tendencies of letter writers are related to characteristics of the individuals who solicited these letters. To some extent, this potential concern is mitigated by the fact that letter favorability was analyzed across three letters. Analyzing multiple letters achieves several goals, including reducing concerns that we did not take characteristics of the subject of the letters into account. If the letters written were affected by differences among the subjects of the letters, these differences would have to be systematic across the three letters. Only future research could determine whether applicant quality is related to the affective temperament of the individuals from whom letters of reference are solicited.

A limitation common to both studies is that no cognitive or interpersonal processes were studied. Both types of processes have been found to be relevant in similar contexts, such as performance evaluation and interviewer decision-making (Longenecker et al., 1992). Given that results here suggest that the tendency to experience undifferentiated affect (affective disposition) is relevant to the letter writing process, future research should explore the possible cognitive and interpersonal processes that cause writers' dispositional tendencies to be expressed in their letters. Another limitation of both studies is the failure to assess the letter writer's liking of the subject of the letter. Furthermore, characteristics of the *recipients* of the letters, such as their dispositions toward reading letters, may be quite relevant.

Because the two studies were quite different (one was a laboratory study with students, the other a field study with actual letter writers), one might reasonably question the degree to which the results across the two studies can be compared. Ideally, we would have conducted four studies so that the independent influences of type of subject (student vs. faculty) and type of method (laboratory vs. field) would not be confounded. As a way of investigating the utility of such a design, we pooled the two data sets and computed an interaction between affective disposition and study (Study 1: laboratory study with students vs. Study 2: field study with faculty). If the results across the two studies are incomparable in terms of the relationship between affective disposition and letter favorability, this interaction should be significant. However, when we conducted this pooled analysis using hierarchical moderated regression, affective disposition remained a significant predictor of letter favor-

³ As was noted by a reviewer on a previous version of this manuscript, if affective disposition is separated into two dimensions, positive affectivity and negative affectivity, it is possible faculty responses were biased by negative (as opposed to positive) affectivity. Under this argument, the measure of affective disposition used in this study reflects positive affectivity and would not necessarily reflect the possibility that high negative affectivity faculty were less likely to respond.

ability, but the interaction was not significant. This suggests the results between the two studies are not incompatible.

We purposely conducted these disparate studies with the idea that the principal limitations of one study are offset by the other. We sought to offset the lack of realism in Study 1 with using actual letters of reference in Study 2. Similarly, we sought to offset the lack of control in Study 2 by controlling the subjects of the letters in Study 1. That similar results were obtained in both studies increases confidence that the relationship between affective disposition and favorability of letters of recommendation is not artifactual (i.e., due to methodological artifacts). Thus, affective disposition seems to play an important role in the favorability of letters of reference.

REFERENCES

- Baron, R. A. (1993). Interviewers' moods and evaluations of job applicants: The role of applicant qualifications. *Journal of Applied Social Psychology*, **23**, 253–271.
- Baxter, J. C., Brock, B., Hill, P. C., & Rozelle, R. M. (1981). Letters of recommendation: A question of value. *Journal of Applied Psychology*, **66**, 296–301.
- Brief, A. P., Butcher, A., & Roberson, L. (1995). Cookies, disposition, and job attitudes: The effects of positive mood inducing events and negative affectivity on job satisfaction in a field experiment. *Organizational Behavior and Human Decision Processes*, **62**, 55–62.
- Browning, R. C. (1968). Validity of reference ratings from previous employers. *Personnel Psychology*, **21**, 389–393.
- Carlson, R. E. (1967). Selection interview decisions: The effect of interviewer experience, relative quota situation, and applicant sample on interviewer decisions. *Personnel Psychology*, **20**, 259–280.
- Cohen, J. (1994). The earth is round ($p < .05$). *American Psychologist*, **49**, 997–1003.
- Dipboye, R. L. (1992). *Selection interviews: Process perspectives*. Cincinnati, OH: South-western.
- Epstein, S. (1977). Traits are alive and well. In D. Magnusson & N. S. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology* (pp. 83–98). Hillsdale, NJ: Erlbaum.
- Feldman, J. M. (1981). Beyond attribution theory: Cognitive processes in performance appraisal. *Journal of Applied Psychology*, **66**, 127–148.
- Fiske, S. T. (1982). Schema-triggered affect: Applications to social perception. In M. S. Clark & S. T. Fiske (Eds.), *Affect and cognition*. Hillsdale, NJ: Erlbaum.
- Hunter, J. E. (1992). *REGRESS: A multiple regression program in BASICA*. User's manual, Department of Psychology, Michigan State University.
- Judge, T. A. (1992). The dispositional perspective in human resources research. *Research in Personnel and Human Resources Management*, **10**, 31–72.
- Judge, T. A., & Bretz, R. D. (1993). Report on an alternative measure of affective disposition. *Educational and Psychological Measurement*, **53**, 1095–1104.
- Judge, T. A., & Carter, S. (1995). *A confirmatory investigation of two alternative measures of affective disposition*. Unpublished manuscript, Cornell University.
- Knouse, S. B. (1983). The letter of recommendation: Specificity and favorability of information. *Personnel Psychology*, **36**, 331–341.
- Landy, F. J., & Farr, J. L. (1980). Performance rating. *Psychological Bulletin*, **87**, 72–107.
- Longenecker, C. O., Jaccoud, A. J., Sims, H. P., Jr., & Gioia, D. A. (1992). Quantitative and qualitative investigations of affect in executive judgment. *Applied Psychology: An International Review*, **41**, 21–41.
- Mehrabian, A. (1965). Communication length as an index of communicator attitude. *Psychological Reports*, **17**, 519–522.

- Merritt, J. M., & Davis, D. D. (1994). *The relationship between negative affectivity, positive affectivity, and perceptions of performance in the workplace*. Paper presented at the Ninth Annual Conference of the Society for Industrial and Organizational Psychology, Nashville, TN.
- Mosel, J. N., & Goheen, H. W. (1958). The validity of the employment recommendation questionnaire in personnel selection: I. The skilled trades. *Personnel Psychology*, **11**, 481–490.
- Mosel, J. N., & Goheen, H. W. (1959). The employment recommendation questionnaire: III. Validity of different types of references. *Personnel Psychology*, **12**, 469–477.
- Muchinsky, P. M. (1979). The use of reference reports in personnel selection: A review and evaluation. *Journal of Occupational Psychology*, **52**, 287–297.
- Peres, S. H., & Garcia, J. R. (1962). Validity and dimensions of descriptive adjectives used in reference letters for engineering applicants. *Personnel Psychology*, **15**, 279–286.
- Schmidt, F. L. (1996). Statistical significance testing and cumulative knowledge in psychology: Implications for training of researchers. *Psychological Methods*, **1**, 115–129.
- Sleight, R. B., & Bell, G. D. (1954). Desirable content of letters of recommendation. *Personnel Journal*, **32**, 421–422.
- Smith, M., & George, D. (1992). Selection methods. *International Review of Industrial and Organizational Psychology*, **7**, 55–97.
- Tsui, A. S., & Barry, B. (1986). Interpersonal affect and rating errors. *Academy of Management Journal*, **29**, 586–599.
- Weitz, J. (1952). A neglected concept in the study of job satisfaction. *Personnel Psychology*, **5**, 201–205.
- Wexley, K. N., Sanders, R. E., & Yukl, G. A. (1973). Training interviewers to eliminate contrast effects in employment interviews. *Journal of Applied Psychology*, **57**, 233–236.
- Wherry, R. J., Jr., & Bartlett, C. J. (1982). The control of bias in ratings: A theory of ratings. *Personnel Psychology*, **35**, 521–551.
- Wiens, A. N., Jackson, R. H., Manaugh, T. S., & Matarazzo, J. D. (1969). Communication length as an index of communicator attitude: A replication. *Journal of Applied Psychology*, **53**, 264–266.

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