The Effects of Met Expectations on Newcomer Attitudes and Behaviors: A Review and Meta-Analysis

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A review of research on the effects of *met expectations* for newcomers to organizations located 31 studies of 17,241 people. A meta-analysis found mean (corrected) correlations of .39 for job satisfaction and for organizational commitment, .29 for intent to leave, .19 for job survival, and .11 for job performance. However, all of these mean correlations had significant between-studies variance. By using strict conformity with Porter and Steers's (1973) definition of met expectations, we identified a subset of studies that had nonsignificant between-studies variance for all correlations except job satisfaction. Furthermore, the mean correlations in these subgroups were very similar to those for the entire group. Future research should consider both the direction of the met expectations discrepancy (i.e., over- vs. underfulfillment) and alternative ways to measure organizational reality.

The concept of *met expectations* in the research literature of industrial and organizational psychology and organizational behavior (I/OB) has been mentioned frequently for over 30 years, but less frequently studied. In the first published experiment on realistic job previews, Weitz (1956) alerted practitioners and researchers alike to the potential usefulness of having employee expectations be as realistic as possible. In a widely cited review of research on employee turnover, Porter and Steers (1973) articulated the met expectations hypothesis as it is known today in I/OB:

> The concept of met expectations may be viewed as the discrepancy between what a person encounters on the job in the way of positive and negative experiences and what he expected to encounter. Thus, since different employees can have quite different expectations with respect to payoffs or rewards in a given organizational or work situation, it would not be anticipated that a given variable (e.g., high pay, unfriendly work colleagues, etc.) would have a uniform impact on withdrawal decisions. We would predict, however, that when an individual's expectations—whatever they are—are not substantially met, his propensity to withdraw would increase. (Porter & Steers, 1973, p. 152)

Reviews of the realistic job preview (RJP) literature (Premack & Wanous, 1985; Wanous, 1977, 1980, 1992; Wanous & Colella, 1989) have kept the topic alive because RJPs represent one way of creating met expectations.

Despite several reviews of both the turnover and RJP literatures, no previous review has examined the research that has directly focused on the met expectations hypothesis. Some textbooks on selection and staffing (e.g., Schneider & Schmitt, 1986) have accepted the validity of this hypothesis, probably

because (a) the expectations held by new recruits are almost always inflated (Wanous, 1980, 1992), (b) turnover rates among newly hired employees are typically much higher than among employees with greater tenure in an organization (Mobley, 1982), and (c) RJPs have been shown to lower expectations and modestly increase job survival (Premack & Wanous, 1985). Given this, it is not surprising that the importance of met expectations has been accepted despite the lack of a systematic research review.

Met expectations has also been a key psychological variable in research on the effectiveness of different recruiting sources (Wanous & Colella, 1989). Briefly, met expectations is one explanation of why certain inside sources, such as rehired employees or employee referrals, result in higher job survival rates than do outside sources such as newspaper ads or employment agencies. This is because it is assumed that inside sources provide more accurate information about a particular organization, acting somewhat like an RJP. A recent review of 12 studies of recruiting source effectiveness (Wanous, 1992) found that inside sources had job survival rates that were about 30% higher than those of outside sources. (When the 12 studies were weighted by sample size, inside sources had a 24% higher survival rate; when the studies were weighted equally, the inside source survival rate was 36% higher. Equal weighting was done as a comparison because 2 of the 12 studies accounted for 70% of the total sample size.)

Met expectations has also been an important psychological variable in various stage model theories of organizational socialization (e.g., Feldman, 1976; Porter, Lawler, & Hackman, 1975; Schein, 1978; Van Maanen, 1976; Wanous, 1980). Basically, all of these models assume that unmet expectations cause a variety of postentry adjustment problems, for example, low job satisfaction and early turnover.

Research on met expectations in the I/OB area is a specific

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example of two concepts found in several other bodies of research: (a) the role of expectations in motivation, decision making, or general cognitive activity, and (b) the concept of matching, congruence, or fit. For example, the importance of expectations in management decision making was explicitly acknowledged by Cyert and March (1963) and by many others. Expectations in theories of work motivation were considered crucial in Vroom's (1964) version of expectancy theory and in all subsequent formulations of it. For example, when applying expectancy theory to choosing among job offers, Vroom used *instrumentality* to refer to the expectation of certain outcomes that would occur if one joined a particular organization. The typical measure of this type of expectation is a set of items in which respondents are asked to rate the likelihood of certain outcomes being present in a particular organization (Wanous, Keon, & Latack, 1983). Outside the I/OB area, met expectations has been a topic of considerable research by social psychologists concerned with cognitive dissonance (see Abelson et al., 1968) and, more recently, by experimental psychologists concerned with stress in aversive situations (e.g., Abbott & Badia, 1986; Abbott, Schoen, & Badia, 1984; Arthur, 1986). These few examples are not intended to be exhaustive, but rather illustrative of how pervasive expectations are throughout I/OB and related areas of research.

Similarly, one can find wide-ranging examples of research concerned with the concept of matching, congruence, or fit. For example, most of the concern with staffing organizations involves getting appropriate matches between job candidates' capabilities and organizational requirements on the one hand and job candidates' wants or needs and organizational climates or cultures on the other (Caldwell & O'Reilly, 1990; Schneider & Schmitt, 1986; Wanous, 1980, 1992). Similarly, leadership research has considered the fit of leadership style to the type of decision (Vroom & Yetton, 1973) and the fit of the type of leader to the situation (Fiedler, 1967; Fiedler & Garcia, 1987). Research on stress has examined person–environment fit as well (Edwards & Cooper, 1990).

Definition of Met Expectations in Industrial and Organizational Psychology and Organizational Behavior Research

The definition of met expectations in I/OB research comes from the work of Porter and Steers (1973). The first aspect of Porter and Steers's definition is the basic hypothesis itself. Unmet expectations are seen as leading to dissatisfaction, which in turn leads to quitting an organization. Thus, two links are specified in the hypothesis, in which satisfaction mediates the relationship between unmet expectations and quitting (or job survival).

The second aspect of Porter and Steers's (1973) definition concerns the appropriate context for conducting research. In this case, expectations held by job candidates before they enter an organization are compared with their postentry experiences. This also means that the relevant expectations concern both the specific job and the wider organizational context. Thus, met expectations research should be conducted with job candidates who later become new recruits.

The third aspect of Porter and Steers's (1973) definition concerns the specific meaning of met expectations. In this case, a discrepancy is assessed between one's initial expectations and one's subsequent beliefs after entering an organization and experiencing it as a full-time member. The operational definition of this discrepancy and the appropriate statistical analysis are, however, areas of controversy, which we discuss later.

The fourth aspect of Porter and Steers's (1973) definition concerns the meaning of expectations. Only those expectations for important aspects of the job or organization are included in the met expectations hypothesis, not all expectations per se, because that would include irrelevant or inconsequential expectations. Porter and Steers were not as explicit about this distinction as Locke (1976) was a few years later. However, a careful reading of Porter and Steers's work reveals that they considered only the disconfirmation of important expectations to be dissatisfying.

As can be seen from the preceding discussion, Porter and Steers's (1973) definition of met expectations has a rather specific meaning. The four implied facets of the definition served as an initial set of criteria for our selection of the research to be reviewed and included in the current meta-analysis. However, the number of studies that used this precise definition was small, so we relaxed the criteria somewhat to locate a larger, but still relevant, body of research.

Specifically, studies that related met expectations to one or more of several attitudes (job satisfaction, organizational commitment, and the intention to remain) or behaviors (job survival and job performance) were included, even if Porter and Steers's exact causal sequence had not been studied. Similarly, some correlational and laboratory studies were included if they concerned expectations about jobs and organizations. Studies that used non–discrepancy-score measures of met expectations were also included.

Method

Selection of Studies and Coding of Study Characteristics

Four criteria were used for study selection. First, an individual's expectations about work-related conditions (e.g., pay, supervision, etc.) must have been measured. Second, the sample size must have been reported. Third, a Pearson correlation coefficient (or some other type of statistic, e.g., a *t* or *F* ratio that could be converted into a correlation) between met expectations and at least one of the five outcome variables must have been reported. Fourth, the study had to measure expectations directly. This meant that only 6 of the 20 RJP experiments reviewed by Premack and Wanous (1985) could be included here, because the other 14 did not report correlations between met expectations and the five outcomes investigated here.

Studies were located by manual searches of *PsycSCAN:Applied Psychology, Dissertation Abstracts,* and *Dissertation Abstracts International,* and by scanning the reference lists of published and unpublished sources. The 20 studies cited by Cotton and Tuttle (1986) were examined, but only 6 met the criteria used here. Our literature search produced 31 studies that met the four criteria. Seven of these studies are unpublished, which minimizes the "file drawer problem" (Rosenthal, 1979). A total of 17,241 individuals participated in the 31 studies; the mean sample size was 556.

After identification of the studies to be used in the analysis, each study was coded on several factors (see the Appendix). All studies were coded twice: once by Stephen L. Premack and again by K. Shannon

Davis; John P. Wanous and Timothy D. Poland double-checked the coding. Before any discussion between coders, intercoder agreement for the various information taken from the studies exceeded 90% for all variables. The few cases involving disagreement were resolved by subsequent discussion, and complete agreement was reached in all cases. Interestingly, the 10% of cases on which coders disagreed were due entirely to a misreading of a study by one coder, rather than to two different judgments. Thus, we believe that the studies are accurately coded. Nevertheless, using multiple coders was considered important because research on meta-analysis procedures has shown that human judgment calls can affect the results (Wanous, Sullivan, & Malinak, 1989).

Because the definition of met expectations was an important source of variation among the studies, the operational measure of expectations from each study was independently coded by five other judges. The judges were organizational behavior or personnel and human resource management faculty members. Each judge was provided with a coding sheet that presented Porter and Steers's (1973) definition of met expectations and was asked to indicate whether the expectations measure was consistent with Porter and Steers's definition or represented some other definition (a dichotomous judgment). On the basis of this criterion, 18 studies were found that used operational measures consistent with Porter and Steers's conceptualization; the 13 other studies used different definitions.

Five correlates of met expectations were investigated frequently enough to be included in the meta-analysis; that is, at least 3 studies reported data for a particular outcome (see Pearlman, Schmidt, & Hunter, 1980, for further information on inclusion criteria). The actual number of studies ranged from 10 to 19 depending on the particular correlate of met expectations. Each correlate of met expectations is described in the following paragraphs:

1. *Organizational commitment* was measured with the Organizational Commitment Questionnaire (OCQ; Mowday, Steers, & Porter, 1979) in all studies.

2. *Intention to remain* was typically measured with a single item that asked employees their intention to quit (reverse scored) or remain.

3. *Job satisfaction* was measured in several ways, ranging from ad hoc items to better known scales, such as the Minnesota Satisfaction Questionnaire or the Job Descriptive Index.

4. *Job survival* was typically measured (in 16 of 18 studies) as a dichotomous variable (i.e., as stay vs. leave). In some cases, the sign of a correlation between met expectations and job survival was reversed to be consistent with the hypothesis that met expectations increase job survival.

5. *Job performance* was measured in a variety of ways, ranging from supervisory and self-ratings of performance to the quality and quantity of output.

Meta-Analysis Procedure

Because reliability data were not reported for every study investigating a particular outcome, correction for attenuation due to unreliability was performed across studies. Thus, correlations were first subjected to a meta-analysis to eliminate the effects of sampling error, followed by a correction of the mean correlation by the mean of the reported reliabilities (Hunter & Schmidt, 1990). In three studies (Dean, 1981; Greenhaus, Seidel, & Marinis, 1983; Horner, 1979), reliability data for the met expectations measure or the job satisfaction measure were reported for subscales rather than the complete scale. In this case, the mean subscale reliability coefficient was used, but only after it was corrected by the Spearman-Brown formula. This was done because the likely lower reliabilities of subscales could be a source of between-studies variance.

Reliability data were sometimes available for measures of met ex-

pectations, job satisfaction, and organizational commitment, but never for job performance or job survival. In several studies, correlations were reported for more than one time period, and in one case they were broken out by the type of organization. When this occurred, correlations were averaged. No attempt was made to correct for restriction in range because the data that would have made this correction possible (population means and standard deviations) were unavailable.

The last correction was done on the job survival data. This is because the relationship between met expectations and job survival is reported as a point biserial correlation. We consider this to be a form of artifactual dichotomization, given that the underlying construct of tenure or participation is continuous (March & Simon, 1958; Porter & Steers, 1973). When this occurs, the corrected correlation is the biserial correlation (Hunter & Schmidt, 1990, p. 335). The formula used to correct the correlations is

$$r_b = r_{pb} \frac{\sqrt{pq}}{h},$$

where r_b is the biserial correlation, r_{pb} is the point biserial correlation, p is the proportion of stayers, q is the proportion of leavers, and h is the ordinate of the unit normal distribution at p (Williams, 1990, p. 733).

There is some controversy surrounding whether or not such a correction should be made and, if so, which procedure should be used (see Bass & Ager, 1991; Williams, 1990). We report the results both with and without this correction.

Results

Table 1 shows the results for five correlates of met expectations. The average correlation and the corrected average correlation (for attenuation due to unreliability) are shown first, along with a 95% confidence interval around each. These are followed by the results of the meta-analysis as calculated from the d statistic (Hunter & Schmidt, 1990). The chi-square test for the significance of between-studies variance is shown last (Hunter & Schmidt, 1990, p. 428). The null hypothesis for this test is that there is no between-studies variance in the mean effect size (Hunter & Schmidt, 1990, p. 213). If this null hypothesis is rejected, then one cannot conclude for certain that a true population mean has been found. That is, there is too much unexplained between-studies variance in the effect size, even after removing the variance due to sampling error. On the other hand, if the null hypothesis is not rejected, then one can conclude that a true population mean has been found. That is, after between-studies variance attributable to sampling error is accounted for by meta-analysis, the remaining variance among effect sizes is not significantly different from zero. When this occurs, confidence intervals are omitted.

The table also shows the results of a moderator analysis in which the studies were subgrouped according to their conformity with Porter and Steers's (1973) definition of met expectations. This was done because the initial meta-analysis done on all five correlates found significant amounts of between-studies variance, even after correcting for sampling error.

The definition of met expectations (Porter and Steers's vs. others') was our first choice for a logical moderator variable because conformity to the operational definition implied by Porter and Steers seemed very basic. We reasoned that studies not conforming to Porter and Steers's definition would be likely

Table 1

Meta-Analyses of the Effect of Met Expectations on Newcomer Attitudes and Behavior

Attitude or behavior/studies[a]	No. of studies	N	r_{obs}	95% confidence interval	r_{cor}	95% confidence interval	d	V_{obs}	V_e	V_{pop}	df	χ^2
Job satisfaction												
All	19	3,960	.33	.051–.602	.39	.061–.725	.72	.132	.020	.112	18	122.96**
Porter and Steers's (1973) definition												
4, 8, 11, 12, 14, 15, 16, 19, 22, 23, 28, 29	12	2,444	.33	.023–.601	.36	.027–.702	.68	.132	.021	.112	11	76.39**
Other definition												
1, 7, 10, 18, 20, 24, 27	7	1,516	.35	.104–.596	.45	.133–.764	.77	.127	.020	.107	6	44.78**
Porter and Steers's definition (outliers removed)												
4, 8, 11, 12, 14, 16, 19, 23, 28, 29	10	2,142	.28	.033–.524	.32	.038–.606	.60	.088	.020	.068	9	44.90**
Organizational commitment												
All	15	2,991	.33	.157–.494	.39	.187–.590	.70	.052	.021	.031	14	36.51**
Porter and Steers's definition												
3, 4, 5, 6, 8, 11, 14, 19, 21, 29	10	1,796	.29	—	.34	—	.61	.015	.023	−.009	9	6.25
Other definition												
1, 20, 24, 25, 27	5	1,195	.38	.188–.568	.45	.225–.679	.83	.077	.018	.059	4	21.12**
Intent to remain												
All	14	2,851	.24	.072–.399	.29	.089–.493	.49	.038	.020	.018	13	26.41*
Porter and Steers's definition												
4, 5, 6, 8, 11, 14, 19, 21, 29	10	1,924	.24	—	.28	—	.50	.016	.021	−.005	9	7.51
Other definition												
1, 20, 24, 27	4	927	.23	−.066–.457	.27	−.066–.540	.48	.084	.018	.066	3	18.87**
Job performance												
All	10	2,130	.09	−.105–.282	.11	−.126–.340	.18	.046	.019	.027	9	24.26**
Porter and Steers's definition												
3, 4, 5, 11, 14, 16, 19	7	1,259	.10	—	.12	—	.20	.017	.022	−.005	6	5.41
Other definition												
18, 26, 27	3	871	.07	−.184–.331	.09	−.223–.401	.16	.086	.014	.072	2	18.62**
Job survival												
All	18	14,210	.12	−.034–.269	.13	−.038–.300	.24	.037	.005	.032	17	129.34**
Porter and Steers's definition												
5, 8, 11, 14, 17, 21, 28, 30	8	3,267	.16	−.094–.416	.17	−.101–.446	.34	.101	.010	.091	7	81.57**
Other definition												
1, 2, 7, 9, 13, 20, 25, 26, 27, 31	10	10,943	.10	.018–.192	.12	.021–.225	.21	.013	.003	.010	9	36.63**
Porter and Steers's definition (outlier removed)												
5, 8, 11, 14, 17, 21, 28	7	3,003	.13	—	.14	—	.25	.014	.009	.004	6	10.34
Job survival (corrected for dichotomization)												
All	16	13,554	.17	−.017–.355	.19	−.019–.396	.36	.073	.005	.068	15	242.56**
Porter and Steers's definition												
5, 8, 11, 14, 17, 21, 28, 30	8	3,267	.23	−.113–.570	.24	−.121–.611	.52	.256	.010	.246	7	201.96**
Other definition												
1, 2, 7, 13, 20, 25, 27, 31	8	10,287	.15	—	.18	—	.30	.0033	.0031	.0002	7	8.39**
Porter and Steers's definition (outlier removed)												
5, 8, 11, 14, 17, 21, 28	7	3,003	.19	−.013–.384	.20	−.014–.412	.39	.054	.009	.045	6	40.11**

Note. Confidence intervals were not calculated when between-studies variance was nonsignificant. Obs = observed; cor = corrected; e = error; pop = population.

[a] See the Appendix for the full citations of the numbered studies.

* $p < .05$. ** $p < .01$.

to have more between-studies variance among themselves as a subgroup than the subgroup of studies that did conform to Porter and Steers's definition.

We tried two other potential moderators: (a) whether the study was experimental or nonexperimental in design, and (b) whether the study was published or not. Seven of the eight experimental studies were from RJP experiments in which the manipulation of expectations was central to the research. If the RJP treatment successfully manipulated expectations, this could have the effect of increasing the number of met expectations for half of the people in the study (the experimental group). Interestingly, if the RJP experiment succeeded in doing precisely this, it would also have the effect of reducing the variance in met expectations for those in the experimental group, which could attenuate the correlation between met expectations and various outcomes. This is because the experimental group is combined with the control group for the purpose of correlating met expectations with various outcomes. Thus, it

seemed possible that experimental studies might have lower correlations than nonexperimental studies.

The other potential moderator was tried because much has been written on the possible differences between published and unpublished research. Despite the reasonableness of selecting these two moderators, neither accounted for any additional significant between-studies variance in the effect sizes.

The results for job satisfaction are shown at the top of Table 1. Despite the relatively strong corrected correlation of .39, the between-studies variance was significant no matter which type of moderator analysis was tried. Even when two outlier studies were removed from the Porter and Steers group, the corrected variance was still significant for the Porter and Steers group.

The mean correlations for organizational commitment were identical with those for job satisfaction. However, in the moderator analysis, the Porter and Steers group had a nonsignificant amount of corrected between-studies variance, but it also had a lower mean correlation than did the Other group (.34 vs. .45).

For intent to remain, the Porter and Steers versus Other categorization was once again a useful moderator because the corrected variance for the Porter and Steers group was nonsignificant. There was little difference in the mean correlations between these two subgroups (.28 vs. .27).

The average correlation for job performance was the weakest of any outcome measure. The moderator analysis again showed that the Porter and Steers group had a nonsignificant between-studies corrected variance (and a slightly stronger average correlation) than did the Other group (i.e., .12 vs. .09).

The moderator analysis for job survival required that one outlier study be dropped from the Porter and Steers group for the between-studies corrected variance to be nonsignificant. The outlier was an unpublished doctoral dissertation (Youngberg, 1963) that reported data much stronger than the others in this group, and it greatly contributed to the between-studies variance. This study was also considered an outlier in a meta-analysis of RJP experiments (see Premack & Wanous, 1985).

When the job survival correlations are corrected for dichotomization, the number of studies dropped from 18 to 16 because of incomplete information necessary to conduct the correction for dichotomization. The effect size increased by 50% as a result of the correction. The Porter and Steers subgroup of studies had significant between-studies variance, which it did not before this correction was made. The Other subgroup had nonsignificant between-studies variance, just the reverse of the situation before the correction was made.

One final word on the moderator analysis concerns the reclassifying of outlier studies. A number of statistics experts have recommended that data should always be examined for the effects of outliers (Cook, 1977; Stevens, 1984; Tukey, 1977). This is especially incumbent upon the researcher when the sample size is relatively small. A recent article on this topic concluded that researchers should examine outlier effects and report them explicitly (Orr, Sackett, & Dubois, 1991). We have done this here.

Discussion

From the theoretical perspective of met expectations as originally formulated, the pattern of average correlations is about what one would expect. That is, the strongest results are found for job satisfaction and organizational commitment, followed by intent to remain and, last, job survival. This is the type of causal sequence suggested in the met expectations literature. The fact that the mean correlations decrease is logical, because the outcome variables are increasingly distant from their purported cause (met expectations). Thus, job survival should have a weaker relationship to met expectations than to initial attitudes (satisfaction and commitment). The fact that intent to remain was in between attitudes and behavior (in terms of the strength of the relationship) is also consistent with decades of research on the relationship between attitudes, intentions, and behavior (McGuire, 1985).

The fact that met expectations correlates weakest with job performance might be considered as a form of discriminant validity. This is because job performance was never suggested as a likely outcome of met expectations by Porter and Steers. There was, nevertheless, a modest relationship between met expectations and performance, as suggested by the results for the Porter and Steers subgroup (r = .12). This link to performance may also make sense. For example, it has been suggested by those concerned with RJPs (Premack & Wanous, 1985; Wanous, 1992) that performance can be increased by met expectations if the job preview includes information that clarifies role expectations. Furthermore, job performance has been shown to have a modest relationship with job satisfaction (Iaffaldano & Muchinsky, 1985; Petty, McGee, & Cavender, 1984). Because of this, some of the increased performance from met expectations might also be due to the effect of met expectations on job satisfaction. Thus, it is reasonable that there was some relationship with job performance, but it is also reasonable that the relationship was weaker than for the more theoretically relevant outcomes.

If the pattern of results seems to make sense theoretically, does the level of results also make sense? That is, are the mean correlations interpretable within existing frameworks? One way to address this is to compare these results with those from RJPs, as these are somewhat related bodies of research and do have some studies in common. Because met expectations have been suggested as one of the reasons why RJPs increase job survival, it is logical to expect that they would have a stronger relationship with job survival than would the RJP per se. This is because met expectations are the result of an RJP and, thus, are closer to the behavior they are supposed to cause (job survival). The average correlation between met expectations and job survival was found to be .14 (for the Porter and Steers group), and this can be compared with the average correlation of .06 between the RJP and job survival reported by Premack and Wanous (1985).

Calculating the increase in job survival rates can be done in the same way as suggested by Premack and Wanous (1985, p. 716). To begin with, the mean effect size of .25 for the outlier-removed Porter and Steers group is probably the best result to use for this calculation, because there is no significant between-studies variance. This effect size means that those employees whose expectations are met will have a job survival rate that is .25 standard deviation units greater than the job survival rate for those whose expectations are not met. If the job survival rate is .50 (for, say, the first year on the job), then the expected job

survival rate would be .625 if met expectations could be created for all new employees. (This is because the standard deviation of a .50 survival rate is .50. Thus, the gain in job survival is .25 × .50 = .125).

The effect of met expectations on job satisfaction should be stronger than the effect of an RJP on job satisfaction. This is because job satisfaction is assumed to be immediately affected in met expectations theory, whereas it is hypothesized to be a more distant effect of an RJP (Wanous, 1980, 1992). The results of research confirm that RJPs have much less effect on job satisfaction (average correlation of .05) than do met expectations (average correlation of .39). However, one reason why met expectations might appear to have the stronger relationship is because there is common method variance between met expectations and job satisfaction (i.e., both are measured on questionnaires).

Even though comparisons have been made between the results for met expectations and those for RJPs, one must be cautious in doing so. For the most part, the two bodies of research are not the same. Specifically, only 7 of the 31 studies reported here are RJP experiments, and only 6 of these were included in Premack and Wanous's (1985) meta-analysis, which has been used here for comparison purposes.

A final note on the theoretical meaningfulness of this meta-analysis is in order here. A review of Table 1 shows that the meta-analysis was successful in explaining the variance in the effect of met expectations on organizational commitment, intent to remain, job performance, and job survival. However, it was unsuccessful in explaining the variance in the effect of met expectations on job satisfaction. A likely explanation for this result lies with the operationalization of the criterion variables. As mentioned earlier, organizational commitment was always measured with the OCQ (Mowday et al., 1979), whereas job satisfaction was measured in a variety of different ways. The fact that we were able to account for the between-studies variance in the effect size of met expectations on organizational commitment should not be surprising because both the predictor measure (Porter and Steers's, 1973, definition of met expectations) and the criterion measure (the OCQ) were held constant across studies. On the other hand, the unexplained between-studies variance in the effect of met expectations on job satisfaction might be due to the variability in the measurement of job satisfaction across studies.

The results for job survival deserve special mention. The use of the Porter and Steers versus Other distinction as a moderator produced different results, depending on whether a correction was made for dichotomization. Without the correction, the Porter and Steers group had nonsignificant between-studies variance, making the mean effect size directly interpretable. However, when the correction was made, the Other group had the nonsignificant between-studies variance. This makes it difficult to say which mean correlation is the one that should be discussed. The most conservative approach is to focus on the outlier-removed Porter and Steers group (uncorrected for dichotomization) because the between-studies variance was nonsignificant and because this is the group of studies meeting the original definition of met expectations. Furthermore, this effect size (d = .25) is virtually identical to the overall uncorrected

effect size, adding to its likely generalizability beyond just the Porter and Steers subgroup of studies.

Even if the results reported in Table 1 seem to make sense theoretically, it is still possible that they have been produced artifactually by the methods used here. Critics of meta-analysis (e.g., Spector & Levine, 1987) have noted that having a small number of studies can lead one to conclude that there is no between-studies variance when, in fact, there really is. In other words, critics contend that Hunter and Schmidt's (1990) method biases one to believe that results are generalizable when they really are not. This criticism would seem to apply here because the number of studies is small, at least when compared with selection-test meta-analyses (Hunter & Hunter, 1984; Schmitt, Gooding, Noe, & Kirsch, 1984). However, recent articles have detected a flaw in Spector and Levine's (1987) study (see Callender & Osburn, 1988; Rasmussen & Loher, 1988). Rasmussen and Loher's (1988) study is particularly relevant because it shows that Type I error rates are not at all excessive, even when there are as few as 6 or 10 studies and the underlying population correlation is .30. These parameters are almost identical to the research on met expectations reviewed here.

Although this most recent work shows that Type I errors are not excessively high when the number of studies is small, it does indicate that the power to detect the presence of a moderator is unacceptably low (Kemery, Mossholder, & Dunlap, 1989; Rasmussen & Loher, 1988). However, this criticism is irrelevant here because we were able to detect a moderator in most cases.

The results reported here also tend to reduce concerns about the number of studies reviewed. This is because the mean correlations in the Porter and Steers and Other subgroups are very similar to each other. Take job survival as an example. What seems to have happened is that there are more extreme values in the Other group, because the average corrected correlation (.14) is the same for both groups in the uncorrected analysis and almost identical (.20 vs. .18) in the corrected analysis. A similar pattern was found for intent to remain and for job performance. For these three correlates of met expectations, then, it may be reasonable to believe that the population correlation has been discovered. This is because the overall mean correlation is the same as that for the Porter and Steers subgroup. Because the overall correlation is based on more studies than are found in the Porter and Steers subgroup, one can have more confidence in the results. There were small differences between the Porter and Steers and Other subgroups for job satisfaction and organizational commitment, so that it is more conservative to interpret the population correlation as being represented by the Porter and Steers subgroup, rather than the overall result.

Future Research

The suggested future research topics come from a general reading of the met expectations literature. Thus, they are not necessarily derived from the means and variances of the meta-analyses.

Direction of Discrepancies

One topic omitted by researchers interested in met expectations is the degree to which getting less than expected is the

equivalent of getting more than expected. Porter and Steers (1973) suggested that low levels of expectations are desirable because they will have a higher probability of being fulfilled. However, Porter and Steers did not discuss what might happen if a person's expectations are unmet in the sense of being over-fulfilled.

Equity theory (Adams, 1963) is a good example of explicit discussion of overfulfillment. In fact, over- versus underpayment has been a topic of considerable interest (Campbell & Pritchard, 1976; Lawler, 1971). Equity theory assumes that getting more than is considered fair leads to some type of psychological tension, resulting in dissatisfaction and actions to remedy the dissatisfaction. Empirical research on equity theory, however, shows that over- versus underreward do not have symmetrical effects—the threshold for overreward is higher than for underreward (Campbell & Pritchard, 1976; Lawler, 1971).

Although met expectations research has not explicitly accounted for the direction of the discrepancy, research on the measurement and meaning of job satisfaction (Wanous & Lawler, 1972) has examined the issue recently (Rice, McFarlin, & Bennett, 1989). However, the job satisfaction research is concerned with a different standard of comparison to one's job experiences (i.e., what is wanted vs. what is expected). This difference could be important because receiving more than expected may not necessarily cause dissatisfaction if the specific factor is one that is highly desirable or valent (Vroom, 1964).

What Is Reality

Porter and Steers's (1973) classic definition of met expectations states that people compare their preentry expectations and postentry perceptions. This requires a within-person comparison with measurements at two points in time. In our review, however, we found a number of other types of definitions involving different comparisons with expectations and sometimes involving one-shot measurement rather than longitudinal data.

One variation on Porter and Steers's (1973) version was to ask newcomers a single question after they had entered an organization: "Think about what you expected to experience in this organization and compare it to what you now experience, then rate the direction and degree of the discrepancy between these two" (Wall & Payne, 1973). This approach was originally suggested by Wall and Payne as an alternative to using raw discrepancy scores, which have a number of psychometric problems (Cronbach & Furby, 1970). Although this method does avoid the use of discrepancy scores, it also precludes the gathering of longitudinal data, relying instead on the accuracy of the respondent's memory.

A related issue in need of further investigation is the relative effect of expectations and perceptions on newcomer attitudes and behavior. Even though the theory of met expectations implies that a discrepancy score using both expectations and perceptions should be used to measure the concept, discrepancy scores have their problems, as noted previously. We were not able to ascertain the possible effects of raw expectations, for example, because such data were not reported separately in most of the studies reviewed here. Future research should re-

port the separate and combined effects of expectations and perceptions.

In several other studies, between-person discrepancy scores, rather than within-person discrepancy scores, were used. By between-person, we mean that the newcomer's expectations were compared with someone else's perception of organizational reality. In a strictly psychometric sense, between-person discrepancy measures are less error prone than within-person measures (Johns, 1981). In a theoretical sense, however, a between-person discrepancy measure implies a different concept of organizational reality. This is because the comparison standard is a constant value for all newcomers (e.g., the mean of a person's work group perceptions, or a boss's perception of reality).

We found at least four different between-person discrepancy measures of met expectations. First, newcomer expectations have been compared with the mean of insider perceptions, as was done by Schneider (1975), who compared newcomers' expectations with the mean of their work groups' perceptions—in this case, employees who worked together in an insurance agency. Second, a variation on comparisons with a group mean was proposed by Mowday (1980), who considered an expectation to be unmet only if it deviated from the group mean by more than one standard deviation (in either direction). Third, newcomer expectations have been compared with the perception of reality by an influential person in the newcomer's role set (e.g., the newcomer's own boss; Schneider, 1975). Fourth, a group of knowledgeable insiders (not necessarily those in face-to-face contact with a newcomer) were asked to describe organizational reality individually, but then met as a group to resolve differences in ratings of job factors, so that a consensus description of organizational reality was obtained (Dean & Wanous, 1982).

Using between-person discrepancy scores clearly violates the original definition of met expectations, because such measures are insensitive to situations in which newcomers experience the organization differently. However, future research using alternative formulations of between-person discrepancy scores may be able to determine the seriousness of this problem.

Work Environment Clarity Versus Ambiguity

The significance of work environment clarity versus ambiguity for met expectations can be seen by asking this question: Under what conditions will a newcomer's expectations be disconfirmed? Because newcomers learn from the insiders in the organization, the degree to which the messages they receive are clear and unambiguous will determine the degree of disconfirmation. Environments that send clear messages to newcomers and in which there is relatively high consensus among the insiders sending these messages have the potential to disconfirm even the most strongly held expectations by newcomers. On the other hand, environments in which newcomers receive ambiguous or conflicting messages from insiders will allow newcomers to maintain their initial expectations (Colella, 1989; Wanous & Colella, 1989). It is possible, then, that met expectations theory applies only in the former type of environment, but not in the latter. Much research on social cognition (e.g., Fiske & Taylor, 1984; Markus & Zajonc, 1985; Taylor & Crocker,

1981) shows that expectations can focus the attention of people in such a way as to lead to their confirmation. The power of this expectation effect has been ignored by met expectations researchers until recently (Colella, 1989), and it has yet to be thoroughly researched.

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Appendix

Studies Used in the Meta-Analysis[A1]

1. Arnold, H. J., & Feldman, D. C. (1982). A multivariate analysis of the determinants of job turnover. *Journal of Applied Psychology, 67,* 350–360. (O, NON, PUB)
2. Avner, B. K., Guastello, S. J., & Aderman, M. (1982). The effect of a realistic job preview on expectancy and voluntary versus involuntary turnover. *Journal of Psychology, 111,* 101–107. (O, EXP, PUB)
3. Blau, G. (1988). An investigation of the apprenticeship organizational socialization strategy. *Journal of Vocational Behavior, 32,* 176–195. (PS, NON, PUB)
4. Colella, A. J. (1989). *A role for newcomer pre-entry expectations during organizational entry: Expectation effects on job perceptions.* Unpublished doctoral dissertation, The Ohio State University, Columbus. (PS, NON, UNP)
5. Dean, R. A. (1981). *Reality shock, organizational commitment, and behavior: A realistic job preview experiment.* Unpublished doctoral dissertation, Michigan State University, East Lansing. (PS, NON, UNP)
6. Dean, R. A., & Wanous, J. P. (1984). Effects of realistic job previews on hiring bank tellers. *Journal of Applied Psychology, 69,* 61–68. (PS, EXP, PUB)
7. Dugoni, B. L., & Ilgen, D. R. (1981). Realistic job previews and the adjustment of new employees. *Academy of Management Journal, 24,* 579–591. (O, EXP, PUB)
8. Farkas, A. J., & Tetrick, L. E. (1989). A three-wave longitudinal analysis of the causal ordering of satisfaction and commitment on turnover decisions. *Journal of Applied Psychology, 74,* 855–868. (PS, NON, PUB)
9. Federico, S. M., Federico, P., & Lundquist, G. W. (1976). Predicting women's turnover as a function of extent of met salary expectations and biodemographic data. *Personnel Psychology, 29,* 559–566. (O, NON, PUB)
10. Feldman, D. C. (1976). A contingency theory of socialization. *Administrative Science Quarterly, 21,* 433–452. (O, NON, PUB)
11. Fisher, C. D. (1985). Social support and adjustment to work: A longitudinal study. *Journal of Management, 11,* 39–53. (PS, NON, PUB)
12. Greenhaus, J. H., Seidel, C., & Marinis, M. (1983). The impact of expectations and values on job attitudes. *Organizational Behavior and Human Performance, 31,* 394–417. (PS, NON, PUB)
13. Hoiberg, A. & Berry, N. H. (1978). Expectations and perceptions of Navy life. *Organizational Behavior and Human Performance, 21,* 130–145. (O, NON, PUB)
14. Horner, S. D. (1979, September). *A field experimental study of the affective, intentional, and behavioral effects of organizational entry expectations.* Paper presented at the 87th Annual Convention of the American Pychological Association, New York. (PS, EXP, UNP)
15. Ilgen, D. R. (1971). Satisfaction with performance as a function of the initial level of expected performance and the deviation from expectations. *Organizational Behavior and Human Performance, 6,* 345–361. (PS, EXP, PUB) (This study was considered an outlier after computation of the initial meta-analysis.)
16. Katerberg, R., & Blau, G. (1980). *A study of met expectations in organizational assimilation.* Unpublished manuscript, University of Cincinnati, Department of Management, Cincinnati, OH. (PS, NON, UNP)
17. Katzell, M. E. (1968). Expectations and dropouts in schools of nursing. *Journal of Applied Psychology, 72,* 393–400. (PS, NON, PUB)
18. Latack, J. C., Josephs, S. L., Roach, B. L., & Levine, M. C. (1987). Carpenter apprentices: Comparison of career transitions for men and women. *Journal of Applied Psychology, 72,* 393–400. (O, NON, PUB)
19. Lee, T. W., & Mowday, R. T. (1987). Voluntarily leaving an organization: An empirical investigation of Steers and Mowday's model of turnover. *Academy of Management Journal, 30,* 721–743. (PS, NON, PUB)
20. Michaels, C. E., & Spector, P. E. (1982). Causes of employee turnover: A test of the Mobley, Griffeth, Hand, and Meglino model. *Journal of Applied Psychology, 67,* 53–59. (O, NON, PUB)
21. Pierce, J. L., & Dunham, R. B. (1987). Organizational commitment: Pre-employment propensity and initial work experiences. *Journal of Management, 13,* 163–178. (PS, NON, PUB)
22. Popovich, P. M. (1986, August). *Characteristics of the job satisfaction of new employees.* Paper presented at the 46th Annual Meeting of the Academy of Management, Chicago, IL. (PS, NON, UNP) (This study was considered an outlier after computation of the initial meta-analysis.)
23. Pulakos, E. D., & Schmitt, N. (1983). A longitudinal study of a valence model approach for the prediction of job satisfaction of new employees. *Journal of Applied Psychology, 68,* 307–312. (PS, NON, PUB)
24. Reichers, A. E., & Kim, J. S. (1987). *A longitudinal investigation of an interactionist perspective on newcomer socialization.* Unpublished manuscript, Ohio State University, College of Business, Columbus. (O, NON, UNP)
25. Reilly, R. R., Brown, B., Blood, M. R., & Malatesta, C. Z. (1981). The effects of realistic previews: A study and discussion of the literature. *Personnel Psychology, 34,* 823–834. (O, EXP, PUB)
26. Schneider, B. (1975). Organizational climate: Individual preferences and organizational realities revisited. *Journal of Applied Psychology, 60,* 459–465. (O, NON, PUB)
27. Stumpf, S. A., & Hartman, K. (1984). Individual exploration to organizational commitment or withdrawal. *Academy of Management Journal, 27,* 308–329. (O, NON, PUB)
28. Suszko, M. K., & Breaugh, J. A. (1984). The effects of realistic job previews on applicant self-selection and employee turnover, satisfaction, and coping ability. *Journal of Management, 12,* 513–523. (PS, EXP, PUB)
29. Vanderberg, R. J., & Scarpello, V. (1990). The matching model: An examination of the processes underlying realistic job previews. *Journal of Applied Psychology, 75,* 60–67. (PS, NON, PUB)
30. Youngberg, C. F. (1963). An experimental study of job satisfaction and turnover in relation to job expectations and self expectations. *Dissertation Abstracts, 25,* 656. (University Microfilms No. 64-6516). (PS, EXP, UNP) (This study was considered an outlier after computation of the initial meta-analysis.)
31. Youngblood, S. A., Mobley, W. H., & Meglino, B. M. (1983). A longitudinal analysis of the turnover process. *Journal of Applied Psychology, 68,* 507–516. (O, NON, PUB)

[A1] Each study is coded three ways: (a) whether it conforms to Porter and Steers's (1973) definition (PS), or whether it uses some other (O) definition; (b) whether it is experimental (EXP) or nonexperimental (NON); and (c) whether it is published (PUB) or unpublished (UNP).