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# Newcomer Adjustment During Organizational Socialization: A Meta-Analytic Review of Antecedents, Outcomes, and Methods

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The authors tested a model of antecedents and outcomes of newcomer adjustment using 70 unique samples of newcomers with meta-analytic and path modeling techniques. Specifically, they proposed and tested a model in which adjustment (role clarity, self-efficacy, and social acceptance) mediated the effects of organizational socialization tactics and information seeking on socialization outcomes (job satisfaction, organizational commitment, job performance, intentions to remain, and turnover). The results generally supported this model. In addition, the authors examined the moderating effects of methodology on these relationships by coding for 3 methodological issues: data collection type (longitudinal vs. cross-sectional), sample characteristics (school-to-work vs. work-to-work transitions), and measurement of the antecedents (facet vs. composite measurement). Discussion focuses on the implications of the findings and suggestions for future research.

*Keywords:* socialization, newcomer adjustment, meta-analysis, organizational socialization tactics

*Organizational socialization* refers to the process by which newcomers make the transition from being organizational outsiders to being insiders. An interactionist perspective of both newcomer and organizational influence on the adjustment process (Reichers, 1987) characterizes the socialization literature. Rather than waning in importance over the years, socialization has become more important because individuals are more mobile. In fact, approximately 25% of U.S. workers are currently undergoing organizational socialization (Rollag, Parise, & Cross, 2005), and individuals change jobs an average of 10.2 times over 20 years (Bureau of Labor Statistics, 2005). These changes suggest that new employee socialization or “onboarding” is a key issue for organizations and newcomers alike as individuals undergo socialization more often in their careers and organizations deal with newcomers more often because of elastic personnel needs. Thus, examining this process has important theoretical and practical implications (Bauer & Elder, 2006).

Despite the strides made in socialization research, the literature remains fragmented. For example, it suffers from a lack of clarity in terms of the role adjustment plays in newcomer socialization, a lack of consistency in how constructs are measured (noted by E. W. Morrison, 2002), and a lack of understanding of the impact

of sampling and data collection timing (noted by Bauer, Morrison, & Callister, 1998). Summarizing the work to date and identifying areas for future research are important to unifying and advancing the socialization literature.

Thus, the first goal of this research was to integrate socialization research into a model of antecedents and outcomes of adjustment and to test this model using meta-analysis and path modeling. Although narrative reviews of the literature exist (e.g., Ashforth, Sluss, & Harrison, in press; Bauer & Taylor, 2001; Bauer et al., 1998; Fisher, 1986; Saks & Ashforth, 1997a; Wanous & Colella, 1989), an empirical review of the socialization literature has yet to be conducted. The current study fills this void by proposing and testing a model of newcomer adjustment while building on previous literature to extend it. Our second goal was to study the effects of different methodological approaches by comparing them meta-analytically. Finally, our study makes a contribution by summarizing existing relationships and uncovering relationships that deserve further attention.

In the following pages, we introduce a model of newcomer adjustment. We first describe three socialization indicators and explain our choice of these variables as indicators of newcomer adjustment for the current meta-analysis. Next, we discuss antecedents and outcomes of newcomer adjustment. Finally, we introduce three potential moderators of newcomer adjustment.

## Model of Newcomer Adjustment During Socialization

Figure 1 presents the model examined in this study. This model treats role clarity, self-efficacy, and social acceptance as three key indicators of newcomer adjustment. Information seeking and organizational socialization tactics are the proposed antecedents of newcomer adjustment, and job satisfaction, organizational commitment, job performance, intentions to remain, and turnover are the outcomes of newcomer adjustment. We proposed and tested this particular model for three reasons. First, from a theoretical

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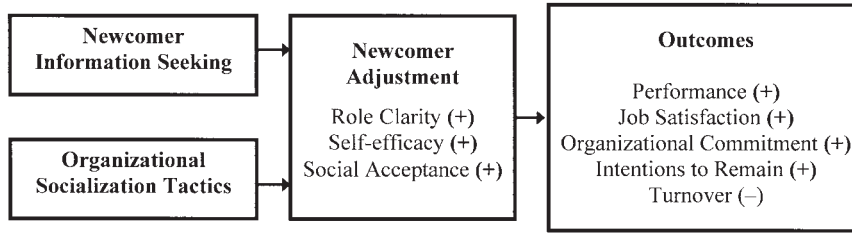


Figure 1. Antecedents and outcomes of newcomer adjustment during organizational socialization. Newcomer information seeking can be broken down into (a) referent information, (b) appraisal information, and (c) relational information, following Miller and Jablin (1991). For socialization tactics, high scores indicate institutionalized socialization. Organizational socialization tactics can be broken down into (a) content tactics, (b) context tactics, and (c) social tactics, following Jones (1986).

standpoint, the socialization process is one of uncertainty reduction (e.g., Berger, 1979). Uncertainty reduction theory posits that newcomers desire to increase the predictability of interactions between themselves and others within the new organization (Berger & Calabrese, 1975). Second, the individual level of adjustment was an explicit main focus of our study, including the effects of both information seeking and organizational socialization tactics on outcomes. Finally, from a practical standpoint, this model represents the most commonly studied constructs in newcomer socialization (Bauer et al., 1998). Unlike a theoretical review article, which can include any potential constructs, a meta-analytic review is limited to relationships that have been consistently studied.

*What Is Newcomer Adjustment?*

Socialization researchers have tended to study similar adjustment indicators in a variety of ways. According to Fisher’s (1986) review of the literature, newcomer adjustment following organizational entry consists of working through both task and social transitions. Similarly, Feldman (1981) noted that adjustment consists of three aspects (see Table 1). *Resolution of role demands* refers to understanding job tasks to perform and understanding task priorities and time allocation (role clarity). *Task mastery* refers to learning the tasks of the new job and gaining confidence in the role (self-efficacy). *Adjustment to one’s group* refers to coming to feel liked and accepted by peers (social acceptance). Subsequently, researchers have frequently used role clarity, self-

efficacy, and social acceptance as indicators of newcomer adjustment (e.g., Bauer et al., 1998). However, researchers have taken different approaches to the measurement of adjustment. It should be noted that learning is only a latent aspect of the adjustment facets focused on in this study. Whereas some investigators have taken the approach noted above to tap the latent construct of learning (e.g., Bauer & Green, 1998; Feldman, 1976), others have measured adjustment more closely as actual learning and knowledge acquisition. For example, Ostroff and Kozlowski (1992) measured adjustment as a single global measure, and, more recently, researchers have developed more specialized measures of adjustment that tap learning regarding specific aspects of the job and organization directly (e.g., Chao, O’Leary-Kelly, Wolf, Klein, & Gardner, 1994; Haueter, Macan, & Winter, 2003; Ostroff & Kozlowski, 1992; Taormina, 1994, 2004). Although these measures show great promise, to date, none has been used consistently across the socialization literature. For example, the Chao et al. (1994) scale has been studied the most frequently, but it has rarely been used in its entire form (for an exception, see Wesson & Gogus, 2005), with researchers using only some of the dimensions.

*Antecedents of Newcomer Adjustment*

A decade after Fisher’s (1986) review, Saks and Ashforth (1997a) presented a summary model of socialization that proposed information seeking and socialization tactics as antecedents of adjustment. We focused on these same influences on adjustment.

Table 1  
*Antecedents of Newcomer Adjustment: Information Seeking and Organizational Socialization Tactics*

Information seeking (adapted from Miller & Jablin, 1991)	Organizational socialization tactics (adapted from Jones, 1986)	Newcomer adjustment (adapted from Feldman, 1981)
<i>Referent information:</i> What is required to function on the job?	<i>Content tactics:</i> Clear stages exist for training, and there is a clear timetable for role adjustment.	<i>Role clarity/resolution of role demands:</i> Understanding the tasks to perform for the job and understanding task priorities and time allocation.
<i>Appraisal information:</i> Degree of functioning successfully on the job.	<i>Context tactics:</i> Learning task requirements as part of a group and having formal training before starting the actual job.	<i>Self-efficacy/task mastery:</i> Learning the tasks of the new job and gaining confidence in the role.
<i>Relational information:</i> Nature of relationships with others.	<i>Social tactics:</i> Receiving positive feedback and identity affirmation from organizational insiders and having a trusted insider to guide them within the organization.	<i>Social acceptance/adjustment to group:</i> Coming to feel liked and trusted by peers.

Organizations (either passively or actively) create strong or weak situations under which newcomers must adjust to their new environments, representing different socialization tactics. Simultaneously (and perhaps in reaction to tactics), newcomers proactively seek information to help them adjust. A theoretical basis for both newcomer information seeking and organizational socialization tactics is the reduction of uncertainty newcomers experience on organizational entry. Organizations differ in terms of the goals they have for newcomers, ranging from conformity to innovation, and newcomers must learn what is expected of them through the adjustment process.

*Information seeking.* Van Maanen and Schein's (1979) first assumption for their theory of socialization was that newcomers will try to reduce uncertainty. Uncertainty reduction theory (Berger, 1979) argues that individuals do this to create predictable environments (Falcone & Wilson, 1988). As Saks and Ashforth (1997a) noted, "Uncertainty is reduced through information provided via various communication channels, notably social interactions with superiors and peers" (p. 236). Louis (1980) also noted that a key input to the sense-making process is information from organizational insiders. Because reality testing is an important aspect of sense making, having insiders serve as "sounding boards" and provide background information is critical for newcomers to diagnose and interpret the many surprises they encounter.

*Information seeking and newcomer adjustment.* At its core, information seeking maps onto three adjustment types. In their theoretical article on information seeking, Miller and Jablin (1991) developed a typology of information sought during organizational entry. These include *referent information*, which includes understanding what is needed to function on the job (role clarity); *appraisal information*, which includes information on how well the newcomer is able to function in relation to role requirements (self-efficacy); and *relational information*, which relates to the quality of relationships with organizational insiders (social acceptance). Table 1 summarizes how the types of information sought and indicators of adjustment overlap.

*Measuring information seeking.* E. W. Morrison (2002) noted in her review of the newcomer information-seeking literature that some researchers have used global versus different types of measures, which makes comparisons across studies challenging. Some of the ways that information-seeking measures vary include the degree to which they address information acquisition (e.g., amount of information gathered), information types (e.g., referent, appraisal, and relational), and measurement approaches (e.g., composite or facet measurement). To examine these different measurement approaches, we studied the relationship between information seeking and outcomes and explored, using moderation analysis, whether results differed when analyses were conducted on facets and on aggregate measures.

*Organizational socialization tactics.* Socialization tactics are organizational approaches to information dissemination to facilitate adjustment in new roles. Van Maanen and Schein (1979) suggested that organizations could be differentiated on the basis of how they approach newcomer socialization on at least six dimensions. Even though they did not propose that the six dimensions represented all of the ways in which organizations differ in their approaches to socialization, the framework has motivated several subsequent studies.

The first aspect on which organizations differ is whether socialization practices are collective versus individual. Under the collective approach, newcomers go through common experiences as part of a group, whereas under the individual approach, newcomers accumulate unique experiences separate from other newcomers. Second, socialization tactics can be formal or informal. Formal tactics involve newcomers who are segregated from others and trained off the job, whereas informal tactics involve little separation between newcomers and existing employees. Third, socialization experiences can be sequential or random. Under sequential, newcomers know what phases they need to go through, whereas under random, the progression is more ambiguous. Fourth, fixed or variable socialization tactics involve having a timetable of when the socialization process is complete as opposed to having no specific timetable. Fifth, serial or disjunctive tactics refer to whether the person is socialized with the help of insiders or without the help of a role model. Finally, investiture versus divestiture tactics refer to whether newcomers receive feedback from insiders that affirms or disaffirms their identity.

A review of the literature indicates that researchers tend to draw from uncertainty reduction theory to explain the link between socialization tactics, adjustment, and outcomes. Saks and Ashforth (1997a) suggested that the purpose of tactics is to reduce the degree of uncertainty experienced during early socialization. Tactics shape the type of information newcomers receive, the source of this information, and the ease of getting information. As Jones (1986) and Allen (2006) proposed, socialization tactics should reduce uncertainty, which should reduce ambiguity for newcomers, leading to more positive attitudes and facilitating adjustment.

*Organizational socialization tactics and newcomer adjustment.* Jones (1986) proposed that the six tactics could be classified as *content* (collective, formal), *context* (sequential, fixed), and *social* (serial, investiture) aspects of socialization. This higher order classification has received scant attention. In one study that examined the relationship of content, context, and tactics with person-organization fit, Cable and Parsons (2001) found that these three dimensions were differentially related to outcomes. Their findings suggest the value of examining the differential relations between socialization dimensions and outcomes. Despite the theoretical rationale for expecting different tactics to relate differentially to outcomes, researchers have tended not to make differential predictions.

The three aspects of socialization tactics map onto the three aspects of newcomer adjustment (see Table 1). Specifically, content tactics address whether newcomers are trained off the job, where performance consequences are minimized, and prepared for their new roles in a way that is nonthreatening. When dangers of the new role are removed and newcomers can practice their roles without fear of failure, their confidence should increase. Thus, content tactics should be positively related to self-efficacy. Context tactics reflect whether newcomers have a fixed timetable and whether they know the stages they need to progress through and, therefore, should contribute to role clarity. Finally, social tactics encourage organizations to provide mentoring and positive feedback to newcomers, leading to greater social acceptance.

*Measuring organizational socialization tactics.* It is important to examine whether future research should study the six socialization tactics separately or as one dimension. An argument against aggregation is whether there is agreement on the classification of



different tactics as institutionalized as opposed to individualized. Specifically, some evidence suggests that not all of the dimensions fit well with this aggregated conceptualization. For example, it is not clear whether the investiture dimension behaves as the other institutionalized tactics. Jones (1986) classified investiture as an institutionalized tactic. Others followed suit and found positive relations between investiture and other institutionalized tactics (e.g., Allen & Meyer, 1990; Ashforth & Saks, 1996). However, Saks and Ashforth (1997b) found negative correlations between investiture and some other institutionalized tactics, and Laker and Steffy (1995) classified investiture as an individualized tactic. We agree with Saks and Ashforth (1997a) that, given the conflicting treatment of investiture in the field, it is important to continue to examine whether aggregation of the different tactics is warranted. To examine the validity of the single continuum, we studied the relationship between each tactic and the different outcomes and conducted moderation tests to determine whether results differed when analyses were conducted on facets or on aggregate measures.

### *Outcomes of Newcomer Adjustment*

Newcomer adjustment has been associated with outcomes such as performance, job attitudes, and retention (Bauer et al., 1998). The relationships among newcomer adjustment and the outcomes in Figure 1 have been studied to varying degrees, and adjustment is often related to socialization outcomes. However, the nature of these relationships is unclear because of conflicting findings across studies and a lack of individual studies that included the full set of outcomes.

*Performance.* We expected newcomer adjustment to relate to performance. Employees who are clear about role expectations are more likely to perform well, and those who believe they can accomplish their tasks tend to have greater goal accomplishment. Employees who are socially accepted by peers may perform at higher levels, given that the relationships they form with their peers may serve as social capital that facilitates their job performance (Bauer & Green, 1994). Thus, we expected positive relations between adjustment and job performance.

*Job attitudes.* Job satisfaction, organizational commitment, and intentions to remain are three of the most studied outcomes of socialization. We predicted that newcomer adjustment was related to all three attitudes. Role ambiguity is a source of dissatisfaction because it is associated with high levels of stress and burnout. Employees who are not clear about their roles may be less satisfied and committed to the organization and more likely to leave. In addition, research has linked uncertainty to lower job satisfaction (e.g., Louis, 1980). Similarly, employees who have high self-efficacy will feel confident that they can achieve key aspects of their jobs and be more satisfied, committed to the organization, and less likely to want to leave. Finally, receiving social support on the job is important for job attitudes (Fisher, 1985; Louis, Posner, & Powell, 1983).

*Turnover.* Employees who adjust to their new roles by understanding role demands, feeling capable of performing tasks, and establishing effective relationships with peers will have a strong attachment to the organization that will prevent them from leaving their jobs. When newcomers successfully adjust to their roles and work environment, they should be less likely to quit. Wanous (1980) found a link between uncertainty and premature turnover.

### *Potential Methodological Moderators of Newcomer Adjustment*

*Data collection design (longitudinal vs. cross-sectional).* We explicitly considered data collection design (longitudinal vs. cross-sectional) as a moderator of observed relationships. Key variables in the socialization process can be measured at the same time or on different occasions. Given the tendency for correlations over longer time periods to decline in magnitude, it is important to explore which correlations among socialization variables are most influenced by the length of time between measurements. Although many studies in the field of organizational socialization are now longitudinal, cross-sectional studies still exist. In addition, even when studies gather data across time, many of the individual relationships reported are, in fact, cross-sectional.

*Transition from school versus work.* As socialization is a process of uncertainty reduction, we determined that it is important to account for the effects of sampling issues in the analyses. Not all newcomers deal with the same degree of uncertainty as they enter organizations. We proposed that newcomers transitioning from school to work face more drastic transitions and greater challenges than those transitioning from one job to another job (Ashforth, 2001). On the other hand, newcomers who are transitioning from one organization to another may have established ways of accomplishing their roles and may thus experience more difficulty in accepting "new" ways. Therefore, we examined the moderating effects of the type of work transition on the relationships.

*Measurement of information seeking and organizational socialization tactics.* Some studies report information seeking and tactics at the facet level (e.g., Allen & Meyer, 1990; Ashforth & Saks, 1996), whereas others report only composite measures (e.g., Bravo, Peiro, Rodriguez, & Whitley, 2003; Mignerey, Rubin, & Gorden, 1995). It is unclear how these different measurement approaches affect the conclusions drawn from these studies. For example, researchers have measured tactics in three ways. First has been to conduct analyses and report findings for all six dimensions (e.g., Allen & Meyer, 1990; Ashforth & Saks, 1996). Second has been to use the three-dimensional approach, which aggregates tactics into content, context, and social dimensions (e.g., Allen, 2006; Cable & Parsons, 2001). Third, Jones (1986) referred to tactics on the formal side of the continuum as "institutional tactics" and tactics on the less formal side as "individualized tactics." Following this classification, several researchers combined all six tactics as institutionalized and individualized tactics (e.g., Bravo et al., 2003; Mignerey et al., 1995). It is unclear whether measurement affects findings.

## Method

### *Criteria for Inclusion*

In choosing studies for this meta-analysis, we had three inclusion criteria. First, we focused on studies of organizational newcomers, which we defined as those who had been on a new job in a new company for 13 months or less. Therefore, we excluded studies examining transferees. Similarly, we did not include studies of expatriates because they are adjusting to new cultures as well as to new organizations (Bauer & Taylor, 2001) and because a recent meta-analysis has been conducted on expatriate adjustment

(Bhuasskar-Shrinivas, Harrison, Shaffer, & Luk, 2005). Second, we chose to focus on organizational socialization, not occupational socialization. Organizational and occupational socialization are different types of adjustment. For example, learning to be a nurse is different from learning to work at a new hospital as a nurse. Third, we included studies that measured at least two of the variables presented in Figure 1 and also reported correlation coefficients.

### Literature Search

We obtained both published and unpublished empirical studies through a variety of means. First, to locate relevant journal articles, we conducted a computerized search using PsycINFO from 1872 until January 1, 2006, using the following keywords: "newcomer," "organizational socialization," "employee socialization," "feedback seeking" + "socialization," and "information seeking" + "socialization." Next, we searched the conference programs from 2000 through 2005 for the annual meetings of the Society of Industrial and Organizational Psychology and the national meetings of the Academy of Management for articles including the keywords "socialization" or "newcomer." We searched the digital dissertation Web site (<http://wwwlib.umi.com>) using the key word "socialization" from 2000 through 2005. Talya N. Bauer read the abstracts to determine inclusion. Finally, we contacted 10 experts who have published articles on organizational socialization. We sent them the list of articles we had considered and asked them to note or share any additional articles (published, in press, or working papers).

### Coding for Meta-Analysis

Four subject matter experts (SMEs) coded the variables included in Figure 1. A team of two SMEs examined all of the studies for all variables except information seeking and organizational socialization tactics. A third SME created composite variables for these remaining two constructs and coded correlations. Following this, a fourth SME recoded a random sample of 20% of all of the studies. The initial average interrater agreement for the SMEs was 95%. Differences in coding were discussed to consensus. Articles were then recoded as needed.

In a number of studies, socialization tactics and information and feedback seeking were measured with several items on multiple dimensions. In these cases, more than one effect size was available for inclusion in the meta-analysis. When the correlations were available, we combined these variables into composite variables and then based the included effect size on the correlations on the basis of the composite variables (Hunter & Schmidt, 1990). When all the necessary correlations were unavailable for creating the composite, we randomly selected one of the possible effect sizes for inclusion (Lipsey & Wilson, 2001; Rosenthal & Rubin, 1986).

### Sample Description

On the basis of the literature review, we identified 70 unique samples ( $N = 12,279$ ) that met our inclusion criteria. Of those studies, 83% were longitudinal. The mean number of data collection periods for the longitudinal studies was 2.90 ( $SD = .94$ ). The

average time of the first data collection was 1 week postentry. The average time of the second data collection was 5.5 months postentry, ranging from 1 to 12 months, with almost all of the studies gathering data by 6 months. The average time between Time 1 and Time 2 was 4.42 months ( $SD = 3.43$ ) for the studies that had two or more data collections. Participants were mostly White (84%) and most held at least an undergraduate degree (86%).

## Results

### Meta-Analysis of Antecedents and Outcomes of Newcomer Adjustment

Our first goal in this study was to integrate past studies of socialization into a model of antecedents and outcomes of adjustment and test this model using meta-analysis and path modeling. Table 2 presents the results of the meta-analytic combination of correlations for the 10 key socialization variables under study. The total sample sizes of the 45 meta-analytic correlations ranged from 272 to 4,027 participants.

Descriptively, only 2 of the 45 correlations were smaller than .10 (in absolute value), suggesting a less-than-small correlation by Cohen's (1988) guidelines. Inferentially, one of these two correlations did not differ significantly from zero on the basis of the  $Z$  test (Rosenthal, 1991). Although all but one of the correlations differed significantly from zero, there is considerable uncertainty in the plausible range of the population correlations of interest as indexed by many of the 95% confidence intervals. In a fixed-effects analysis, the width of the confidence interval is determined primarily by a function of the cumulative sample size. Fail-safe  $K$  refers to the estimated number of studies with an average effect size of zero that would be needed to bring the obtained effect size to less than a criterion level. The Fail-safe  $K$  for the 43 correlations exceeding  $|.10|$  was a median of 10 studies.

To further test the relationships among the 10 variables, we conducted a path analysis using a structural equation modeling approach (cf. J. Z. Carr, Schmidt, Ford, & DeShon, 2003; Cheung & Chan, 2005), using the meta-analytic correlations in Table 2 as input. We specified the path model based on Figure 1, allowing all variables to relate to all other variables. Most of the partial associations among variables were statistically significant, and the parameter estimates were in the expected direction. Eleven of the partial associations were not statistically significant, implying that the effect of a variable on the other is at best indirect in nature (e.g., role clarity was not significantly related to turnover, controlling for the other variables).

Omitting these 11 nonsignificant paths resulted in a model that fit the data well:  $\chi^2(11, N = 877) = 13.11, p = .29$ ; goodness-of-fit index = .99; comparative fit index = .99; root-mean-square error of approximation = .01. Figure 2 presents the results of this path analysis. In terms of the antecedents of newcomer adjustment, we found that information seeking was positively related to role clarity and social acceptance, but it was not significantly related to self-efficacy. Socialization tactics were positively related to all three adjustment variables. We also found that role clarity was related to all of the outcomes except turnover. Self-efficacy was related to all outcomes except organizational commitment and job satisfaction. Finally, social acceptance was related to all five of the outcomes studied.

Table 2  
*Descriptive and Inferential Statistics From the Meta-Analytic Synthesis of Correlations Among All Variables From Figure 1*

Variable	$\bar{r}$	95% CI	<i>k</i> studies	<i>N</i>	<i>SD</i>	Fail-safe <i>K</i>
Information seeking						
Socialization tactics	.22*	.14, .30	3	553	.11	4
Role clarity	.17*	.13, .21	10	2,549	.09	7
Self-efficacy	.14*	.05, .23	3	450	.06	1
Social acceptance	.16*	.08, .23	6	697	.10	4
Job performance	.08*	.03, .14	10	1,260	.18*	—
Job satisfaction	.20*	.15, .24	13	1,809	.19*	13
Organizational commitment	.21*	.16, .26	9	1,438	.16*	10
Intentions to remain	.15*	.10, .20	10	1,458	.17*	5
Turnover	-.08	-.18, .03	3	369	.13	—
Socialization tactics						
Role clarity	.27*	.23, .31	7	1,954	.22*	12
Self-efficacy	.42*	.33, .51	2	314	.16*	6
Social acceptance	.19*	.14, .24	4	1,459	.12	4
Job performance	.15*	.08, .22	5	715	.26*	3
Job satisfaction	.43*	.38, .48	7	962	.13*	23
Organizational commitment	.15*	.10, .19	8	1,884	.31*	4
Intentions to remain	.34*	.28, .40	5	809	.10	12
Turnover	-.14*	-.19, -.08	4	1,466	.02	2
Role clarity						
Self-efficacy	.45*	.40, .49	5	1,239	.15*	18
Social acceptance	.23*	.20, .27	13	3,255	.21*	17
Job performance	.29*	.25, .33	7	1,958	.09*	13
Job satisfaction	.32*	.29, .35	22	3,395	.13*	48
Organizational commitment	.29*	.26, .33	14	3,138	.10*	27
Intentions to remain	.23*	.19, .27	14	2,239	.15*	18
Turnover	-.11*	-.22, -.00	4	315	.07	1
Self-efficacy						
Social acceptance	.28*	.21, .35	4	872	.06	7
Job performance	.35*	.28, .41	6	724	.23*	15
Job satisfaction	.28*	.22, .34	8	1,162	.17*	11
Organizational commitment	.20*	.16, .25	8	1,620	.14*	8
Intentions to remain	.15*	.08, .21	7	841	.13*	4
Turnover	-.16*	-.27, -.04	2	272	.05	1
Social acceptance						
Job performance	.21*	.11, .29	4	455	.23*	4
Job satisfaction	.33*	.29, .37	15	1,849	.16*	35
Organizational commitment	.35*	.31, .39	10	1,965	.11*	25
Intentions to remain	.24*	.19, .30	9	1,235	.14	13
Turnover	-.16*	-.24, -.08	4	626	.09	2
Job performance						
Job satisfaction	.21*	.17, .26	13	1,892	.21*	14
Organizational commitment	.20*	.15, .24	11	1,694	.16*	11
Intentions to remain	.12*	.01, .23	4	327	.10	1
Turnover	-.19*	-.28, -.08	4	368	.06	4
Job satisfaction						
Organizational commitment	.58*	.56, .60	26	4,027	.19*	125
Intentions to remain	.63*	.60, .64	25	3,587	.20*	133
Turnover	-.10*	-.15, -.04	11	1,291	.27*	1
Organizational commitment						
Intentions to remain	.54*	.52, .57	17	2,682	.24*	75
Turnover	-.16*	-.21, -.12	8	1,740	.17*	5
Intentions to remain						
Turnover	-.22*	-.15, -.28	8	856	.13*	10

Note. Organizational socialization tactics are coded so that the higher end of the continuum represents institutionalized tactics as categorized by Jones (1986). Dashes indicate that a correlation was already less than 1.10.  $\bar{r}$  = weighted average correlation; CI = confidence interval; *SD* = standard deviation of observed effect sizes.

\*  $p < .05$ .

In terms of mediation, information seeking had only one direct effect on the outcomes (for organizational commitment). The other relationships were fully mediated by adjustment. Thus, the relationship between information seeking and socialization outcomes

appears to be mostly indirect. On the other hand, socialization tactics had direct effects on job satisfaction and intentions to remain, which indicates that adjustment partially mediates these relationships.

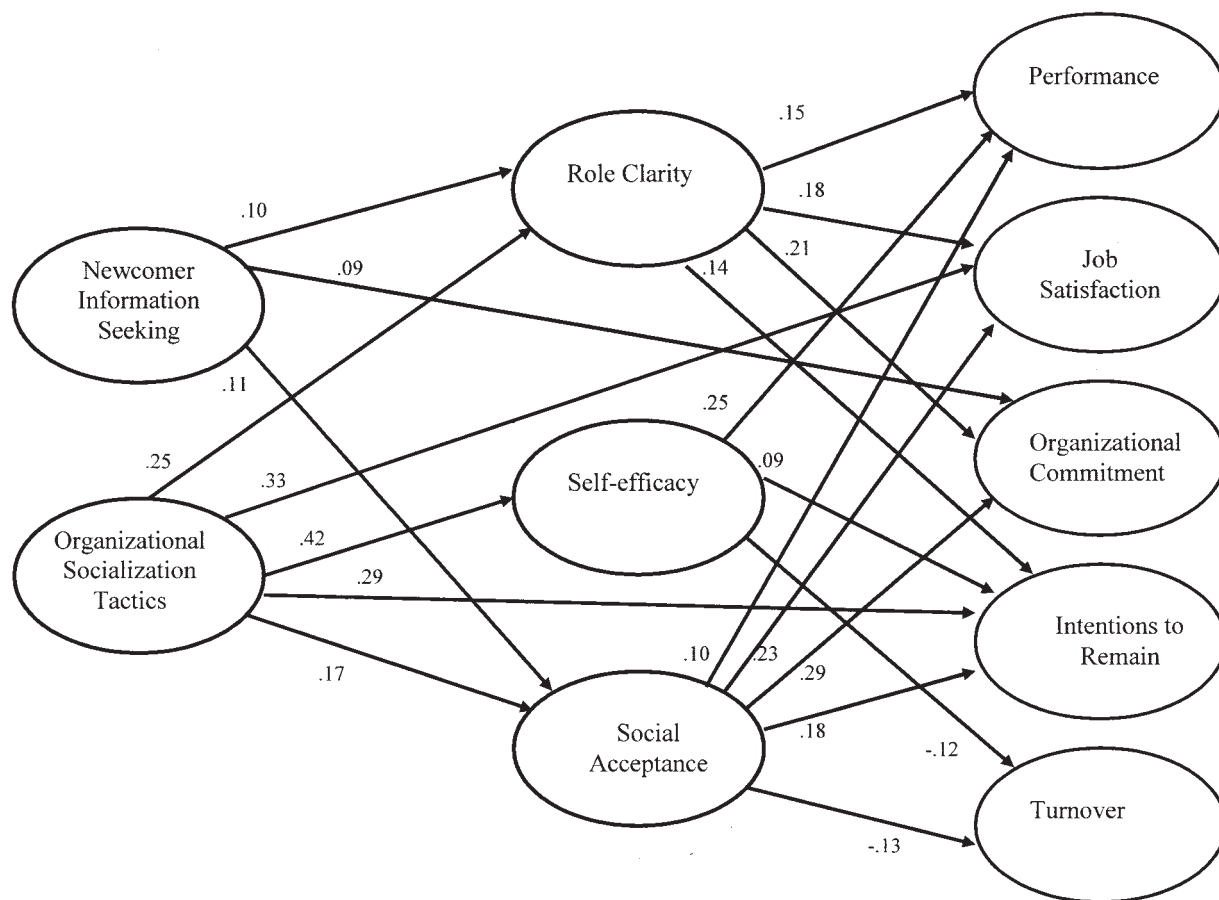


Figure 2. Standardized parameter estimates from the final socialization process model. For clarity of presentation, correlations among variables within wave and all nonsignificant correlations across waves have been omitted. All parameter estimates are significant at the .05 level. For socialization tactics, high scores indicate institutionalized socialization (as categorized by Jones, 1986).

*Relationships With Facets of Information Seeking and Socialization Tactics*

Information seeking and socialization tactics are constructs consisting of several facets. Our results showed that the intercorrelations among the information-seeking tactics were as follows ( $K = 8$ ). Appraisal information seeking was correlated with both referent and social information seeking at .49. Referent and social information seeking were correlated at .32. For tactics, the range of intercorrelations was between  $-.11$  and  $.57$ , with an average of  $.38$  (see Table 3). The meta-analytic correlations presented in Table 4 provide the correlations among these variables measured at the facet level only, newcomer adjustment, and the five outcome variables.

Overall, the correlations between facets of information seeking and socialization tactics and the newcomer adjustment variables were positive. For relationships between the facets of information seeking and newcomer adjustment, the referent and appraisal information facets were significantly related with role clarity and social acceptance. In contrast, the relational information facet of information seeking was not significantly related to any of the adjustment dimensions. For the relationships between the facets of

socialization tactics and newcomer adjustment, all six facets were significantly correlated with role clarity, whereas all but the formal facet were significantly correlated with self-efficacy, and only the fixed, serial, and investiture facets were significantly correlated with social acceptance.

We also examined the correlations between facets of information seeking and socialization tactics with socialization outcomes.

Table 3  
*Intercorrelations Among Facets of Organizational Socialization Tactics*

Tactic	1	2	3	4	5	6
1. Collective	—					
2. Formal	.44	—				
3. Sequential	.45	.55	—			
4. Fixed	.39	.46	.57	—		
5. Serial	.41	.43	.53	.56	—	
6. Investiture	.10	-.11	.02	.12	.22	—

Note.  $K = 8$ . Organizational socialization tactics are coded so that the higher end of the continuum represents institutionalized tactics as categorized by Jones (1986).



Table 4

*Correlations Between Information Seeking and Organizational Socialization Tactics With Newcomer Adjustment and Socialization Outcomes*

Variable	Information seeking (adapted from Miller & Jablin, 1991)			Organizational socialization tactic (adapted from Jones, 1986)					
	Category	<i>r</i>	<i>K</i>	<i>N</i>	Category	<i>r</i>	<i>K</i>	<i>N</i>	
Adjustment									
Role clarity	Referent information	.11*	7	1,198	Collective	.25*	3	327	
					Formal	.20*	3	327	
	Appraisal information	.17*	5	570	Sequential	.49*	4	500	
					Fixed	.46*	4	500	
Self-efficacy	Relational information	.06	3	339	Serial	.50*	4	500	
					Investiture	.45*	3	409	
	Referent information	.14*	3	450	Collective	.22*	2	314	
					Formal	.03	1	154	
Social acceptance	Appraisal information	.16	1	135	Sequential	.24*	2	314	
					Fixed	.29*	2	314	
	Relational information	.07	1	202	Serial	.31*	2	314	
					Investiture	.40*	2	314	
	Referent information	.16*	3	445	Collective				
					Formal				
	Appraisal information	.20*	2	240	Sequential	.09	1	85	
					Fixed	.22*	1	85	
	Relational information	.07	3	399	Serial	.24*	1	85	
					Investiture	.42*	1	85	
	Socialization outcomes								
	Performance	Referent information	.05	4	733	Collective	.03	3	467
					Formal	-.08	3	467	
Appraisal information		.10	2	206	Sequential	.13*	4	552	
					Fixed	.11*	4	552	
Job satisfaction	Relational information	.01	3	310	Serial	.13*	4	552	
					Investiture	.12*	4	552	
	Referent information	.08*	7	1,138	Collective	.16*	5	731	
					Formal	.11*	4	569	
Organizational commitment	Appraisal information	.18*	5	510	Sequential	.36*	5	731	
					Fixed	.34*	5	731	
	Relational information	.12*	6	715	Serial	.39*	5	731	
					Investiture	.37*	5	731	
Intentions to remain	Referent information	.04	4	880	Collective	.13*	5	743	
					Formal	-.01	5	672	
	Appraisal information	.15*	2	252	Sequential	.18*	6	834	
					Fixed	.15*	6	834	
Turnover	Relational information	.06	3	457	Serial	.21*	6	834	
					Investiture	.40*	6	834	
	Referent information	.07*	6	933	Collective	.12*	5	731	
					Formal	.19*	4	569	
	Appraisal information	.14*	5	510	Sequential	.26*	5	731	
					Fixed	.27*	5	731	
	Relational information	.14*	5	510	Serial	.28*	5	731	
					Investiture	.21*	5	731	
	Referent information	.14	1	97	Collective	.00	2	316	
					Formal	-.06	1	154	
	Appraisal information	.04	1	97	Sequential	-.12*	2	316	
					Fixed	-.07	2	316	
	Relational information	.11	1	97	Serial	-.07	2	316	
					Investiture	-.10*	2	316	

*Note.* Content tactics are collective and formal, context tactics are sequential and fixed, and social tactics are serial and investiture. Tactics were coded so that higher numbers represent institutionalized tactics following the socialization tactic categorization by Jones (1986). Information seeking was categorized following Miller and Jablin (1991).

\*  $p < .05$ .

With the exception of the facets of socialization tactics and turnover, the correlations were mostly positive in direction. All three facets of information seeking were significantly correlated with satisfaction and intentions to remain, only the appraisal facet was significantly correlated with organizational commitment, and none of the facets of information seeking were significantly correlated with performance or turnover. All six of the facets of socialization tactics were significantly correlated with satisfaction and intentions to remain. All facets, except for the formal facet, were significantly correlated with organizational commitment. All facets, except for formal and collective, were significantly correlated with performance. Only the sequential and investiture facets were significantly correlated with turnover.

### Moderator Analyses

Our second goal was to understand how different methodological approaches have affected the literature. For the correlations noted in Table 2, we used Hedges and Olkin's (1985)  $Q$  test to evaluate the homogeneity of each of the 45 unique effect size distributions. Of these, 30 showed significant variability across studies, suggesting that exploring moderators was warranted. We examined the impact of three socialization moderators on these effect size distributions.

*Type of data collection (longitudinal vs. cross-sectional).* Because socialization unfolds over time, we expected the magnitudes of the associations among socialization variables in Figure 1 to vary as a function of the time of the assessment of each construct. Thus, we conducted exploratory moderator analyses of the effect sizes to understand the influence of longitudinal versus cross-sectional data collections on the effect sizes. Typically, the magnitude of a correlation decreases as the time between measurements increases (Nunnally & Bernstein, 1994). Therefore, this was our expectation for the moderator analyses. We also were interested in seeing which relationships were susceptible to the effects of data collection type decisions.

Table 5 presents the results of these moderator analyses. Generally, larger correlations were found for variables assessed at the same time. The two cases in which the opposite was true (and the differences were statistically significant) were due to the inclusion in the analyses of relatively large studies with results that differed markedly from the other studies within that group.<sup>1</sup> Removing these studies reversed the trend in correlations to the general pattern, but the difference between time of measurement was no longer statistically significant. Role clarity was more positively related to socialization tactics, performance, job satisfaction, organizational commitment, and intentions to remain when measured at the same time. Similarly, intention to remain was more strongly correlated with self-efficacy and social acceptance, job satisfaction was more strongly correlated with social acceptance, and organizational commitment was more strongly correlated with self-efficacy when measured at the same time.

*Transitioning from school versus work.* One important study feature in this literature is whether the data were collected on a sample of students or existing workers transitioning into a new organization. To explore whether the relationships between variables vary by sample type, we conducted a series of moderator analyses. The results are presented in Table 5. Self-efficacy was more positively related to intentions to remain and performance in

school-to-work samples. Moreover, social acceptance was more positively related to performance in the school-to-work samples.

*Composite versus facet measurement.* Both information seeking and socialization tactics are constructs with nuanced underlying dimensions. Researchers studying relationships with these constructs may do so measuring the composite construct or facets of the construct. Our interest lay in whether and how this choice may moderate the relationships between these constructs and other variables of interest. Studies were coded as originally, using a composite- or facet-based measure of information seeking and socialization tactics. If a facet-based measure was used and the necessary correlations among facets and the variables of interest were available, we computed a composite correlation using a technique described by Nunnally and Bernstein (1994).<sup>2</sup> The results are presented in Table 5.

### Discussion

Overall, we found general support for the summary model presented in Figure 1. Consistent with Feldman (1981), role clarity, self-efficacy, and social acceptance emerged as three important indicators of newcomer adjustment. For the antecedents of adjustment, we found, using composite measures, that information seeking was significantly related to role clarity and social acceptance, whereas socialization tactics were related to all three adjustment types. This is consistent with the important role that information seeking plays in uncertainty reduction (Saks & Ashforth, 1997a). Examining the facets of information seeking, referent and appraisal information were related to most of the adjustment indicators, but the relational facet was unrelated. We found that a majority of the tactics was related to all three types of adjustment, consistent with the proposed role of socialization tactics for newcomer uncertainty reduction (Allen, 2006; Jones, 1986). For the outcomes of adjustment, we found that social acceptance was related to all outcomes, self-efficacy was related to all of the outcomes except job satisfaction and organizational commitment, and role clarity was related to all of the outcomes except turnover.

### Moderators

We found that data collection choices, sampling, and measurement matter. First, our tests of methodological moderators revealed some differences in terms of how socialization studies are conducted. Overall, 56% of the relationships examined were affected by data collection type. In general, the findings demonstrate that many of the relationships examined in this study were stronger when the data were collected cross-sectionally rather than longitudinally. Second, we found that sampling affected 26% of the relationships examined. It appears that for recent graduate sam-

<sup>1</sup> Please contact Talya N. Bauer for more specifics on these exceptions.

<sup>2</sup> To illustrate this method, consider the case of two constructs (e.g.,  $X$  and  $Y$ ), each measured by one or more variables. Let  $\mathbf{R}_{XX}$  and  $\mathbf{R}_{YY}$  represent the within-construct correlation matrices, and let  $\mathbf{R}_{XY}$  represent the between-construct matrix of correlations. Of interest is the correlation between the composite variables for  $X$  and  $Y$ . Nunnally and Bernstein (1994) and Hunter and Schmidt (1990) illustrate that this composite correlation can be computed as the ratio of the sum of the elements in  $\mathbf{R}_{XY}$  to the square root of the product of the sums in  $\mathbf{R}_{XX}$  and  $\mathbf{R}_{YY}$ .

Table 5  
Moderation Analyses for Adjustment Examining Data Collection, Sample Studied, and Measurement

Relationship	Moderator								
	Longitudinal or cross-sectional data collection			Work-to-work or school-to-work sample			Composite or facet measurement		
	Level of moderator	Effect size	K	Level of moderator	Effect size	K	Level of moderator	Effect size	K
Information seeking—Role clarity	Same	.15 <sup>a</sup>	7	Student	.16	3	Composite	.14	2
	Different	.24 <sup>b</sup>	3	Work	.23	6	Facet	.21	8
Information seeking—Self-efficacy	Same	.16	2	Student	.16	2	Composite	.21	1
	Different	.10	1	Work	.10	1	Facet	.12	2
Information seeking—Social acceptance	Same	.17	5	Student	.09	2	Composite	.28 <sup>a</sup>	1
	Different	.10	1	Work	.20	4	Facet	.11 <sup>b</sup>	5
Socialization tactics—Role clarity	Same	.48 <sup>a</sup>	4	Student	.42 <sup>a</sup>	2	Composite	.14 <sup>a</sup>	3
	Different	.18 <sup>b</sup>	3	Work	.49 <sup>b</sup>	4	Facet	.46 <sup>b</sup>	4
Socialization tactics—Self-efficacy	Same	.43	2	Student	.38 <sup>a</sup>	1	Composite		0
	Different		0	Work	.54 <sup>b</sup>	1	Facet	.43	2
Socialization tactics—Social acceptance	Same	.24	3	Student		0	Composite	.18	3
	Different	.18	1	Work	.24	3	Facet	.33	1
Role clarity—Job performance	Same	.18 <sup>a</sup>	3	Student	.27	3			
	Different	.34 <sup>b</sup>	4	Work	.30	4			
Role clarity—Job satisfaction	Same	.35 <sup>a</sup>	15	Student	.33	9			
	Different	.26 <sup>b</sup>	7	Work	.31	13			
Role clarity—Organizational commitment	Same	.33 <sup>a</sup>	8	Student	.27	8			
	Different	.25 <sup>b</sup>	6	Work	.31	5			
Role clarity—Intentions to remain	Same	.31 <sup>a</sup>	9	Student	.21	6			
	Different	.13 <sup>b</sup>	5	Work	.25	8			
Role clarity—Turnover	Same		0	Student		0			
	Different	-.11	4	Work	-.11	4			
Self-efficacy—Job performance	Same	.48	1	Student	.40 <sup>a</sup>	5			
	Different	.32	5	Work	.01 <sup>b</sup>	1			
Self-efficacy—Job satisfaction	Same	.30	2	Student	.25	4			
	Different	.19	5	Work	.17	3			
Self-efficacy—Organizational commitment	Same	.30 <sup>a</sup>	2	Student	.21	5			
	Different	.14 <sup>b</sup>	5	Work	.13	2			
Self-efficacy—Intentions to remain	Same	.20 <sup>a</sup>	3	Student	.20 <sup>a</sup>	3			
	Different	.04 <sup>b</sup>	3	Work	.04 <sup>b</sup>	3			
Self-efficacy—Turnover	Same	-.13	1	Student	-.20	1			
	Different	-.20	1	Work	-.13	1			
Social acceptance—Job performance	Same	.16	1	Student	.30 <sup>a</sup>	2			
	Different	.23	3	Work	.11 <sup>b</sup>	2			
Social acceptance—Job satisfaction	Same	.37 <sup>a</sup>	7	Student	.34	5			
	Different	.27 <sup>b</sup>	8	Work	.32	10			
Social acceptance—Organizational commitment	Same	.39	4	Student	.37	6			
	Different	.31	6	Work	.32	4			
Social acceptance—Intentions to remain	Same	.28 <sup>a</sup>	4	Student	.26	6			
	Different	.15 <sup>b</sup>	5	Work	.23	5			
Social acceptance—Turnover	Same		0	Student	-.20	2			
	Different	-.16	4	Work	-.08	2			

<sup>a,b</sup> Correlations are significantly different from each other at the  $p < .05$  level.

ples, self-efficacy is a stronger predictor of job performance and intentions to remain. Furthermore, social acceptance is more strongly related to job performance in school-to-work samples. Finally, in terms of measurement at the facet versus the composite level, we found that a total of 40% of the relationships differed. The correlation between information seeking and social acceptance was stronger when a composite rather than a facet measure was used. In contrast, for socialization tactics, the correlation with role clarity was stronger with a facet approach.

We also were interested in examining the differential treatment of socialization tactics in the literature. We were curious to see whether classifying the six socialization tactics as institutionalized

or individualized was warranted. For this purpose, we examined the correlations between the six tactics and newcomer adjustment and the outcomes. In most cases, the correlations between the tactics at the institutionalized end of the continuum were positively and significantly correlated with newcomer adjustment and the outcomes. Therefore, we did not find strong evidence that the classification of some tactics was incorrect. In addition, the moderator analysis showed that the relationship between tactics and role clarity was stronger when facets, as opposed to a composite measure, were used. This indicates that by collapsing different facets, we may lose important information and underestimate the relationship between information seeking and newcomer

adjustment. However, for information seeking, we found the opposite.

### *Potential Implications*

No single study has examined all of the relationships within Figure 1 at once. Meta-analysis coupled with path modeling allowed us to conduct such a study. We found strong support for the antecedent–adjustment and adjustment–outcome relationships, even when controlling for the other relationships. A key finding is that newcomer adjustment mediates (at least partially) the information seeking–outcome and tactics–outcome relationships. Therefore, to the degree that future researchers are interested in understanding the mechanisms of newcomer adjustment, these constructs (or other indicators of adjustment) should be included. Organizations should consider the types of adjustment (role clarity, self-efficacy, and social acceptance) as key indicators of newcomer socialization. To the degree that they can facilitate newcomers in achieving higher levels of each of these, they should see better job attitudes and performance. Although turnover has many potential antecedents, more successful adjustment appears to help increase intentions to remain and decrease turnover.

Several implications emerged from our moderator analyses. For example, it appears that role clarity is the adjustment indicator that is most susceptible to differences in the time of measurement. Role clarity was more positively related to socialization tactics, intentions to remain, job satisfaction, and organizational commitment when measured at the same time as opposed to longitudinally. When role clarity is of interest, researchers should make sure to consider data collection timing carefully. Gathering role clarity at the same time as attitudinal outcomes may inflate the relationship more severely than for other types of adjustment.

In terms of sampling, we found that different adjustment indicators became more salient for those who were transitioning from school to work. For example, social acceptance was more positively related to performance for these types of newcomers than for those moving from one job to another. Researchers should consider the salience of different adjustment and outcome variables given the nature of their samples.

Table 1 summarizes a new heuristic for integrating newcomer adjustment, information seeking, and tactics. However, we found limited support for a strict interpretation of Table 1. Uncertainty reduction theory (Berger, 1979) makes intuitive sense for the study of newcomer adjustment, but it has yet to be explicitly examined. We suggest that additional studies be conducted using this framework. However, we found that appraisal information was the most important of the three information types proposed by Miller and Jablin (1991) in terms of newcomer adjustment. This makes sense as the socialization process reflects learning the ropes, and gathering information about one's performance can facilitate that learning.

In terms of measuring information seeking, researchers need to carefully consider the goals of their studies. If their goal is to gather a general impression about the outcomes of socialization, then a composite measure makes sense. If, however, they are interested in understanding differential predictions, then they need to gather and report facet data, noting that this approach dampens the strength of the observed relationships. For tactics, using composite measures may sometimes weaken the observed relation-

ships, so it is possible to underestimate the relationships among tactics and adjustment. We recommend that researchers gather information at the facet level and report both facet and composite measures in their correlation matrices to allow future meta-analyses to compare these studies more easily.

Because we found appraisal information to be the strongest predictor of newcomer adjustment, newcomers should consider seeking information regarding how well they are doing in their jobs and what else they can do to increase their level of success on the job. Similarly, because social tactics tended to have the strongest correlation with newcomer adjustment and socialization outcomes, organizations may consider giving employees feedback affirming their role as insiders and assign them a mentor to guide their adjustment.

### *Potential Limitations*

Although this meta-analysis breaks new ground in the socialization literature, it is not without its potential limitations. First, meta-analysis is a summary tool that depends on previous studies. Although there are many studies of socialization, sample sizes and the number of studies on which some of the current meta-analytic correlations were based were relatively small in some cases. As a result, some of the estimated meta-analytic correlations may be unstable. Thus, it was not possible to study these correlations more closely than the summary path model (i.e., we could not perform effect size moderator analyses). In general, studies including self-efficacy were more scarce than other types of adjustment. Clearly, more studies are needed to be able to estimate these correlations with greater precision and to test for additional moderators for some of the relationships studied.

The socialization literature has approached the measurement of the antecedents of information seeking and tactics in different ways. One important difference is composite versus facet measures of these constructs. A challenge in the current study was to maximize our ability to include as many studies of socialization as possible in our path analysis to help us summarize the literature succinctly. To do this, we created composite variables for information seeking and tactics. Doing this allowed us to include all studies that included these variables. The downside, however, is that this overall model obscures the different potential relationships among the facets of information seeking, tactics, adjustment, and socialization outcomes. Therefore, we conducted follow-up analyses of the specific facet relationships with adjustment as well as the outcomes. Thus, we were able to meet our goal of summarizing the literature with an overall path model while also analyzing the interrelationships of the specific facets.

### *Future Research Directions*

On the basis of conducting this meta-analysis, we have some specific recommendations for future research. First, we recommend that researchers always present a correlation matrix; we found several studies that we could not include because they did not. Second, we recommend that socialization researchers clearly report the time of measurement for all of the variables. We found that the type and timing of data collection mattered. Therefore, this information is key to include in the method section of socialization studies. Third, researchers including facet-based measures should

report results for specific facets as well as composites. This practice will help facilitate future meta-analyses on this topic.

In addition, one of the major goals of this study was to understand what areas of socialization are in need of additional studies. We found several areas in which this is true, including learning, innovation, and the role of time in socialization. Despite the importance of learning as part of the socialization process, researchers have not consistently examined the role of learning. Researchers should build on the work of studies that tap learning, such as Ostroff and Kozlowski (1993) and R. F. Morrison and Brantner (1992), as it seems that there is still a need for more research examining learning as a proximal outcome of socialization.

Most of the socialization studies continued to focus on distal outcomes of the socialization, including job satisfaction, organizational commitment, and turnover intentions (Bauer et al., 1998). When socialization is viewed as an uncertainty reduction process, more proximal outcomes should include actual learning of tasks as well as organizational norms and values. In this article, we have focused on the most often studied outcomes of the socialization process, including job satisfaction, organizational commitment, performance, and turnover. These distal outcomes have been associated with newcomer socialization through a process of uncertainty reduction. However, these outcomes may not necessarily be desirable to all organizations. In fact, a small number of researchers noticed a tradeoff between role innovation and organizational commitment. For example, Jones (1986) as well as Allen and Meyer (1990) showed that institutionalized tactics were positively related to commitment, but they were negatively related to role innovation. Some organizations may even be interested in a certain level of person–organization misfit to achieve desirable outcomes such as innovative behaviors. It seems that more research is necessary that examines role innovativeness as an outcome. We identified some studies that examined this outcome but not in sufficient numbers to include this outcome in our path model. Still, this is an important outcome to study. Depending on the organization's culture, organizations may be interested in increasing ambiguity, or using individualized tactics, despite their potentially negative relationship with organizational commitment. Given the importance of innovation as an outcome for some organizations, more research is needed.

The length of the time it takes newcomers to adjust has been of consistent concern to socialization researchers. For example, Fisher (1986) noted that "socialization is a dynamic process in which individuals and organizations change over time. Many studies have failed to handle the time dimension appropriately" (p. 103). Bauer et al. (1998) noted that organizational socialization researchers made large strides from 1986 to 1998 in terms of conducting longitudinal studies of socialization and noted that researchers have tended to gather information at 3-month intervals including entry, 3 months, 6 months, 9 months, and 1 year following entry. We found similar time intervals for the studies included in this meta-analysis, with entry, 3 months, and 6 months being the most frequently used intervals for data collection, but we found a great deal of variance in timing as well. Further related to the issue of time and socialization, Ostroff and Kozlowski (1992) showed that there were differences in individual patterns of information acquisition over time. However, we were unable to examine trajectories of individuals because of the global nature of the

data. We recommend that future researchers use alternative data analytic approaches such as hierarchical linear modeling to examine the role of time since entry. Such research will allow us to make more specific recommendations regarding what matters most at different points in the adjustment process.

Similarly, areas of research that seem to hold promise but were not studied in sufficient numbers to include in the path model include new outcomes such as destructive employee behaviors and creative employee behaviors. These key behaviors should be influenced by culture and the socialization process. Additional areas of future research that may prove useful include the role of organizational and national culture on newcomer adjustment. For example, initial work by Kim, Cable, and Kim (2005) on socialization in South Korea as well as work with samples of individuals in Hong Kong (e.g., Fu, Shaffer, & Harrison, 2005; E. W. Morrison, Chen, & Salgado, 2004; Taormina & Bauer, 2000) indicate that socialization matters a great deal in Asian cultures. Although theorists have noted some similarities and differences during international socialization (e.g., Chao, 1997; Feldman, 1997), this challenging work is worthy of further pursuit given the global nature of work today. Finally, the role of technology will continue to influence the socialization process. For example, Wesson and Gogus (2005) found that computer-conducted orientations were as effective as face-to-face orientations for information-based content areas, but they were less effective for socially rich content areas. Furthermore, Wells (2006) found relationships among tactics, learning, and trust in virtual teams. Future research should continue to examine the changing role that technology plays in the socialization process.

In conclusion, our findings show that role clarity, self-efficacy, and social acceptance mediate the relationship between newcomer information seeking and organizational socialization tactics and socialization outcomes, including newcomer performance, work attitudes, and turnover. The methodological choices socialization researchers make, such as using composite or facet measures of tactics and information seeking, have implications for the estimated relationships between these variables and adjustment and the outcomes. Moreover, whether school-to-work or work-to-work transitions are studied and whether variables are measured at the same time or with a time lag have implications for the relationships. Our study indicates that newcomer socialization continues to be an interesting and promising avenue of research.

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- References marked with an asterisk indicate studies that contributed at least one correlation to the meta-analysis. Some studies included more than one unique sample. Any studies that shared the same sample were coded only once, but both have an asterisk. Therefore, the number of studies with asterisks does not exactly match the number of independent samples included in the meta-analysis. A complete list of all studies considered is available by request from Talya N. Bauer.
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