



# Socialization tactics and newcomer adjustment: A meta-analytic review and test of a model <sup>☆</sup>

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## Abstract

One of the most popular and often studied topics in the organizational socialization literature is Van Maanen and Schein's [Van Maanen, J., & Schein, E. H. (1979). *Toward a theory of organizational socialization*. In B. M. Staw (Ed.), *Research in organizational behavior* (Vol. 1), pp. 209–264. Greenwich, CT: JAI Press.] theory of organizational socialization tactics. Over 30 studies on socialization tactics have been conducted in the past 20 years. In this meta-analysis, we examine the relationships between six socialization tactics and various indicators of newcomer adjustment as well as the moderating effects of study design (cross-sectional vs. longitudinal), measurement scale (use of complete vs. modified tactics scale), and type of newcomer (recent graduates vs. other newcomers). Our results indicate that institutionalized socialization tactics were negatively related to role ambiguity, role conflict, and intentions to quit, and positively related to fit perceptions, job satisfaction, organizational commitment, job performance, and a custodial role orientation. We also found that the social tactics (serial and investiture) were the strongest predictors of adjustment outcomes. The results also indicated that the relationships between the tactics and outcomes were stronger for recent graduates compared to other newcomers; cross-sectional designs compared to longitudinal designs; and when Jones' [Jones, G. R. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal*, 29, 262–279.] complete scales were used compared to modified versions. Support was also found for a mediation model of newcomer adjustment in which role conflict, role ambiguity, and fit perceptions partially mediate some of the relationships

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between the socialization tactics and distal outcomes of adjustment. The implications of these results for research and practice are discussed.

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## 1. Introduction

The process of organizational socialization focuses on how newcomers adjust to their new surroundings and learn the behaviors, attitudes, and skills necessary to fulfill their new roles and function effectively as a member of an organization (Fisher, 1986; Van Maanen, 1976). Given the economic and demographic changes that are heightening the importance of employee recruitment and retention (Rynes & Cable, 2003) and the mobility of today's workforce (Bureau of Labor Statistics, 2005), organizations have increasingly begun to focus on the process of "on-boarding" in order to facilitate newcomer learning and adjustment. Astute managers are realizing that they can enhance employee on-boarding and socialization by regulating the formal training and work experiences that newcomers receive early in the socialization process.

Van Maanen and Schein (1979) proposed six socialization tactics that managers can employ to structure the socialization experience and ultimately influence the role orientation that newcomers adopt. Jones (1986) and other researchers (see Saks & Ashforth, 1997a) have demonstrated that Van Maanen and Schein's socialization tactics relate not only to employees' role orientation, but also to newcomers' role ambiguity, role conflict, organizational commitment, job satisfaction, and intentions to quit. In the past 20 years, however, there has been little attempt to go beyond this basic approach other than the addition of adjustment outcomes such as job performance and perceived job (PJ) and perceived organization (PO) fit (Ashforth & Saks, 1996; Cable & Parsons, 2001; Kim, Cable, & Kim, 2005; Riordan, Weatherly, Vandenberg, & Self, 2001).

Focusing on the direct relationship between socialization tactics and newcomer adjustment has led to limited theoretical advancement in our understanding of socialization tactics (Saks & Ashforth, 1997a), and left many important questions unanswered. For example, we know relatively little about which tactics organizations should employ to best facilitate newcomer adjustment or if some tactics are more important than others in relation to certain adjustment outcomes. Additionally, it is unclear whether the tactics have differential effects on outcomes early versus later in an employee's socialization, or whether the tactics are more important for the adjustment of some newcomers (e.g., recent graduates) than others.

The present study seeks to address these limitations by first exploring the relative strengths of the relationships between the six socialization tactics with various indices of newcomer adjustment using meta-analytically derived coefficients. Next, we propose and test a model of newcomer socialization based on uncertainty reduction theory (Lester, 1987; Miller & Jablin, 1991) and person-environment fit theory (Kristof-Brown, Zimmerman, & Johnson, 2005), in which the relationships between socialization tactics and distal adjustment outcomes are mediated by more proximal adjustment outcomes. Finally, we explore whether three methodological differences in socialization tactics research can

explain residual variance in primary research effect sizes by serving as moderators of the tactic-adjustment relationships. Stemming from these analyses, we aim to provide a theoretical framework to guide future research on organizational socialization tactics and identify practical recommendations regarding where to allocate organizational resources for socialization.

### 1.1. Previous reviews of organizational socialization tactics

Narrative reviews of socialization tactics have summarized the results of previous studies and offered directions for future research, but they have not addressed the kinds of issues we raised in the previous section (Ashforth, Sluss, & Harrison, 2007; Bauer, Morrison, & Callister, 1998; Saks & Ashforth, 1997a). There is also a quantitative review modeling socialization tactics as one antecedent of newcomer adjustment (Bauer, Bodner, Erdogan, Truxillo, & Tucker, in press). Although both the Bauer et al. study and the current study examine socialization tactics, there is limited overlap between the two endeavors. Briefly, our meta-analysis (a) includes a significantly greater number of studies on socialization tactics, (b) investigates the 6-, 3-, and 1-factor conceptualizations of the tactics, and (c) examines three important outcome variables not included in Bauer et al. (i.e., role conflict, role orientation, fit perceptions). Additional unique focuses of our study are to test a model linking socialization tactics to distal and proximal outcomes, to examine the relative predictive strengths of the tactics, and to explore the role of three potential moderating variables in the relationships between the tactics and both proximal and distal outcomes.

### 1.2. Van Maanen and Schein's (1979) theory of organizational socialization

One of the best-developed theoretical models of socialization is Van Maanen and Schein's (1979) typology of socialization tactics (Ashforth & Saks, 1996). Van Maanen and Schein (1979) defined socialization tactics as "the ways in which the experiences of individuals in transition from one role to another are structured for them by others in the organization" (p. 230). In their theory of organizational socialization, Van Maanen and Schein identified six tactical dimensions and described how they give way to a newcomers' custodial, content-innovative, or role-innovative responses. Each tactical dimension is said to exist on a bipolar continuum with considerable range between the two poles.

*Collective (vs. individual)* socialization refers to grouping newcomers and putting them through a common set of experiences, rather than isolating newcomers from one another and putting them through more or less unique sets of experiences. *Formal (vs. informal)* socialization is the practice of segregating a newcomer from regular organizational members during a defined socialization period, as opposed to *not* clearly distinguishing a newcomer from more experienced members. *Sequential (vs. random)* socialization involves a fixed sequence of discrete and identifiable steps leading to the assumption of the role, as compared to an ambiguous, unknown, or continually changing sequence. *Fixed (vs. variable)* socialization provides a timetable for the steps involved in the assumption of the role and precise knowledge of the time it will take, whereas a variable process does not provide this information. The *serial (vs. disjunctive)* tactic is one where the newcomer is socialized by an experienced member of the organization who grooms the newcomer and serves as a role model, as compared to a process where a role model is not available. Finally,

*investiture* (vs. *divestiture*) affirms the incoming identity and personal characteristics of the newcomer rather than to disconfirm, deny, and strip them away.

Jones (1986) contended that Van Maanen and Schein's (1979) six tactics form a gestalt called *institutionalized socialization*. According to Jones, the collective, formal, sequential, fixed, serial, and investiture tactics encourage newcomers to passively accept pre-set roles, thus reproducing the organizational status quo. Institutionalized tactics provide newcomers with information that reduces the uncertainty inherent in early work experiences and reflects a more structured and formalized socialization process. At the opposite end of the socialization continuum, the individual, informal, random, variable, disjunctive, and divestiture tactics encourage newcomers to question the status quo and to develop their own unique approach to their roles. Individualized socialization reflects an absence of structure such that newcomers are socialized more by default than design (Ashforth, Saks, & Lee, 1997) which may increase the uncertainty as well as anxiety of early work experiences (Jones, 1986).

On the basis of a factor analysis, Jones (1986) also found that the six tactics represent three broad factors. Using this tripartite factor structure, Jones argued that the *social* tactics (serial and investiture) may be most important "because they provide the social cues and facilitation necessary during learning processes" (p. 266). He predicted that the *content* tactics (sequential and fixed), which have to do with the content of the information given to newcomers, would be the next strongest predictors of adjustment, followed by the *context* socialization tactics (collective and formal), which regard the way in which organizations provide information to newcomers.

### 1.3. Socialization tactics and newcomer adjustment

Jones (1986) argued that some of the tactics might be more strongly related to newcomer adjustment than others "because different tactics provide information in different ways." (p. 266). Consistent with these propositions, Jones (1986) and others have found that the six tactics associated with institutionalized socialization were negatively related to role ambiguity, role conflict, and intentions to quit, and positively related to job satisfaction, organizational commitment, and a custodial role orientation (e.g., Allen & Meyer, 1990; Ashforth & Saks, 1996; Ashforth, Sluss, & Saks, 2006; Black, 1992). Institutionalized socialization tactics have also been found to be positively related to fit perceptions (Cable & Parsons, 2001; Kim et al., 2005; Riordan et al., 2001). Several studies have also measured job performance (Ashforth & Saks, 1996; Ashforth et al., 2006; Saks & Ashforth, 1997b), however, the results have been mixed.

Jones (1986) also found that as he predicted, the social tactics were the most important followed by the content tactics and then the context tactics. However, despite his findings, subsequent studies have not focused on, nor reported results concerning, the relative strength of the various tactics in relation to newcomer adjustment. An exception is a study by Cable and Parsons (2001) who found that the social tactics were most strongly related to newcomers' PO fit perceptions. As well, a study by Allen (2006) found the social tactics to be most strongly related to turnover. Nevertheless, it remains unclear as to whether the relative strength prediction is supported across studies and outcomes. From a practical standpoint, organizations would benefit from knowing whether and the extent to which gains in newcomer adjustment can be garnered by incorporating particular socialization tactics into their socialization programs. Therefore, in addition to testing the relationships

between the tactics and various indices of newcomer adjustment, we also examine the relative strength of the relationships for social, content, and context tactics.

Based on the preceding discussion, we offer the following hypotheses regarding the relationships between socialization tactics and newcomer adjustment:

**Hypothesis 1:** Institutionalized socialization tactics (collective, formal, sequential, fixed, serial, and investiture) will be negatively related to (a) role ambiguity, (b) role conflict, and (c) intentions to quit, and positively related to (d) job satisfaction, (e) organizational commitment, (f) job performance, (g) perceived fit, and (h) a custodial role orientation.

**Hypothesis 2:** The social tactics (serial and investiture) will be the strongest predictors of newcomer adjustment.

#### 1.4. A mediation model of socialization tactics and newcomer adjustment

By and large, previous studies have focused on the direct relationships between socialization tactics and newcomer adjustment outcomes. As such, all indicators of adjustment tend to be treated as relatively equal in terms of their temporal proximity to the tactics. Researchers, however, have begun to make a distinction between ‘proximal’ outcomes of adjustment and more ‘distal’ outcomes marking signposts that employees are successfully socialized (Saks & Ashforth, 1997a; Wanous, 1992). Indeed, Saks and Ashforth (1997a) proposed a process model of organizational socialization in which certain proximal outcomes (e.g., role clarity, PJ and PO fit) precede and predict more distal outcomes (e.g., job satisfaction, organizational commitment).

Extending this approach to socialization tactics, we offer a similar model illustrated in Fig. 1, in which the socialization tactics predict proximal indicators of newcomer

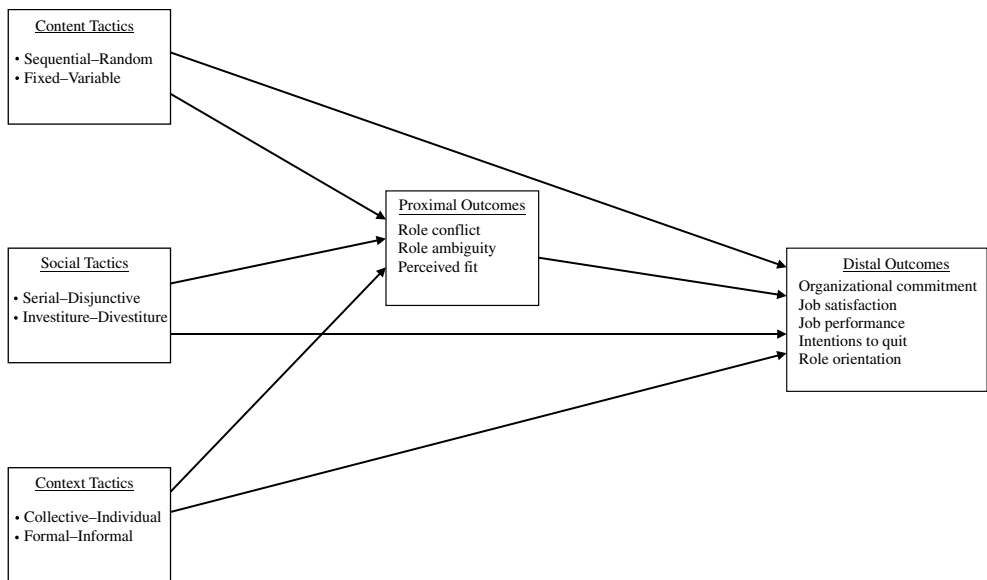


Fig. 1. A mediation model of socialization tactics and newcomer adjustment.

adjustment (role conflict, role ambiguity, and fit perceptions), which in turn predict distal indicators of adjustment (job satisfaction, organizational commitment, job performance, intentions to quit, and role orientation). Distinguishing between proximal and distal indicators of adjustment is helpful because it suggests that organizations might need to heed particular attention to fostering positive proximal outcome impressions, given that they might predict longer-term consequences.

The proximal or mediation variables in our model have their basis in two theoretical approaches that have been recognized in previous studies on socialization tactics. First, the theoretical and conceptual underpinning of socialization tactics is that they provide newcomers with information that can reduce their uncertainty surrounding the entry process (Jones, 1986). In this respect, uncertainty reduction theory (Lester, 1987) provides a meaningful way to conceptualize the relationship between socialization tactics and newcomer adjustment (Saks & Ashforth, 1997a). In fact, Kim et al. (2005) recently stated that “the major reason firms use institutionalized tactics is to remove some of the uncertainty of a new environment by offering information that guides employees’ behaviors” (p.235).

Two outcomes associated with uncertainty reduction that are frequently measured in socialization tactics research are role ambiguity and role conflict (Ashforth & Saks, 1996). Because institutionalized socialization tactics provide information that reduces the uncertainty of the entry-socialization process, they are typically found to relate to lower role ambiguity and role conflict (Ashforth & Saks, 1996; Jones, 1986). In a similar vein, Miller and Jablin (1991) treat role ambiguity and role conflict as proximal outcomes of newcomer information-seeking and as indicators of uncertainty with implications for more distal outcomes. They state:

...during the encounter phase of organizational assimilation newcomers depend upon information from others for developing role clarity. Although newcomers receive role-related information, the information they receive is frequently perceived as inadequate; hence, they usually experience fairly high levels of uncertainty. This uncertainty is reflected in the levels of role ambiguity and role conflict which newcomers experience and is of importance because it may have an impact on employees’ job satisfaction, productivity, and, ultimately, job tenure (p. 93).

Second, person-environment (PE) fit theory has also been recognized as providing a theoretical basis for understanding the relationship between socialization tactics and newcomer adjustment. According to PE fit theory, compatibility between an individual and a work environment occurs when certain characteristics are well matched (Kristof-Brown et al., 2005). In the socialization literature, PJ and PO fit may be especially important indicators of PE fit (Saks & Ashforth, 1997a). According to Kim et al. (2005):

Socialization is fundamental to PO fit because the primary goals of socialization are to ensure the continuity of central values and to provide new employees with a framework for responding to their work environment and for coordinating with other employees (p. 232).

There is some evidence that newcomers assess how well they fit into their new environment with respect to their values and goals (PO fit) and knowledge and skills (PJ fit) (Cable & Parsons, 2001; Kristof, 1996; Saks & Ashforth, 1997a), and that socialization practices are related to PO fit (Chatman, 1991). In addition, socialization tactics have been found to be positively related to perceptions of PJ and PO fit, and PJ and PO fit perceptions have

been found to predict distal adjustment outcomes such as job satisfaction, organizational commitment, and turnover (Cable & Parsons, 2001; Riordan et al., 2001; Saks & Ashforth, 1997c).

Finally, there is evidence to suggest that the relationships between the socialization tactics and distal outcomes of adjustment are mediated, at least in part, by the proximal adjustment outcomes. For example, several studies have found that PJ and PO fit perceptions mediate relations between some of the socialization tactics and outcomes such as job satisfaction, organizational commitment, and turnover intentions (Cooper-Thomas, van Vianen, & Anderson, 2004; Riordan et al., 2001). As well, research external to the socialization literature has found that role ambiguity and role conflict are significantly related to job satisfaction, organizational commitment, performance, and intentions to quit (Fisher & Gitelson, 1983; Jackson & Schuler, 1985), and PJ and PO fit perceptions are related to job satisfaction, organizational commitment, turnover intentions, and turnover (Kristof-Brown et al., 2005).

Thus, to the extent that socialization tactics predict role ambiguity, role conflict, and fit perceptions as well as the distal outcomes, there is reason to expect a mediating relationship. Because of the sizable zero-order relationships between the tactics and the distal indices of newcomer adjustment from previous tactics research, we maintain that partial mediation is more likely than full mediation. Accordingly, we predicted:

**Hypothesis 3:** The proximal adjustment outcomes (role ambiguity, role conflict, fit perceptions) partially mediate the relationship between socialization tactics and the distal adjustment outcomes (job satisfaction, organizational commitment, turnover intentions, job performance, and role orientation).

## 2. Moderating variables

In addition to understanding the relative importance of various socialization tactics on newcomer adjustment, differences across studies in terms of type of newcomer, study design, and the manner in which the tactics have been measured might affect the size and nature of the relationships. In this regard, we considered these three factors as potential moderating variables for the relationship between socialization tactics and newcomer adjustment.

### 2.1. Type of newcomer

Although many studies on socialization tactics have involved recent college or university graduates, a number of studies have included other types of newcomers. Whether recent graduates respond to the socialization tactics in the same manner as other newcomers is an empirical question with implications for the generalizability of socialization tactics research. From a practical standpoint, organizations would benefit from knowing whether recent college or university graduates socialize differently from seasoned newcomers.

It is possible that recent graduates are particularly vulnerable during the organizational entry process and are more sensitive to socialization influences and cues (Ashforth, 2001). As a result, they might be more affected by socialization tactics and respond differently to some tactics than older or more experienced newcomers. For example, recent graduates might respond more favorably to institutionalized tactics given their greater need for



information, structure, and guidance and perhaps more negatively to individualized tactics due to their uncertainty and anxiety. Given their vulnerability and need for structure and formality, we expect the socialization tactics to be more strongly related to newcomer adjustment for recent graduates. Therefore, we predicted:

**Hypothesis 4:** The type of newcomer (recent graduates vs. other newcomers) will act as a moderator such that the relationships between socialization tactics and adjustment will be stronger for recent graduates than for other newcomers.

## 2.2. *Study design*

Although socialization research has increasingly begun to employ longitudinal designs (Saks & Ashforth, 1997a), this has been the exception rather than the rule in research on socialization tactics. In fact, only two studies have measured a complete array of adjustment measures months after measuring socialization tactics (Ashforth & Saks, 1996; Ashforth et al., 2006). Several other studies have measured some adjustment variables longitudinally but the prevalence of cross-sectional designs raises questions about common method bias, which may produce inflated effect sizes that limit the generalizability of the results. In fact, there is some evidence that the tactics are more strongly related to adjustment outcomes when the tactics and outcomes are measured at the same time (Allen & Meyer, 1990; Ashforth & Saks, 1996).

Differences in effect sizes between cross-sectional and longitudinal designs may occur for a number of reasons. For example, socialization tactics might be more important for newcomers' adjustment during the first several months of socialization, in which case the relationships reported in cross-sectional studies would be expected to be stronger. According to Saks and Ashforth (1997a), the effect of socialization tactics on newcomer adjustment might be attenuated as newcomers "outgrow" initial socialization practices. Thus, weaker results for longitudinal designs might suggest that the relationship between tactics and outcomes weakens over time. Whatever the case, given concerns about method bias and the general tendency for relationships between variables to be lower as the temporal proximity between predictors and criterion variables increases (Cohen, 1993), we predicted:

**Hypothesis 5:** Design of the study will act as a moderator such that the relationships between socialization tactics and adjustment will be stronger when the tactics and outcomes are measured at the same point in time (cross-sectionally) than when outcomes are measured subsequent to tactics (longitudinally).

## 2.3. *Measurement of the socialization tactics*

One of the shortcomings of previous research on socialization tactics has been the continued use of Jones' (1986) scale. This should be of concern for a number of reasons. First, relatively little attention has been paid to the psychometrics of the scales, and little attempt has been made to refine them (for an exception, see Ashforth & Saks, 1996). Second, the reliability of some of the scales has at times been somewhat low, and has varied widely across studies (see Allen & Meyer, 1990; Baker, 1989; Baker & Feldman, 1990; Black, 1992; Jones, 1986). Third, and perhaps most troubling, is that many studies have used shortened versions of Jones' scales. This is a serious concern as Jones wrote each item to tap a



separate aspect of the relevant content domain with minimal redundancy among the items. In fact, the poorest reliabilities have been reported in studies that used shortened or revised versions of Jones' scales (Ashforth & Saks, 1996), which may lead to attenuations in the relationships between the tactics and adjustment. Accordingly, we predicted:

**Hypothesis 6:** The measurement of socialization tactics will act as a moderator such that the relationships between socialization tactics and adjustment will be stronger when the complete scale has been used than when shorter modified versions are used.

### 3. Method

#### 3.1. Method overview

We conducted three analytic procedures to address the six hypotheses described above. First, we calculated population estimates of the relationships between socialization tactics and indicators of adjustment. Regression was then used to determine the relative strength of each socialization tactic in relation to each adjustment outcome and whether proximal outcomes partially mediated the distal outcomes of adjustment. Finally, subgroup meta-analyses were used to determine if the a priori identified moderators could account for significant residual variance in the relationships between the tactics and adjustment outcomes.

#### 3.2. Literature search

Computer and manual searches for published and unpublished articles on socialization tactics were undertaken. The computer search scanned the abstract databases of psychology, management, and communications from 1867 to April 2006 for variations of “socialization tactics” and “newcomer orientation”. To confirm that no studies with relevant data were omitted, a search was undertaken for all papers citing Jones (1986) using the Social Sciences Citation Index. In addition, we searched the conference programs for the Society for Industrial-Organizational Psychology and Academy of Management from 1997 to 2005, and contacted three researchers prominent in the socialization tactics field, as sources of unpublished work. A total of 40 papers were identified and reviewed by two independent readers. Of these studies, 30 provided sufficient information to be included in the meta-analysis, yielding 31 independent samples ( $N = 6104$ ). The remaining studies were not included in the analyses because they (a) were not empirical ( $N = 1$ ), (b) involved relationships outside the scope of these analyses (e.g., proactive socialization tactics;  $N = 8$ ), or (c) did not meet the necessary statistical assumptions underlying meta-analysis (e.g., provision of partial or semi-partial relationships only; Hunter & Schmidt, 1990;  $N = 1$ ).

#### 3.3. Coding of the data

Each primary study was coded for: (a) the type of socialization tactic, (b) the type of adjustment outcome, (c) the reliability of each measure, (d) sample size, (e) all correlations between the socialization tactics, adjustment outcomes, and socialization tactics with adjustment outcomes, (f) whether the original Jones (1986) measure was used or a derivative of this scale, (g) whether the sample was comprised of recent university graduates or

other newcomers, and (h) whether the tactics and adjustment outcomes were measured cross-sectionally or longitudinally. This coding scheme yielded 1076 coefficients. The two readers initially agreed on all but 21 coded coefficients; all discrepancies were resolved through discussion.

### 3.3.1. Socialization tactics

Van Maanen and Schein's (1979) six socialization tactics have been factor-analyzed into three broader constructs: context-related (collective–individual and formal–informal), content-related (sequential–random and fixed–variable), and social-related (serial–disjunctive and investiture–divestiture; Jones, 1986). This three-factor structure has been employed in some research (e.g., Cable & Parsons, 2001) as an alternative to the original six-factor structure. Similarly, some researchers (e.g., Gruman, Saks, & Zweig, 2006; Kim et al., 2005) combined the items into one institutionalized scale. Thus, we coded the socialization tactics as: collective, formal, sequential, fixed, serial, investiture, context (including collective and formal), content (including sequential and fixed), social (including serial and investiture), as well as an institutionalized scale (including all of the socialization tactic measures). In all analyses we coded the data such that higher values reflected the institutionalized end of the scale, and lower values corresponded to the individualized pole.

### 3.3.2. Adjustment outcomes

To meet the needs of meta-analysis, we examined only the adjustment variables that appear in two or more studies. The resulting set of adjustment variables included role ambiguity, role conflict, role orientation (which included role innovation; Black, 1992; with higher scores indicating an innovative role orientation), job satisfaction, organizational commitment, intentions to quit (which included intentions to stay—reverse coded), job performance, and perceived fit (which included PJ and PO fit).

## 3.4. Meta-analytic methods

### 3.4.1. Computation of population effect sizes

The meta-analytic techniques outlined by Hunter and Schmidt (1990) were used to calculate population effect size estimates corrected for sampling error and unreliability of the predictor and criterion. Correlation coefficients were first weighted by sample size. Analyses to correct for sampling error and unreliability in the predictor and criterion were then conducted. We used artifact distributions to correct for unreliability in the few cases in which reliability coefficients were not reported (Hunter & Schmidt, 1990; Schmidt & Hunter, 2001). The procedure outlined by Hunter and Schmidt was also used to create the 95% confidence interval for each population estimate.

### 3.4.2. Non-independence issues

Several studies measured the relationship between socialization tactics and adjustment outcomes at more than one point in time. Additionally, some studies contained multiple coefficients that corresponded to one adjustment outcome category used in this study. For example, Saks and Ashforth (1997b) included coefficients for socialization tactics as related to both intentions to quit and actual turnover behavior. In these instances, data from both outcomes was included in the same outcome category. To avoid the distorting effects of overweighting studies that contain non-independent data (Hunter & Schmidt, 1990), we

followed two approaches. First, similar to Hausknecht, Day, and Thomas (2004), we report both  $k_s$  and  $k_c$ .  $k_s$  corresponds to the number of separate samples that were used in calculating a population estimate. When a single study contributed more than one coefficient to a single meta-analysis, an average of the coefficients was used so that each study contributed only one coefficient to any meta-analysis. We also report  $k_c$ , wherein all coefficients relating to a particular meta-analysis were used (and thus, one study may have contributed more than one coefficient). Second, when multiple coefficients measured at the same point in time corresponded to the same outcome category in our coding scheme, the overall study sample size was distributed evenly among the coefficients (see also Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005 for use of this approach).

### 3.5. *Meta-analytic regression analysis*

Inspection of a matrix of meta-analytic coefficients and confidence intervals addresses only the zero-order relationships between a predictor and criterion variable and does not account for potential covariance among predictor variables. Consequently, we addressed Hypotheses 2 and 3 using multiple regression conducted on the meta-analytically derived coefficients. This analytic approach allowed us to compare the relative predictive strengths of the six socialization tactics on the adjustment indicators. Because the sample sizes associated with the population estimates are likely to be different as a function of the number of primary studies and the sample size of the primary studies included in each meta-analysis, we created a harmonic mean for each multiple regression analysis (Viswesvaran & Ones, 1995). To generate harmonic means, we divided the number of sample sizes by the sum of the reciprocals of the sample sizes for each regression (Howell, 1995). Meta-analytic regression analysis was also used to examine whether and the extent to which the proximal adjustment outcomes act as a mediator of the relationships between the socialization tactics and the distal adjustment outcomes.

### 3.6. *Moderator tests*

To assess whether heterogeneity was present among the effects sizes for the socialization tactics and adjustment outcomes, we employed the  $Q$  statistic procedure outlined by Hedges and Olkin (1985). If a statistically significant  $Q$  statistic indicated significant residual variance (i.e., the presence of potential moderators), we employed the sub-group approach (see Schmidt & Hunter, 2001). Sub-group approach analyses indicate any effect size differences for different levels of the moderator; specifically, whether the relationships between tactics and adjustment were stronger for recent graduates versus other newcomers, when measured cross-sectionally or longitudinally, or using Jones' (1986) complete scale vs. a modified version.

## 4. Results

### 4.1. *Zero-order meta-analytic analyses*

Table 1 provides the meta-analytic relationships between the socialization tactics and eight adjustment outcomes. Because of the relatively small number of coefficients available for some analyses, we report failsafe  $k$  (range: 1–5676), which indicates the number of

Table 1  
Meta-analyses of the socialization tactics with the adjustment outcomes

	Role ambiguity	Role conflict	Role orientation	Job satisfaction	Org. commitment	Intentions to quit	Performance	Perceived fit
<b>Collective</b>								
<i>r</i>	-.20	-.08	-.12	.14	.15	-.14	.03	.24
<i>r<sub>c</sub></i> (CI)	-.27 (-.32, -.21)	-.11 (-.21, .00)	-.16 (-.29, -.01)	.18 (.11, .26)	.19 (.12, .26)	-.18(-.24, -.10)	.04 (-.05, .12)	.30 (.20, .41)
<i>k<sub>s</sub>, k<sub>c</sub>, k<sub>f</sub></i>	5, 6, 30	4, 5	7, 11, 70	11, 12, 13	12, 14, 50	12, 15, 34	5, 7	3, 4, 1
<i>N</i>	835.50	685.5	1139.75	2231.5	2215.50	2095.50	823.5	495
<i>Q</i>	1.44	5.93	37.45**	21.93*	21.96	25.16*	7.44	4.58
<b>Formal</b>								
<i>r</i>	-.25	-.17	-.12	.14	.11	-.18	-.04	.22
<i>r<sub>c</sub></i> (CI)	-.34 (-.44, -.24)	-.24 (-.32, -.17)	-.16 (-.26, -.05)	.20 (.09, .30)	.14 (.05, .24)	-.23(-.32, -.15)	-.05 (-.18, .08)	.30 (.24, .35)
<i>k<sub>s</sub>, k<sub>c</sub>, k<sub>f</sub></i>	5, 6, 30	4, 5, 4	8, 14, 50	10, 11, 53	12, 14, 86	11, 13, 23	4, 6	2, 3, 1
<i>N</i>	835.50	685.5	1130.15	2071.50	2146.50	1935.50	684.5	335
<i>Q</i>	8.62	2.79	28.38**	32.04**	39.91**	30.32**	9.90	0.65
<b>Sequential</b>								
<i>r</i>	-.42	-.28	-.12	.27	.23	-.23	.08	.35
<i>r<sub>c</sub></i> (CI)	-.52 (-.72, -.39)	-.37 (-.46, -.29)	-.15 (-.28, -.02)	.34 (.24, .44)	.28 (.17, .39)	-.28(-.37, -.19)	.10 (-.01, .22)	.43 (.29, .58)
<i>k<sub>s</sub>, k<sub>c</sub>, k<sub>f</sub></i>	6, 7, 42	4, 5, 20	9, 15, 49	11, 12, 69	13, 15, 106	12, 15, 49	5, 7	3, 4, 5
<i>N</i>	920.5	685.5	1216.15	2232.50	2307.5	2096.50	769.50	495
<i>Q</i>	39.15**	5.69	51.25**	50.95**	80.06**	49.51**	13.14*	10.38*
<b>Fixed</b>								
<i>r</i>	-.41	-.30	-.18	.31	.21	-.24	.10	.37
<i>r<sub>c</sub></i> (CI)	-.53 (-.62, -.46)	-.40 (-.49, -.31)	-.23 (-.35, -.11)	.41 (.29, .52)	.27 (.16, .38)	-.30(-.39, -.21)	.12 (-.06, .31)	.46 (.30, .63)
<i>k<sub>s</sub>, k<sub>c</sub>, k<sub>f</sub></i>	6, 7, 42	4, 5, 20	9, 15, 66	11, 12, 88	13, 15, 85	12, 15, 106	5, 7	3, 4, 5
<i>N</i>	920.5	685.5	1216.65	2233.50	2308	2097.50	769.50	495
<i>Q</i>	12.85*	6.12	45.76**	63.05**	78.16**	46.39**	33.14**	13.01**
<b>Serial</b>								
<i>r</i>	-.47	-.34	-.21	.35	.25	-.26	.11	.38
<i>r<sub>c</sub></i> (CI)	-.62 (-.70, -.55)	-.47 (-.56, -.37)	-.26 (-.37, -.15)	.45 (.34, .55)	.32 (.19, .45)	-.33(-.44, -.22)	.13 (-.02, .29)	.49 (.42, .55)
<i>k<sub>s</sub>, k<sub>c</sub>, k<sub>f</sub></i>	6, 7, 29	4, 5, 20	9, 15, 34	12, 13, 156	14, 16, 128	12, 15, 129	6, 8	4, 8, 17
<i>N</i>	920.5	685.5	1175.65	2313.50	2388.50	2097.50	908.50	557.25
<i>Q</i>	10.95	5.48	35.86**	65.93**	121.28**	71.49**	32.54**	4.12

Investiture									
<i>r</i>	-.41	-.42	-.13	.40	.38	-.24	.17	.33	
<i>r<sub>c</sub></i> (CI)	-.54 (-.66, -.44)	-.58 (-.64, -.52)	-.16 (-.27, -.06)	.53 (.41, .64)	.49 (.39, .58)	-.31(-.41, -.21)	.24 (.15, .32)	.41 (.30, .52)	
<i>k<sub>s</sub></i> , <i>k<sub>c</sub></i> , <i>k<sub>f</sub></i>	6, 9, 72	4, 7, 42	9, 19, 30	12, 15, 181	14, 18, 271	12, 17, 127	5, 9, 16	4, 8, 28	
<i>N</i>	920.5	685.5	1218.16	2313.50	2388.5	2097.50	769.50	557.25	
<i>Q</i>	25.30**	2.29	40.18**	100.58**	76.62**	67.79**	6.59	10.64	
Institutionalized									
<i>r</i>	-.17	-.22	-.12	.26	.25	-.22	.08	.37	
<i>r<sub>c</sub></i> (CI)	-.21 (-.35, -.11)	-.31 (-.36, -.25)	-.15 (-.19, -.11)	.34 (.27, .39)	.32 (.28, .37)	-.29(-.32, -.25)	.10 (.05, .17)	.46 (.41, .50)	
<i>k<sub>s</sub></i> , <i>k<sub>c</sub></i> , <i>k<sub>f</sub></i>	9, 47, 2162	5, 33, 696	10, 93, 2211	15, 83, 4273	17, 100, 5676	15, 96, 3748	7, 46, 123	7, 41, 800	
<i>N</i>	2025.94	1346.04	1522.64	2628	2915.05	2318.13	1002.5	1104.08	
<i>Q</i>	251.08**	17.59	40.30	131.91**	106.52	53.81	25.80	21.71	
Context									
<i>r</i>	-.27	-.13	-.11	.15	.13	-.17	.00	.25	
<i>r<sub>c</sub></i> (CI)	-.36 (-.47, -.27)	-.17 (-.25, -.09)	-.14 (-.23, -.05)	.21 (.14, .26)	.18 (.12, .24)	-.21(-.28, -.15)	.00 (-.08, .08)	.33 (.26, .40)	
<i>k<sub>s</sub></i> , <i>k<sub>c</sub></i> , <i>k<sub>f</sub></i>	6, 13, 156	4, 10, 6	8, 25, 264	13, 25, 200	15, 30, 370	14, 30, 195	5, 13	5, 10, 26	
<i>N</i>	974.50	685.5	1130.41	2453.5	2528.50	2317.50	823.5	763	
<i>Q</i>	23.29*	6.15	34.73**	29.51	42.91*	42.95*	9.41	8.09	
Content									
<i>r</i>	-.40	-.29	-.15	.28	.22	-.24	.09	.30	
<i>r<sub>c</sub></i> (CI)	-.52 (-.62, -.45)	-.38 (-.45, -.33)	-.19 (-.28, -.10)	.37 (.29, .44)	.28 (.21, .36)	-.30 (-.37, -.24)	.11 (.01, .23)	.38 (.27, .48)	
<i>k<sub>s</sub></i> , <i>k<sub>c</sub></i> , <i>k<sub>f</sub></i>	7, 15, 210	4, 10, 90	9, 30, 226	13, 26, 374	15, 32, 497	14, 32, 409	5, 14, 11	5, 11, 53	
<i>N</i>	1059.50	685.5	1215	2453.5	2530.25	2319	769.5	763	
<i>Q</i>	25.39*	5.91	48.44*	65.24**	81.77**	53.59**	22.69*	18.53*	
Social									
<i>r</i>	-.46	-.38	-.16	.38	.32	-.25	.14	.39	
<i>r<sub>c</sub></i> (CI)	-.61 (-.70, -.55)	-.52 (-.59, -.46)	-.21 (-.29, -.13)	.49 (.41, .56)	.41 (.33, .49)	-.33(-.40, -.26)	.18 (.09, .27)	.49 (.45, .54)	
<i>k<sub>s</sub></i> , <i>k<sub>c</sub></i> , <i>k<sub>f</sub></i>	7, 17, 272	4, 12, 132	9, 34, 87	14, 30, 811	16, 36, 988	14, 34, 642	6, 17, 32	6, 19, 177	
<i>N</i>	1059.5	685.5	1218.28	2535.51	2610.51	2319.51	908.4	825.26	
<i>Q</i>	27.56*	5.50	39.12	84.37**	111.13**	68.76**	20.57	10.62	

Note. *r*, mean weighted coefficient; *r<sub>c</sub>*, coefficient corrected for sampling error and unreliability of the predictor and criterion; CI, 95% confidence interval; *k<sub>s</sub>*, number of studies; *k<sub>c</sub>*, number of coefficients; *k<sub>f</sub>*, failsafe *k* (reported only for relationships significantly different from zero); *N*, total sample size; *Q*, test of homogeneity.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

Table 2

Regression coefficients concerning relative predictive strength of context, content, and social tactics on indices of newcomer adjustment

Role ambiguity <i>N</i> = 1612		Role conflict <i>N</i> = 1158		Role orientation <i>N</i> = 1797	
Context	0.008	Context	0.184**	Context	−0.014
Content	−0.274**	Content	−0.262**	Content	−0.099**
Social	−0.465**	Social	−0.450**	Social	−0.151**
Job satisfaction <i>N</i> = 2972		Organizational commitment <i>N</i> = 3025		Intentions to quit <i>N</i> = 2852	
Context	−0.095**	Context	−0.035	Context	−0.001
Content	0.212**	Content	0.106**	Content	−0.171**
Social	0.413**	Social	0.366**	Social	−0.237**
Perceived fit <i>N</i> = 1292		Performance <i>N</i> = 1356			
Context	0.116**	Context	−0.147**		
Content	0.086*	Content	0.115**		
Social	0.398**	Social	0.175**		

Note.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

independent samples with null findings that would be required to make a significant meta-analytic result non-significant.

Inspection of Table 1 reveals support for Hypothesis 1. Specifically, the six institutionalized socialization tactics (collective, formal, sequential, fixed, serial, and investiture) were by and large negatively related to role ambiguity, role conflict, and intentions to quit, and positively related to job satisfaction, organizational commitment, perceived fit, and a custodial role orientation. However, only the investiture tactic was significantly related to job performance.

Table 1 also reveals that out of the total of 80 relationships between the tactics and outcomes, only seven of the 95% confidence intervals included zero. Of these seven non-significant relationships, six occurred with the performance outcome (relating to collective, formal, sequential, fixed, serial, and context tactics). The remaining non-significant relationship was between the collective tactic and role conflict ( $r_c = -0.11$ , 95% CI =  $-0.21, 0.00$ ). Thus, overall the institutionalized socialization tactics were negatively related to role ambiguity, role conflict, and intentions to quit, and positively related to job satisfaction, organizational commitment, job performance, perceived fit, and a custodial role orientation.

#### 4.2. Differential predictions

Table 2 provides the results of regression analyses addressing the potential for differential prediction of newcomer adjustment by social, content, and context socialization tactics. Tests of the differences between regression coefficients (Howell, 1997) revealed that the social tactics were the strongest predictors of all eight adjustment outcomes, fully supporting Hypothesis 2.<sup>1</sup> Providing further support for Hypothesis 2, usefulness scores (Darlington, 1968) indicated that social tactics were the most useful predictor of all eight adjustment outcomes. The context tactics were the weakest predictor of role

<sup>1</sup> All Z-test were above the critical value of  $\pm 1.96$  at  $\alpha = 0.05$ .

ambiguity, role conflict, role orientation, job satisfaction, organizational commitment, and intentions to quit, and the content tactics were the weakest predictor of performance and perceived fit.

#### 4.3. Mediation tests

For Hypothesis 3, predicting that role ambiguity, role conflict, and perceived fit would partially mediate the relationships between socialization tactics and the distal indices of newcomer adjustment, we tested four criteria of mediation (Baron & Kenny, 1986; Judd & Kenny, 1981) using multiple regression analyses. We used the more parsimonious categorization of social, context, and content tactics in testing this hypothesis.

Table 3 shows the results for three of the four mediation criteria, and Table 2 presents tests of the remaining criterion. The first condition for mediation is that the predictor variables must be related to the criterion (see step 1 in Table 3). Because context tactics did not significantly predict role orientation, organizational commitment, or intentions to quit, these relationships were not included in the mediation tests. The second condition for mediation is that the predictor variables must be related to the mediating variables. Inspection of Table 2 reveals that context, content, and social tactics relate to role ambiguity, role conflict, and perceived fit with the exception of the relationship between context tactics and role ambiguity. Third, the mediation variables must be related to the criterion. If a mediation variable was not related to the criterion (see step 3 in Table 3), the mediation analysis was not completed. The mediator was not related to the adjustment outcome in four models (role ambiguity—role orientation, role ambiguity—organizational commitment, role conflict—performance, and fit—role orientation). These four models, therefore, do not contribute to the interpretation of H3. Finally, the relationship between the predictor variables and the criterion should be weakened by the addition of the mediation variables to the regression model (see step 4 in Table 3).

Each of the proximal adjustment outcomes (role ambiguity, role conflict, and perceived fit) served as a potential mediator between the three categories of socialization tactics (content, context, and social) and the five distal outcomes (role orientation, job satisfaction, organizational commitment, intentions to quit, and performance). Based on the conditions described above, 11 mediation tests out of a possible 15 total tests were conducted for this hypothesis. Of these 11 analyses, all but one (role ambiguity—intentions to quit) showed signs of partial mediation.

Hypothesis 3 was therefore supported, albeit in 10 of 15 possible relationships. Specifically, context and social tactics were partially mediated by perceived fit in relation to role orientation. With respect to job satisfaction, content and social tactics were partially mediated by role ambiguity, role conflict, and perceived fit. The effect of context tactics on job satisfaction was partially mediated only by role conflict. Content and social tactics were partially mediated by role conflict and perceived fit in relation to organizational commitment. Similarly, the effect of content and social tactics on intentions to quit were also partially mediated by role conflict and perceived fit. With respect to job performance, the relationship with content and social tactics were partially mediated by role ambiguity and perceived fit.

In summary, these findings suggest that role ambiguity, role conflict, and perceived fit partially mediate the relationships between socialization tactics and role orientation, job satisfaction, organizational commitment, intentions to quit, and job performance. This



Table 3  
Regression coefficients for mediation tests with role ambiguity, role conflict, and perceived fit

Distal adjustment outcome	Step 1 predictor	<i>b</i>	<i>N</i>	Step 3 predictor	<i>b</i>	<i>N</i>	Step 4 predictors	<i>b</i>	<i>N</i>
Role orientation				Role ambiguity	0.060	(873)			
	Content	−0.108*	(1566)	Role conflict	0.330*	(324)	Content	−0.067	(758)
	Social	−0.152*		Perceived fit	0.000	(150)	Social	−0.021	
						Role Conflict	0.294*		
Job satisfaction				Role ambiguity	−0.450*	(802)	Context	−0.093*	(1619)
							Content	0.153*	
							Social	0.314*	
	Context	−0.095*	(2972)	Role Conflict	−0.460*	(513)	Role ambiguity	−0.212*	(1199)
	Content	0.212*		Perceived fit	0.660*	(511)	Context	−0.047	
	Social	0.413*					Content	0.144*	(1281)
							Social	0.296*	
							Role conflict	−0.260*	
						Context	−0.160*	(946)	
						Content	0.164*		
						Social	0.191*		
						Fit	0.557*		
Organizational Commitment				Role ambiguity	−0.030	(787)			
	Content	0.083*	(2856)	Role conflict	−0.370*	(342)	Content	0.054	(871)
	Social	0.365*		Perceived fit	0.710*	(361)	Social	0.273*	
							Role conflict	−0.208*	
							Content	−0.027	
						Social	0.094*		
						Fit	0.674*		

Intentions to Quit	Content Social	-0.172* -0.237*	(2645)	Role ambiguity	0.230*	(802)	Content	-0.174*	(1406)	
				Role conflict	0.340*	(513)	Social	-0.240*		
				Perceived fit	-0.590*	(449)	Role ambiguity	-0.007		(1000)
							Role conflict	0.211*		
				Content	-0.082*	(1020)				
				Social	-0.016					
Fit	-0.551*									
Performance	Context Content Social	-0.147* 0.115* 0.175*	(1356)	Role ambiguity	-0.400*	(475)	Context	-0.143*	(1059)	
				Role conflict	-0.080	(427)	Content	-0.021		
				Perceived fit	0.340*	(150)	Social	-0.056		
				Context	-0.188*	(670)				
							Content	0.085		
				Social	0.034					
				Fit	0.353*					

\*  $p < .01$ .

provides support for the notion that proximal outcomes partially mediate the relationship between socialization tactics and distal outcomes.

Surprisingly, four mediation tests showed signs of a suppressor effect. That is, the relationship between the predictor and the outcome became stronger when the mediator was added to the model. A suppressor effect occurs when the relationship between the mediator variable and the predictor variable lead to a reduction in the error variance in the relationship between the predictor and the criterion (Howell, 1997). To some extent, this may result from the high correlation between content, context, and social tactics, but the relatively weak relationships between context tactics and the adjustment variables.

#### 4.4. Moderator analyses

Inspection of Table 1 reveals that significant  $Q$  statistics were found in 48 out of 80 relationships between the socialization tactics and adjustment outcomes indicating the presence of potential moderators. Table 4 displays the sub-group meta-analyses for significant  $Q$  statistics.

##### 4.4.1. Type of newcomer

The type of newcomer accounted for a significant proportion of residual variance in eleven relationships (22.9 percent of significant  $Q$  statistics), seven of which indicate that the relationships are stronger for recent graduates. Recent graduates showed stronger relationships between intentions to quit and social, content, and serial tactics. Also, collective, sequential, and context tactics were more strongly related to role orientation for recent graduates than other newcomers. Institutionalized tactics were more strongly related to role ambiguity for recent graduates than other newcomers. The relationship between role ambiguity and content and investiture tactics was stronger for other newcomers than recent graduates. Also, sequential and fixed tactics were more strongly related to perceived fit for other newcomers than for recent graduates.

##### 4.4.2. Study design

Whether the coefficient was based on tactics and outcomes measured longitudinally or cross-sectionally accounted for a significant proportion of residual variance in 13 relationships (27.1 percent of significant  $Q$  statistics). Cross-sectional designs showed stronger relationships than longitudinal designs.

To further explore whether relationships between socialization tactics and outcomes weaken over time, we conducted a series of post hoc subgroup analyses between cross-sectional studies that used employees with an organizational tenure of less than or greater than six months (see Table 4). We found that employee tenure in cross-sectional studies accounted for residual variance in 14 relationships (29.2 percent of significant  $Q$  statistics). In all cases, stronger relationships were found for employees on the job less than six months.

##### 4.4.3. Measurement of the socialization tactics

Examination of Table 4 shows that differences in tactic measures accounted for a significant proportion of residual variance in nine relationships (18.8 percent of significant  $Q$  statistics), all of which indicated that Jones' (1986) original measure yielded stronger relationships.

Table 4  
Meta-analyses for significant  $Q$  statistic findings for moderation tests of the socialization tactics

Adjustment outcomes	Cross sectional	Longitudinal	Complete scale	Other modification	Recent graduates	Other newcomers	Cross section >6 mos.	Cross section <6 mos.
<i>Collective</i>								
Role orientation								
$r$	-.11	-.22	-.13	-.09	<b>-.24</b>	<b>.10</b>	-.13	-.26
$r_c$ (CI)	-.15 (-.35, .06)	-.27 (-.38, -.17)	-.18 (-.35, .02)	-.13 (-.30, .05)	<b>-.30 (-.37, -.23)</b>	<b>.15 (.01, .27)</b>	-.18 (-.43, .09)	-.32 (-.39, -.24)
$k_s$ ( $k_c$ )	5 (6)	4 (5)	4 (8)	3 (3)	<b>5 (9)</b>	<b>2 (2)</b>	2 (3)	2 (5)
$N$	862	526	670	370	<b>669</b>	<b>371</b>	268	333
Job satisfaction								
$r$	.16	.09	.15	.13	.15	.13	<b>.07</b>	<b>.23</b>
$r_c$ (CI)	.22 (.11, .31)	.11 (.09, .14)	.19 (.08, .29)	.17 (.10, .25)	.18 (.07, .28)	.19 (.09, .28)	<b>.10 (.04, .15)</b>	<b>.27 (.16, .39)</b>
$k_s$ ( $k_c$ )	8 (8)	4 (4)	6 (7)	5 (5)	6 (7)	5 (5)	<b>4 (4)</b>	<b>4 (5)</b>
$N$	1750	740	1404	828	993	1239	<b>990</b>	<b>707</b>
<i>Formal</i>								
Role orientation								
$r$	-.13	-.17	<b>-.20</b>	<b>.00</b>	-.17	-.01	<b>.00</b>	<b>-.23</b>
$r_c$ (CI)	-.17 (-.31, -.03)	-.22 (-.34, -.10)	<b>-.25 (-.32, -.19)</b>	<b>-.02 (-.18, .17)</b>	-.22 (-.33, -.12)	-.02 (-.23, .21)	<b>.00 (-.20, .22)</b>	<b>-.31 (-.38, -.24)</b>
$k_s$ ( $k_c$ )	6 (9)	4 (5)	<b>4 (8)</b>	<b>4 (6)</b>	6 (12)	2 (2)	<b>3 (6)</b>	<b>2 (5)</b>
$N$	953	526	<b>669</b>	<b>461</b>	759	371	<b>358</b>	<b>333</b>
Job satisfaction								
$r$	.16	.12	.16	.11	.16	.12	<b>.05</b>	<b>.24</b>
$r_c$ (CI)	.24 (.08, .38)	.16 (.09, .23)	.23 (.12, .33)	.15 (-.04, .34)	.21 (.11, .31)	.19 (-.03, .38)	<b>.07 (-.06, .20)</b>	<b>.31 (.24, .39)</b>
$k_s$ ( $k_c$ )	7 (7)	4 (4)	6 (6)	5 (5)	6 (7)	4 (4)	<b>4 (4)</b>	<b>3 (4)</b>
$N$	1590	740	1244	828	993	1079	<b>990</b>	<b>547</b>
Intentions to quit								
$r$	-.20	-.15	-.22	-.14	-.22	-.13	<b>-.08</b>	<b>-.29</b>
$r_c$ (CI)	-.27 (-.41, -.13)	-.20 (-.29, -.11)	-.30 (-.42, -.18)	-.18 (-.29, -.07)	-.29 (-.38, -.20)	-.18 (-.31, -.04)	<b>-.10 (-.15, -.04)</b>	<b>-.39 (-.48, -.31)</b>
$k_s$ ( $k_c$ )	8 (8)	5 (5)	5 (6)	6 (7)	6 (7)	5 (6)	<b>4 (5)</b>	<b>3 (4)</b>
$N$	1454	891	886	1050	993	943	<b>669</b>	<b>547</b>

(continued on next page)

Table 4 (continued)

Adjustment Cross outcomes sectional	Longitudinal	Complete scale	Other modification	Recent graduates	Other newcomers	Cross section >6 mos.	Cross section <6 mos.	
<i>Sequential</i>								
Role orientation								
<i>r</i>	-.13	-.16	-.19	.00	-.20	.03	-.04	-.30
<i>r<sub>c</sub></i> (CI)	-.18 (-.36, .02)	-.20 (-.32, -.09)	-.25(-.41, -.08)	.00 (-.15, .15)	-.25 (-.39, -.11)	.05 (-.10, .19)	-.06(-.28, .18)	-.36 (-.52, -.19)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	6 (9)	5 (6)	5 (9)	4 (6)	6 (12)	3 (3)	3 (6)	2 (5)
<i>N</i>	953	611	754	462	759	458	359	333
Job satisfaction								
<i>r</i>	.31	.17	.29	.24	.25	.28	.17	.40
<i>r<sub>c</sub></i> (CI)	.41 (.28, .53)	.20 (.13, .28)	.36 (.24, .48)	.30 (.14, .48)	.31 (.18, .43)	.38 (.21, .54)	.23 (.19, .27)	.47 (.40, .55)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	8 (8)	4 (4)	6 (7)	5 (5)	6 (7)	5 (5)	4 (4)	4 (5)
<i>N</i>	1751	629	1404	829	993	1240	991	707
Perceived fit								
<i>r</i>	.43	.18	.43	.18	.18	.43		
<i>r<sub>c</sub></i> (CI)	.53 (.44, .63)	.22 (.15, .28)	.53 (.44, .63)	.22 (.15, .28)	.22(.15, .28)	.53 (.44, .63)		
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	2 (2)	1 (2)	2 (2)	1 (2)	1 (2)	2 (2)		
<i>N</i>	345	300	345	300	300	345		
Intentions to quit								
<i>r</i>	-.27	-.18	-.28	-.18	-.30	-.16	-.13	-.34
<i>r<sub>c</sub></i> (CI)	-.34 (-.47, -.21)	-.21 (-.30, -.13)	-.35 (-.46, -.23)	-.21 (-.34, -.09)	-.37 (-.47, -.26)	-.20 (-.32, -.09)	-.16 (-.23, -.09)	-.43 (-.54, -.30)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	10 (10)	5 (5)	7 (8)	6 (7)	6 (7)	7 (8)	4 (5)	4 (6)
<i>N</i>	1615	892	1046	1051	993	1104	670	707
<i>Fixed</i>								
Organizational commitment								
<i>r</i>	.23	.14	.29	.06	.19	.22	.15	.34
<i>r<sub>c</sub></i> (CI)	.31 (.16, .45)	.18 (.15, .20)	.39 (.28, .48)	.07 (-.09, .22)	.25 (.07, .42)	.29 (.16, .42)	.20 (.03, .37)	.44 (.29, .58)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	11 (11)	4 (4)	7 (9)	6 (6)	7 (9)	5 (6)	6 (7)	4 (5)
<i>N</i>	1989	693	1519	789	1049	1259	1199	707
Perceived fit								
<i>r</i>	.44	.20	.44	.20	.20	.44		
<i>r<sub>c</sub></i> (CI)	.56 (.40, .72)	.25 (.14, .35)	.56 (.40, .72)	.25 (.14, .35)	.25(.14, .35)	.56 (.40, .72)		
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	2 (2)	1 (2)	2 (2)	1 (2)	1 (2)	2 (2)		
<i>N</i>	345	300	345	300	300	345		

**Intentions to quit**

<i>r</i>	-.27	-.20	-.31	-.18	-.33	-.16	<b>-.12</b>	<b>-.36</b>
<i>r<sub>c</sub></i> (CI)	-.35 (-.47, -.22)	-.25 (-.39, -.12)	-.39 (-.49, -.28)	-.22 (-.34, -.11)	-.42 (-.51, -.31)	-.20 (-.31, -.10)	<b>-.15 (-.24, -.06)</b>	<b>-.46 (-.57, -.34)</b>
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	10 (10)	5 (5)	7 (8)	6 (7)	6 (7)	7 (8)	<b>4 (5)</b>	<b>4 (6)</b>
<i>N</i>	1616	893	1046	1052	993	1105	<b>671</b>	<b>707</b>

**Serial**

**Role orientation**

<i>r</i>	-.25	-.19	<b>-.29</b>	<b>-.07</b>	-.23	-.17	-.18	-.29
<i>r<sub>c</sub></i> (CI)	-.31 (-.46, -.16)	-.24 (-.39, -.09)	<b>-.37 (-.49, -.24)</b>	<b>-.10 (-.18, -.01)</b>	-.28 (-.43, -.14)	-.22 (-.30, -.14)	-.23 (-.47, .00)	-.36 (-.55, -.17)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	6 (9)	5 (6)	<b>5 (9)</b>	<b>4 (6)</b>	6 (12)	3 (3)	3 (6)	2 (5)
<i>N</i>	956	568	<b>713</b>	<b>463</b>	760	416	361	333

**Job satisfaction**

<i>r</i>	.38	.27	.35	.34	.41	.30	<b>.23</b>	<b>.50</b>
<i>r<sub>c</sub></i> (CI)	.50 (.36, .62)	.34 (.26, .42)	.44 (.29, .59)	.47 (.33, .60)	.50 (.40, .61)	.40 (.23, .57)	<b>.30 (.20, .41)</b>	<b>.60 (.50, .70)</b>
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	9 (9)	4 (4)	6 (7)	6 (6)	6 (7)	6 (6)	<b>4 (4)</b>	<b>5 (6)</b>
<i>N</i>	1832	629	1404	910	993	1321	<b>992</b>	<b>787</b>

**Intentions to quit**

<i>r</i>	-.32	-.17	-.28	-.24	<b>-.37</b>	<b>-.16</b>	-.21	-.37
<i>r<sub>c</sub></i> (CI)	-.41 (-.55, -.28)	-.21 (-.33, -.09)	-.36 (-.51, -.21)	-.30 (-.46, -.15)	<b>-.47 (-.59, -.35)</b>	<b>-.21 (-.33, -.09)</b>	-.27 (-.44, -.10)	-.47 (-.61, -.33)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	9 (10)	5 (5)	6 (8)	6 (7)	<b>6 (7)</b>	<b>6 (8)</b>	5 (5)	4 (6)
<i>N</i>	1616	706	1045	1052	<b>993</b>	<b>1105</b>	671	707

**Investiture**

**Role ambiguity**

<i>r</i>	-.45	-.30	-.39	-.43	<b>-.35</b>	<b>-.54</b>	-.30	-.11
<i>r<sub>c</sub></i> (CI)	-.60 (-.73, -.49)	-.40 (-.50, -.31)	-.52 (-.61, -.44)	-.57 (-.92, -.27)	<b>-.46 (-.55, -.36)</b>	<b>-.84 (-.98, -.69)</b>	-.39 (-.49, -.30)	-.15 (-.25, -.03)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	4 (5)	4 (4)	4 (7)	2 (2)	<b>4 (7)</b>	<b>2 (2)</b>	3 (6)	2 (9)
<i>N</i>	722	457	600	321	<b>665</b>	<b>256</b>	361	333

(continued on next page)

Table 4 (continued)

Adjustment outcomes	Cross sectional	Longitudinal	Complete scale	Other modification	Recent graduates	Other newcomers	Cross section >6 mos.	Cross section <6 mos.
<b>Job satisfaction</b>								
<i>r</i>	<b>.48</b>	<b>.22</b>	.45	.33	.42	.39	.42	.49
<i>r<sub>c</sub></i> (CI)	<b>.63 (.55, .71)</b>	<b>.29 (.10, .45)</b>	.57 (.48, .66)	.45 (.20, .70)	.53 (.42, .65)	.53 (.31, .73)	.54 (.42, .68)	.63 (.52, .73)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>9 (10)</b>	<b>4 (5)</b>	6 (9)	6 (6)	6 (9)	6 (6)	4 (4)	5 (8)
<i>N</i>	<b>1832</b>	<b>740</b>	1404	910	993	1321	992	787
<b>Organizational commitment</b>								
<i>r</i>	<b>.42</b>	<b>.20</b>	.40	.33	.38	.37	.43	.41
<i>r<sub>c</sub></i> (CI)	<b>.55 (.45, .63)</b>	<b>.26 (.13, .40)</b>	.52 (.42, .61)	.42 (.24, .61)	.51 (.39, .62)	.46 (.31, .62)	.53 (.45, .61)	.56 (.39, .71)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>12 (13)</b>	<b>4 (5)</b>	7 (11)	7 (7)	7 (11)	7 (7)	6 (7)	5 (8)
<i>N</i>	<b>2070</b>	<b>693</b>	1520	869	1050	1339	1199	787
<i>Institutionalized</i>								
<b>Role ambiguity</b>								
<i>r</i>	-.18	-.18	<b>-.25</b>	<b>.03</b>	<b>-.36</b>	<b>-.05</b>	.18	-.39
<i>r<sub>c</sub></i> (CI)	-.21 (-.43, -.05)	-.26 (-.33, -.18)	<b>-.37 (-.45, -.28)</b>	<b>.08 (-.27, .34)</b>	<b>-.47 (-.52, -.41)</b>	<b>-.02 (-.33, .20)</b>	.23 (-.13, .56)	-.51 (-.59, -.44)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	6 (29)	4 (18)	<b>6 (34)</b>	<b>3 (13)</b>	<b>5 (35)</b>	<b>4 (12)</b>	2 (7)	3 (23)
<i>N</i>	1166	1007	<b>1399</b>	<b>627</b>	<b>803</b>	<b>1223</b>	460	499
<b>Job satisfaction</b>								
<i>r</i>	<b>.32</b>	<b>.17</b>	.26	.25	.24	.27	<b>.19</b>	<b>.38</b>
<i>r<sub>c</sub></i> (CI)	<b>.42 (.36, .48)</b>	<b>.22 (.12, .31)</b>	.34 (.26, .41)	.33 (.24, .42)	.30 (.22, .38)	.39 (.29, .47)	<b>.26 (.18, .34)</b>	<b>.47 (.42, .53)</b>
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>11 (55)</b>	<b>6 (28)</b>	9 (51)	6 (32)	9 (52)	6 (31)	<b>4 (24)</b>	<b>7 (39)</b>
<i>N</i>	<b>2052</b>	<b>1020</b>	1719	909	1308	1320	<b>991</b>	<b>1008</b>
<i>Context</i>								
<b>Role ambiguity</b>								
<i>r</i>	<b>-.29</b>	<b>-.16</b>	-.29	-.24	-.27	-.29	-.26	-.30
<i>r<sub>c</sub></i> (CI)	<b>-.39 (-.52, -.28)</b>	<b>-.21 (-.23, -.18)</b>	-.38 (-.51, -.27)	-.33 (-.48, -.18)	-.35 (-.47, -.25)	-.43 (-.68, -.16)	-.26	-.40 (-.57, -.25)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>5 (9)</b>	<b>2 (4)</b>	4 (9)	2 (4)	5 (11)	1 (2)	1 (2)	3 (7)
<i>N</i>	<b>861</b>	<b>372</b>	654	321	803	171	154	500



<b>Role orientation</b>									
<i>r</i>	-.11	-.19	-.16	-.03	-.18	.05	-.03	-.25	
<i>r<sub>c</sub></i> (CI)	-.15 (-.26, -.02)	-.25 (-.33, -.16)	-.21 (-.31, -.11)	-.04 (-.07, .10)	-.24 (-.31, -.16)	.06 (-.09, .21)	-.05 (-.21, .13)	-.31 (-.36, -.26)	
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	6 (15)	4 (10)	4 (16)	4 (9)	6 (21)	2 (4)	3 (9)	2 (10)	
<i>N</i>	952	526	670	461	759	371	359	333	
<b>Organizational commitment</b>									
<i>r</i>	.14	.11	.16	.08	.12	.15	.06	.21	
<i>r<sub>c</sub></i> (CI)	.19 (.12, .26)	.15 (.07, .22)	.22 (.16, .27)	.09 (-.03, .22)	.16 (.07, .25)	.20 (.11, .28)	.07 (-.01, .17)	.28 (.22, .34)	
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	13 (22)	4 (8)	9 (19)	6 (11)	9 (19)	6 (11)	6 (13)	6 (11)	
<i>N</i>	2210	693	1742	787	1272	1257	1197	929	
<b>Intentions to quit</b>									
<i>r</i>	-.19	-.13	-.18	-.14	-.23	-.10	-.09	-.22	
<i>r<sub>c</sub></i> (CI)	-.25 (-.33, -.16)	-.17 (-.22, -.12)	-.24 (-.34, -.14)	-.18 (-.24, -.12)	-.28 (-.35, -.22)	-.14 (-.22, -.04)	-.11 (-.15, -.07)	-.30 (-.41, -.17)	
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	11 (20)	5 (10)	8 (16)	6 (14)	8 (16)	6 (14)	4 (10)	6 (12)	
<i>N</i>	1836	891	1268	1050	1215	1103	669	929	
<b>Content</b>									
<b>Role ambiguity</b>									
<i>r</i>	-.44	-.30	-.38	-.46	-.36	-.55	-.37	-.38	
<i>r<sub>c</sub></i> (CI)	-.56 (-.68, -.48)	-.38 (-.47, -.32)	-.50 (-.56, -.44)	-.58 (-.89, -.37)	-.46 (-.52, -.40)	-.80 (-1.00, -.64)	-.47 (-.52, -.42)	-.49 (-.57, -.40)	
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	5 (9)	3 (6)	5 (11)	2 (4)	5 (11)	2 (4)	1 (2)	3 (7)	
<i>N</i>	861	457	739	321	804	256	154	500	
<b>Role orientation</b>									
<i>r</i>	-.17	-.17	-.23	-.02	-.20	-.07	-.07	-.27	
<i>r<sub>c</sub></i> (CI)	-.22 (-.33, -.09)	-.21 (-.32, -.11)	-.30 (-.39, -.19)	-.03 (-.15, .10)	-.24 (-.35, -.14)	-.09 (-.25, .06)	-.10 (-.26, .07)	-.33 (-.45, -.21)	
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	6 (18)	5 (12)	5 (18)	4 (12)	6 (24)	3 (6)	3 (12)	2 (10)	
<i>N</i>	951	611	754	461	759	456	358	333	
<b>Organizational commitment</b>									
<i>r</i>	.24	.15	.28	.10	.20	.25	.15	.33	
<i>r<sub>c</sub></i> (CI)	.31 (.22, .40)	.19 (.12, .25)	.37 (.29, .43)	.12 (-.01, .25)	.25 (.14, .37)	.32 (.23, .41)	.20 (.09, .31)	.42 (.31, .51)	
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	13 (24)	4 (8)	9 (20)	6 (12)	9 (20)	6 (12)	6 (14)	6 (12)	
<i>N</i>	2211	694	1742	789	1272	1259	1199	929	

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Table 4 (continued)

Adjustment outcomes	Cross sectional	Longitudinal	Complete scale	Other modification	Recent graduates	Other newcomers	Cross section >6 mos.	Cross section <6 mos.
<b>Job satisfaction</b>								
<i>r</i>	<b>.32</b>	<b>.21</b>	.31	.23	.27	.29	<b>.19</b>	<b>.37</b>
<i>r<sub>c</sub></i> (CI)	<b>.42 (.32, .51)</b>	<b>.26 (.21, .31)</b>	.40 (.31, .48)	.30 (.17, .44)	.34 (.25, .41)	.41 (.26, .54)	<b>.26 (.17, .34)</b>	<b>.45 (.36, .55)</b>
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>10 (18)</b>	<b>4 (8)</b>	8 (16)	5 (10)	8 (16)	5 (10)	<b>4 (8)</b>	<b>6 (12)</b>
<i>N</i>	<b>1972</b>	<b>740</b>	1626	828	1215	1239	<b>990</b>	<b>929</b>
<b>Intentions to quit</b>								
<i>r</i>	-.28	-.19	-.30	-.18	<b>-.32</b>	<b>-.16</b>	<b>-.12</b>	<b>-.34</b>
<i>r<sub>c</sub></i> (CI)	-.36 (-.44, -.27)	-.23 (-.30, -.16)	-.38 (-.45, -.30)	-.22 (-.31, -.14)	<b>-.40 (-.47, -.32)</b>	<b>-.20 (-.29, -.13)</b>	<b>-.16 (-.21, -.10)</b>	<b>-.44 (.52, -.35)</b>
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	11 (21)	6 (11)	8 (18)	6 (14)	<b>8 (16)</b>	<b>6 (16)</b>	<b>4 (10)</b>	<b>6 (14)</b>
<i>N</i>	1838	1035	1268	1052	<b>1215</b>	<b>1105</b>	<b>671</b>	<b>929</b>
<b>Perceived fit</b>								
<i>r</i>	<b>.33</b>	<b>.19</b>	.38	.16	.19	.44		
<i>r<sub>c</sub></i> (CI)	<b>.42 (.28, .55)</b>	<b>.23 (.17, .29)</b>	.49 (.38, .60)	.19 (.14, .25)	.23 (.18, .29)	.55 (.46, .64)		
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>4 (7)</b>	<b>1 (4)</b>	5 (6)	2 (5)	3 (7)	2 (4)		
<i>N</i>	<b>613</b>	<b>150</b>	484	279	418	345		
<b>Social</b>								
<b>Role ambiguity</b>								
<i>r</i>	<b>-.49</b>	<b>-.34</b>	-.47	-.44	-.44	-.52	-.45	-.47
<i>r<sub>c</sub></i> (CI)	<b>-.66 (-.74, -.58)</b>	<b>-.45 (-.55, -.37)</b>	-.62 (-.70, -.54)	-.60 (-.79, -.45)	-.57 (-.66, -.49)	-.80 (-.88, -.73)	-.56 (-.69, -.42)	-.62 (-.73, -.52)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>5 (10)</b>	<b>3 (7)</b>	5 (13)	2 (4)	5 (13)	2 (4)	1 (2)	3 (9)
<i>N</i>	<b>861</b>	<b>457</b>	739	321	804	256	154	500

Job satisfaction								
<i>r</i>	<b>.43</b>	<b>.25</b>	.40	.33	.41	.34	.33	.47
<i>r<sub>c</sub></i> (CI)	<b>.56 (.48, .63)</b>	<b>.32 (.21, .42)</b>	.51 (.42, .59)	.46 (.32, .60)	.51 (.45, .58)	.47 (.32, .60)	.43 (.31, .55)	.59 (.53, .66)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>11 (21)</b>	<b>4 (9)</b>	8 (18)	6 (12)	8 (18)	6 (12)	4 (8)	7 (16)
<i>N</i>	<b>2054</b>	<b>740</b>	1626	910	1215	1321	992	1009
Organizational commitment								
<i>r</i>	<b>.35</b>	<b>.20</b>	.36	.25	.33	.31	.31	.41
<i>r<sub>c</sub></i> (CI)	<b>.45 (.36, .53)</b>	<b>.25 (.17, .33)</b>	.46 (.38, .53)	.32 (.16, .48)	.44 (.33, .54)	.39 (.27, .50)	.38 (.26, .51)	.54 (.43, .62)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>14 (27)</b>	<b>4 (9)</b>	9 (22)	7 (14)	9 (22)	7 (14)	6 (14)	7 (16)
<i>N</i>	<b>2292</b>	<b>693</b>	1742	869	1272	1339	1199	1009
Intentions to quit								
<i>r</i>	<b>-.31</b>	<b>-.15</b>	-.27	-.24	<b>-.34</b>	<b>-.17</b>	-.22	-.32
<i>r<sub>c</sub></i> (CI)	<b>-.40 (-.48, -.32)</b>	<b>-.20 (-.29, -.11)</b>	-.34 (-.42, -.27)	-.31 (-.43, -.19)	<b>-.43 (-.50, -.36)</b>	<b>-.21 (-.32, -.12)</b>	-.27 (-.40, -.15)	-.43 (-.49, -.35)
<i>k<sub>s</sub></i> ( <i>k<sub>c</sub></i> )	<b>11 (23)</b>	<b>5 (11)</b>	8 (20)	6 (14)	<b>8 (18)</b>	<b>6 (16)</b>	4 (10)	6 (16)
<i>N</i>	<b>1838</b>	<b>893</b>	1268	1052	<b>1215</b>	<b>1105</b>	671	929

Note. \* $p < 0.05$ , \*\* $p < 0.01$ . *r*, mean weighted coefficient; *r<sub>c</sub>*, coefficient corrected for sampling error and unreliability of the predictor and criterion; CI, 95% confidence interval; *k<sub>s</sub>*, number of studies; *k<sub>c</sub>*, number of coefficients; *N*, total sample size; *Q*, test of homogeneity. For parsimony, we report the sub-group analyses when the relationship between a tactic and outcome was significantly moderated by at least one of the three moderators we identified a priori. Significant differences are in bold.

#### 4.4.4. Summary

Overall, the three moderators were able to explain significant residual variance in 33 of the 48 relationships with a significant  $Q$  statistic suggesting some support for Hypotheses 4 through 6. It is important to note, however, that type of newcomer did not demonstrate a consistent pattern.

## 5. Discussion

Twenty years ago, Jones (1986) conducted the first empirical study on the relationship between socialization tactics and newcomer adjustment. In this meta-analysis, we sought to provide a quantitative summary of the relationships first reported by Jones (1986) and address a number of outstanding theoretical and practical questions regarding socialization tactics. Consistent with Jones (1986), we found that the tactics that represent institutionalized socialization were negatively related to role ambiguity, role conflict, and intentions to quit, and positively related to job satisfaction, organizational commitment, job performance, fit perceptions, and a custodial role orientation.

Moving beyond zero-order relationships, we found that the social tactics (serial and investiture) were the most strongly related to the adjustment outcomes. Moreover, with the exception of job performance and fit perceptions, the weakest relationships for all measures of adjustment were for those tactics concerned with context (i.e., collective and formal). Consistent with the model proposed in Fig. 1, the results of our mediation analysis indicated that role conflict, role ambiguity, and fit perceptions partially mediate a number of the relationships between the socialization tactics and distal indicators of newcomer adjustment.

We found some evidence that the sample of newcomers, the study design, and the scale used to measure socialization tactics moderate a number of the relationships between the tactics and newcomer adjustment. Bauer et al. (in press) also reported stronger relationships for cross-sectional designs and recent graduates; however, because they only tested moderating effects for socialization tactics and three outcomes (i.e., role clarity, self-efficacy, and social acceptance), our results provide a considerable extension by examining seven additional adjustment outcomes.

In seven of the 11 instances in which the type of newcomer accounted for a significant proportion of residual variance, the relationships were stronger for recent graduates. Thus, this suggests that socialization tactics have a stronger effect on some indices of adjustment for recent university graduates compared to other types of newcomers. There are at least three possible explanations for the weaker effect of tactics for seasoned entrants.

First, seasoned newcomers might be less affected by specific efforts by the organization to socialize them. They might be less willing to bend and mold to a new organization because they have a better understanding of their own needs and requirements at work (Beyer & Hannah, 2002). Second, the effect size of tactics on adjustment may also be weaker for seasoned than unseasoned entrants simply because less socialization is needed. Having experienced socialization efforts at other organizations, seasoned newcomers might be more aware of what is required of them and more comfortable with the boundaries of expected behavior within organizations in general (Kirschenbaum, 1992; Meglino, DeNisi, & Ravlin, 1993). Furthermore, veteran entrants may have used their experience to move to an organization where they have a high natural degree of fit (Carr, Pearson, Vest, & Boyar, 2006), and experience and levels of fit are significantly correlated

(Kristof-Brown et al., 2005). Thus, on-boarding of seasoned newcomers may require very little effort on behalf of the new employer.

A third possibility is that more effort is required to facilitate seasoned employee on-boarding. That is, although new entrants might easily learn new processes and procedures that are unique to their new employer, seasoned workers may experience cognitive interference from their previous employment experiences when learning how processes and procedures are conducted at their new organization (Fiske & Dyer, 1985). Whether and the extent to which any of these three possibilities might explain the socialization process of seasoned entrants is a question for future research, which is made particularly important given that seasoned entrants may be the largest pool of newcomers and the pool most sought after by employers (Carr et al., 2006). In addition, the length of a newcomer's tenure in his or her previous organization, their total experience in a particular career and the work world in general, and the similarity between previous employers and their new organization are all factors which may contribute to the socialization of seasoned entrants.

With respect to study design, the results of this meta-analysis indicated that there were sizable differences for some relationships in the corrected weighted mean correlations between cross-sectional and longitudinal designs. The stronger relationships in cross-sectional designs might be due to inflation that results from common method variance or it might reflect priming effects from assessing both socialization tactics and adjustment on the same questionnaire. The reduced impact of the socialization tactics over time might also reflect changes in socialization dynamics during the first year. Institutionalized socialization might help reduce initial uncertainty and anxiety but over time the initial security of institutionalized socialization may come to represent smothering paternalism (Ashforth & Saks, 1996). Thus, the very success of institutionalized socialization in cross-sectional studies might be the result of newcomers' needs at the time of data collection rather than statistical inflation.

To tease out these explanations, we conducted additional post hoc subgroup analyses between cross-sectional studies that used employees with less or more than six months tenure and found stronger relationships between the tactics and outcomes in cross-sectional studies measured within six months of the employment start-date as compared to later than six months. Thus, the stronger relationships in cross-sectional studies seem to reflect more than statistical inflation and provide some support for the contention that newcomers with less tenure are most receptive to institutionalized socialization tactics (Ashforth & Saks, 1996). Future studies should consider measuring socialization tactics and indicators of adjustment several times during the socialization process to further tease out temporal differences in the relationships over time.

As noted earlier, all previous research that has measured socialization tactics have used either Jones' (1986) complete scales or shorter versions. The results of our moderator tests revealed stronger relationships when the complete scales were used. This should not be surprising as use of a shortened version of a scale means that the content domain is incomplete, and when coupled with lower reliabilities associated with the shortened scales, this raises serious doubts as to the validity of the findings of those studies that have used modified versions. However, even in studies that used the full and original set of Jones' items (e.g., Allen & Meyer, 1990; Ashforth & Saks, 1996; Jones, 1986), the reliability of several tactics has remained problematic. Thus, future research should refrain from using shortened versions of the original scales. There is also a real need for future studies to continue

to improve, refine, and revise the six scales as well as studies that use sources other than self-report to measure socialization tactics (Ashforth & Saks, 1996).

### 5.1. *Research implications and future research*

Because of the relatively high consistency among primary studies examining socialization tactics and newcomer adjustment, it is probably time for a moratorium on research testing the zero-order relationships between the tactics and adjustment along the lines of the studies included in this meta-analysis. This is especially the case for cross-sectional studies of recent graduates. However, there are several areas for research that might be considered in order to further develop this area.

As we noted in our introduction, zero-order relationships do not allow for robust recommendations as to where resources should be allocated. Greater clarity is gained through comparison of relative effects. Our relative strength results were consistent with Jones' (1986) contention that the tactics most concerned with the social or interpersonal aspects of socialization are most important for newcomers' adjustment. Although the other tactics were also related to the outcomes, the context tactics were the weakest predictors of most of the outcomes and the content tactics were the weakest predictors of job performance and fit perceptions.

It seems that we have reached a point in the tactics literature where we can now identify some tactics that are more promising than others in promoting many forms of adjustment. Because the social tactics (serial and investiture) were found to be the strongest predictors of newcomer adjustment, future research might examine specific strategies with respect to these dimensions. There are specific research questions to be addressed so that practical advice can be provided to guide management. For example, with respect to providing role models, is a role model needed for each aspect of one's job as well as for social aspects of the job? Is socialization facilitated by one role model or multiple models? Should the socialization by role models be structured? Is there a minimum threshold of contact needed in order for a newcomer to feel that they have had a role model to follow? Who should the model be (i.e., someone with previous experience with that particular job, someone with mentoring skills, is there an optimal length of tenure for the role model)? What kinds of socialization programs are most likely to provide the benefits of social tactics (e.g., formal mentoring program, buddy system, on-the-job training, social events, team assignments)?

A major shortcoming of previous studies is the failure to examine the mechanisms that underlie the relationship between socialization tactics and newcomer adjustment. We already know that socialization tactics predict newcomer adjustment, now we need research to find out why. Although previous studies have suggested models of socialization in which proximal outcomes partially mediate the relationship between socialization and distal outcomes (Bauer et al., *in press*; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997a), our meta-analysis provides the first empirical evidence that uncertainty reduction in terms of lower role conflict and role ambiguity, and perceptions of PJ and PO fit partially mediate the relationships between social, content, and context tactics and distal measures of newcomer adjustment.

Future research is needed to develop and test additional models that explain the linkages between socialization tactics and newcomer adjustment. For example, Mignerey, Rubin, and Gorden (1995) as well as Saks and Ashforth (1997b) linked socialization tactics with information seeking and acquisition, and Gruman et al. (2006) found that proactive

behaviors mediate the relationship between tactics and outcomes. Socialization tactics might also influence newcomers' learning of socialization content (Ashforth et al., 2006; Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994; Cooper-Thomas & Anderson, 2002), involvement in work-related activities (Bauer & Green, 1994), on-the-job embeddedness (Allen, 2006), and emotions (Ashforth & Saks, 2002). More research along these lines would help to understand how and why socialization tactics affect newcomer adjustment.

Finally, future research should also consider the role of individual differences. To date, only Jones (1986) and Laker and Steffy (1995) examined an interactionist model in which self-efficacy was treated as a moderating variable. More recently, Kim et al. (2005) found that newcomer proactivity moderated the relationship between institutionalized socialization tactics and PO fit perceptions and Gruman et al. (2006) found that information-seeking and feedback-seeking moderate the relationship between socialization tactics and several outcomes. Given the increasing emphasis on newcomer proactive behavior and an interactionist approach to socialization, more attention should be given to individual differences.

## 5.2. *Practical implications*

Based on the results of this study, the social tactics are the strongest predictors of newcomer adjustment. Thus, managers may want to focus on providing an experienced member of the organization to act as a role model when newcomers first arrive, and also focus on affirming the identity and personal characteristics of the newcomer to show how the newcomer might fit into the organization. Newcomers should have frequent opportunities to meet, interact, and work with members of the organization. In fact, an increasing number of organizations are initiating social interactions during the recruitment process where future co-workers and senior management are available to meet with potential candidates. Once hired, newcomers are then assigned to senior employees to act as buddies and mentors (Galt, 2005). Providing newcomers ample opportunities to socialize and network with insiders before and after entry would seem to be a fundamental component of any successful socialization program. Nevertheless, on-boarding specialists should consider the expected return on investment of social, content, and context socialization tactics before placing complete emphasis on social tactics.

The results of this study also suggest that organizations should focus first on proximal indicators of adjustment such as role conflict, role ambiguity, and perceptions of fit. Given that socialization practices are likely to have a direct impact on these variables, which will subsequently impact more distal outcomes such as job satisfaction and organizational commitment, we suggest that organizational attempts at socialization focus on reducing newcomer uncertainty and improving perceptions of fit. Within the recruitment literature, Chapman et al. (2005) found that perceptions of fit were the strongest predictor of applicant attraction to organizations including job pursuit and acceptance intentions, and job/organizational attraction. It would seem that perceptions of fit continue to play an important role following entry and should be the focus of socialization efforts and programs.

Our results also suggest that organizations might use different tactics contingent on the intended outcome of socialization and the type of newcomer. In this regard, we recommend a contingency approach to socialization tactics. In addition, the results suggest that organizations can use a combination of individualized and institutionalized tactics rather than being forced to choose one set or the other. This is important because some authors



have suggested that there might be trade-offs in the selection of socialization tactics because institutionalized socialization promotes attachment to the job and organization resulting in a more loyal workforce, whereas individualized socialization promotes role innovation (Ashforth & Saks, 1996). This has led to speculation that organizations might have to choose between socializing newcomers for strong attachment to the job and organization or for innovative role orientations. Our results suggest that this is not necessarily the case. For example, it is conceivable that an organization might employ institutionalized *social* tactics to promote strong attachments to the job and organization but also employ individualized *content* and *context* tactics to promote an innovative role orientation. Thus, organizations might wish to use a combination of institutionalized and individualized tactics in order to tailor their socialization to achieve particular outcomes and reap the benefits of institutionalized and individualized socialization tactics (Allen & Meyer, 1990).

In addition, the tactics used might also need to be tailored to the newcomer. For example, recent graduates seem to benefit the most from the information, structure, and guidance of institutionalized socialization tactics. However, with more experienced newcomers it might not be necessary or helpful to employ institutionalized tactics, at least not to the same extent. For example, one can conceive of a situation where more experienced newcomers might benefit the most from a combination of institutionalized and individualized tactics. Whatever the case, our results suggest that more attention should be given to tailoring the tactics to particular newcomers.

### 5.3. Limitations

There are a number of limitations that should be kept in mind when interpreting the results of this study. Although the effect sizes and relationships between the tactics and outcomes were quite consistent in the primary studies, there were a relatively small number of studies available (range: 2–17). More confidence can be assured for meta-analyses utilizing most of the primary studies, whereas less confidence is warranted when not all studies contributed to a meta-analytic coefficient. Caution is to be exercised in interpreting the results of the moderator analyses, in particular where there were only two or three studies in a subpopulation.

The results also suggest that there might be other moderator variables in operation. Thus, while our choice of moderators was based on important concerns that exist in the literature, they are by no means the only or perhaps most important moderators.

Finally, some caution should be exercised in interpreting the results for job performance and fit perceptions. Few studies have measured these variables and in the case of job performance, most have used self-report measures. Further, because so few studies have measured fit, we had to combine PJ and PO fit into one measure. In addition, there are other adjustment measures that have been shown to be related to socialization tactics. However, because too few studies measured them we were not able to include them in this meta-analysis. Thus, the relationships reported in this study represent only those that have received the most attention in the literature.

## 6. Conclusion

The results of this meta-analysis provide strong support for the relationship between socialization tactics and newcomer adjustment. We found that the tactics which

Jones (1986) refers to as institutionalized socialization, were associated with lower role ambiguity, role conflict, and intentions to quit, and higher job satisfaction, organizational commitment, job performance, fit perceptions, and a custodial role orientation. Furthermore, the social tactics (serial and investiture) were the strongest predictors of all adjustment outcomes and the relationships between the tactics and outcomes were stronger for recent graduates, cross-sectional designs, and when the complete tactics scales were used. The results also provide some support for uncertainty reduction theory and PE fit theory as role ambiguity, role conflict, and fit perceptions were found to partially mediate a number of the relationships between the tactics and the more distal outcomes of newcomer adjustment.

## References

References marked with an asterisk indicate studies included in the meta-analysis.

- \*Allen, D. G. (2006). Do organizational socialization tactics influence newcomer embeddedness and turnover? *Journal of Management*, 32, 237–256.
- \*Allen, N. J., & Meyer, J. P. (1990). Organizational socialization tactics: a longitudinal analysis of links to newcomers' commitment and role orientation. *Academy of Management Journal*, 33, 847–858.
- Ashforth, B. E. (2001). *Role transitions in organizational life: an identity-based perspective*. Mahwah, NJ: Lawrence Erlbaum.
- \*Ashforth, B. E., & Saks, A. M. (1996). Socialization tactics: longitudinal effects on newcomers adjustment. *Academy of Management Journal*, 39, 149–178.
- Ashforth, B. E., & Saks, A. M. (2002). Feeling your way: emotion and organizational entry. In R. G. Lord, R. J. Klimoski, & R. Kanfer (Eds.), *Emotions in the workplace: understanding the structure and role of emotions in organizational behavior* (pp. 331–369). San Francisco: Jossey-Bass.
- Ashforth, B. E., Saks, A. M., & Lee, R. T. (1997). On the dimensionality of Jones' (1986) measures of organizational socialization tactics. *International Journal of Selection and Assessment*, 5, 200–214.
- Ashforth, B. E., Sluss, D. M., & Harrison, S. H. (2007). Socialization in organizational contexts. In G. P. Hodgkinson & J. K. Ford (Eds.), *International review of industrial and organizational psychology* (pp. 1–70). Chichester, UK: Wiley.
- \*Ashforth, B. E., Sluss, D. M., & Saks, A. M. (2006). Socialization tactics, proactivity, and learning: how process and content influence adjustment. Paper presented at the annual meeting of the Academy of Management, Atlanta.
- \*Baker, R. Z. (1989). A control perspective of organizational socialization. Paper presented at the annual meeting of the Academy of Management, Washington, D.C.
- \*Baker, H. E., III (1992). Employee socialization strategies and the presence of union representation. *Labor Studies Journal*, 17, 5–17.
- \*Baker, H. E., Jr., & Feldman, D. C. (1990). Strategies of organizational socialization and their impact on newcomer adjustment. *Journal of Managerial Issues*, 2, 198–212.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Bauer, T. N., & Green, S. G. (1994). Effect of newcomer involvement in work-related activities: a longitudinal study of socialization. *Journal of Applied Psychology*, 79, 211–223.
- Bauer, T. N., Morrison, E. W., & Callister, R. R. (1998). Organizational socialization: a review and directions for future research. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 16, pp. 149–214). Greenwich CT: JAI Press.
- Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (in press). Newcomer adjustment during organizational socialization: a meta-analytic review of antecedents, outcomes, and methods. *Journal of Applied Psychology*.
- Beyer, J. M., & Hannah, D. R. (2002). Building on the past: enacting established personal identities in a new work setting. *Organization Science*, 13, 636–652.

- \*Black, J. S. (1992). Socializing American expatriate managers overseas: tactics, tenure, and role innovation. *Group & Organization Management*, 17, 171–192.
- \*Black, J. S., & Ashford, S. J. (1995). Fitting in or making jobs fit: factors affecting mode of adjustment for new hires. *Human Relations*, 48, 421–437.
- \*Blass, F. R. (2003). Socialization tactics, content, and career effectiveness: The role of political skill in contextual adjustment and effectiveness. Unpublished doctoral dissertation.
- \*Bravo, M. J., Peiro, J. M., Rodriguez, I., & Whitley, W. T. (2003). Social antecedents of the role stress and career-enhancing strategies of newcomers to organizations: a longitudinal study. *Work & Stress*, 17, 195–217.
- Bureau of Labor Statistics (2005). <http://www.bls.gov/nls/nlsfaqs.htm#anch5>. Retrieved April 6, 2006.
- \*Cable, D. M., & Parsons, C. K. (2001). Socialization tactics and person-organization fit. *Personnel Psychology*, 54, 1–23.
- Carr, J. C., Pearson, A. W., Vest, M. J., & Boyar, S. L. (2006). Prior occupational experience, anticipatory socialization, and employee retention. *Journal of Management*, 32, 343–359.
- \*Chao, G. T., Kozlowski, S. W. J., Major, D. A., & Gardner, P. (1994). The effects of organizational tactics and contextual factors on newcomer socialization and learning outcomes. Paper presented at the ninth annual conference of the Society for Industrial and Organizational Psychology, Nashville, TN.
- Chao, G. T., O'Leary-Kelly, A. M., Wolf, S., Klein, H. J., & Gardner, P. D. (1994). Organizational socialization: its content and consequences. *Journal of Applied Psychology*, 79, 730–743.
- Chapman, D. S., Uggerslev, K. L., Carroll, S. A., Piasentin, K. A., & Jones, D. A. (2005). Applicant attraction to organizations and job choice: a meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology*, 90, 928–944.
- Chatman, J. A. (1991). Matching people and organizations: selection and socialization in public accounting firms. *Administrative Science Quarterly*, 36, 459–484.
- Cohen, A. (1993). Organizational commitment and turnover: a meta-analysis. *Academy of Management Journal*, 36, 1140–1157.
- \*Cooper-Thomas, H., & Anderson, N. (2002). Newcomer adjustment: the relationship between organizational socialization tactics, information acquisition and attitudes. *Journal of Occupational and Organizational Psychology*, 75, 423–437.
- \*Cooper-Thomas, H. D., van Vianen, A., & Anderson, N. (2004). Changes in person-organization fit: the impact of socialization tactics on perceived and actual P-O fit. *European Journal of Work and Organizational Psychology*, 13, 52–78.
- Darlington, R. B. (1968). Multiple regression in psychological research and practice. *Psychological Bulletin*, 69, 161–182.
- \*Erickson, V. S. (1996). The effect of organizational socialization practices in critical care nursing on orientation program outcomes. Unpublished doctoral dissertation.
- Fisher, C. D. (1986). Organizational socialization: an integrative review. In K. M. Rowland & G. R. Ferris (Eds.), *Research in personnel and human resources management* (Vol. 4). Greenwich, CT: JAI Press.
- Fisher, C. D., & Gitelson, R. (1983). A meta-analysis of the correlates of role conflict and ambiguity. *Journal of Applied Psychology*, 68, 320–333.
- Fiske, S. T., & Dyer, L. M. (1985). Structure and development of social schemata: evidence from positive and negative transfer effects. *Journal of Personality and Social Psychology*, 48, 839–852.
- \*Fogg, R. J. (2003). The mentor-protégé relationship in an academic setting: contributions and outcomes. Unpublished doctoral dissertation. Emailed for further data 3/28.
- Galt, V. (2005, March 9). Kid-glove approach woos new grads. *The Globe and Mail*, C1, C3.
- \*Grant, E. S., & Bush, A. J. (1996). Salesforce socialization tactics: building organizational value congruence. *The Journal of Personal Selling and Sales Management*, 16, 17–32.
- \*Gruman, J. A., Saks, A. M., & Zweig, D. I. (2006). Organizational socialization tactics and newcomer proactive behaviors: an integrative study. *Journal of Vocational Behavior*, 69, 90–104.
- \*Hart, Z. P., & Miller, V. D. (2005). Context and message content during organizational socialization: a research note. *Human Communication Research*, 31, 295–309.
- Hausknecht, J. P., Day, D. V., & Thomas, S. C. (2004). Applicant reactions to selection procedures: an updated model and meta-analysis. *Personnel Psychology*, 57, 639–683.
- Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis*. Orlando, FL: Academic Press.
- Howell, D. (1995). *Fundamental statistics for the behavioral sciences* (3rd ed.). Belmont, CA: Duxbury Press.
- Howell, D. (1997). *Statistical methods for psychology* (4th ed.). Belmont, CA: Duxbury Press.

- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis: correcting error and bias in research findings*. Newbury Park, CA: Sage.
- Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Performance*, 36, 16–78.
- \*Jones, G. R. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal*, 29, 262–279.
- Judd, C. M., & Kenny, D. A. (1981). Process analysis: estimating mediation in treatment evaluations. *Evaluation Review*, 5, 602–619.
- Kammeyer-Mueller, J. D., & Wanberg, C. R. (2003). Unwrapping the organizational entry process: disentangling multiple antecedents and their pathways to adjustment. *Journal of Applied Psychology*, 5, 779–794.
- \*Kim, T-Y., Cable, D. M., & Kim, S-P. (2005). Socialization tactics, employee productivity, and person-organization fit. *Journal of Applied Psychology*, 90, 232–241.
- Kirschenbaum, S. S. (1992). Influence of experience on information-gathering strategies. *Journal of Applied Psychology*, 77, 343–352.
- \*Klynn, B. J. (2001). Getting new executives on board: investigating an integrated theory of organizational socialization. Unpublished doctoral dissertation.
- Kristof, A. L. (1996). Person-organization fit: an integrative review of its conceptualisation, measurement, and implications. *Personnel Psychology*, 49, 1–50.
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: a meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, 58, 281–342.
- \*Laker, D. R., & Steffy, B. D. (1995). The impact of alternative socialization tactics on self-managing behavior and organizational commitment. *Journal of Social Behavior & Personality*, 10, 645–660.
- Lester, R. E. (1987). Organizational culture, uncertainty reduction, and the socialization of new organizational members. In S. Thomas (Ed.), *Culture and communication: Methodology, behavior, artifacts, and institutions* (pp. 105–113). Norwood, NJ: Ablex.
- Meglino, B. M., DeNisi, A. S., & Ravlin, E. C. (1993). Effects of previous job exposure and subsequent job status on the functioning of a realistic job preview. *Personnel Psychology*, 46, 803–822.
- \*Mignerey, J. T., Rubin, R. B., & Gorden, W. I. (1995). Organizational entry: an investigation of newcomer communication behavior and uncertainty. *Communication Research*, 22, 54–85.
- Miller, V. D., & Jablin, F. M. (1991). Information seeking during organizational entry: influences, tactics, and a model of the process. *Academy of Management Review*, 16, 92–120.
- \*Orpen, C. (1995). The effect of socialization tactics on career success and satisfaction: a longitudinal study. *Psychological Studies*, 40, 93–96.
- \*Riordan, C. M., Weatherly, E. W., Vandenberg, R. J., & Self, R. M. (2001). The effects of pre-entry experiences and socialization tactics on newcomer attitudes and turnover. *Journal of Managerial Issues*, 13, 159–176.
- Rynes, S. L., & Cable, D. M. (2003). Recruitment research in the twenty-first century. In W. C. Borman & D. R. Ilgen (Eds.), *Handbook of psychology: industrial and organizational psychology* (Vol. 12, pp. 55–76). New York, NY: John Wiley & Sons.
- Saks, A. M., & Ashforth, B. E. (1997a). Organizational socialization: making sense of the past and present as a prologue for the future. *Journal of Vocational Behavior*, 51, 234–279.
- \*Saks, A. M., & Ashforth, B. E. (1997b). Socialization tactics and newcomer information acquisition. *International Journal of Selection and Assessment*, 5, 48–61.
- Saks, A. M., & Ashforth, B. E. (1997c). A longitudinal investigation of the relationships between job information sources, applicant perceptions of fit, and work outcomes. *Personnel Psychology*, 50, 395–426.
- \*Saks, A. M. & Cote, S. (2005). Socialization via emotion: the mediating role of emotions in the relationship between socialization tactics and newcomer adjustment. Paper presented at the annual meeting of the Administrative Sciences Association of Canada, Toronto.
- Schmidt, F. L., & Hunter, J. E. (2001). Meta-analysis. In N. Anderson, D. Ones, H. Kepir Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work and organizational psychology* (Vol. 1, pp. 51–70). London: Sage.
- Van Maanen, J. (1976). Breaking in: socialization to work. In R. Dubin (Ed.), *Handbook of work, organization, and society* (pp. 67–130). Chicago: Rand McNally.
- Van Maanen, J., & Schein, E. H. (1979). Toward a theory of organizational socialization. In B. M. Staw (Ed.), *Research in organizational behavior* (Vol. 1). Greenwich, CT: JAI Press.

- Viswesvaran, C., & Ones, D. S. (1995). Theory testing: combining psychometric meta-analysis and structural equations modeling. *Personnel Psychology*, *48*, 865–885.
- Wanous, J. P. (1992). *Organizational entry: recruitment, selection, orientation, and socialization of newcomers*. Reading, MA: Addison-Wesley.
- \*Weatherly, E. W. (2000). Newcomer and insider proaction in organizational socialization. Unpublished doctoral dissertation.