DOWN BUT NOT OUT:
NEWCOMERS CAN COMPENSATE FOR LOW VERTICAL ACCESS WITH STRONG HORIZONTAL TIES AND FAVORABLE CORE SELF-EVALUATIONS

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Abstract

We draw upon and extend socialization resources theory to explain how organizational newcomers leverage their social capital resources (i.e., vertical access and horizontal tie strength within their communication networks) and personal resources (i.e., core self-evaluations) to learn about and assimilate into their work and organizations. The findings of a multi-wave study of organizational entrants in China reveal the synergistic effects of relational and personal resources for newcomer adjustment. Newcomers learn and assimilate effectively not only when they have vertical connections to high-status organization members but also when they can compensate for their lack of high-status connections by leveraging their strong horizontal ties with peers and favorable core self-evaluations. These findings provide practical perspective on how to tailor newcomer onboarding practices to facilitate effective newcomer adjustment.

Keywords: core self-evaluations; newcomer adjustment; social capital; social networks; socialization; tie strength; vertical access
Organizational newcomers use their communication networks to access the information, support, and resources they need to reduce uncertainty, facilitate adjustment, and achieve success (Bauer & Erdogan, 2014; Fang, Duffy, & Shaw, 2011; Miller & Jablin, 1991; Morrison, 2002). Researchers and practitioners alike have acknowledged that newcomers with *vertical access*—connections to high-status organization members in their communication networks—are likely to learn about and assimilate into new work settings more effectively than those who lack vertical access (Fang et al., 2011; Morrison, 2002). Understandably, immediate supervisors and mentors are key sources of tacit knowledge regarding how lower-level tasks should be performed and how those jobs fit within broader organizational systems (Kammeyer-Mueller & Wanberg, 2003; Ostroff & Kozlowski, 1992). They can give new recruits unique developmental opportunities through discretionary work assignments, delegated responsibility, and social credentials that signal acceptance and inclusion within their workgroups and organizations (Bauer, Morrison, & Callister, 1998; Jokisaari & Nurmi, 2009; Kammeyer-Mueller & Wanberg, 2003).

The importance of high-level organizational insiders as sources of social capital and work-related resources is well established in the organizational socialization literature (Major & Kozlowski, 1997; Nelson & Quick, 1991). Emerging socialization resources theory posits “that the transition to a new job or role is inherently challenging and stressful, and that presenting newcomers with the resources they need to cope with the challenge is the most effective and efficient way to foster their adjustment and successful socialization” (Saks & Gruman, 2012, p. 45). This theory indicates that high-level insiders such as supervisors and mentors are prominent conduits for newcomers to access vital transitional assistance including feedback, recognition, training, developmental job assignments, direction, and other work resources (Ellis, Bauer, Mansfield, Erdogan, Truxillo, & Simon, 2015; Saks & Gruman, 2012).
Although newcomers view interactions with high-status insiders as most helpful for their adjustment, many new recruits have limited or no access to these important socialization agents (Hurst, Kammeyer-Mueller, & Livingston, 2012; Louis, Posner, & Powell, 1983; Nelson & Quick, 1991) through no fault of their own and for various reasons, making it much more difficult to become proficient in fulfilling their work responsibilities, learn about their organizations, and assimilate into social groups. They may be new to the region and know few local people (Putnam, 2001), and they may have found their jobs without being referred by high-status contacts. New employees who enter nontraditional work roles often struggle to form and mobilize social relations with very different high-level senior colleagues (Ensel, 1979; Ibarra, 1993, 1995; Kanter, 1977). However, past socialization scholarship provides these new recruits limited guidance for effective learning and assimilation in the absence of high-status connections. Socialization resources theory has also been silent about this issue despite its identification of a rich tapestry of resources that can help newcomers adjust.

Our research draws upon and extends socialization resources theory to address resource requirements for a broader set of organizational newcomers, and especially for those who lack vertical access in their communication networks. Departing from a ‘one size fits all’ frame of reference, we affirm that the difficulties of learning and assimilation associated with deficient vertical access can be overcome through alternative means. Emerging scholarship on the organizational careers of women and ethnic minorities who lack high-status ties suggests that they may be unable to compensate by simply conforming and working harder to form such ties—for example, by “paying their dues” and “beating others at their own game”—and that their unique circumstances require innovative means that entail working smarter rather than harder
(Ibarra, 1995, 1997; Ibarra & Smith-Lovin, 1997). For new recruits who lack vertical access, working smarter means better utilizing the relational and personal resources at their disposal.

Our research contributes to socialization scholarship by advancing our understandings of the resource requirements for effective newcomer adjustment. First, our model delineates the unique effects of two relational resources—vertical access (i.e., instrumental reach to sources of resources at high levels within an organization) and horizontal tie strength (i.e., the capacity of one’s network linkages to peers as conduits for resources to flow)—on newcomer learning and assimilation (Burt, 1992; Lin, 1999a, 2000). Although dyadic exchange relations with supervisors and mentors are known to be beneficial for newcomer adjustment (e.g., Bauer & Green, 1998; Bauer, Erdogan, Liden, & Wayne, 2006; Li, Harris, Boswell, & Xie, 2011; Jokisaari, 2013; Nifadkar & Bauer, 2016; Sluss & Thompson, 2012), our framework reveals the potential benefits of access more generally to high-level members, many of whom may not be direct supervisors or mentors. Beyond this, our model also incorporates strong horizontal ties as an alternative source of resources. Specifically, we propose that transitioning newcomers can adjust effectively when they have sufficiently strong communication ties with peers to correct misunderstandings (Papa, 1990), resolve problems (Orr, 1996), and transmit relevant information and resources in a timely manner (Anderson, 2008).

Second, our work extends socialization resources theory and responds to recent calls for socialization researchers to examine the determining effects of personal resources, and core self-evaluations in particular, on socialization outcomes (Ashforth, Sluss, & Harrison, 2007; Hurst et al., 2012). Specifically, we theorized that core self-evaluations—people’s fundamental beliefs about themselves and their functioning in the world (Judge, Erez, & Bono, 1998)—give the impetus for action and persistence that newcomers need to learn and assimilate (see Ashforth et
As such, newcomers who have favorable core self-evaluations are better able to proactively explore and experiment, draw from other life experiences to make sense of work situations, and adapt their role identities and career narratives to situational demands (Ashforth et al., 2007). Thus, although scholars have acknowledged the potential importance of core self-evaluations for newcomer adjustment, our research is the first to provide empirical evidence concerning such linkages and theory to guide future inquiry.

Third, we model and explain the synergistic effects of personal resources (core self-evaluations) and social capital (vertical access and horizontal tie strength) on newcomer learning and assimilation. Recent empirical work and reviews of socialization scholarship have highlighted the importance of both personal resources (see Bauer & Erdogan, 2014; Hurst et al., 2012; Li et al., 2011) and network-based social capital (e.g., Jokisaari, 2013; Morrison, 2002) for effective employee adjustment, but their interactive effects remain unexamined (see Bauer & Erdogan, 2014; Ellis et al., 2015). Especially for newcomers who lack vertical access to high-status organization members, exploitation of social capital resources (e.g., their strong ties with peers) requires impetus for action and persistence over time (Adler & Kwon, 2002; Fang et al., 2011; Stevenson & Greenberg, 2000). Thus, we theorize that newcomers who lack vertical access can adjust effectively when they have both strong horizontal ties and favorable core self-evaluations. By drawing attention to this configurational aspect of socialization factors, we suggest new directions for socialization scholarship.

Direct Effects of Social Capital and Personal Resources

To overcome uncertainties associated with newcomer status, and to establish themselves as legitimate organization members (Berger & Calabrese, 1975; Fisher, 1986), new employees must acquire explicit and tacit knowledge to perform their jobs competently (task mastery) and
understand the circles of power that determine how things get done \textit{(political knowledge)} (Chao, O’Leary-Kelly, Wolf, Klein, & Gardner, 1994). They must also gain acceptance and find their place within a workgroup \textit{(social integration)} and organization \textit{(organizational identification)} (Saks & Ashforth, 1997). These aspects of learning and assimilation are key indicators of successful newcomer adjustment that have attendant implications for new employee job attitudes and behaviors, including job satisfaction and job performance (see Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007; Bauer & Erdogan, 2014; Morrison, 2002; Saks & Gruman, 2012).

The organizational socialization literature has acknowledged that newcomers must deal with uncertainties and unknowns during the organizational entry process (see Bauer et al., 1998; Bauer et al., 2007). Socialization resources theory has emerged of late as a framework for understanding and inventorying the resources available to help newcomers as they contend with uncertainties, and are socialized into new jobs and work roles (Saks & Gruman, 2011, 2012, 2014). In particular, this theory positions higher-level organization members and lateral relations with coworkers as key sources of the resources needed for uncertainty reduction—supervisors and mentors can provide feedback, recognition, appreciation, developmental job assignments, direction through planning, and access to training; peers can provide more general support, assistance, information, feedback, and encouragement (Saks & Gruman, 2011, 2012, 2014).

Highly consistent with the perspective of socialization resources theory, social capital researchers contend that newcomers often have personal networks of communication ties with organizational insiders who can provide information, advice, support and other resources they need to reduce uncertainties and help them adjust (Fang et al., 2011; Jokisaari, 2013; Morrison, 2002). Social capital benefits accrue over time as individuals mobilize their communication networks at work to acquire information, influence, credentials, and reinforcement (Lin, 1999a).
Prior research on individual performance and career success has paid systematic attention to two social capital resources: vertical access reflecting upward reach of communications ties to people at higher levels and horizontal tie strength reflecting capacity of communication ties with peers at the same level (e.g., Cross & Cummings, 2004; Ibarra, 1995; Pil & Leana, 2009). Following past scholarship on newcomer communication networks (e.g., Fang et al., 2011; Jokisaari, 2013), we focus on how the vertical and horizontal communication ties of newcomers with different socialization agents affects their adjustment.

**Vertical Access**

Newcomers with vertical access, also termed *contact status*, have network contacts who are positioned high within an established status hierarchy (Lin, 1982, 1999b). Vertical access is a key structural source of social capital predicting perceived prestige (Faulkner, 1983), status attainment (Lin, 1999b), job performance (Cross & Cummings, 2004; Pil & Leana, 2009), and career success (Seibert, Kraimer, & Liden, 2001). We theorize that vertical access also facilitates newcomer learning and assimilation.

Newcomers have much to learn about their job responsibilities, work procedures, and organizational politics. High-level contacts in managerial positions are preferred sources for information on job responsibilities and perspective on the political environment (Bauer et al., 1998; Lin, 2000), as well as unique developmental opportunities through discretionary assignments and delegated responsibilities. In addition, high-status members often have relevant job experience and tacit knowledge of how jobs fit within organizational systems (Morrison, 2002; Ostroff & Kozlowski, 1992). They are better able than either fellow newcomers or experienced peers to explain the nuances of informal organizational politics (Kammeyer-Mueller & Wanberg, 2003; Ostroff & Kozlowski, 1992). Thus, communication ties to high-level
organizational actors can help newcomers achieve task mastery more easily and gain political advantage through direct access to the organization’s dominant coalition and the resources at its disposal (Brass, 1984; Ibarra, 1995). As such, higher vertical access is expected to be associated with greater task mastery and political knowledge.

High-status connections also facilitate newcomer assimilation more generally and strengthen feelings of social integration and organizational identification. When interactions with authority figures are supportive and caring (Bauer & Green, 1998), and afford access to work opportunities and organizational information, newcomers come to identify with their organizations and feel accepted within their social groups (Major, Kozlowski, Chao, & Gardner, 1995; Ostroff & Kozlowski, 1992). Newcomers also gain social credentials from having high-status insiders in their communication networks—others not only see them as valuable members but also treat them as such (Fang et al., 2011). Finally, newcomers with vertical access benefit from favorable task assignments and resource allocations (Pil & Leana, 2009), which enhance their feelings of legitimacy within their organizations and social groups. Therefore:

**Hypothesis 1:** Vertical access is positively associated with newcomer learning (task mastery and political knowledge) and assimilation (social integration and organizational identification).

**Horizontal Tie Strength**

Whereas vertical access indicates the presence of high-level communication ties, horizontal tie strength captures the capacity of communications ties with peers to transmit information and resources (Ibarra, 1995; Morrison, 2002). Our perspective on vertical access follows Burt’s (1992) view that it is the mere presence or absence of high-status connections and not their strength that matters. For horizontal relations with colleagues, however, tie strength—
the relational bandwidth that affords relevant and timely information exchange between colleagues—has particular importance (e.g., McFadyen, Semadeni, & Cannella, 2009; Morrison, 2002; Nelson, 1989). Strong communication ties are associated with improved access to work and organizational knowledge (Anderson, 2008), more effective problem solving (Orr, 1996), and enhanced individual performance (Papa, 1990). Consistent with this understanding, newcomers consider daily interactions with peers as the most available and helpful socialization practice (Louis et al., 1983; Nelson & Quick, 1991). Thus, although weak ties may function as bridges to non-redundant information, novel ideas, and potentially strategic information (Granovetter, 1973), we focus on strong communication ties with peers as a basis for collaboration, resource sharing, and mutual support. We propose that strong horizontal ties facilitate both newcomer learning and assimilation.

Strong horizontal ties contribute to task mastery and political knowledge by facilitating the flow of timely and relevant information about work and organizational roles (McFadyen & Cannella, 2004; McFadyen et al., 2009; Tortoriello & Krackhardt, 2010; Tortoriello, Reagans, & McEvily, 2012). Beyond simply reducing ambiguity and uncertainty for newcomers (Ostroff & Kozlowski, 1992), they also afford collegiality benefits that are generally not present in supervisor–subordinate relations. Thus, to a greater extent with peers than with supervisors, newcomers can dispense with formality and self-censorship, penetrate the heart of issues, and disclose personal vulnerabilities or weaknesses if they have strong communication ties with peers (Carroll & Teo, 1996).

In addition to the informational benefits that are critical for learning, strong horizontal ties can also enhance newcomer social integration and organizational identification. Strong communication ties with peers become conduits through which the acceptance, social support,
and mutual obligation that shape social identity can flow to newcomers (Flap, 1991; Lin, 2000). With the experience of friendship, acceptance, counseling, confirmation, and role modeling that strong-tied peers afford, newcomers become assured of their acceptance within their social groups and organizations (Coleman, 1988; Higgins & Kram, 2001). Therefore:

*Hypothesis 2:* Horizontal tie strength is positively associated with newcomer learning (task mastery and political knowledge) and assimilation (social integration and organizational identification).

**Core Self-evaluations**

For organizational newcomers, individual differences—reflected in patterns of thought, feeling and action that persist over time—represent personal resources for mastery and control of their surrounding environments and are thus particularly critical for dealing with the uncertainties of organizational entry (Bauer & Erdogan, 2014; Ellis et al., 2015; Hurst et al., 2012). Prior studies have associated emotional stability or low neuroticism (Jones, Smith, & Johnston, 2005), self-esteem (Saks & Ashforth, 1997), self-efficacy (Saks, 1994), and locus of control (Spector & O’Connell, 1994) with positive socialization outcomes. Recent reviews of socialization scholarship have called for research to address the effect of core self-evaluations—a second-order construct comprising neuroticism, self-esteem, self-efficacy, and locus of control and collectively tapping into fundamental assessments of personal worthiness, competence, and capability (Judge et al., 1998)—on socialization processes and outcomes (see Ashforth et al., 2007; Hurst et al., 2012). It is surprising and problematic that socialization resources theory does not include personal resources that originate from individual differences and affect socialization outcomes, although scholars have recognized that personal resources such as core self-evaluations do have determining effects on newcomer adjustment (Ashforth et al., 2007; Ellis et
al., 2015; Hurst et al., 2012). We address the visible gap in socialization scholarship by incorporating core self-evaluations as meta-competencies that can help newcomers deal with socialization uncertainties (see Ashforth et al., 2007).

We posit that core self-evaluations help new recruits master their work tasks and better understand the political landscape. People who have favorable core self-evaluations are confident that they can successfully control their working environments (Kammeyer-Mueller, Judge, & Scott, 2009). They readily embrace challenging, learning-related work goals (Ferris, Rosen, Johnson, Brown, Risavy, & Heller, 2011). They are open to constructive criticism and feedback (Judge & Kammeyer-Muller, 2011) and take advantage of learning opportunities that allow them to master their new tasks and understand organizational politics and contexts (Simsek, Heavey, & Viega, 2010). As such, we expect new employees with favorable core self-evaluations to progress more rapidly along the newcomer learning curve. Past research has established that employees with higher core self-evaluations experience greater task mastery (Song & Chathoth, 2013), and we maintain that this linkage is especially pronounced for organizational newcomers.

Favorable core self-evaluations also facilitate more effective assimilation into workgroups and organizations. Our argument rests on the understanding that people tend to seek environments and behave in ways that help them maintain favorable self-views (Swann, 2005). Newcomers with favorable core self-evaluations can be expected to exhibit positive emotions (e.g., pleasure, friendliness), and contribute to the psychosocial environment by helping coworkers, promoting the organization, and refraining from harming the organization and its members (Chang, Ferris, Johnson, Rosen, & Tan, 2011). Consistent with this understanding, research conducted in both China and the United States has shown that employees with favorable core self-evaluations tend to enjoy positive interpersonal work relations and identify more
strongly with their organizations (Rode, Judge, & Sun, 2012; Song & Chathoth, 2013). Just as charismatic employees receive fairer supervisory treatment (Scott, Colquitt, & Zapata-Phelan, 2007), newcomers with favorable core self-evaluations engender a positive dynamic by which their collegial actions invite affirming responses from organizational insiders that facilitate their social integration and organizational identification (Fang et al., 2011). Therefore:

**Hypothesis 3:** Core self-evaluations are positively associated with newcomer learning (task mastery and political knowledge) and assimilation (social integration and organizational identification).

**Tailoring Strategies for Newcomer Adjustment**

Many organizational entrants are not positioned well to benefit from high vertical access. Fresh university graduates and economic migrants who flock to more prosperous cities for better jobs may have only limited access to senior advisers or mentors, and perhaps no access to demographically similar individuals at high levels (see Cox, 1991; Ibarra, 1995). And those who are most marginalized often stand to benefit least from high-status contacts. In contrast with in-group counterparts, out-group newcomers who desire to form high-status ties must reach across social boundaries and connect with people who are different from them—an effort that usually requires a greater investment of personal time and resources and yields fewer benefits.

Newcomers with low vertical access may be able to overcome their disadvantages by trying harder to form the needed ties. However, emerging scholarship on the contingent nature of career strategies suggests that these employees may also use fundamentally different approaches to achieve their developmental goals (see Ely, Ibarra, & Kolb, 2011). For instance, high-potential women managers—often minorities with limited ties to dominant coalitions—tend to form strong ties with strategic partners rather than weak bridging high-status ties in their efforts to
achieve career-related objectives (Burt, 1992; Ibarra, 1992; Ibarra & Smith-Lovin, 1997). Socialization environments are often designed to nurture collegial relations and strengthen communication ties between new recruits and other employees at the same level. New employees often value their relationships with coworkers that are characterized by frequent and intensive interactions (Bauer et al., 1998; Cooper-Thomas & Anderson 2006). In turn, organizations often implement formal practices encouraging coworkers to devote time and effort to help new colleagues socialize and adjust (Bauer et al., 1998; Saks & Ashforth, 1997). Thus, we maintain that those who lack vertical access can leverage their strong communication ties with peers to compensate for any real or perceived deficit in vertical access. More to the point, leveraging strong horizontal ties for learning and assimilation is a preferred strategy to counter the lack of equal access to parties at the top of the organizational hierarchy.

However, strong horizontal ties enhance learning and assimilation only if they are effectively mobilized (Adler & Kwon, 2002), and individuals can be more or less motivated to initiate and persist in their efforts to capitalize on social ties (Fang et al., 2011; Fang & Shaw, 2009; Stevenson & Greenberg, 2000). For newcomers with low vertical access, we theorize that those who have more favorable core self-evaluations have greater initiative and persistence in mobilizing strong communication ties with peers. In support, findings from a study of the intergenerational effects of parent income, education, and occupational prestige on child income revealed that parent achievements benefitted only the children who had favorable core self-evaluations (Judge & Hurst, 2007). Extrapolating from Judge and Hurst’s (2007) theory and findings concerning core self-evaluation effects on the ability to capitalize on family advantages, we maintain that newcomers can compensate for deficient vertical access by leveraging strong peer ties when they have favorable core self-evaluations.
We argue that core self-evaluations moderate the positive associations of horizontal tie strength with socialization outcomes for at least two reasons. First, core self-evaluations affect whether newcomers view their strong communication ties with peers positively and believe that such ties can facilitate learning and assimilation. This positive regard for strong horizontal ties follows directly from the ongoing dynamics of self-verification (see Swann, 2005) whereby newcomers with favorable self-views perceive such ties as valuable and appropriate for someone like themselves (Swann, 2005). Indeed, people who have favorable core self-evaluations and consider themselves worthy and able to cope with exigent circumstances tend to “bring a ‘positive frame’ to the events and situations they encounter” (Judge, Locke, Durham, & Kluger, 1998, p. 31). As a consequence of this positive framing, newcomers who have favorable core self-evaluations will see strong communication ties with peers, which signal peer acceptance and recognition, as relational resources to be leveraged in the service of uncertainty reduction, personal development, learning, and assimilation (see Ferris et al., 2011; Judge et al., 1998).

Second, core self-evaluations affect whether newcomers proactively engage with their circumstances, persist in goal-directed actions (Bono & Colbert, 2005; Chang et al., 2011), and leverage their relational resources from strong-tied peers to achieve desirable outcomes (Judge & Hurst, 2007). Whereas direct access to high-status contacts provides a rapid path to information and social standing, mobilizing strong communication ties with peers for learning and assimilation takes time and perseverance. Consequently, newcomers with low core self-evaluations may become discouraged when desired benefits materialize slowly. In contrast, newcomers with favorable core self-evaluations can be expected to persist in their goal pursuit until they achieve success. Taken together, we predict that new employees who lack vertical
access will mobilize their strong horizontal ties with greater intensity and persistence when their core self-evaluations are high rather than low.

Specifically, newcomers with low vertical access can mobilize their strong horizontal ties in the service of both learning and assimilation. Indeed, we posit that this is especially the case for newcomers with favorable core self-evaluations, who are confident of their capabilities and worthiness and thus take full advantage of the information and resources for task mastery and political understanding that can be accessed through engagement with strong-tied peers. Further, as strong communication ties with peers are conduits for positive sentiments towards workgroups and organizations, we posit that newcomers with access to them will more readily gain social acceptance and become identified with their workgroups and organizations. By way of contrast, newcomers with low core self-evaluations, who doubt their capabilities and worthiness, may see less potential to learn from, and consequently be less motivated to mobilize, their strong horizontal ties. Further, strong horizontal ties for these newcomers may amplify the negative sentiments of employees who are isolated from high-level members (e.g., “misery loves company”), and thus reduce the likelihood of their gaining inclusionary acceptance in and becoming identified with their work communities.

The interaction of horizontal tie strength and core self-evaluation we hypothesize is unique to newcomers who lack vertical access. By way of contrast, new recruits who have high vertical access can be expected to effectively learn and assimilate because high-status organization members play the most crucial roles in ongoing socialization processes (Bauer & Green, 1998; Berlew & Hall, 1966; Morrison, 1993; Ostroff & Kozlowski, 1992). Thus in keeping with Hypotheses 2 and 3, for newcomers with high vertical access we see incremental or additive benefit from the main effects of strong horizontal ties and favorable core self-
evaluations. In short, we propose the three-way interaction of vertical access, horizontal tie strength, and core self-evaluations in models predicting newcomer adjustment, such that horizontal tie strength and core self-evaluations interact positively for newcomers with low rather than high vertical access. Therefore:

**Hypothesis 4:** A three-way interaction among vertical access, horizontal tie strength, and core self-evaluations predicts newcomer learning (task mastery and political knowledge) and assimilation (social integration and organizational identification), such that the positive interaction of horizontal tie strength and core self-evaluations holds only for newcomers who have low rather than high vertical access. Specifically, when vertical access is low, horizontal tie strength has a stronger positive relationship with newcomer learning and assimilation for those with high rather than low core self-evaluations.

**Methods**

**Participants and Procedures**

To test the hypotheses, we invited 300 graduating business students from a university in Southern China to participate in a three-wave study. A research team member emailed students to solicit their participation two months before their graduation and thus before they started their new full-time jobs in various occupations (e.g., accounting, marketing, and human resources). In all, 248 participants completed an initial online survey that included core self-evaluations and demographic characteristics. After their graduation, we re-contacted participants who completed the first survey via email to request the specific date when they started their jobs and invite them to participate in the second and third online surveys. Six months after participants started their jobs, we emailed them to solicit their second-wave participation and gathered 153 usable surveys. This questionnaire contained an egocentric measure of communication networks they
had formed in their new jobs. Three months after the second survey (i.e., 9 months after they started their jobs), we again contacted participants and gathered 146 usable third-wave surveys. The response rate (49%) compares favorably with other multi-wave socialization studies (e.g., Kammeyer-Mueller & Wanberg, 2003). The third questionnaire contained indicators of learning (task mastery and political knowledge) and assimilation (social integration and organizational identification). Participants were 22-years-old on average, and were primarily women (77%). These sample characteristics excluded many potentially confounding factors (e.g., prior experience and tenure) that influence social capital development and newcomer adjustment.

Timing

Given the emergent nature of organizational socialization phenomena and the importance of timing decisions concerning data collection, we consulted the literature for guidance. Researchers have tracked socialization effects over various time intervals (e.g., 3 months, 6 months, 9 months, and 1 year), and a 3-month interval is perhaps most common (Bauer et al., 1998; Bauer et al., 2007). However, the socialization literature provides few theoretically grounded benchmarks for when and how often certain processes and outcomes should be assessed (see Ashforth, 2012; Ashforth et al., 2007; Bauer et al., 1998; Klein & Heuser, 2008; Saks & Ashforth, 1997). Also, no specific guidance is available on the optimal schedule for capturing patterns of newcomer social networks, and empirical research on newcomer networks has been extremely limited (except Morrison, 2002; Jokisaari, 2013). Thus, we based the timing of our data collection, especially the second and third surveys, on the precedent of previous socialization studies and broader perspective from the organizational literature on the matter of when to measure X and Y (cf. Mitchell & James, 2001).
We collected first-round data 2 months before the participants graduated. Our focus at this time was on stable demographics (e.g., age and gender) and individual differences (including core self-evaluations). For second-round measurement of vertical access and horizontal tie strength within newcomer communication networks, we followed the advice of socialization scholars to capture working and social relationships 4 to 6 months after the newcomers started their jobs (see Klein & Heuser, 2008). For instance, newcomer-boss relationships tend to stabilize at the six-month mark (Mitchell & James, 2001). This may explain why Nifadkar and Bauer (2016) measured newcomers’ relationships with coworkers 6 months and Morrison (2002) captured newcomers’ social network relations with various insiders 9 months after their organizational entry. Consistent with this wisdom, and knowing that newcomers are unlikely to make immediate progress in developing ties to high-status members and strong communication ties with peers, we captured communication networks 6 months after the participants entered their organizations. Finally, scholars generally affirm that some degree of learning and assimilation can be reasonably expected within 6 to 12 months after organizational entry (Klein & Heuser, 2008). Longer time-frames “allow outcomes to be more fully influenced by the socialization processes” (Bauer & Green, 1998, p. 221). Following prior empirical studies (e.g., Morrison, 1993, 2002; Bauer & Green, 1998), we collected third-round data on learning and assimilation 3 months after the second survey.

Measures

Participants completed self-report surveys in Chinese, their native language. We used published multi-item measures with known psychometric properties, and followed established procedures for translation and back-translation of measures and items (Brislin, 1970). Unless otherwise specified, response options ranged from 1 (strongly disagree) to 7 (strongly agree).
Core self-evaluations (Time 1). We used Judge and colleagues’ (2003) 12-item core self-evaluation measure (α = .81). Example items: “I determine what will happen in my life” and “I am capable of coping with most of my problems.” Response options ranged from 1 (strongly disagree) to 7 (strongly agree).

Vertical access and horizontal tie strength (Time 2). Following Morrison (2002), we used Marsden’s (1990) egocentric network approach to measure vertical access and horizontal tie strength within newcomer communication networks. Participants identified up to 14 “people at your company with whom you communicate for job-related or firm-related information or you can discuss job-related problems.” Participants (called ego) indicated whether each individual (called alter) was a manager or non-manager (including first year, experienced, and senior staff), and the frequency of communication with alters (1 = once or twice per month, 2 = three times or more per month, 3 = several times a week, 4 = every day). Following previous studies (e.g., Cross & Cummings, 2004; Lin, 1999a; Seibert et al., 2001), we measured vertical access as the number of alters who were managers. Also following previous studies (e.g., Ibarra, 1995; Morrison, 2002; Nelson, 1989; Pil & Leana, 2009), we computed horizontal tie strength as the average frequency of communication with non-managerial alters.

Newcomer adjustment—task mastery, political knowledge, social integration, and organizational identification (Time 3). Following most prior socialization research, we measured learning and assimilation outcomes based on newcomers’ self-reports (see Bauer et al., 1998; Bauer et al., 2007). Task mastery (α = .83) was assessed with 7 items (Morrison, 2002); for example, “I have learned how to successfully perform my job in an efficient manner.” Political knowledge (α = .73) was assessed with 6 items (Chao et al., 1994); for example, “I know which people are the most influential in my organization.” Social integration (α = .84) was measured
with 7 items (Morrison, 2002); for example, “I feel accepted by my coworkers.” *Organizational identification* \((\alpha = .86)\) was assessed with 5 items (Smidts, Pruyn, & van Reil, 2001); for example, “I experience a strong sense of belonging to this organization.”

Controls *(Time 1 and Time 2).* We included several control variables based on theoretical and methodological considerations (see Bernerth & Aguinis, 2016; Spector & Brannick, 2011). Specifically, demographics such as gender and age may represent life experiences relevant to the socialization process and thus are associated with newcomer socialization outcomes (e.g., Bauer et al., 1998; Saks & Ashforth, 1996). We captured *gender* \((0 = \text{man}, 1 = \text{woman})\) and *age* (in years) at Time 1. For controls at Time 2, *organization size* is said to influence the development of social capital in communication networks (Seibert et al., 2001) and newcomer adjustment (Kim, Cable, & Kim, 2005). We measured organization size with participant estimates of the number of full-time employees in their organizations. We controlled for *jobs* that newcomers perform, which can affect their opportunities for informal interactions with others and the development of their workplace social networks (Straits, 1996). Participants chose the job category best describing their work from four options—*accounting, human resources, marketing,* and *other.* We then operationalized job category with three dummy variables, leaving the *other* category as the reference group. Finally, we included *network size*—the number of alters identified in their communication networks—which has been associated with vertical access, horizontal tie strength, and newcomer adjustment (see Morrison, 2002).

**Analysis**

Following the established two-step procedure for data analysis (Anderson & Gerbing, 1988), we examined the measurement properties of our data (e.g., convergent and discriminant properties, and bias checks) before testing our hypotheses. Given the large number of items (37
items measuring 5 constructs) relative to the sample size (N = 146), we reduced the number of construct indicators by randomly assigning items to one of three composite indicators for each construct (see Landis, Beal, & Tesluk, 2000). We used confirmatory factor analysis to establish the adequacy of our five-factor theoretical model, comparing its fit indices with those of relevant alternative models, including (1) a single-factor model reflecting source effects only, (2) a two-factor model reflecting method effects only (grouping data in terms of the two rounds—Time 1 and Time 3—in which data on multi-item measures were collected) and (3) a three-factor model reflecting core self-evaluations and the two aspects of adjustment—learning (task mastery and political knowledge) and assimilation (social integration and organizational identification).

Finally, we used logistic regression to test for bias associated with differential participation time. These analyses entailed comparing gender, age, and core self-evaluations of respondents participating only in the early stages of the study with those participating throughout.

We used hierarchical regression to test our hypotheses concerning the main and three-way interactive effects of vertical access, horizontal tie strength, and core self-evaluations on newcomer adjustment. We computed interaction terms with mean-centered variables. To probe significant three-way interactions, we tested whether individual slopes differed from each other as hypothesized (Dawson & Richter, 2006). We also conducted simple slope analyses for the relationship of horizontal tie strength with newcomer adjustment under the four conditions represented by the varying degrees of core self-evaluations (low versus high) and vertical access (low versus high) (Cohen, Cohen, West, & Aiken, 2003). We specified high and low conditions as one standard deviation above and below the mean of each construct.
Results

Table 1 shows present descriptive statistics for and correlations among study variables. Table 2 shows hierarchical regression results that pertain to hypotheses tests. The reliability testing and confirmatory factor analyses results provide grounds for confidence in the convergent and discriminant properties of our data. The hypothesized five-factor model fit the data well ($\chi^2 = 134.19$, $df = 80$; $\chi^2/df = 1.68$; CFI = .94; GFI = .90; RMSEA = .07), and was substantially better than the relevant alternative models, including (1) a single-factor model ($\chi^2 = 679.85$, $df = 90$; $\chi^2/df = 7.55$; CFI = .39; GFI = .52; RMSEA = .21), (2) a two-factor model representing separate rounds of data collection ($\chi^2 = 527.64$, $df = 89$; $\chi^2/df = 5.93$; CFI = .55; GFI = .58; RMSEA = .18), and (3) a three-factor model representing the domains of core self-evaluations, learning, and assimilation ($\chi^2 = 254.91$, $df = 87$; $\chi^2/df = 2.93$; CFI = .83; GFI = .81; RMSEA = .12). Furthermore, chi square ($\chi^2$) tests of the significance of the change in model fit for the five-factor model relative to alternative models suggest 99% certainty ($p = .01$) that our theoretical model represented a significant improvement in model fit (Tabachnick & Fidell, 2001).

Finally, the logistic regression analyses comparing characteristics of respondents and non-respondents across the three survey administrations revealed that women had higher participation rates across the rounds of data collection. Thus we controlled for gender in our hypothesis testing. However, in our correlation and hierarchical regression analyses, two control variables—gender and accounting—were not correlated with other independent and dependent variables and did not predict socialization outcomes. Following suggestions to exclude such controls from the hierarchical regression analyses (Bernerth & Aguinis, 2016; Spector & Brannick, 2011), we omitted the two variables in our final analyses reported below.

====== Insert Tables 1 and 2 Here ======
Hypothesis Testing

We predicted that *vertical access* would be positively associated with newcomer learning (task mastery, political knowledge) and assimilation (social integration, organizational identification) (Hypothesis 1). Table 2 (Step 2) shows that vertical access was positively associated with political knowledge ($\beta = .22$, $p < .05$), but was not with task mastery ($\beta = .09$, n.s.), social integration ($\beta = .06$, n.s.), or organizational identification ($\beta = .11$, n.s.). Hypothesis 1 was partially supported for newcomer learning but not assimilation.

We predicted that *horizontal tie strength* would be positively associated with newcomer learning and assimilation (Hypothesis 2). Table 2 (Step 2) shows that horizontal tie strength was not related to task mastery ($\beta = -.05$, n.s.), political knowledge ($\beta = .08$, n.s.), social integration ($\beta = .13$, n.s.), or organizational identification ($\beta = .14$, n.s.). Hypothesis 2 was not supported.

We predicted that *core self-evaluations* would be positively associated with newcomer learning and assimilation (Hypothesis 3). Table 2 (Step 2) shows that core self-evaluations positively predicted task mastery ($\beta = .37$, $p < .001$) political knowledge ($\beta = .31$, $p < .001$), social integration ($\beta = .25$, $p < .01$), and organizational identification ($\beta = .22$, $p < .05$). Hypothesis 3 was fully supported for both learning and assimilation.

We predicted a three-way interaction among vertical access, horizontal tie strength, and core self-evaluations in models predicting learning and assimilation (Hypothesis 4). Specifically, we predicted that the positive interaction of horizontal tie strength and core self-evaluations would be stronger for newcomers with low rather than high vertical access. Table 2 (Step 4) shows that the three-way interaction term explained significant incremental variance in political knowledge ($\beta = -.23$, $p < .01$, $\Delta R^2 = .046$), social integration ($\beta = -.22$, $p < .01$, $\Delta R^2 = .044$), and organizational identification ($\beta = -.25$, $p < .01$, $\Delta R^2 = .053$), but not task mastery ($\beta = -.05$, n.s.,
\( \Delta R^2 = .002 \). Thus, Hypothesis 4 was supported for three of four criterion variables. Evidence pertaining to the form of significant three-way interactions is presented in the interaction plots (Figures 1, 2, and 3) and in our analyses of simple slopes and slope differences (Table 3).

For political knowledge, Figure 1 depicts the interaction of horizontal tie strength and core self-evaluations for low and high vertical access. Consistent with our hypothesis, slope difference tests (Table 3) reveal a significant interaction of horizontal tie strength and core self-evaluations when vertical access was low [slope (1) vs. slope (2), \( t = 3.55, p < .01 \)], but not when vertical access was high [slope (3) vs. slope (4), \( t = -1.17, n.s. \)]. In addition, the simple slope testing (Table 3) shows a significant association of horizontal tie strength with political knowledge when vertical access was low and core self-evaluations were high [slope (2): \( b = .66, t = 2.00, p < .05 \)], but not for low vertical access and low core self-evaluations [slope (1): \( b = -.16, t = -.44, n.s. \)], high vertical access and low core self-evaluations [slope (3): \( b = .06, t = .19, n.s. \)], or high vertical access and high core self-evaluations [slope (4): \( b = -.27, t = -.69, n.s. \)].

For social integration, Figure 2 depicts the interaction of horizontal tie strength and core self-evaluations for low and high vertical access. Consistent with our hypothesis, slope difference tests (Table 3) reveal a significant interaction of horizontal tie strength and core self-evaluations when vertical access was low [slope (1) vs. slope (2), \( t = 3.00, p < .01 \)], but not when vertical access was high [slope (3) vs. slope (4), \( t = -1.31, n.s. \)]. In addition, the simple slope testing (Table 3) shows a significant association of horizontal tie strength and social integration when vertical access was low and core self-evaluations were high [slope (2): \( b = .63, t = 3.04, p < .01 \)], but not for low vertical access and low core self-evaluations [slope (1): \( b = -.16, t = -.78, n.s. \)].
n.s.], high vertical access and low core self-evaluations [slope (3): $b = .22, t = 1.06, n.s.$], and high vertical access and high core self-evaluations [slope (4): $b = -.21, t = -.80, n.s.$].

For organizational identification, Figure 3 depicts the interaction of horizontal tie strength and core self-evaluations for low and high vertical access. Consistent with our hypothesis, slope difference tests (Table 3) reveals a significant interaction of horizontal tie strength and core self-evaluations when vertical access was low [slope (1) vs. slope (2), $t = 3.51, p < .01$], but when high vertical access was high [slope (3) vs. slope (4), $t = -1.17, n.s.$]. The simple slope testing (Table 3) shows a significant association of horizontal tie strength and organizational identification when vertical access was low and core self-evaluations were high [slope (2): $b = 1.03, t = 4.24, p < .001$], but not for low vertical access and low core self-evaluations [slope (1): $b = -.22, t = -.89, n.s.$], high vertical access and low core self-evaluations [slope (3): $b = .24, t = .93, n.s.$], and high vertical access and high core self-evaluations [slope (4): $b = -.29, t = -.85, n.s.$]. Therefore, Hypothesis 4 was supported for political knowledge, social integration, and organizational identification. The interaction of horizontal tie strength and core self-evaluations only predicted newcomer adjustment (political knowledge, social integration, and organizational identification) when vertical access was low.

Supplementary Analyses and Findings

We conducted supplementary analyses to more firmly establish the robustness of our significant findings, especially the three-way interaction of vertical access, horizontal tie strength, and core self-evaluations. First, we tested whether our findings would hold without the control variables included in our regression analyses. The results show that vertical access was a significant predictor of task mastery and political knowledge, horizontal tie strength was significantly related to organizational identification, and core self-evaluations was a significant
predictor of the four adjustment indicators. The robustness of the three-way interaction was established: horizontal tie strength and core self-evaluations had a significant interactive effect on newcomer adjustment (political knowledge, social integration, and organizational identification) only when vertical access was low, but not when vertical access was high. Also consistent with our findings, the simple slope test results shows that the relationships of horizontal tie strength with these three outcomes were significant only under the condition of low vertical access and high core self-evaluations, and not for the other three conditions.

Second, we conducted relative weight analyses to isolate the unique variance ($R^2$) in newcomer adjustment explained by vertical access, horizontal tie strength, core self-evaluations, and their three-way interaction (see Johnson, 2000; LeBreton, Tonidandel, & Krasikova, 2013). Beyond the statistical significance of individual regression coefficients that show the incremental predictive validity of predictor variables, relative weights isolate each predictor’s unique contribution the $R^2$, considering both its direct effect (i.e., its correlation with the criterion) and its effect when combined with the other variables in the regression model (Johnson & LeBreton, 2004). The main-effect testing (Step 2, Table 2) shows vertical access accounted for 23.14% of the explained variance in political knowledge, and core self-evaluations accounted for 40.90%, 35.87%, and 34.60% of the explained variance in task mastery, political knowledge, social integration, and organizational identification, respectively. The theorized three-way interaction (Step 4, Table 2) accounted for 17.39%, 15.19%, and 22.97% of the explained variance in political knowledge, social integration, and organizational identification, respectively.

Third, we tested whether our significant findings would hold if we followed past precedent and computed vertical access and tie strength with reference to all contacts in each communication network (see Lin, 1982; Ibarra, 1995; Morrison, 2002). In the present study we
operationalized vertical access as a count of *managers* within a newcomer’s listed contacts, and tie strength as the average frequency of communication with *non-managers*. Thus, we computed a more nuanced measure of vertical access as the average hierarchical level of all alters (1 = first year staff, 2 = experienced staff, 3 = senior staff, 4 = manager) (e.g., Lin, 1982; Ibarra, 1995; Morrison 2002), and tie strength as the average frequency of communication (1 = once or twice per month, 2 = three times or more per month, 3 = several times a week, 4 = every day) with all alters (i.e., managers and non-managers) (e.g., Ibarra, 1995; Morrison, 2002; Nelson, 1989). Overall, the results of analyses with these measures are highly consistent with our findings. The three-way interaction of vertical access, tie strength, and core self-evaluations explained unique variance in political knowledge, social integration, and organizational identification. Also, the two-way interaction of tie strength and core self-evaluations was significant when vertical access was low but not when vertical access was high. Finally, the simple slope test results show that tie strength was significantly related with the three outcomes only under the condition of low vertical access and high core self-evaluations, and not for the other three conditions.

**Discussion**

In this study of organizational newcomers, we find that social capital resources embedded in communication networks (vertical access and horizontal tie strength) and employee personal resources (core self-evaluations) function *interactively* to predict newcomer learning and assimilation. New recruits with low vertical access (i.e., limited or no managerial connections) need *both* strong horizontal ties and favorable core self-evaluations to gain the *synergistic* positive effects on political knowledge, social integration, and organizational identification. Across our measures of learning and assimilation, employees deficient in vertical access but having both strong horizontal ties and favorable core self-evaluations could adjust as effectively
as those with high-level connections. In contrast, when new recruits had high vertical access, core self-evaluations, which are positively associated with task mastery, political knowledge, social integration, and organizational identification, did not condition how effectively newcomers could leverage their strong communication ties with peers to learn and assimilate.

Having hypothesized a three-way interaction among vertical reach and horizontal tie strength as social capital resources and core self-evaluations as personal resources, we were not surprised to find mixed support for our main-effect hypotheses: core self-evaluations consistently predicted improved learning and assimilation; vertical access predicted improved political knowledge but no other socialization outcomes; and horizontal tie strength failed to predict any of the four adjustment indicators. Overall, our findings highlight the equifinality of socialization outcomes, and thus inherent limitations in traditional main-effect models of newcomer adjustment. Rather than endorsing a ‘one size fits all’ approach to newcomer socialization that calls for remedial action to counter deficient vertical access, our findings show that no singular or consensus approach to learning and assimilation is equally effective for all new employees. Instead, they highlight unique configurations of structural and personal resources that can facilitate newcomer adjustment.

Theoretical Contributions

Our research draws upon and extends socialization resources theory in very practical ways, and makes several key contributions to socialization scholarship. First, we broaden the scope of organizational entrants that socialization resources theory can address by revealing the potential for newcomers who lack vertical access to effectively adjust through strong horizontal ties. The issue is extremely practical in that socialization researchers have given little attention to new employees who, through no fault of their own and for various reasons, have limited or no
access to high-status socialization agents (Hurst et al., 2012). For employees such as these, scholarship on the managerial careers of demographic minorities highlights strong relational ties among colleagues as essential for gaining friendship, support, and legitimacy (Ibarra, 1992, 1995; Kanter, 1977). Hurst and colleagues (2012) brought a socialization lens to the study of adjustment for newcomers who are different and called for research on personality as a potential moderator, particularly highlighting core self-evaluations. Our findings show that although horizontal tie strength alone is insufficient, it interacts with core self-evaluations to fully compensate for vertical access deficit. For new recruits who lack vertical reach, this approach is likely to be better than traditional prescriptions focused on redoubled efforts to form and leverage vertical ties and is also highly consistent with the general understanding of diversity researchers who explain that different circumstances require different approaches to achieve similar ends (Cox, 1991; Nkomo, 1992).

Second, we extend socialization resources theory, and socialization scholarship more generally, by demonstrating that personal resources such as core self-evaluations interact with social capital resources (vertical access and horizontal tie strength) to influence newcomer learning and assimilation. Our findings are certainly consistent with recent claims of socialization researchers concerning the importance of both personal resources and network-based social capital for effective employee adjustment (see Bauer & Erdogan, 2014; Ellis et al., 2015) and social network scholars concerning the strategic importance of individual differences in motivation and agency for effective utilization of social capital (Anderson, 2008; Fang, Chi, Chen, & Baron, 2015; Fang, et al., 2011; Fang & Shaw, 2009; Stevenson & Greenberg, 2000). However, our theory and evidence also breaks important new ground by demonstrating the interactive and thus synergistic effects of social capital and personal resources—newcomers who
have low vertical access can benefit the most from strong horizontal ties when they have favorable core self-evaluations. Therefore, in contrast with past work on the main effects of social capital (e.g., Morrison, 2002) and individual differences (e.g., Li et al., 2011), our theory and findings demonstrate that failure to address their interactive effects results in model misspecification and loss of explained variance.

Although we theorize about the interaction of social capital and core self-evaluations, our contribution goes well beyond testing whether core self-evaluations strengthen social capital effects on newcomer learning and assimilation (see Fang et al., 2011). We theorize and find that core self-evaluations interact with horizontal tie strength when newcomers have low rather than high vertical access. That is, under the deficit condition of low vertical access, core self-evaluations play an agentic role by giving rise to the positive appraisals, persistence, and resolve needed to mobilize strong horizontal communication ties. As such, our focus on newcomer agency in mobilizing available structural resources (e.g., strong peer ties) for effective adjustment also extends the literature on newcomer proactivity in self-socialization, information seeking, and relationship building (e.g., Ashford & Black, 1996; Bauer et al., 2007).

Third, our focus on vertical access and horizontal tie strength in newcomer communication networks extends socialization scholarship regarding supervisors and coworkers as socialization agents for helping newcomers transition from outsiders to insiders (see Bauer et al., 1998; Cooper-Thomas & Anderson, 2006; Klein & Heuser, 2008). Beyond the dyadic relations of newcomers with their direct supervisors or mentors (e.g., Bauer & Green, 1998; Bauer et al., 2006; Jokisaari, 2013; Sluss & Thompson, 2012), our findings highlight the more general importance of vertical reach to high-status members in organizations. Furthermore, prior studies isolated supervisors and coworkers as unique socializing agents but failed to address the
joint or interactive effects of network ties with members from these two constituencies (see Li et al., 2011 for an exception). Our study provides insight into the joint influence of peers and high-status members by showing that newcomers who lack vertical access can still adjust effectively by leveraging strong peer ties and favorable core self-evaluations.

Our findings suggest that the qualitative texture of newcomer communication ties affects their learning and assimilation. Following Burt (1992), we view the strength of vertical ties (i.e., vertical tie strength) as less consequential than their mere presence/absence, and the strength of horizontal ties as more consequential than their mere presence/absence (i.e., horizontal access). Our post-hoc analyses revealed that vertical tie strength had no main effect and did not interact with horizontal tie strength and core self-evaluations in models predicting adjustment outcomes. Horizontal access significantly predicted only task mastery, and the three-way interaction of vertical access, horizontal access, and core self-evaluations was significantly related only to organizational identification. The differential availability of peers and high-status members as socialization agents may explain why newcomer adjustment is more affected by the presence/absence rather than strength of vertical ties and by the strength rather than the presence/absence of horizontal ties (Louis et al. 1983; Nelson & Quick, 1991). Over the course of a workday, newcomers interact with peers frequently, allowing strong ties to form. In contrast, high-status members have hierarchical distance that often constrains their availability and accessibility to newcomers and thus limits the potential for strong vertical ties to emerge. As such, the mere presence/absence of vertical ties matters more than their strength.

Finally, our findings have substantive implications for the emerging literature on core self-evaluations and employee outcomes. Although the main effects of core self-evaluations have received considerable attention, their moderating role remains largely unexamined (Chang et al.,
2011). As noted, a pioneering longitudinal study of the relationship between parent achievements (income, education, and occupational prestige) and child income showed that only children with favorable core self-evaluations were able to capitalize on their family advantages for higher income later in life. By focusing on the interaction of core self-evaluations with vertical access as reflected in parent educational and occupational achievements, Judge and Hurst (2007) showed that favorable core self-evaluations can benefit individuals with high vertical access. However, their study did not consider the existence or quality of relational ties with siblings or, just as important, why individuals whose parents are less educated or have lower incomes are still able to achieve high incomes. We show that people with low vertical access can indeed succeed—as indexed by our measures of learning and assimilation—when they have both strong horizontal ties and favorable core self-evaluations.

Practical Implications

This study has implications for how organizations and managers facilitate newcomer adjustment. New employees are likely to have different experiences and ways of dealing with the challenges of learning and assimilation, depending on whether they have high-status ties. Rather than potentially wasting resources by adhering to norms of fairness suggesting that employees should have similar access to support resources, we recommend that organizations and managers take steps to accommodate individual circumstances of newcomers. Indeed, we show that different circumstances call for different approaches to achieve similar ends. Socialization practices are likely to be most effective when they are tailored to the unique requirements of employee groups (Ely et al., 2011). In practical terms, our findings suggest two paths: one approach is to create institutional mechanisms to give employees access to high-level sources; the other approach is to create a collegial environment where peers can support each other.
We see the importance of strong collegial ties with peers that facilitate the open flow of information and resources, especially for new hires with low vertical access—perhaps because they are economic migrants, ethnic minorities, or working in nontraditional roles. And because favorable core self-evaluations are essential for motivation and agency to capitalize on strong horizontal ties, we see the wisdom of incorporating individual differences in core self-evaluation as a factor in new employee selection. Additionally, organizations and managers can cultivate positive working environments that are essential for nurturing new employees’ core self-evaluations. Although our findings are based on empirical work with broad-based dispositional measures of core self-evaluation, recent research conducted in both the United States and China reveals that work-specific core self-evaluations may have even stronger effects than dispositional core self-evaluations (Bowling, Wang, Tang, & Kennedy, 2010).

Our findings have particular relevance for organizations within the Chinese context where forming and maintaining relationships or guanxi with high-status individuals is considered paramount (Cheng & Rosett, 1991). Our findings challenge traditional thinking by showing that Chinese newcomers can leverage their inner personal strength and strong communication ties with peers to achieve similar ends of effective learning and assimilation. As China undergoes reform era changes, contemporary Chinese people are expected to change in their ways of leveraging structural and personal resources for success. Indeed, considering the potential difficulties of forming guanxi ties with high-status contacts in China as well as the limited time and resources that such contacts may have to support their adjustment, Chinese newcomers should be encouraged not to relying solely on their immediate supervisors and other high-level organization members as sources of social capital. The good news for organizations in China’s
competitive labor markets is that firms may find greater competitive advantage by promoting strong relational ties among employees and by nurturing favorable core self-evaluations.

_Limitations and Future Directions_

Our study has limitations that suggest directions for future research. First, given the weight of past findings and theory concerning the importance of supervisors and mentors as high-status socialization agents (Nifadkar & Bauer, 2016), we predicted that vertical access would be perhaps the most important single predictor of newcomer socialization outcomes, but we did not find a significant main effect in models predicting task mastery, social integration, and organizational identification. This finding was a surprise to us, but we are mindful that newcomers with high-status connections may not always be well received by other people at work (see Higgins & Nohria, 1999). For instance, newcomer protégés with high-status mentors are often considered ‘sidekicks’ who may not be able to succeed without mentor support (Higgins & Nohria, 1999). Moving forward, it will be important for researchers to reconcile evidence of a strong main effect of information from supervisors on task mastery (Nifadkar & Bauer, 2016) with our finding of no significant main effect of vertical access on socialization outcomes. Such inconsistency in findings can often be explained by contextual and personal factors that determine when and how vertical access is beneficial to newcomers.

Second, we acknowledge that whereas we focus on the psychological resources of employees that are dispositional in nature, other researchers have acknowledged the importance of emergent psychological states as psychological capital (characterized by self-efficacy, hope, optimism, and resilience) that are influenced by interactions with supervisors and coworkers (Gruman & Saks, 2011). Similarly, Cable, Gino and Staats (2013) highlight the value of personal identity (emphasizing newcomers’ authentic best selves) as an emergent psychological state that
enhances newcomer work engagement and satisfaction and reduces the likelihood of newcomer turnaround. We see value in extending our work on personal resources and network-embedded social capital to address the mediating role of emergent psychological states in models predicting newcomer adjustment.

Third, given the critical importance of access to information and resources for effective adjustment, we focus on newcomer communication networks through which social capital flows (e.g., Brass & Burkhardt, 1993; Fang et al., 2011). In highly uncertain environments where newcomers have no prior experience with socialization agents, their communication ties with other organization members are conduits for psycho-social support as well as instrumental exchange of information, and these ties take time to develop. Although we found it appropriate to measure communication networks at the 6-month point after employment, we acknowledge that replication of our work with measures of communication networks at other points of time would be beneficial. We also recognize that other network relations, including friendship and task interdependence, capture unique aspects of social capital conducive to newcomer adjustment. For example, information and friendship networks do not overlap completely, and both explain unique variance in newcomer adjustment (Morrison, 2002). Thus, we welcome further research on how social capital embedded in other social networks may differentially predict newcomer adjustment, and on whether the three-way interaction of vertical access, horizontal tie strength, and core self-evaluations that we observed also occurs in other networks.

Fourth, we have examined how newcomer core self-evaluations condition their use of strong horizontal ties to overcome vertical access deficit, and the role of newcomer core self-evaluations in developing communication networks—perhaps as an antecedent to vertical access and horizontal tie strength—remains to be studied. Core self-evaluations may affect how
newcomers structure their connections with other employees. For instance, those high in core
self-evaluation may be more likely to develop ties to influential others. Although our post-hoc
analyses did not show linkages of core self-evaluations with either vertical access or horizontal
tie strength in newcomer communication networks, the predictive power of core self-evaluations
in other social networks remains to be studied. We also encourage researchers to examine how
newcomers acquire vertical access and develop strong horizontal ties over time, and whether
core self-evaluations influence the developmental trajectory of these relational connections.

Fifth, our research builds on a tradition of scholarship focused on egocentric indices of
network properties showing how unique webs of affiliation relate to variables at the individual
level of analysis (Marsden, 1990) and that have been used productively in past social capital
research (e.g., Campbell, Marsden, & Hurlbert, 1986; Ibarra, 1995; Lin, 1999a; Morrison, 2002;
Seibert et al., 2001). However, researchers can also use a full network approach (Marsden, 1990)
to examine how, beyond newcomers’ immediate egocentric networks, social capital from
indirect ties with organization members influences their adjustment. For instance, one reviewer
of our manuscript astutely questioned whether indirect vertical access—that is, indirect ties to
high-status members via peers with whom newcomers have strong ties—plays an important role
in newcomer adjustment. Furthermore, consistent with our understanding that frequent
communication facilitates the flow of relevant and timely information between colleagues (e.g.,
McFadyen et al., 2009; Morrison, 2002; Nelson, 1989), we defined and measured horizontal tie
strength in terms of communication frequency. Frequency-based measures of tie strength capture
the time and effort invested in network contacts (Boissevain, 1974). Understandably, for
newcomers lacking prior interactions with colleagues, the emotional quality of interpersonal
bonds and attachments is limited and thus less defining of horizontal tie strength than
communication frequency. However, relationship closeness becomes an increasingly defining property of tie strength over time (e.g., Hansen, Mors, & Lovas, 2005), so we recommend that researchers incorporate this aspect of tie strength into operational measures (Nicholson, 1984).

Sixth, although we focus on core self-evaluations as a personal resource, many other personality traits, such as proactive personality and the four specific facets of core self-evaluations—self-efficacy, locus of control, self-esteem, and emotional stability (see Ellis et al., 2015)—may also capture inner personal strength that interacts with social capital. Similarly, our focus on adjustment indicators of learning and assimilation as proximal outcomes does not preclude the applicability of our research model to more distal outcomes that capture newcomers’ job attitudes and behaviors at work (see Bauer & Erdogan, 2014; Saks & Gruman, 2012). We encourage future research to explore whether our model holds if other personal resources are examined and whether social capital and personal resources work independently and interactively to influence distal socialization outcomes.

Seventh, although we have followed the tradition of socialization researchers in using self-report measures of newcomer adjustment (see Bauer et al., 1998; Bauer et al., 2007), we have also been careful to address the potential effects of common method bias. However, such bias is unlikely to have significantly affected our results because we measured core self-evaluations, social capital, and effective adjustment at different points in times, and these data collection efforts were separated by at least three months. Most important, common method bias cannot explain significant higher-order interactions that are consistent with theory (see Evans, 1985). We found consistent evidence of three-way interaction among predictor variables in models addressing diverse facets of newcomer adjustment: political knowledge, social integration, and organizational identification. Nonetheless, we encourage researchers to use
other-source ratings, including those from peers and supervisors, for newcomer dispositions, network properties, and newcomer adjustment. We recognize that researchers have used other-rated measures of core self-evaluation (Scott & Judge, 2009), that other ratings of network properties are readily available when full networks are studied (Marsden, 1990), and that supervisors and peers would be able to provide objective ratings of newcomer adjustment. Finally, common method effects can be avoided through incorporation of behavioral outcome measures like turnover (Cable et al., 2013).

Last, we studied newcomers to different organizations in China, which has a heritage of strong collectivism and large power distance (Tsui, 2006). China provides an ideal context for examining newcomer socialization given China’s economic transition and reform in recent decades. Although we aligned our sampling with recent calls to collect data from newcomers in different organizations to establish the generalizability of our work (Morrison, 2002), the patterns of effects we found may not hold for newcomers in western countries. To rule out the possibility that our empirical findings have currency only for the Chinese context, we invite future research to replicate our work elsewhere.

Conclusion

In conclusion, this study enriches our understanding of how organizational newcomers leverage their social capital and personal resources to learn and assimilate effectively. We have known for some time that connections to high-status organization members help newcomers adjust and succeed. We now know that employees who lack vertical access can be just as successful if they have both strong horizontal ties and favorable core self-evaluations.
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<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
<tr>
<td>1. Age (T1)</td>
<td>22.56</td>
<td>.95</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Company size (T2)</td>
<td>272.93</td>
<td>340.08</td>
<td>-.12</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Human resources (T2)</td>
<td>.14</td>
<td>.35</td>
<td>.02</td>
<td>.02</td>
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<td></td>
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</tr>
<tr>
<td>4. Marketing (T2)</td>
<td>.21</td>
<td>.41</td>
<td>-.07</td>
<td>-.02</td>
<td>-.21</td>
<td>**</td>
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<tr>
<td>5. Network size (T2)</td>
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<td>3.49</td>
<td>-.02</td>
<td>.17</td>
<td>*</td>
<td>-.14</td>
<td>-.16</td>
<td></td>
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<tr>
<td>6. Vertical access (T2)</td>
<td>1.28</td>
<td>1.32</td>
<td>.06</td>
<td>.08</td>
<td>-.03</td>
<td>-.10</td>
<td>.47</td>
<td>**</td>
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<td>7. Horizontal tie strength (T2)</td>
<td>2.95</td>
<td>.65</td>
<td>.07</td>
<td>-.15</td>
<td>-.08</td>
<td>.10</td>
<td>-.21</td>
<td>*</td>
<td>-.05</td>
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<tr>
<td>8. Core self-evaluations (T1)</td>
<td>4.61</td>
<td>.76</td>
<td>-.13</td>
<td>.02</td>
<td>-.02</td>
<td>.05</td>
<td>.02</td>
<td>.00</td>
<td>.04</td>
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<td>9. Task mastery (T3)</td>
<td>4.78</td>
<td>.76</td>
<td>-.03</td>
<td>-.19</td>
<td>*</td>
<td>-.05</td>
<td>.09</td>
<td>.18</td>
<td>*</td>
<td>.17</td>
<td>*</td>
<td>-.01</td>
<td>.39</td>
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<td>10. Political knowledge (T3)</td>
<td>4.97</td>
<td>.75</td>
<td>-.13</td>
<td>-.13</td>
<td>-.06</td>
<td>.10</td>
<td>.14</td>
<td>.25</td>
<td>**</td>
<td>.11</td>
<td>.34</td>
<td>**</td>
<td>.60</td>
</tr>
<tr>
<td>11. Social integration (T3)</td>
<td>5.00</td>
<td>.81</td>
<td>-.02</td>
<td>-.02</td>
<td>-.21</td>
<td>*</td>
<td>.23</td>
<td>**</td>
<td>.13</td>
<td>.09</td>
<td>.16</td>
<td>.28</td>
<td>**</td>
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<td>12. Organizational identification (T3)</td>
<td>4.20</td>
<td>1.08</td>
<td>.11</td>
<td>.00</td>
<td>-.20</td>
<td>*</td>
<td>.07</td>
<td>-.01</td>
<td>.09</td>
<td>.18</td>
<td>*</td>
<td>.21</td>
<td>**</td>
</tr>
</tbody>
</table>

*Note. N = 146. T1 = Time 1 measure, T2 = Time 2 measure, T3 = Time 3 measure. *p < .05; **p < .01 (Two-tailed tests).*
TABLE 2
Hierarchical Regression Results for Newcomer Adjustment

<table>
<thead>
<tr>
<th>Controls</th>
<th>Task Mastery</th>
<th>Political Knowledge</th>
<th>Social Integration</th>
<th>Organizational Identification</th>
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<tr>
<td>Age</td>
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<td>-.01</td>
<td>-.01</td>
<td>-.16 *</td>
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<tr>
<td>Company size</td>
<td>-.23 **</td>
<td>-.21 *</td>
<td>-.20 *</td>
<td>-.27 **</td>
</tr>
<tr>
<td>Human resources</td>
<td>.04</td>
<td>.03</td>
<td>.02</td>
<td>-.03</td>
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<tr>
<td>Marketing</td>
<td>.11</td>
<td>.09</td>
<td>.09</td>
<td>.08</td>
</tr>
<tr>
<td>Network size</td>
<td>.29 **</td>
<td>.21 *</td>
<td>.21 *</td>
<td>.25 **</td>
</tr>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Vertical access</td>
<td>.09</td>
<td>.09</td>
<td>.09</td>
<td>.22 *</td>
</tr>
<tr>
<td>Horizontal tie strength</td>
<td>-.05</td>
<td>-.04</td>
<td>-.05</td>
<td>.08</td>
</tr>
<tr>
<td>Core self-evaluations (CSE)</td>
<td>.37 ***</td>
<td>.36 ***</td>
<td>.37 ***</td>
<td>.31 ***</td>
</tr>
<tr>
<td><strong>Two-way interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horizontal tie strength x CSE</td>
<td>.02</td>
<td>.01</td>
<td>.16</td>
<td>.11</td>
</tr>
<tr>
<td>Vertical access x CSE</td>
<td>.07</td>
<td>.06</td>
<td>.03</td>
<td>-.02</td>
</tr>
<tr>
<td>Vertical access x Horizontal tie strength</td>
<td>.01</td>
<td>.00</td>
<td>-.09</td>
<td>-.12</td>
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<tr>
<td><strong>Three-way interaction</strong></td>
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<td></td>
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<tr>
<td>Vertical access x Horizontal tie strength x CSE</td>
<td>-.05</td>
<td>-.23 **</td>
<td>-.22 **</td>
<td>-.25 **</td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.139 ***</td>
<td>.006</td>
<td>.002</td>
<td>.136 ***</td>
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<td>Adjusted ( R^2 )</td>
<td>.070</td>
<td>.196</td>
<td>.183</td>
<td>.179</td>
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</table>

*Note. N = 146. Standardized coefficients are reported. * \( p < .05 \); ** \( p < .01 \); *** \( p < .001 \) (Two-tailed tests).
### TABLE 3
Slope Difference and Simple Slope Analyses for Significant Three-way Interactions of Vertical access, Horizontal Tie Strength, and Core Self-evaluations (CSE) in Predicting Newcomer Adjustment

<table>
<thead>
<tr>
<th>Group Description</th>
<th>Political Knowledge</th>
<th>Social Integration</th>
<th>Organizational Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t-value for slope difference</td>
<td>t-value for slope difference</td>
<td>t-value for slope difference</td>
</tr>
<tr>
<td>(A) Low Vertical Access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Low CSE vs. (2) High CSE</td>
<td>3.55**</td>
<td>3.00**</td>
<td>3.51**</td>
</tr>
<tr>
<td>(B) High Vertical Access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Low CSE vs. (4) High CSE</td>
<td>-1.17</td>
<td>-1.31</td>
<td>-1.17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group Description</th>
<th>Slope</th>
<th>t-value</th>
<th>Slope</th>
<th>t-value</th>
<th>Slope</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Low Vertical Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Low CSE</td>
<td>-.16</td>
<td>-.44</td>
<td>-.16</td>
<td>-.78</td>
<td>-.22</td>
<td>-.89</td>
</tr>
<tr>
<td>(2) High CSE</td>
<td>.66*</td>
<td>2.00</td>
<td>.63**</td>
<td>3.04</td>
<td>1.03***</td>
<td>4.24</td>
</tr>
<tr>
<td>(B) High Vertical Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Low CSE</td>
<td>.06</td>
<td>.19</td>
<td>.22</td>
<td>1.06</td>
<td>.24</td>
<td>.93</td>
</tr>
<tr>
<td>(4) High CSE</td>
<td>-.27</td>
<td>-.69</td>
<td>-.21</td>
<td>-.80</td>
<td>-.29</td>
<td>.85</td>
</tr>
</tbody>
</table>

*Note.* Slope numbers (1), (2), (3), and (4) correspond to groups listed in Figures 1, 2, and 3. The simple slopes are calculated based on unstandardized coefficients. *p < .05; **p < .01; †p < .001 (Two-tailed tests).
Figure 1: Three-way Interaction among Vertical Access, Horizontal Tie Strength, and Core Self-evaluations (CSE) Predicting Political Knowledge.

Figure 2: Three-way Interaction among Vertical Access, Horizontal Tie Strength, and Core Self-evaluations (CSE) Predicting Social Integration.

Figure 3: Three-way Interaction among Vertical Access, Horizontal Tie Strength, and Core Self-evaluations (CSE) Predicting Organizational Identification.