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RELATIONAL CHANGES DURING ROLE TRANSITIONS: THE INTERPLAY OF EFFICIENCY AND COHESION

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This study looks at what happens to the collection of relationships (network) of service professionals during a role transition (promotion to a management role). Our setting is three professional service firms, where we examine changes in relations of recently promoted service professionals (auditors, consultants, and lawyers). We take a comprehensive look at the drivers of two forms of network changes: tie loss and tie gain. Looking backward, we examine the characteristics of the contact, the relationship, and social structure and identify which forces are at play in losing ties, revealing an overarching tendency for both cohesion and efficiency forces to play a role. Looking forward, we identify the effect of previous network structures that act as a "shadow of the past" and impact the quality of newly gained relations during the role transitions. Findings demonstrate that role transitions are not only influenced by a few key contacts but that the entire (extant) network of professional relationships shapes the way people reconfigure their workplace relations during a role transition.

> "The real hardest thing that I had to do was figure out who could I trust. Because, during the first year, and I don't say this in my book, but I was just lost on the technical kinds of issues . . . And I had to rely [on and] find some people [that I could trust] . . . Thank God, I got lucky and picked some good people early on to rely on."
>
> Louis Gerstner, former CEO of IBM (Rose, 2002)

Role transitions, such as when people experience a management promotion, are pervasive in organizational life, and take place across the full range of a firm's hierarchy, from middle managers to the CEO's office (as in the Gerstner example). Navigating them is essential to organizational life (Schein, 1971). Their importance is highlighted by the literature on workplace role transitions and promotions, research that can be divided into (numerous) studies of the *antecedents* of workplace promotions—including demographics (Cohen, Broschak, & Haveman, 1998; James, 2000; Tharenou, 2001) and social structure (Podolny & Baron, 1997; Seibert, Kraimer, & Liden, 2001; Shah, 2000)—and studies of the *consequences* of workplace promotions. The latter research stream recognizes the profound changes individuals may experience as they enter a new or expanded role (Stephens, 1994); for example, personal strains and turnover (Kraimer, Shaffer, Harrison, & Ren, 2012), identity and role changes (Ashforth & Saks, 1995; Chreim, Williams, & Hinings, 2007; Ibarra, 1999; Nicholson, 1984), and performance impacts (Welbourne, Johnson, & Erez, 1998).

Among these important consequences are changes to social relations, not just mindsets, during role transitions. Gerstner's remark about his first year as IBM CEO captures well the importance of such relationship shifting and discovery. While scholars have previously acknowledged this issue—for example, Stephens (1994) noted that role transitions are

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filled with needs for social support, information, and learning, all of which require adjustments to relations (see also Dalton & Thompson, 1986)—empirical research on relational changes during role transitions is scarce (see Ashforth & Saks, 1995), despite an extensive literature into the benefits of social structure on career moves (Allen, 2006; Granovetter, 1973; Podolny & Baron, 1997; Seibert et al., 2001). Understanding relational change during role transitions is important because of the growing volume of knowledge-based work which requires a great deal of human exchange (Defillippi, Arthur, & Lindsay, 2006), perhaps best observed within professional service organizations (Von Nordenflycht, 2010). It is hard to dispute that, as service professionals gain responsibility and become lynchpins in firms, they must acquire strategic awareness, develop client relations, and locate resources efficiently (Bensaou, Galunic, & Jonczyk-Sédès, 2014; Fosstenløkken, Løwendahl, & Revang, 2003; Stumpf, 1999). Clearly, their emerging workplace networks will play an important role (Briscoe & von Nordenflycht, 2014). Hence, service professionals entering management ranks will be concerned with changes to their contacts—who comes into focus and who fades out, and how to identify high-quality new contacts.

Related research on socialization has in fact suggested a few structural consequences for transitioning individuals. Morrison (2002) found that they face trade-offs between large, expansive networks (which facilitate learning about the organization) and dense or closed networks (which facilitate role learning). We hold that it is important to also examine the actual contact losses and gains individuals experience during a role transition event, a level of granularity that can help us to better understand the forces and dynamics that professionals experience. In this paper, we examine who is lost and who is gained in service professionals' networks following a promotion. Our data consist of newly promoted professionals in three professional service firms (PSFs) and the changes in contacts that they experienced between two periods that span their first 1.5 years in the new role (involving expanded managerial responsibilities in all cases). Generally, role transitions will create opportunities for relational change even as professionals may require persistence and stability (Kilduff, Tsai, & Hanke, 2006). To understand how such countervailing undercurrents play out, we build on several literatures to help focus our study of relational change dynamics that entail role transitions.

First, our work draws upon the social embeddedness literature. Granovetter's (1985) seminal work on embeddedness pointed out that much of economic work is impacted by the social relations surrounding actors, and that this embeddedness has a dual nature: relational and structural. Although more attention has been given to structural embeddedness (see Barden & Mitchell, 2007; Moran, 2005), transitioning managers are entwined in not only wider structures but also personal, meaningful ties, and so we examine both properties of embeddedness. More so, we return to the roots of Granovetter's conceptualization of embeddedness to consider not only the different forms that it takes (relational vs. structural) but the extent to which two basic forces are at play; namely, those that are part of "under-socialized" thinking (economic or pragmatic forces) and of "over-socialized" thinking (effectively forces for inertia). Granovetter's conception of embeddedness suggests that, whatever forces may be at play, they are contingent on the specific experience of actors embedded in relationships, rather than being experienced as "abstracted" or universal motivations. We believe that the in situ experience of efficiency and inertial forces are relevant to role transitions in organizations as well, and something we seek to operationalize and better understand. Promotions are opportunities for actors to experience acutely the push and pull of such core forces, moments that "constitute a period of discontinuity and flux where individuals and their roles must gravitate towards a new synchronization" (Ashforth & Saks, 1995: 157). This synchronization includes new arrangements that are of instrumental value as well as the pull of the past, or, as Ashforth and Saks (1995: 160) summarized, "one's prior occupational experience also affects how one adjusts to a new role." Unpacking how these forces play out within the social relations of transitioning managers (does one stand out or do both matter in some form of "harmony"?) is important to our understanding of role changes.

Our operationalization of these core forces draws upon more recent work on social capital. One force involves an economic or efficiency lens on how contacts will change and highlights a pragmatic approach to social capital. This approach to social capital is mostly about the resources at the ends of the relationships (information, knowledge, skills), not the quality of the relationship per se (Adler & Kwon, 2002; Burt, 1992). These resources are available as a result of one's network (Nahapiet & Ghoshal, 1998), with access to these resources granting the focal actor a performance edge or efficiency of action

(e.g., Lin, 2001), particularly emphasized by Burt (1992) and structural hole theory. Because the core ingredient or lure of these resources is personal advantage and performance, efficiency forces are a more instrumental view of relationships and their change. A competing force to efficiency is the contextual pull of cohesion. Cohesive forces emanate from a different form of social capital, where the emphasis is on the relationships themselves. Such social capital is about the strong bonds, trust, and support that some ties may engender (Bourdieu, 1986; Coleman, 1988; Krackhardt, 1992; Nahapiet & Ghoshal, 1998; Putnam, Leonardi, & Nanetti, 1993). The pull of interpersonal trust strikes us as particularly important to examine because trust is essential to motivating (or not) exchange. It follows that trust should also be essential to determining which partners a newly promoted manager retains and loses during a role transition (e.g., Chua, Ingram, & Morris, 2008). This approach to social capital is also about the "magnetic" inward pull of dense ties, thereby amplifying cohesive forces. Whether the focus is on efficiency or cohesion, however, both views are consistent with Granovetter's call for embedded social theory, in that they are based upon concrete social relations and context. Our empirical setting—moments during which individuals are afforded (similar) opportunities to make instrumental changes while being still subject to the pull of their existing social relations and structure—is a good opportunity to examine the interplay of these competing forces toward an understanding of role transitions.

To sum, our study focuses on the contacts people lose and gain during role transitions. We find that contact losses exhibit both efficiency and cohesive forces, but so interwoven that they suggest a compromising harmony across these competing forces. We show how lost ties confirm the strong pull of already close, and often embedded, contacts (McEvily, Perrone, & Zaheer, 2003), but also how newly promoted service professionals try to gain efficiency. The theoretical narrative that emerges is about the dual nature of tie loss during role transitions. We find that these forces are at play on different levels of the network. Our theoretical development of tie losses comprises three fundamental network levels—the node, the relationship, and the structure—that describe the holistic relational experiences of actors, and have been highlighted as key levels of analysis in the network literature (Ahuja, Soda, & Zaheer, 2012).

Regarding tie gains, we focus on the quality of the newly gained ties. Although the question of what makes two actors form a tie has merits on its own, we fix our aim on the trust levels in newly gained contacts, for two reasons. First, in role transitions, the trustedness of newly gained ties is a significant issue. New contacts may be crucial to unlocking new resources and insights, but accessing those resources is conditional on trust in the relationship. Second, while past studies of tie formation have focused on homophily (Ingram & Morris, 2007; McPherson, Smith-Lovin, & Cook, 2001), reciprocity (Blau, 1964), relational transitivity (Granovetter, 1973), social foci (Dahlander & McFarland, 2013; Feld, 1981), and matching (Vissa, 2011), the literature is largely silent about what factors affect such qualities as the trust of new ties. We contribute to this domain by examining whether prior structural positions (e.g., a hole-filled, relatively open network structure) influence tie gains, beyond simply early personal interactions, offering a simultaneous look at cross-level sources of influence.

DATA AND ASSUMPTIONS ON AGENCY

Our data consist of ego network measures obtained through surveys with focal actors. Implicit to the question of tie losses and gains is some amount of agency on behalf of the focal actor—that the focal actor has some degree of choice in which contacts they lose and gain, which is generally implied in tie loss/gain research. However, because of the nature of our data (ego network data), agency cannot be proven with respect to each and every tie loss or gain. For example, because it takes "two to tango," there is the possibility that losses and gains are driven by the specific counterpart. There is also the possibility that changes in formal structure (new assignments) force tie changes. Our data measure neither of these forces. We will return to this question in the discussion (limitations) section, where we also consider why in this context an absence of agency would be very unlikely. Nonetheless, we need to be careful not to over-imply the role of agency in the mechanisms: while some degree of agency is reasonable to assume, absolute agency cannot be proven.

THEORETICAL BACKGROUND AND HYPOTHESES

Professionals frequently experience role transitions, periods when individuals become immersed in a new role and detached from the previous one (Ebaugh, 1988; Kraimer et al., 2012). Adaptations are generally of two sorts, partly psychological (identity formation) (Ashforth & Saks, 1995; Chreim et al.,

2007; Ibarra, 1999; Nicholson, 1984) and partly behavioral (Dalton & Thompson, 1986), which includes changes in relations. Studies of embeddedness have pointed out that social relations are not only important to economic work (Granovetter, 1985), but play an important part in such transitions, helping individuals socially integrate and discover norms (Morrison, 2002; Podolny & Baron, 1997). Furthermore, research has shown that managers trapped in their previous network are less effective in their new assignments (Gargiulo & Benassi, 2000). This implies that both re-examining old relationships and forming new ones are important to successful role transitions, and yet there is scarce research on such relational changes.

The emerging literature in network dynamics provides some ideas and mechanisms to help us understand these processes. Studies have examined how networks undergo changes, both as a result of natural personal development (Burt, 2000a, 2002) and because of special events (Barley, 1990; Granovetter, 1973) or organizational restructuring (Sasovova, Mehra, Borgatti, & Schippers, 2010). Research into network dynamics is growing (Ahuja et al., 2012); however, research on tie losses and gains is still scarce, and especially within business organizations, let alone in the context of management transitions. One notable contribution to the study of relational change is Burt's (2000b) longitudinal work on tie loss of investment bankers. He found that tie loss is rapid in the early stages of new relationships (liability of newness), but less likely to occur where relations are strong and embedded. In a follow-up study, Burt (2002) showed that only bridging ties (which tend to be weak) are prone to decay. The general conclusion is that networks have a propensity to become cohesive and embedded—especially around homophilous contacts (McPherson et al., 2001)—and that such ties tend to last (Dahlander & McFarland, 2013; Granovetter, 1973; McEvily et al., 2003), while ties not aligned with such cohesive propensity are easily dissolved (Krackhardt, 1999). The power of such cohesive pull or structural inertia is supported by a number of studies in non-organizational settings (Degenne & Lebeaux, 2005; Lubbers, Molina, Lerner, Brandes, Ávila, & McCarty, 2010; Martin & Yeung, 2006; Reagans, 1998).

This tendency to remain in strong relationships and cohesive groups should be particularly powerful when the context remains undisturbed—but what happens when that context is disrupted? It is not clear that such bonding forces remain significant predictors of relational changes in the face of disrupting events. In particular, job promotions may create new needs for efficiency and productivity. For PSFs, the technical work becomes increasingly interwoven with the relational work and client management (Fosstenløkken et al., 2003), and with less time "doing" and more time "managing," these professionals must draw on sources beyond themselves (Linehan, 2001). In turn, existing social contacts may be less relevant, as some research has suggested (Gargiulo & Benassi, 2000). Hence, newly promoted professionals are likely to face multiple forces—the inertial pull of existing relationships, but also the push toward greater efficiency and relational "rationalization."

We first turn to operationalizing these forces in tie losses. We do so by examining how these forces may play out within each of three fundamental network elements: the properties of the node, the properties of the relationship, and the properties of the network structure.

LOSING TIES

Node Attributes: Rank and Multiplexity

Newly promoted professionals may find their attention drawn to the quality and breadth of resources that an existing contact delivers as they face new challenges and pressures. Two properties are likely to be relevant because they are especially prominent: rank and multiplexity.

Rank. High-ranking contacts are important to rising managers because they provide political backing (Brass, 1984; Stevenson & Gilly, 1991), a resource more relevant to management work than, say, the technical work of a junior auditor. High-ranking contacts can also provide access to new information and advice. In fact, connections to higher-ranking managers, and particularly those that are brokers, have been found to improve subordinate performance (Galunic, Ertug, & Gargiulo, 2012; Sparrowe & Liden, 2005). Newly promoted managers can also expect higher levels of task mastery and role clarity when connected to more senior contacts (Morrison, 2002), which can accelerate their career progress. In other words, there are good reasons for newly promoted managers to avoid losing high-ranking contacts, and these reasons are mostly to do with efficiency gains. In the context of PSFs, the rank of partner is especially prominent. Partners affect pay and promotion decisions, and only partners make decisions on who else becomes partner. They also represent a status group to which upwardly mobile service professionals ultimately aspire (Podolny,

1993). Getting ahead in PSFs almost inevitably relies upon positive recognition and familiarity among partners, and so they should be especially valued contacts (Lazega & Van Duijn, 1997).

Hypothesis 1a. The likelihood of service professionals losing a contact is lesser when those contacts are partners in their respective PSFs.

Apart from the attraction of having a direct tie to a partner, having another contact that indirectly leads to the same partner can result in other mechanisms that help explain contact retention. Namely, having an indirect tie to an already connected partner creates a closed triad, which is known to strengthen bonds and increase cohesive forces (Coleman, 1988; Gargiulo, Ertug, & Galunic, 2009). While such a closed system may increase the surety that one's resource requests are met (i.e., because of enhanced social pressures to respond), it is unlikely that this would be compelling to partners, who are shielded from social pressures because of their rank. However, to the extent that triads simply intensify cohesive bonds, having a partner who shares many third-party contacts may mean that a partner is much less likely to be lost during role transitions. Hence, partners may be retained not just for efficiency forces but also because of the pull of cohesive forces. Thus, we predict the following:

Hypothesis 1b. The lesser likelihood of losing contacts who are partners will be stronger when service professionals share a greater number of third-party ties with the partner.

Multiplexity. Multiplexity concerns the diversity of resources available from a contact (Burt, 1983). Contacts who provide a plurality of inputs, such as task or technical advice, career advice, political support, etc., offer an efficient way for busy professionals to manage their time. The variety of exchanges experienced through one source may also mean more creative exchanges and multiplex ties have been linked with higher-quality exchanges (Sias & Cahill, 1998) including higher reliability (Ibarra, 1995; McAllister, 1995) and less opportunistic behavior (Brass, Butterfield, & Skaggs, 1998). It follows that multiplex relations should be highly valued and less likely to decay (see also McEvily et al., 2003). Nonetheless, there is little empirical evidence for these propositions. One exception is a qualitative study of entrepreneurs (Steier & Greenwood, 2000) in which it was shown that the ties that survive early entrepreneurial periods are those that become multiplex, resulting in the authors proposing that the multidimensionality of exchange relationships is positively associated with tie robustness. The authors also suggested, however, that multiplex ties offer not just greater efficiency but more cohesion—people may develop stronger bonds because of the greater scope of interactions with such (multiplex) contacts (Kilduff & Brass, 2010). Fortunately, we can control for these competing mechanisms within multiplexity by measuring separately interpersonal bonding (next).

Hypothesis 2. The likelihood of service professionals losing a contact is lesser when those contacts offer multiplex ties.

Relational Attributes: Emotional and Cognitive Trust

Social capital also consists of the quality of the relationship. One way to approach tie quality is to consider relational trust.[1] Trust is a key ingredient for maintaining strong relations and so deserves closer examination in social capital studies. In his longitudinal study of senior bankers' network decay, Burt (2000b) found that feelings of closeness are associated with slow decay. Trust goes further in capturing relational quality by examining the acceptance of vulnerability by the focal actor because she or he holds positive beliefs regarding a relation's motivations. It is one of the most compelling ways of capturing relational quality and an important ingredient in relational dynamics (Dirks & Ferrin, 2001). Because trust is a multifaceted concept, differentiation is useful. Research has converged on two forms of trust: emotion-based and cognitive-based trust (Chua et al., 2008; Levin & Cross, 2004; McAllister, 1995). In our context, these overlap nicely with "cohesive" and "efficiency" forces (as Chua et al., 2008, also suggested).

Emotional trust. Emotion-based trust is about interpersonal bonding and liking. It is described as the less calculating of the two forms of trust and is based predominantly on interpersonal experience, fondness, or chemistry, leading some authors to claim that it is the longer-lasting form of trust (Lewis & Weigert, 1985). Similarly, our conceptualization of emotional trust concerns the quality of the interpersonal relationship, such as whether sharing of

[1] Trust borders on being a quality of the node, not just the relationship. However, because it can be experienced more interactively than rank and more subjectively than multiplexity, we place it under quality of the dyad, not the node.

ideas and feelings is freely and easily done, whether the contact is an available and good listener, whether a sense of personal loss would be experienced if the contact disappeared, and so on.

Staying with a trusted contact, however, is not a given in the face of new career events and opportunities. Lazzarini, Miller, and Zenger (2008) argued that, where there are plentiful and new opportunities to exchange with alternative partners, staying with the same contacts may even be discouraged. Nonetheless, several studies imply that high levels of relational trust between actors should be a factor in preventing tie loss. Malhotra and Lumineau (2011) found that goodwill-based trust (which captures benevolence and integrity in the relationship, similar to emotional trust) increases the intention to continue collaborative work. More generally, Dirks and Ferrin's (2001) summary of trust research highlighted the behavioral consequences of greater trust, such as greater (and better) information exchange, behaviors that naturally increase the likelihood of relationship retention. High emotional trust relations are also valuable relations, as they promote more extensive knowledge transfer and creation (cf. Hansen, 1999; Reagans & McEvily, 2003; Smith, Collins, & Clark, 2005) and protect the focal actor from burnout (Kahn, Schneider, Jenkins-Henkelman, & Moyle, 2006). However, high emotional trust relations should be mostly valued as "ends" in themselves (which our measures target), rather than just "means" to career progression, for which we can otherwise control.

Hypothesis 3. The likelihood of service professionals losing a contact is lesser when they have established higher levels of emotional trust in that contact.

Cognitive trust. The role of cognitive trust is less straightforward. Cognitive-based trust involves estimations of "alters'" (contacts') competence and dependability (largely through interpersonal experience), features that should help the focal actor (or "ego") achieve her/his goals. Hence, it captures efficiency. Cognitive-based trust has been found to be a key criterion for selecting workplace peers, and it follows that such peers are more likely to be retained. However, Casciaro and Lobo (2008) have found that, in the presence of negative affect, even high evaluations of potential contacts' competence do not result in new tie formation. Regarding tie loss, however, having already formed a tie, affect levels are likely to be at least neutral if not positive to some degree. Presumably, alters then who are high on competence, dependability, and dedication will be valued, and these relations are more likely to be maintained. This is especially important for newly promoted service professionals, who, in their demanding management roles, will be generally eager to maintain competent professionals (Hinds, Carley, Krackhardt, & Wholey, 2000).

Hypothesis 4. The likelihood of service professionals losing a contact is lesser when they have established higher levels of cognitive-based trust in that contact.

Trust in extant contacts. Retaining contacts requires maintenance. Professionals who rely on others particularly need to spend time and energy in order to retain (the value of) a contact (Killworth, Johnsen, Bernard, Ann Shelley, & McCarty, 1990; Levin, Walter, & Murnighan, 2011; Roberts, Dunbar, Pollet, & Kuppens, 2009). This raises the question of opportunity costs—maintenance is costly, the benefits are not always assured, and actors could be investing in other activities. For example, McFadyen and Cannella (2004) showed, in their study, that an excessive number of direct contacts had a dampening effect on scientists' performance.

Opportunity costs can be operationalized by paying attention to the value of the extant ties. The opportunity cost of a contact should increase with the availability of comparable alternative relationships (cf. Greve, Mitsuhashi, & Baum, 2013)—that is, extant ties. One important quality to consider of those extant contacts is the level of cognitive trust that they provide. As we have argued, because cognitive trust is based on the expectation of competence, which results from directly observable interactions (see McAllister, 1995), this type of trust can be compared across different contacts in a network. That is, what may be relevant to questions of tie loss is not just the trust in the contact itself but also the relative level of trust in extant contacts. Specifically, as cognitive trust increases in other contacts besides the focal contact, the opportunity cost of maintaining this focal contact will increase. Accordingly, busy professionals, with limited time and energy, will be more likely to lose such a contact, given that they can be substituted by dependable others.

Hypothesis 5. The likelihood of service professionals losing a contact is greater when the average level of cognitive-based trust increases outside of that contact.

Although there is personal value in extant contacts that are high in affective trust, we contend that the

presence of extant contacts with high emotional trust does not increase the opportunity cost. This is because the value of these relationships is more or less "irreplaceable." Therefore, we do not predict that alternative sources of emotional trust will influence the loss of a focal contact (although we will test this effect).

Structural Attributes: Embeddedness and Network Redundancy

The performance benefits of network structure are indisputable; however, which structural form is best has been the subject of debates (e.g., Burt, 2000b). The discussion concerns the comparative advantage of having non-redundant networks (which is linked with efficiency benefits) and embedded networks (which is tied to cohesion). We examine both structural forces.

Network embeddedness. Network embeddedness is about having close contacts who themselves are closely connected to one another. Actors situated in embedded networks are more likely to share common experiences and understandings (Uzzi, 1997), conditions that facilitate information-rich interactions (Morrison, 2002). Embedded networks have been shown to have a positive impact on team viability (Aquino & Serva, 2005; Balkundi & Harrison, 2006) and an ego's involvement in innovation (Obstfeld, 2005) as well as citizenship behavior (Lee, Mitchell, Sablynski, Burton, & Holtom, 2004). But, more generally, and a key driver in tie loss/retention, is that an actor in an embedded network is likely to have the strength of her or his tie with another contact "multiplied"—that is, made closer and stronger. For example, network embeddedness has been found to be positively associated with emotion-based trust (Burger & Buskens, 2009; Chua et al., 2008). Although there is some evidence that network embeddedness makes ties persist over time (Burt, 2000a; Lubbers et al., 2010; Martin & Yeung, 2006), this raises the question of whether, once controlling for emotion-based trust, there will be an independent effect of embeddedness on tie loss, something our analysis will allow us to parse out.

Hypothesis 6. The likelihood of service professionals losing a contact is lesser when that contact is embedded in common third-party ties.

Network non-redundancy. While embedded ties are likely to persist, new managers, with broader responsibilities, need to be efficient. This means that the diversity of information per contact may start to become important, as they will be less able to afford exchanges with contacts who do not offer unique and valuable resources. Specifically, their jobs now require them to know more about company direction, the client landscape, new technologies, and the location and quality of internal resources. Therefore, they need to reach further in their knowledge, understanding, and access within the firm, and this may mean losing redundant ties. This may not entail rejecting all embedded ties—which captures a combination of overlap but also closeness—but it may pressure professionals to succumb to efficiency forces. That employees should accrue career benefits from developing non-redundant social networks is supported in cross-sectional studies (Seibert et al., 2001). Knowledge-intensive work, like the job of service professionals, can particularly benefit from perspective diversity and breadth of access (Cross & Cummings, 2004; Tsai, 2002). We therefore expect that a service professional transitioning to more senior roles will end up trimming contacts if his or her network is redundant.

Hypothesis 7. The likelihood of service professionals losing a contact is greater when their network is more redundant.

It is worthwhile noting that network embeddedness and non-redundancy are not the opposite ends of a continuum. While it is true that network embeddedness increases with the number of common third parties, this formulation masks the fact that embeddedness also captures the quality of the relationships, such as the feeling of closeness (Uzzi, 1997). Hence, network embeddedness effectively concerns how *strongly* multiple individuals are connected to one another. In contrast, the non-redundancy of the network is "purely" structural—that is, to what extent an actor's contact is non-overlapping with other contacts in the network—regardless of the closeness between the actor and his or her contacts. It is hence entirely possible that, even while preserving strongly embedded ties, an actor loses more contacts when his or her network becomes more redundant.

Trust Modifiers of Redundant Networks

Although newly promoted professionals may face greater needs for efficiency and therefore prune their existing relationships, such a tendency could be

constrained because of both the availability of alternatives and the possible advantages of redundancy. For instance, through the enabling of social sanctions if requests are not met, redundant contacts can help secure more reliable access to resources and information and reduce the uncertainty in mobilizing social capital (Gargiulo et al., 2009). However, the uncertainty in mobilizing social capital is likely to be moderated by the overall trust that the service professional has developed in his or her extant network. Once again, we need to look at the quality of the ego's (focal actor's) relational "options" to fully understand how his or her relationship evolves with a focal contact. Also, whether this uncertainty is *mitigated* or, on the other hand, *amplified*, may depend upon the type of trust.

In the case of cognitive trust in extant contacts, uncertainty is likely to be *mitigated*. The uncertainty reduction of keeping redundant contacts is likely to be minimal (opportunity cost will be high) when an actor has a network that is highly competent and reliable. The easier access to resources afforded by redundant contacts may not be needed, given the high reliability of extant contacts. If the focal actor has developed relations that provide reliable access, there is more to be lost from inefficient (redundant) network structures than gained through overlapping ties. It should therefore make losing contacts even more likely.

Hypothesis 8. The greater likelihood of service professionals losing a contact when their network is redundant will be positively impacted by the level of cognitive-based trust in their extant network.

Trust in the extant network, however, may also work against tie loss. Specifically, high emotional trust in the extant network is *less* likely to drive tie loss in a redundant network. This is because actors who are implanted in high emotional trust relations may be especially well bonded within their network. In this case, severing contacts may be difficult, as it may push actors toward unbalanced relations (Heider, 1958), the general consequence of which is to amplify uncertainty. Thus, tie loss in such situations should be dampened.

Hypothesis 9. The greater likelihood of service professionals losing a contact when their network is redundant will be negatively impacted by the level of emotional trust in their extant network.

GAINING (HIGH-TRUST) TIES

Performance pressures in their new roles will mean that managers have an incentive to gain higher-quality ties. A simple analysis of our population of professionals indicates that they generally moved toward higher-trust relations: gained ties were significantly higher in cognitive trust than lost ties, and gained ties were also higher in emotional trust (but not significantly) than lost ties, while retained ties had the highest trust in both dimensions of trust (i.e., higher than lost or gained ties).[2] These trends are intuitive. In general, both efficiency and cohesion seems desirable in gained ties. The main nuance in these trends is that, while actors generally experience both more efficiency (cognitive trust) and cohesion (emotional trust) in this replacement process, there appears to be an emphasis on the immediate efficiency (i.e., there is a significant leap in the productive qualities of gained ties over lost ties, and gained ties are not significantly different from retained ties) rather than on cohesion (there is no significant leap in emotional trust of gained ties over lost ties, and retained ties are significantly higher in such trust than gained ties). But this is to be expected, as it will take time for such bonding to occur. In general, however, it is safe to presume that professionals should desire more (not less) of both of these qualities over time.

What is less apparent is whether all professionals equally obtain high-trust new contacts. Depending on their capacity to search and select such contacts, some newly promoted professionals may be better able to add high-trust relationships. This presents an opportunity to examine the mechanisms by which professionals gain high-trust contacts. Once again, we draw on Granovetter's (1985) insight that embeddedness is in part structural and part relational in approaching the possible antecedents of high-trust contacts.

Prior structure is a reasonable place to search. Research has shown that there is a link between structure and perception (Burt, 2000b). The idea is that actors occupying central network positions may

[2] To be more specific, gained ties were higher in cognitive trust (4.21 on average) than lost ties (4.03, $p < 0.05$) and gained ties were higher in emotional trust (3.33) than lost ties (3.26, although not significant). Kept ties that were present in both time periods of study had the highest levels of cognitive trust (4.32) and emotional trust (3.72) in the later time period, and kept ties increased in strength from Time 1 to Time 2 in both cognitive trust (from 4.26 to 4.32, but not significant) and emotional trust (3.53 to 3.72, $p < .05$).

be advantaged (better informed) and so make better decisions. For example, Bielby and Bielby (1999) showed that talent agencies occupying boundary-spanning positions make better brokers between screenwriters and studios. People with networks rich in structural holes are also more likely to recognize holes in a new network (Janicik & Larrick, 2005), and Burt (2002) also reasoned that those who maintain bridges successfully over time do so because of their conditioning by prior bridge relationships. Furthermore, Mizruchi and Stearns (2001) argued that, when bankers propose a new deal, those with structural holes may improve their judgment from the diversity of opinions in their network. Such enhancement to judgment is important because accuracy in social perception is normally difficult and prone to bias (Kilduff, Crossland, Tsai, & Krackhardt, 2008), and yet it is consequential for organizational members (Krackhardt, 1990).

We therefore argue that prior structural position—and, in particular, a position full of structural holes—may condition and improve the judgment of transitioning professionals in the careful selection of new ties. This is because such a position affords the professional access to more diverse information (including information about a greater variety of possible contacts). The role of structure may be particularly advantaged in this scenario because of the big uncertainties surrounding new relationships, both in simply identifying potential contacts but also in assessing their trustworthiness (which we capture as gained contacts' trust levels).

Hypothesis 10. The likelihood of service professionals gaining contacts high in cognitive trust in Time 2 is greater when service professionals have sparse, non-redundant networks in Time 1.

Hypothesis 11. The likelihood of service professionals gaining contacts high in emotional trust in Time 2 is greater when service professionals have sparse, non-redundant networks in Time 1.

Capturing relational embeddedness of gained contacts is impractical for the simple reason that these contacts were not part of the focal actor's network in Time 1 at the very beginning of the role transition. However, we are also able to capture something of the relational mechanisms in these models. All Time 2 gained ties that were captured about 1.5 years after the promotion and will have been developed as key contacts during the transition process and after Time 1. However, they may differ in the specific length of the relationship (tie longevity) and the frequency of interaction the focal actor and contact experience (tie frequency). These at least offer important controls for explaining Time 2 tie trust. That is, they can help us capture to what extent personal experience explains the assessed trustworthiness of those ties, not just prior structure.

DATA AND METHODS

Data and Sample

Our target populations were recently promoted individuals in three PSFs—a consultancy, an audit company, and a law firm—located in Europe and North America. All were moving into the common role of "project managers" for the consultancy and the audit company. For the law firm, the promotions were two-thirds to associate level (both internal and lawyers on secondment) and one-third to partner level (newest/junior entries to this role). The law firm promotions entailed expanded managerial and professional duties, although the moves were not the same quantum career step as was the case for the auditors and consultants. Although the contexts were not identical for the consultants and auditors versus the lawyers, for the purposes of predicting losing ties, they were similar enough and we controlled for the differences. From this population, we randomly chose a representative sample in terms of age, gender, tenure with firm, and professional area, resulting in 101 respondents.[3]

We interviewed and surveyed the respondents in two waves roughly 1.5 years apart. The first survey was taken within a few weeks of their promotion. Hence, our empirical design captures the natural tie loss process as these professionals adjusted to their

[3] This study is related to earlier work by three of the authors (Bensaou et al., 2014). That study was mostly a qualitative and inductive exploration of the different strategies actors employ in navigating role transitions, with particular attention paid to the level of agency behind those strategies. Our current work builds on that data set, but is purely quantitative and focused on specific tie losses and gains (for which "agency" is not captured) and incorporates additional data (lawyers, whose transitions, as noted, were close enough for the purposes of studying tie losses and gains to be included in this analysis). Thus, while the prior work examines three broad strategic "narratives" from the viewpoint of transitioning managers, this work hones in on one specific aspect of role transitions—the losses and gains of specific contacts—and how two general motivational forces interplay (efficiency and cohesion). Collectively, we hope that these works help us better understand role transitions and network dynamics.

new role, rather than the immediate effect of the promotion event (cf. Kleinbaum & Stuart, 2014; Sasovova et al., 2010). Twenty respondents exited their firms between the two surveys, and two respondents failed to respond. This reduced our sample to 79 eligible respondents (37 auditors, 18 consultants, 24 lawyers). Our survey required the respondents to name key contacts that were important for being successful in their job during the previous year, tapping into six widely used network categories: task advice, innovation, political buy-in, professional growth, social support, and external contacts (the items are available from the authors). The respondents could name and assign contacts to more than one category and were asked about various aspects of their relationship with each contact. "Cognitive trust" indicates trust in the competence, skills, and qualifications of a contact that leads to the belief that this contact is qualified to provide the input that is required. "Emotional trust" goes beyond simple liking and captures perceptions of bonding and mutual care that lead to the sharing of feelings and difficulties. We also asked each respondent about the closeness with his or her contacts as well as among contacts themselves, a conventional measure of network structure in ego network studies.

Our sample of respondents reported a total of 1,239 contacts in the first survey. However, 11 respondents failed to report on personal items necessary to the study, and so had to be excluded along with their 142 contacts. In addition, 13 contacts could not be used because of missing values on network items, leaving us with a final sample of 1,084 contacts from 68 respondents under risk of tie loss. Excluded respondents did not differ from our sample in network size, gender, education, nationality, or tenure with firm. In the second-wave survey, 67 respondents named a total of 499 new (gained) contacts in Time 2, but not in the first survey (this is one respondent less than for tie losses because this person gained no new key contacts).

Measures

Dependent variables. Our first dependent variable was whether or not a contact was lost during the roughly 18-month period between surveys. We define "tie loss" when a person was named as a key contact in Time 1 but not Time 2. Because the survey focuses on key (important) contacts, it captures people who were quite visible to our subjects. Among 1,084 eligible respondent–contact ties for our analysis, 631 ties had been lost by the time of the second survey. To ensure that a contact's absence was not a mere mistake (Lubbers et al., 2010; Marsden, 1990) and to increase data validity, we verified missing contacts through interviews by asking whether contacts were left out by mistake, and then corrected for those mistakes. *Tie loss* equaled "1" if the contact was lost, and "0" otherwise. To test our predictions regarding gained ties, we used the 499 gained contacts from the 67 respondents. We use respondents' reported scores for cognitive trust (*tie gain cognitive trust*) and emotional trust (*tie gain emotional trust*) for each newly gained contact (measures of trust are explained below) as our dependent variables to test Hypotheses 10 and 11.

Independent variables. Our *tie loss* variables focus on Time 1 (when the lost contact was captured by the survey). To test Hypothesis 1a, we compared rank descriptions across the three firms, and found that the broader categories were comparable, which we coded as *Partner*, *Manager* (including project managers or associates), *Entry* level, *Staff* level (i.e., those who were not on the partner track), and an *External* category. We set the "manager" category as the baseline category. *Indirect ties* are the number of third-party ties with whom the respondent and the contact share ties. This was interacted with rank dummies of the contact to test Hypothesis 1b. *Tie multiplexity* indicates that a tie spans different types of relationships (Burt, 1983). Hence, we used the number of different network categories within which a contact was listed, ranging from 1 to 6.

We measured trust by asking the respondents 11 Likert-type questions (5-point scales): 5 for *emotional trust* and 6 items for *cognitive trust* based on existing trust scales (McAllister, 1995) (items are also available online). We performed a principal factor analysis and found a two-factor structure.[4] *Emotional trust* was formed by taking the average of the 5 items ($\alpha = 0.90$). Although the 6 items of cognitive trust were reliable, excluding item 6 enhanced the reliability (from $\alpha = 0.86$ to $\alpha = 0.88$), so we proceeded with 5 items (results were consistent in either case). Cognitive trust is then the average of the 5 items. To test Hypothesis 5, we also created *cognitive trust in others* by taking the average of the respective trust scores in other contacts in the ego's network, excluding the focal contact. *Emotional trust in others* was calculated in a similar way to test Hypothesis 9.

The structural determinant of tie loss was assessed by constructing an ego network for each respondent. Ego network tie strengths are based on the assessment

[4] The pattern of factor loadings from VARIMAX rotation for both trust measures was consistent with our expectation.

of closeness between individuals (Marsden & Campbell, 1984). Respondents reported the closeness with their contacts on a 5-point scale, in which a higher value implies a closer relationship (1 = "*distant*" to 5 = "*especially close*"). For relations between contacts, we added a 0 to the scale to capture no relations. From these ego networks, we formed our measure of network embeddedness and network redundancy.

The extent to which each contact was embedded in a respondent's network was determined by the closeness of each contact through direct and indirect ties. Formally, *network embeddedness* followed Burt's (1992: 54) alter specific constraint measure, which is calculated as:

$$C_{i,j} = p_{i,j} + \sum_{q} p_{i,q} {}^{*} p_{q,j}$$

where $C_{i,j}$ indicates the alter specific constraint, $p_{i,j}$ is the proportion of i's closeness to alter j, and $p_{i,q}$ is the proportion of i's closeness to alter q, a common third-party with j. $p_{q,j}$ is the proportion of q's closeness to alter j. This measure approaches 1 as j becomes more embedded in i's network, meaning j represents high proportional closeness with and is closely connected to third parties who are also closely connected with the focal actor i. This measure captures well the notion of embeddedness, which combines tie strength and closure aspects.

While network embeddedness shows the extent to which a contact is close to both the ego and his or her other contacts, network redundancy captures whether contacts in the ego's network are likely to contain redundant resources. To test Hypothesis 7, we used *proportional density*, as it captures the sparseness of a network and so possible non-redundancy among the contacts (Podolny & Baron, 1997). Proportional density is the number of ties among alters divided by the maximum possible number of ties. We considered a tie to be present if closeness is greater than 0. Networks with low proportional density are considered more efficient. Whenever we tested interaction effects, we mean centered the variables to create the interaction variables. Although network embeddedness and network redundancy could be empirically correlated, they are conceptually different. Figure 1 illustrates the difference between our measure of network embeddedness and network redundancy.

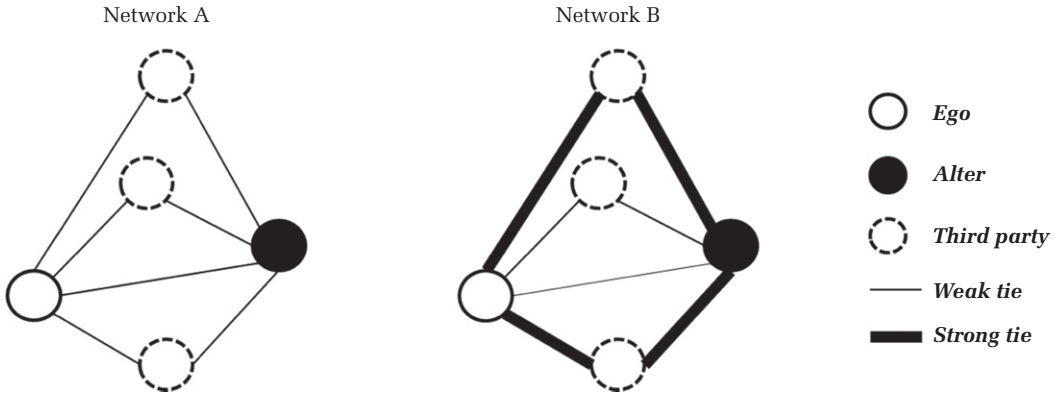
To test Hypothesis 10 and 11, we used the respondents' network structure in Time 1 to gauge the respondents' learning from their previous network position. Once again, we used *proportional density*, as our hypotheses were focused on the benefits of network efficiency/non-redundancy.

Controls. We controlled for the service professional's *age* in years, as older professionals may be more selective in their ties and lose them less easily (Burt, 2002). Because human capital may diminish a person's dependence on social capital (Coleman, 1988; Nahapiet & Ghoshal, 1998), we measured *education* in three categories in which "0" indicates a bachelor's degree, "1" denotes master's degree, and "2" denotes a doctorate. A *foreigner*—someone not from the host nation—may display different networking tendencies, complicating tie maintenance (Lubbers et al., 2010), while *female* may reveal that different genders show different proclivities to sever ties (Martin & Yeung, 2006). We also controlled for marital status, as *single* individuals may have more time and proclivity for networking (Martin & Yeung, 2006). Tenure can impact participants' accumulated learning about their firm and job, so we added *firm tenure* in years and *job tenure* in months (Burt, 1992, 2000b). Research has suggested a limit to the number of concurrent contacts a person can manage, so we controlled for *network size* as the number of contacts in a person's Time 1 network (McFadyen & Cannella, 2004). We also controlled for the number of *ties gained* in the network observed in the second survey to account for crowding out of existing contacts.

Homophily has been considered an important control for tie persistence, although the empirical evidence is not always supportive (Noel & Nyhan, 2011). Nonetheless, we controlled for *location homophily* by creating a dummy that captures when the ego and alter are in the same office, and *expertise homophily*, a dummy that captures when the ego and alter are in the same expertise group.[5] We also controlled for *tie longevity* (in months) and *tie*

[5] Because we do not have demographic information about our respondents' contacts, we were not able to control for age or gender homophily. However, as a robustness check, we inferred the gender of contacts from their first name. To assure reliability, two independent coders interpreted each contact's first name. Whenever these two coders disagreed or were unsure, we randomly selected the contact's gender. Based on such gender information, we created a *Gender homophily* variable, which captured whether the respondents and the contacts had the same gender. In one set of models, we excluded those observations in which we randomly assigned the gender, and, in another set of models, we included them with an indicator variable to control for these observations. The main results that we present in the paper are robust to the inclusion of *Gender homophily*, thereby giving an additional support. The results of these robustness checks are available from the authors.

FIGURE 1
The Differences in Network Embeddedness and Network Redundancy



Note: Both networks A and B have the same level of proportional density. Furthermore, the direct relationship between the ego and the alter is also the same. However, the alter in network B brings more network embeddedness, as the alter's relationships with the third parties are stronger compared to network A, while the ego's relationships to the third parties are also stronger. Therefore, while the alter in networks A and B brings the same level of redundancy, the alter in network B brings more network embeddedness than the alter in network A.

frequency (1 = "*a few times a year*" to 5 = "*daily*") to rule out simple familiarity as the explanation for interpersonal trust (Marsden & Campbell, 1984). We also controlled for whether the contact was their *boss*.

Finally, we controlled for differing natural rates of tie loss across respondents' job characteristics. Our three sample PSFs are organizationally divided into multiple expertise groups (n = 23) separated by the industry specialty or functional role. Because these expertise groups may differ in their need of social capital, we introduced dummies for each expertise group by setting one of the groups as a base category. This job fixed effect also took care of invariant differences within each of our three study sites, as job categories were nested within each firm we studied.

For our gained ties models, we controlled for such characteristics as *age*, *education*, *foreigner*, *female*, *single*, *firm tenure*, and *job tenure*. We also controlled for the *network size* at Time 2. To account for changes in networking behaviors in general, we controlled for the number of *ties gained* at Time 2 and the number of *ties lost* from Time 1. Because the relational characteristics may also influence the degree of trust in gained ties, we controlled for *location* and *expertise homophily*, *tie longevity*, *tie frequency*, *tie multiplexity*, and *without third party* (as a dummy for when there was no common third-party between the ego and the alter), all at Time 2 (Chua et al., 2008). A contact's job rank can also influence the level of trust, hence we included dummies for *rank* (manager level was the base category), as well as a dummy for being a *boss*. Furthermore, in order to control for respondents' general propensity to trust, we controlled for *cognitive* and *emotional trust propensity* as the average of trust scores that the respondents reported in the Time 1 survey. Finally, we added job fixed effects as a series of dummy variables for each expertise group.

Analysis. We use logit regression to estimate the likelihood of tie loss. As respondents have multiple contacts, the same respondent appeared multiple times in our dataset. Furthermore, as some of the respondents listed the same contact, some contacts appeared multiple times as well.[6] This violates the assumption of independence, thereby creating the potential for network autocorrelation (Lincoln, 1984). Following recent work, we use a two-way clustering method to account for the network autocorrelation that may arise from two different sources—that is, shared respondents but also contacts (Cameron, Gelbach, & Miller, 2011; Lindgren, 2010). Two-way clustering takes care of the serial correlations of the error terms among the observations that share common unobserved characteristics at two different (non-nested) dimensions. It therefore helps to relax the strict assumption of observational independence and corrects the standard errors for

[6] Contacts are not, of course, entered multiple times per respondent. However, respondents from the same office or expertise group may indicate a common person as their network contact. A total of 890 different contacts appear in our data. This makes alters to be listed on average 1.22 times; just a little more than once. We control for this non-independence.

robust inference. Recent works have shown that this analytical strategy improves statistical inference (Cameron et al., 2011; Lindgren, 2010), and it has been used in other management research (Kleinbaum, Stuart, & Tushman, 2013). For the second set of models, we used ordinary least squares estimates with, once again, two-way clustering.

RESULTS

Table 1 contains the descriptive statistics and pairwise correlations for the tie loss analysis, and Table 2 presents our two-way clustered logit results. Model 1 presents the baseline model with control variables. Our baseline model shows some meaningful effects. For example, professionals who have accumulated more job experience are less likely to shed contacts, as might be expected if experience generates better discernment in tie formation. Oddly, those who had gained more contacts during their transition were also less likely to lose contacts. It seems that, rather than crowding out existing contacts, professionals try to add more people in their network during role transition. Professionals are also less likely to lose contacts in their same expertise group, although location homophily has no effect. This finding may be related to the particular context of professional service work, where teams cover common areas of expertise yet may be working remotely. Meeting frequency dampens the likelihood of tie loss. Frequency is a proxy for relational inertia (Li & Rowley, 2002) and represents an alternative explanation of tie loss to the evaluative mechanisms implicit in our trust and embeddedness variables.

Model 2 adds the contact's rank to test Hypothesis 1a. Supporting Hypothesis 1a, partners are less likely to be lost. The risk of tie loss for alters in other ranks did not differ from manager-level alters, so the main effect is that contacts who are partners are significantly less likely to be lost. Model 3 adds the number of third-party contacts who are also connected to a partner to test Hypothesis 1b. We find a strong interaction effect ($p < .001$), supporting Hypothesis 1b. This provides an initial view into the dual and compounding nature of efficiency and cohesive forces—professionals tend not to lose high-ranking contacts (a strong main effect persists) and this tendency is amplified when they are tied to those partners through many closed triads. Model 4 adds tie multiplexity, to test Hypothesis 2. Supporting Hypothesis 2, more multiplex ties are less likely to be lost. Both the effects of partner rank and tie multiplexity remain robust.

Models 5 and 6 test the effects of two different forms of trust on tie loss. Supporting Hypotheses 3 and 4, both emotional and cognitive trust in a relationship reduce the likelihood of losing that contact, and at the same level of significance ($p < .01$), although the coefficient of cognitive trust is higher than that for emotional trust (and remains so across models)—once again, efficiency and cohesion both matter. In Model 7, we find support for Hypothesis 5: our respondents tended to lose contacts if there were reliable others in their extant network. In Model 8, we also check for any effect of emotional trust in others, and, as anticipated, find no effect. This indicates that emotional trust is indeed a deeper property of a (specific) relationship and so less likely a "substitute."

Model 9 tests network embeddedness. Supporting Hypothesis 6, the effect of network embeddedness is negative and significant. Alters who are closely surrounded by an ego and third-party ties are less likely to be lost. Noteworthy here is the impact of this structural measure on the effect of emotional trust, which becomes diminished and only marginally significant, but with no impact on cognitive trust. This reveals the overlapping impact of network embeddedness and emotional trust. However, independent effects do persist in the subsequent models. Emotional trust picks up attributes of the relation that overlap with—but are distinct from—the bonding that occurs when alters share strong common connections with the ego. Here, we see network embeddedness as being the stronger driving force behind those interpersonal bonds. Model 10 tests the effect of network redundancy, using proportional density (Hypothesis 7). Because of the concern for multicollinearity between our measure of network embeddedness and network redundancy, despite the moderate level of pairwise correlation ($r = 0.28$), we introduced proportional density without network embeddedness and also found a significant positive effect. Model 11 confirms their independent effects in a saturated model, as both show a significant effect. Hence, both Hypotheses 6 and 7 are supported, showing again the nuanced way in which cohesion and efficiency interplay.

Finally, Hypotheses 8 and 9 are tested in Model 12. We find support for both. Model 12 shows that the interaction effect of proportional density and cognitive trust in others is positive and significant. There is support that the presence of competent others further leads an ego with a redundant network to streamline more. On the other hand, there is strong support that greater emotional trust in extant alters

TABLE 1
Descriptive Statistics and Pairwise Correlations for Tie Loss

	Variables	Mean	*SD*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	Age	29.36	3.38												
(2)	Education	0.47	0.61	0.46											
(3)	Foreigner	0.22	0.41	−0.18	−0.12										
(4)	Female	0.32	0.47	−0.29	−0.16	0.10									
(5)	Single	0.26	0.44	−0.12	0.01	0.11	0.11								
(6)	Tenure at firm	3.99	2.42	0.18	−0.19	0.02	0.01	−0.03							
(7)	Tenure at job	6.1	2.71	0.24	−0.32	−0.01	−0.16	0.11	0.65						
(8)	Network size	17.64	4.62	0.03	−0.05	0.21	0.13	0.04	−0.17	−0.12					
(9)	Ties gained	7.92	4.47	0.06	−0.09	0.17	0.07	0.10	−0.10	0.03	0.23				
(10)	Location homophily	0.6	0.49	−0.07	−0.00	0.02	−0.08	−0.04	0.05	0.06	−0.13	−0.09			
(11)	Expertise homophily	0.54	0.5	−0.04	−0.01	−0.07	0.01	−0.08	0.02	−0.03	−0.16	−0.11	0.57		
(12)	Tie longevity	3.18	3.06	0.08	−0.10	−0.12	−0.02	−0.01	0.21	0.20	−0.01	0.03	−0.14	−0.19	
(13)	Tie frequency	3.5	1.17	−0.16	−0.02	−0.11	−0.10	0.02	−0.09	−0.04	−0.10	−0.09	0.43	0.42	−0.08
(14)	Boss	0.05	0.21	0.00	−0.08	0.02	−0.07	−0.04	0.04	0.12	−0.04	0.01	0.12	0.13	0.04
(15)	Indirect ties	9.98	5.72	0.06	0.08	0.10	−0.01	−0.10	0.26	0.09	0.17	0.08	0.30	0.32	−0.07
(16)	Partner rank	0.26	0.44	0.13	0.06	−0.06	−0.09	0.02	0.16	0.17	−0.12	−0.01	0.22	0.22	0.01
(17)	External rank	0.2	0.4	−0.02	−0.19	0.08	0.02	0.02	0.03	0.12	0.19	0.08	−0.58	−0.50	0.13
(18)	Staff rank	0.05	0.21	0.19	0.26	−0.12	−0.12	−0.06	−0.11	−0.17	0.06	0.02	−0.26	−0.23	0.17
(19)	Entry rank	0.22	0.41	−0.14	0.04	0.03	0.01	0.07	−0.22	−0.16	0.04	−0.05	0.24	0.14	−0.16
(20)	Tie multiplexity	1.6	0.98	0.00	−0.03	−0.02	−0.05	−0.03	0.05	0.03	−0.09	−0.05	0.26	0.28	−0.01
(21)	Emotional trust	3.38	1.04	−0.15	−0.05	−0.02	0.15	−0.00	−0.10	−0.12	0.04	0.05	0.00	−0.02	0.26
(22)	Cognitive trust	4.14	0.75	−0.06	−0.11	0.00	0.10	0.09	0.05	0.19	0.04	0.05	−0.03	0.01	0.09
(23)	Emotional trust in others	3.36	0.47	−0.34	−0.08	−0.06	0.30	−0.01	−0.20	−0.24	0.05	0.07	−0.04	0.04	0.04
(24)	Cognitive trust in others	4.1	0.54	−0.09	−0.13	−0.02	0.12	0.13	0.10	0.29	0.02	0.03	−0.03	−0.02	0.07
(25)	Network embeddedness	0.01	0.01	−0.00	−0.00	−0.09	−0.04	−0.07	0.12	0.05	−0.65	−0.13	0.21	0.29	0.04
(26)	Proportional density	0.63	0.28	0.03	0.10	−0.05	−0.09	−0.15	0.33	0.12	−0.40	−0.03	0.15	0.16	0.02
	Variables	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**	**(19)**	**(20)**	**(21)**	**(22)**	**(23)**	**(24)**	**(25)**	
(14)	Boss	0.11													
(15)	Indirect ties	0.18	0.02												
(16)	Partner rank	−0.02	0.19	0.16											
(17)	External rank	−0.26	−0.08	−0.22	−0.30										
(18)	Staff rank	−0.14	−0.05	−0.18	−0.13	−0.11									
(19)	Entry rank	0.26	−0.09	−0.04	−0.32	−0.26	−0.12								
(20)	Tie multiplexity	0.32	0.21	0.17	0.25	−0.21	−0.11	−0.12							
(21)	Emotional trust	0.22	0.01	−0.02	−0.26	0.02	0.06	0.19	0.19						
(22)	Cognitive trust	−0.02	0.11	−0.09	0.08	0.02	−0.02	−0.01	0.13	0.23					
(23)	Emotional trust in others	0.01	0.04	−0.05	−0.02	0.03	−0.07	0.01	−0.02	0.34	0.12				
(24)	Cognitive trust in others	−0.07	0.14	−0.13	0.02	0.05	−0.09	0.03	−0.03	0.07	0.66	0.20			
(25)	Network embeddedness	0.25	0.15	0.01	0.10	−0.20	−0.13	0.02	0.33	0.21	0.07	−0.07	−0.00		
(26)	Proportional density	0.09	−0.03	0.65	0.09	−0.14	−0.05	−0.12	0.05	−0.04	−0.16	−0.06	−0.18	0.28	

[a] $N = 1084$. Correlation greater than $|.06|$ is significant at $p < .05$.

TABLE 2a
Results of Two-Way Clustering Logit Models for Tie Loss (Models 1–5)[a]

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
Age	−0.04	(0.03)	−0.03	(0.03)	−0.04	(0.03)	0.01	(0.03)	−0.00	(0.03)
Education	0.43*	(0.21)	0.48*	(0.21)	0.60**	(0.21)	0.35	(0.23)	0.45†	(0.24)
Foreigner	−0.31	(0.24)	−0.40†	(0.23)	−0.37	(0.24)	−0.34	(0.24)	−0.31	(0.25)
Female	−0.02	(0.20)	−0.04	(0.22)	−0.11	(0.21)	0.02	(0.22)	0.07	(0.23)
Single	0.07	(0.18)	0.14	(0.18)	0.17	(0.19)	0.36†	(0.19)	0.35†	(0.19)
Tenure at firm	−0.02	(0.06)	0.00	(0.06)	0.04	(0.06)	0.03	(0.06)	0.03	(0.06)
Tenure at job	−0.11*	(0.05)	−0.10*	(0.05)	−0.13*	(0.06)	−0.18**	(0.05)	−0.19**	(0.06)
Network size	0.05†	(0.02)	0.04	(0.02)	0.06*	(0.02)	0.02	(0.03)	0.03	(0.03)
Ties gained	−0.08**	(0.02)	−0.08**	(0.02)	−0.07**	(0.02)	−0.08**	(0.02)	−0.08**	(0.02)
Location homophily	−0.29	(0.23)	−0.26	(0.26)	−0.25	(0.26)	−0.24	(0.26)	−0.21	(0.26)
Expertise homophily	−0.70**	(0.20)	−0.64**	(0.23)	−0.57**	(0.22)	−0.64**	(0.23)	−0.70**	(0.24)
Tie longevity	0.00	(0.03)	0.01	(0.03)	0.03	(0.03)	0.01	(0.03)	0.05	(0.04)
Tie frequency	−0.42**	(0.09)	−0.50**	(0.09)	−0.52**	(0.09)	−0.34**	(0.09)	−0.29**	(0.09)
Boss	−0.65*	(0.29)	−0.39	(0.32)	−0.37	(0.30)	0.10	(0.30)	0.07	(0.33)
Indirect ties	−0.01	(0.02)	−0.00	(0.02)	0.03	(0.03)	0.01	(0.02)	0.02	(0.02)
Partner rank			−0.83**	(0.20)	−0.65**	(0.18)	−0.75**	(0.21)	−0.93**	(0.21)
External rank			−0.11	(0.37)	−0.01	(0.36)	−0.37	(0.36)	−0.30	(0.37)
Staff rank			−0.54	(0.58)	1.41	(1.19)	−0.73	(0.59)	−0.57	(0.54)
Entry rank			0.14	(0.22)	0.19	(0.22)	−0.20	(0.23)	−0.03	(0.25)
Partner rank × Indirect ties					−0.15**	(0.04)				
External rank × Indirect ties					−0.01	(0.05)				
Staff rank × Indirect ties					0.29*	(0.14)				
Entry rank × Indirect ties					−0.04	(0.04)				
Tie multiplexity							−0.74**	(0.09)	−0.66**	(0.10)
Emotional trust									−0.34**	(0.12)
Cognitive trust										
Cognitive trust in others										
Emotional trust in others										
Network embeddedness										
Proportional density										
Cognitive trust in others × Proportional density										
Emotional trust in others × Proportional density										
Constant	3.49**	(0.98)	3.65**	(1.00)	3.16**	(0.99)	3.29**	(1.03)	4.11**	(1.16)
Job fixed effects	Included		Included		Included		Included		Included	
Log-likelihood	−623		−610		−594		−575		−568	

[a] $N = 1084$. Two-way clustered standard errors in parentheses clustered by respondents ($N = 68$) and contacts ($N = 890$).
† $p < .10$
* $p < .05$
** $p < .01$, two-tailed test

causes the ego to keep contacts even in the face of greater redundancy. Bonding appears to be "structural," not just dyadic, in its influence on tie losses.

Table 3 provides descriptive statistics and pairwise correlations for gained ties models. Table 4 shows the results. Model 13 uses cognitive trust and Model 14 uses emotional trust as the dependent variable. In Model 13, we find strong support for Hypothesis 10, which captures the influence of prior structure on the efficiency of new ties. Model 13

TABLE 2b
Results of Two-Way Clustering Logit Models for Tie Loss (Models 6–9)[a]

Variables	Model 6		Model 7		Model 8		Model 9	
Age	−0.02	(0.03)	−0.00	(0.03)	0.00	(0.03)	0.01	(0.03)
Education	0.43†	(0.24)	0.43†	(0.25)	0.43†	(0.25)	0.39	(0.24)
Foreigner	−0.17	(0.24)	−0.26	(0.25)	−0.26	(0.24)	−0.27	(0.25)
Female	0.09	(0.23)	0.08	(0.24)	0.09	(0.24)	0.14	(0.24)
Single	0.40*	(0.19)	0.38*	(0.19)	0.38*	(0.19)	0.38*	(0.19)
Tenure at firm	0.03	(0.06)	0.03	(0.06)	0.04	(0.06)	0.03	(0.06)
Tenure at job	−0.18**	(0.06)	−0.20**	(0.06)	−0.19**	(0.06)	−0.21**	(0.06)
Network size	0.04	(0.03)	0.03	(0.03)	0.03	(0.03)	−0.02	(0.03)
Ties gained	−0.08**	(0.02)	−0.08**	(0.02)	−0.08**	(0.02)	−0.08**	(0.02)
Location homophily	−0.25	(0.26)	−0.27	(0.26)	−0.27	(0.26)	−0.26	(0.26)
Expertise homophily	−0.65**	(0.24)	−0.68**	(0.24)	−0.68**	(0.24)	−0.63**	(0.24)
Tie longevity	0.05	(0.04)	0.05	(0.04)	0.05	(0.04)	0.05	(0.04)
Tie frequency	−0.32**	(0.09)	−0.31**	(0.09)	−0.31**	(0.09)	−0.29**	(0.09)
Boss	0.14	(0.33)	0.05	(0.34)	0.05	(0.34)	0.19	(0.34)
Indirect ties	0.01	(0.02)	0.01	(0.02)	0.01	(0.02)	0.02	(0.02)
Partner rank	−0.87**	(0.21)	−0.85**	(0.21)	−0.85**	(0.21)	−0.85**	(0.21)
External rank	−0.30	(0.37)	−0.30	(0.37)	−0.30	(0.37)	−0.29	(0.37)
Staff rank	−0.54	(0.54)	−0.48	(0.52)	−0.48	(0.52)	−0.53	(0.52)
Entry rank	−0.02	(0.25)	−0.04	(0.25)	−0.04	(0.25)	−0.03	(0.25)
Partner rank × Indirect ties								
External rank × Indirect ties								
Staff rank × Indirect ties								
Entry rank × Indirect ties								
Tie multiplexity	−0.63**	(0.10)	−0.62**	(0.10)	−0.62**	(0.10)	−0.59**	(0.10)
Emotional trust	−0.29**	(0.11)	−0.26*	(0.11)	−0.27*	(0.11)	−0.20†	(0.11)
Cognitive trust	−0.41**	(0.14)	−0.57**	(0.17)	−0.56**	(0.17)	−0.56**	(0.17)
Cognitive trust in others			0.48*	(0.21)	0.48*	(0.21)	0.52*	(0.22)
Emotional trust in others					0.03	(0.23)	−0.04	(0.23)
Network embeddedness							−20.00*	(8.88)
Proportional density								
Cognitive trust in others × Proportional density								
Emotional trust in others × Proportional density								
Constant	6.07**	(1.16)	4.21**	(1.25)	4.08**	(1.51)	4.64**	(1.54)
Job fixed effects	Included		Included		Included		Included	
Log-likelihood	−562		−560		−560		−558	

[a] $N = 1084$. Two-way clustered standard errors in parentheses clustered by respondents ($N = 68$) and contacts ($N = 890$).
† $p < .10$
* $p < .05$
** $p < .01$, two-tailed test

shows that low proportional density in Time 1 increases cognitive trust levels of new contacts. Relational forces played relatively minor roles (only tie frequency was significant, $p < .05$). However, the opposite was true when predicting the emotional trust of new ties. Model 14 shows no support for Hypothesis 11. Instead, both tie longevity ($p < .01$) and tie frequency ($p < .01$) are predictors of tie emotional trust. Standing in the flow of nonredundant information is not enough to increase the likelihood that service professionals will gain contacts that bond easily with the focal actor, but it does predict their reliability.

DISCUSSION

Relations change as service professionals try to cope with new roles, such as during management promotions. Existing relations may fade away, while new, and high-quality, relations may have to be formed in order to cope with new responsibilities. In this paper, we evaluate how professionals experience the pull of cohesion and the push toward efficiency during such transitions, and across network levels. Our concern is with the comparative experience of these two core forces. Overall, we find that both forces matter, at times independently and at times interactively. For tie losses, all hypotheses

TABLE 2c
Results of Two-Way Clustering Logit Models for Tie Loss (Models 10–12)[a]

Variables	Model 10		Model 11		Model 12	
Age	0.01	(0.03)	0.02	(0.03)	−0.01	(0.03)
Education	0.40†	(0.24)	0.37	(0.23)	0.51*	(0.24)
Foreigner	−0.27	(0.24)	−0.27	(0.24)	−0.26	(0.25)
Female	0.10	(0.24)	0.15	(0.23)	0.08	(0.21)
Single	0.41*	(0.18)	0.40*	(0.18)	0.41*	(0.18)
Tenure at firm	0.03	(0.06)	0.03	(0.06)	0.06	(0.06)
Tenure at job	−0.20**	(0.06)	−0.21**	(0.07)	−0.24**	(0.07)
Network size	0.05†	(0.03)	0.00	(0.03)	−0.01	(0.03)
Ties gained	−0.08**	(0.02)	−0.08**	(0.02)	−0.06**	(0.02)
Location homophily	−0.28	(0.26)	−0.26	(0.26)	−0.24	(0.26)
Expertise homophily	−0.66**	(0.25)	−0.60*	(0.25)	−0.65**	(0.24)
Tie longevity	0.05	(0.04)	0.05	(0.04)	0.05	(0.04)
Tie frequency	−0.31**	(0.09)	−0.29**	(0.09)	−0.28**	(0.09)
Boss	0.09	(0.34)	0.22	(0.34)	0.30	(0.34)
Indirect ties						
Partner rank	−0.85**	(0.21)	−0.85**	(0.21)	−0.84**	(0.21)
External rank	−0.32	(0.37)	−0.32	(0.37)	−0.31	(0.37)
Staff rank	−0.52	(0.52)	−0.58	(0.52)	−0.59	(0.51)
Entry rank	−0.03	(0.25)	−0.02	(0.25)	−0.01	(0.25)
Partner rank × Indirect ties						
External rank × Indirect ties						
Staff rank × Indirect ties						
Entry rank × Indirect ties						
Tie multiplexity	−0.61**	(0.10)	−0.58**	(0.10)	−0.58**	(0.10)
Emotional trust	−0.27*	(0.12)	−0.21†	(0.11)	−0.22†	(0.12)
Cognitive trust	−0.57**	(0.17)	−0.57**	(0.17)	−0.57**	(0.17)
Cognitive trust in others	0.51*	(0.21)	0.55*	(0.22)	0.52*	(0.25)
Emotional trust in others	0.03	(0.23)	−0.04	(0.22)	−0.24	(0.25)
Network embeddedness			−19.31*	(8.66)	−21.66*	(8.66)
Proportional density	0.53*	(0.26)	0.56*	(0.25)	0.55**	(0.20)
Cognitive trust in others × Proportional density					1.06*	(0.49)
Emotional trust in others × Proportional density					−1.85*	(0.73)
Constant	3.42*	(1.46)	4.01**	(1.49)	8.00**	(1.29)
Job fixed effects	Included		Included		Included	
Log-likelihood	−559		−557		−555	

[a] $N = 1084$. Two-way clustered standard errors in parentheses clustered by respondents ($N = 68$) and contacts ($N = 890$).
† $p < .10$
* $p < .05$
** $p < .01$, two-tailed test

were supported, both for efficiency (Hypotheses 1a, 2, 4, 5, 7, and 8) and cohesion (Hypotheses 1b, 3, 6, and 9). For tie gains, maintaining a non-redundant prior structure positively influenced the accumulation of higher-trust (competent, reliable) contacts, but it had no effect on the accrual of strong, cohesive new contacts—rather, interpersonal experience matters more. The holistic impression of role transitions is that they are experienced as a compromise between the inertial pull of cohesion and the drive for efficiency, but always situated in concrete social relations. That is, and consistent with Granovetter (1985), the experience of role transitions is not a display of abstracted or generalized forces for network change—that is, "pure" or under-socialized self-interest at every turn, or a "universal" moral code for relational loyalty—but, rather, a display of the contingent evolution of social relations that depend on the specific features of social structure. To appreciate the apparent "harmony" of these forces, we have to look across levels.

First, we find that the efficiency forces are certainly at work at the node level. Newly promoted service professionals retain high-ranking contacts (Hypothesis 1a, efficiency force). The focus is indeed on the partner position, not just level, as we found hierarchy is not the driver. This makes sense, given the typically large gap in prestige between partners

TABLE 3
Descriptive Statistics and Pairwise Correlations for Gained Ties[a]

	Variables	Mean	*SD*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1)	Age	29.16	3.19											
(2)	Education	0.41	0.57	0.32										
(3)	Foreigner	0.25	0.44	−0.05	−0.16									
(4)	Female	0.33	0.47	−0.32	−0.16	0.10								
(5)	Single	0.28	0.45	−0.08	0.09	0.15	0.11							
(6)	Firm tenure	4.05	2.4	0.24	−0.22	−0.11	−0.07	−0.04						
(7)	Job tenure	6.29	2.84	0.32	−0.32	0.00	−0.21	0.09	0.62					
(8)	Network size	17.41	6.64	0.12	−0.24	0.18	0.03	0.12	0.01	0.16				
(9)	Ties gained	10.05	4.83	−0.06	−0.22	0.33	0.24	0.23	−0.11	0.01	0.86			
(10)	Ties lost	0.55	0.16	−0.24	0.21	0.15	0.31	0.21	−0.33	−0.43	−0.49	−0.10		
(11)	Location homophily	0.59	0.49	−0.14	0.01	0.02	0.08	0.04	0.01	−0.03	−0.11	−0.03	0.17	
(12)	Expertise homophily	0.52	0.5	−0.12	0.04	0.08	0.12	0.09	−0.03	−0.08	−0.14	−0.03	0.23	0.61
(13)	Tie longevity	2.37	1.95	0.23	0.04	−0.16	−0.09	0.02	0.17	0.15	−0.02	−0.10	−0.08	0.04
(14)	Tie frequency	3.46	1.11	−0.19	0.05	−0.05	−0.08	−0.08	−0.07	−0.08	−0.19	−0.15	0.10	0.29
(15)	Tie multiplexity	1.44	0.84	−0.12	−0.01	0.05	0.05	−0.00	−0.01	−0.05	−0.14	−0.08	0.14	0.22
(16)	Without third-party	0.02	0.15	0.17	0.05	−0.06	−0.03	−0.07	0.06	0.04	−0.03	−0.05	0.03	−0.16
(17)	Boss indicator	0.2	0.4	−0.23	−0.03	0.00	0.08	0.01	−0.08	−0.11	−0.13	−0.05	0.16	0.18
(18)	Partner rank	0.26	0.44	0.04	−0.08	0.01	−0.02	0.06	0.15	0.20	−0.00	−0.04	−0.07	0.22
(19)	External rank	0.21	0.41	−0.03	−0.19	−0.01	−0.06	−0.06	0.13	0.25	0.14	0.10	−0.21	−0.56
(20)	Staff rank	0.09	0.28	0.18	0.23	−0.13	−0.08	0.05	−0.22	−0.19	0.04	−0.01	0.00	−0.19
(21)	Entry rank	0.19	0.4	−0.08	0.14	−0.01	0.02	−0.02	−0.16	−0.17	−0.09	−0.06	0.13	0.25
(22)	Cognitive trust propensity ($t = 1$)	4.17	0.51	−0.04	−0.16	0.06	0.03	0.13	0.04	0.26	0.16	0.13	−0.06	0.11
(23)	Emotional trust propensity ($t = 1$)	3.4	0.48	−0.33	−0.03	−0.03	0.30	0.01	−0.23	−0.33	0.08	0.16	0.11	0.10
(24)	Proportional density ($t = 1$)	0.65	0.27	−0.10	0.01	−0.02	−0.09	−0.05	0.38	0.15	−0.09	0.00	−0.07	0.03
	Variables	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**	**(19)**	**(20)**	**(21)**	**(22)**	**(23)**	
(13)	Tie longevity	0.02												
(14)	Tie frequency	0.27	−0.00											
(15)	Tie multiplexity	0.20	−0.02	0.30										
(16)	Without third-party	−0.16	0.10	−0.14	−0.05									
(17)	Boss indicator	0.19	−0.17	0.18	0.33	−0.05								
(18)	Partner rank	0.20	0.05	−0.06	0.22	−0.06	0.43							
(19)	External rank	−0.48	−0.06	−0.10	−0.20	0.05	−0.17	−0.31						
(20)	Staff rank	−0.19	0.06	−0.09	−0.08	0.09	−0.12	−0.18	−0.16					
(21)	Entry rank	0.28	0.01	0.21	−0.14	−0.01	−0.21	−0.29	−0.25	−0.15				
(22)	Cognitive trust propensity ($t = 1$)	0.06	−0.03	0.04	0.07	−0.12	0.00	0.06	0.06	−0.07	−0.04			
(23)	Emotional trust propensity ($t = 1$)	0.18	−0.00	0.12	0.05	−0.15	0.03	−0.03	−0.09	−0.03	0.10	0.13		
(24)	Proportional density ($t = 1$)	−0.04	0.06	0.04	−0.00	0.01	−0.01	0.03	0.06	−0.18	0.02	−0.08	−0.00	

[a] $N = 499$. Correlation greater than $|.09|$ is significant at $p < .05$.

TABLE 4
Trusts for Gained Ties[a]

Variables	Model 13 Cognitive trust		Model 14 Emotional trust	
Age	0.01	(0.02)	−0.02	(0.04)
Education	0.13	(0.08)	0.07	(0.14)
Foreigner	0.02	(0.08)	0.19	(0.14)
Female	−0.09	(0.09)	0.13	(0.15)
Single	−0.07	(0.11)	0.04	(0.17)
Firm tenure	0.04	(0.03)	−0.09†	(0.05)
Job tenure	−0.03	(0.04)	0.12*	(0.06)
Network size	0.01	(0.02)	0.04	(0.03)
Ties gained	−0.02	(0.03)	−0.06	(0.04)
Ties lost	0.06	(0.39)	0.56	(0.53)
Location homophily	−0.06	(0.08)	0.21	(0.14)
Expertise homophily	−0.02	(0.07)	−0.12	(0.11)
Tie longevity	0.01	(0.02)	0.07**	(0.02)
Tie frequency	0.06*	(0.03)	0.23**	(0.05)
Tie multiplexity	0.04	(0.04)	0.18**	(0.04)
Without third-party	−0.09	(0.15)	0.02	(0.31)
Boss	0.03	(0.08)	−0.14	(0.13)
Partner rank	0.14*	(0.07)	−0.36**	(0.11)
External rank	−0.11	(0.09)	−0.41*	(0.20)
Staff rank	−0.16	(0.16)	−0.43†	(0.22)
Entry rank	−0.03	(0.08)	0.26*	(0.11)
Cognitive trust propensity ($t = 1$)	0.55**	(0.13)	−0.17	(0.14)
Emotional trust propensity ($t = 1$)	0.01	(0.09)	0.43*	(0.17)
Proportional density ($t = 1$)	−0.52**	(0.15)	0.18	(0.23)
Constant	1.96*	(0.96)	0.94	(1.30)
Job fixed effects	Included		Included	
Observations	499		499	
Adjusted R^2	0.35		0.45	

[a] $N = 499$. Two-way clustered standard errors in parentheses clustered by respondents ($N = 67$) and contacts ($N = 465$).
† $p < .10$
* $p < .05$
** $p < .01$, two-tailed test

and all others in PSFs. Hanging on to high-ranking contacts during a transition to management may be particularly important as it signals the social circle to which the focal actors ultimately aspire. It tells us that the development of a professional identity may also play a role in tie loss dynamics, in which the partner position is the ultimate career summit of a rigorous up-or-out career path. It also helps to explain why other important contacts are let go—they may have served their time as role models (Kram & Isabella, 1985). However, partners who are connected to the focal professional through third-party ties are especially resilient (Hypothesis 1b, cohesion force). Rank and cohesion combine to amplify retention chances.

While controlling for rank, we also find pragmatism at play, in that multiplex relations are retained (Hypothesis 2, efficiency force) who offer a greater variety of resources per relation. Moreover, the effect of tie multiplexity holds across models and when controlling for trust levels. This is important because prior work has argued that relationships will spill over to different domains of interaction because of strong trusting ties built between actors (cf. Gulati & Gargiulo, 1999; Kilduff & Brass, 2010), thus essentially downplaying the effect of multiplexity as an epiphenomenon of trust. Multiplexity's independent effect on tie loss points to the presence of a strong main effect, favoring efficiency not just relational strength.

The interplay between efficiency and cohesion is once again exhibited at the relational level, when we unpack trust. Purely instrumental assessments of contacts (Hypothesis 4, efficiency force) drive tie losses, as do emotional assessments (Hypothesis 3, cohesion force)—both matter, independently. There is a perhaps some modest advantage to cognitive-based trust (efficiency) at this level, based on coefficient sizes and significance levels. It may be that job change events are opportunities for assessing

network efficiency, a time when the lure of partnership, and job pressures, are all elevated and so steer actors toward pragmatism. Our findings show that these dynamics are substantially influenced by the competence of the extant network, whereby having more reliable and effective extant contacts enables tie losses (Hypothesis 5, efficiency force). This finding on tie loss is important because it reveals the interdependencies between the dyadic ego–alter relationship and the ego's other relations. It suggests that actors are influenced by the opportunity costs and benefits of retaining ties vis-à-vis other existing relations (Ahuja et al., 2012).

We also conducted additional analyses to test for any interaction effects between emotional and cognitive trust, but found no significant results (although an attenuating (positive) direction, as we might expect). We also examined whether there is an interaction effect across different levels of the trust types. Following Ai and Norton (2003), we calculated the marginal effect of cognitive trust and found that it becomes insignificant when emotional trust exceeds the 75th percentile of the observed distribution. Similarly, the marginal effect of emotional trust is insignificant when cognitive trust is greater than the median of the observed distribution. Hence, supporting McAllister's (1995) prediction, emotional and cognitive trust show a multiplicative effect *only* when each dimension shows low levels of trust, but otherwise remain independent effects.

Our study also reveals the interplay between cohesion and efficiency forces at the structural level. Embeddedness matters—contacts that are *closely* connected with common third parties are less likely to fade away (Hypothesis 6, cohesion force). Contacts so embedded are more likely to constrain the focal actor, but they are also more likely to develop thicker bonds. Despite this inertial force, however, we also find that actors are still, at the margins, pulled by efficiency forces. Newly promoted service professionals are more likely to lose contacts as their networks become more redundant (Hypothesis 7, efficiency force). Embeddedness captures the power of cohesion—of thick, close relations with common third parties—while tie efficiency captures the limits of being tied to those who do not necessarily bring a fresh perspective. Both can matter and play a role. The impression is what Kilduff et al. (2006) described as a complex adaptive system, one that exhibits *both* a tendency for persistence but also modification in the face of change.

Finally, we also find contingencies between network content (here, trust) and network structure. We find that efficiency and cohesion work together to explain the loss of ties in a redundant network. Our data shows that an actor is more likely to lose ties from a redundant network when she or he has higher-quality relational "options" they can substitute for the redundant tie (Hypothesis 8, efficiency force). On the other hand, she or he is less likely to lose ties from even a redundant network where there is high emotional trust in the extant network (Hypothesis 9, cohesion force).

Turning to gained ties, we argued that, while professionals should desire new relations that are competent and supportive (and tend to gain more higher-trust ties than they lose), it cannot be taken for granted that they are equally capable of gaining high-trust ties. We focused greater attention here on the structural determination of the trust of gained ties, while controlling for direct interpersonal experience (tie longevity and tie frequency). Consistent with the emerging narrative in tie losses, we found an interplay of cohesion and efficiency. Non-redundant former network positions at Time 1 boosted the capacity of the focal professional to gain high-efficiency ties. It seems that "cold, hard" structure can shape judgments in the face of uncertainty (Hypothesis 10). But, structure cannot help determine the emotional qualities of those relationships—interactive experience does much better to predict such qualities.

In summary, individuals are buffeted by the push and pull of efficiency and cohesion in their experience of role transitions. This is a unique viewpoint—the literature has tended to view cohesive and efficiency forces as mutually exclusive. For example, while prior work shows the pull of embeddedness on tie maintenance (Burt, 2000a; Lubbers et al., 2010; Martin & Yeung, 2006), the parallel pursuit of non-redundancy has not been well documented (for a simulation study, see Buskens & Van de Rijt, 2008). Some studies have implied a kind of balancing act. Studies of teams and organizations have shown that network structures can evolve to manage the cohesion–efficiency tradeoff by generating local cliques with shortcuts to new social circles (Uzzi & Spiro, 2005). Also, studies that focus on the institutional dynamics influencing the construction of professional role identities also suggest a duality of forces (cf. Giddens, 1984), between local actions and macro-level institutional forces (Chreim et al., 2007; Welbourne et al., 1998). Our work provides more visibility into the micro-sociological dynamics of this interplay.

There are various practical implications of our findings. First, it seems reasonable to think that

actors who overemphasize cohesion (inertia) and ignore efficiency may place themselves at a performance disadvantage. The efficiency forces we described are perhaps intuitively linked to such outcomes as productivity and effectiveness. On the other hand, it also seems reasonable to suspect that an overemphasis on either of the two forces (ignoring the other) may be suboptimal from the viewpoint of service professional performance—for example, actors who ignore and lose heavily embedded contacts may face social sanctions that have performance consequences. Further research is needed on the objective performance consequences of these relational changes. Our study offers at least a way to think about (and measure) whether those relational changes are driven by efficiency and/or cohesion.

Performance and practical implications, however, will depend also on the goal orientation of individuals; that is, whether they require more efficiency and/or cohesion given their situation. There may be individuals in a professional's working life who, for various reasons, they very much want to retain over the long term (e.g., a very prominent partner or client). One strategy is to try to make these ties multiplex and embedded. Relatedly, human resources (HR) professionals who want to see working groups retain connectivity beyond an assignment should organize events that help members build more complex ties (multiplex). On the other hand, individuals or HR professionals who require rapid adaptations in the face of uncertain contexts may wish to create tools that enhance discovery of alternative relations—and possibly highlight the opportunity costs of existing ones—and so facilitate relational discovery and change (Galunic, Sengupta, & Petriglieri, 2014). Our insights may also provide some advice for HR professionals who monitor employees' role transitions and need to diagnose root causes of difficult or unsuccessful transitions. Local search being likely, the hunt for root causes may over-focus on the candidate going through the transition (their personal characteristics) or a specific relationship that they hold (e.g., the "boss–subordinate" relation)—but our study suggests that the search may require casting a wider net. For example, a professional who is not making a speedy enough transition may be held back by a particularly embedded network of mutually re-enforcing (old) ties, or perhaps she or he comes from a particular cliquish network structure and so is unable to discern (without support) high-quality, or better-fitting, future relations.

Future Research Directions and Limitations

Our study has limitations that could be advanced by future research. First, because only ego network data were available, which rely upon ego's assessment of ties between contacts, there may be inaccuracy in assessing the second-order ties (Kilduff et al., 2008). Nonetheless, we see no systemic bias across our respondents that should make some more likely than others to recognize either more embedded or more efficient networks among their relations. Still, full network data would be ideal for this type of research. Full network data would also help control for any homophily effects in explaining losses or gains. While we conducted additional analyses on proxy measures for gender homophily (see footnote 5) and found no impacts to our main results, ideally, studies should aim to capture richer demographic data of the contacts.

Another related limitation is that the number of respondents in our sample is relatively small (n = 68 for tie loss and n = 67 for trusts for gained ties models), although the number of observations for statistical analysis is more than adequate (n = 1084 for tie loss and n = 499 for trusts for gained ties models). Given the difficulties in collecting longitudinal network data with detailed relational information (e.g., trust scores for each contact), it is not uncommon to have a small number of respondents (e.g., Lubbers et al., 2010; Vissa & Bhagavatula, 2012). Nevertheless, future research could improve this by investing additional resources in data collection.

Third, our study was not able to systematically examine the specific changes in task requirements of our respondents, which could have impacted relational changes during this transition period. That is, contacts may have been lost or gained for simply "formal" structure reasons, such as a new project team or evolution in their area of focus. The implication is that "agency" could not have had a bearing on such transitions, and so essentially none of the core forces of efficiency and cohesion would be relevant—rather, the explanatory power would lie in the change in formal structure. There are, however, good reasons why this should not present serious bias in our results. First, the ties that we studied were not any working relationships but key contacts. While it is likely that "any and all" types of ties will be affected by changes in task requirements, key contacts are more immune to these changes (and all role transitions were of people working in the same industry, in the same company, and with similar

technologies). Second, our study design meant that we necessarily interacted with subjects just after their promotions (i.e., they had to be promoted before they could be sampled). Hence, significant network changes due to purely task requirements were more likely to be captured. This also implies that the network changes we observed were more "natural," an artifact of an individual's enactment of their future, rather than just dictated by the "external" event itself. In addition, our comprehensive set of controls address some of these concerns, and, in particular, whether there is variance in how task structures may change across respondents (representing internal bias in our data). For example, we controlled for job fixed effects, which will account for the relative differences in changing task requirements across different firms and expertise/industry groups. If the changes in task requirements depend on industry group (e.g., if clients in the finance industry change faster than those in a tech-based industry), then our job fixed effects will take care of such potential differences. Finally, there is recent research that suggests that changes in informal ties are resilient or even orthogonal to changes in formal structure; for example, as Gulati and Puranam (2009: 425) found, "ties between individuals formerly in the same organizational unit persisted even though these individuals now functioned within different units" (see also Kleinbaum & Stuart, 2014). In our study, the conditions for network changes induced by changes in formal structure were much less acute because these promotions were neither about horizontal (cross-divisional) movements nor about radical strategic transformations that could lead to abrupt changes to internal boundaries. Still, we think future work should be more careful in parsing out relational changes that may be simply due to changes in formal structure.

Closely related to the above issue is the general issue of agency—that is, to what extent is creative, individual choice responsible for specific tie losses and gains? Agency is certainly implied in Granovetter's (1985) conceptualization of embeddedness, the alternative being a radical reductionism of actors from their social context, by which they become essentially mere vessels of narrow, utilitarian self-interest or universal cultural scripts. While it is plausible that agency, as part of a structuration process (Giddens, 1984), is involved in role transitions, once again, without a careful parsing of the elements noted above (formal vs. informal structural changes, and the role of alters in relationship dynamics), we do not have the empirical warrants to come to conclusions about agency when it comes to specific tie losses and gains. Our interactions with respondents provided numerous examples of agency in changing network relations; however, each instance of a lost or gained tie would have to be assessed for agentic explanation if the purpose of the study was to prove or disprove agency. But this was not the purpose of our paper, and our focus on how structural embeddedness may explain relational changes presupposes a degree of human motivation and action consistent with this more modest scoping (and consistent with studies of network dynamics, which also imply some degree of agency at work but are not designed to prove or disprove agency per se). Nonetheless, and echoing the limitation, future research should consider designs that help establish the role of agency more clearly.

Finally, our study did not measure personality differences in the propensity to lose ties. Recent work (Sasovova et al., 2010) has shown that differences in self-monitoring influences the degree of network change. Although our sample is drawn from a similar pool, future work should include measures of personality differences and explore the interaction of these differences with nodal, relational, and structural measures (Carroll & Teo, 1996).

CONCLUSION

Role transitions are pervasive in managerial life, giving individuals an opportunity to re-examine their social relations. Our study finds that, above all, these are "embedded" experiences. Network changes during role transitions are influenced by nodal properties but also by interpersonal experience and wider network effects. Forces for change—whether efficiency or cohesion—are best understood across levels. Moreover, while those forces imply logical trade-offs (e.g., efficiency vs. cohesion), they can be experienced in "harmony," as human actors easily engage with both motivational forces during role transitions. Everyday working life, but also our transitions, are thus shaped by the intricate interplay of embedded social forces.

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