

# Dormant Ties: The Value Of Reconnecting

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The social networks literature suggests that ties must be maintained to retain value. In contrast, we show that reconnecting dormant ties—former ties, now out of touch—can be extremely useful. Our research prompted Executive MBA students to consult their dormant contacts about an important work project; outcomes compared favorably to those of their current ties. In addition, reconnecting previously strong ties led to all of the four benefits that are usually associated with either weak ties (efficiency and novelty) or strong ties (trust and shared perspective). These findings suggest that dormant relationships—often overlooked or underutilized—can be a valuable source of knowledge and social capital.

*Key words:* social capital; tie strength; knowledge transfer

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Built into human cognitive equipment is a remarkable capacity, depressingly little studied, to file away the details and especially the emotional tone of past relations for long periods of time, so that even when one has not had dealings with a certain person for many years, a re-activation of the relationship does not start from scratch, but from some set of previously attained common understandings and feelings. (Granovetter 1992, p. 34)

Losing touch is all too common—the inevitable by-product of a modern, mobile society, with people changing locations, switching jobs, and leading hectic, busy lives. Individuals are free to take advantage of an enormous array of economic and social opportunities. The finite limits of time, however, create a natural ceiling on the number of relationships that a person can actively maintain (Dunbar 1993, McFadyen and Cannella 2004). As a result, many relationships—even positive, rewarding relationships—end up neglected. Both practitioners and scholars have treated this type of “neglected” tie—and its ability to offer economic or other nonsocial benefits (i.e., its social capital)—as dead and irrelevant (Burt 1992, 2002; Coleman 1990).

In this paper, we introduce a new concept, dormant ties, that we define as a relationship between two individuals who have not communicated with each other for a long time, e.g., who have drifted apart because of job mobility, divergent interests, or other time demands (Burt 2002). In contrast to the established literature on social networks and social capital, we suggest that as long as the option of a future reconnection continues

to exist, dormant ties are not dead. Thus, we examine whether reconnected dormant ties can become a valuable component of an individual’s social network.

Obviously, not all reconnections will be useful, especially ties that were consciously severed because of interpersonal conflict (Labianca and Brass 2006). In addition, some dormant contacts may lack relevant expertise or the motivation to help. We argue, however, that at least some dormant ties—especially those that people consciously choose to reconnect—might, for several reasons, provide an important source of knowledge and might therefore be included as part of an individual’s social capital. First, reactivating a dormant tie may impose few constraints and require little time investment, making reconnections fairly efficient. Second, just because a tie becomes dormant does not mean that uncontacted individuals go into hibernation; instead, they typically continue to encounter new and different experiences, observations, and information. Thus, reconnections may provide a new, diverse array of independently accumulated knowledge. Third, as Granovetter (1992, p. 34) has noted, reconnecting a past relationship could reactivate a residue of “previously attained common understandings and feelings,” augmenting a contact’s ability and willingness to provide valuable advice.

We tested these ideas in an exploratory empirical investigation of dormant ties. Although a multitude of personal and professional benefits might result from reconnecting, we focused on the receipt of information

and/or knowledge that has a positive impact on a knowledge seeker's work (Levin and Cross 2004). We were especially interested in knowledge-related benefits, as one of the few sources of sustainable competitive advantage for firms is their base of knowledge (Argote 1999, Kogut and Zander 1992). To put the value of reconnected dormant ties in perspective, we also compared the value of reconnected dormant ties with typical current ties.

This research expands the study of individuals' networks—and their associated social capital—by exploring the underlying dynamics and benefits of both current and dormant ties. Whereas previous research has treated dormant ties as qualitatively different from current ties—i.e., as if they were unwanted or even rejected—our results indicate otherwise: dormant ties provide a familiar set of benefits, augmented by increased efficiency and novelty. Thus, this study introduces dormant ties as an underappreciated but potentially highly valuable source of knowledge—a concept that can have value for practitioners and social capital scholars alike.

### Dormant and Reconnected Ties

Although adults accumulate thousands of ties, they actively maintain no more than one or two hundred (e.g., Killworth et al. 1990); this means that most ties are dormant. Indeed, almost anyone's life history will include an enormous number of interpersonal connections: some fleeting, some transitory, and others long-lasting (Killworth et al. 1990). Other than close family, few interpersonal ties are permanent, and even family connections can be distant or intermittent. Yet despite the pervasiveness of dormant ties, we know remarkably little about them—perhaps because they can be difficult for researchers to detect and measure, or perhaps because practitioners have a tendency to forget about them.

As noted, ties can become dormant for many reasons. Relatively few become dormant consciously; instead, ties become dormant through inattention, happenstance, and inertia (Burt 2002). As activities pull people in different directions, previous connections become less important, and present contingencies can dominate a person's consciousness and time. Thus, two people in the same organization may maintain an active tie only because they encounter each other in the same physical space on a regular basis; they may not stay actively connected if either of them is transferred elsewhere. Organizational and physical distance, then, provide one of many likely reasons for dormancy.

Social network research has focused primarily on current ties, and so the issue of dormant ties remains largely unaddressed. When they are addressed, dormant ties are often treated as dead and irrelevant. For example,

Coleman (1990, p. 321) claimed that “[s]ocial relationships die out if not maintained; expectations and obligations wither over time; and norms depend on regular communication.” Burt (1992, p. 9) argued that if any party to “a relationship withdraws, the connection, with whatever social capital it contained, dissolves.” Dissolutions need not be intentional, in this view, as relationships will “die of natural causes unless an effort is made” (Burt 2002, p. 347). A few authors, however, have hinted that dormant ties may retain at least some value. Burt (1992, p. 68), for instance, acknowledged that some relationships are “ignored for current purposes, not necessarily neglected for life. They are on hold, sleepers ready to wake.” In addition, Sellers's (2006) discussion of Arthur Andersen's collapse noted that many former employees expressed the belief that, if the need arose, parts of their nonmaintained social capital could be reactivated.

It is important, though, to distinguish the concept of dormancy from the concept of tie strength, because some dormant ties used to be strong and some used to be weak. In particular, dormant ties are not the same as weak ties. Granovetter (1973) initially defined tie strength as a combination of time spent, emotional intensity, intimacy, and reciprocal services. Accordingly, a number of studies have characterized tie strength as a combination of interaction frequency and closeness (e.g., Hansen 1999, Levin and Cross 2004, McFadyen and Cannella 2004). Interaction frequency, however, is problematic for two reasons. The first is empirical: Marsden and Campbell's (1984, pp. 496–498) multistudy analysis reached “one fairly clear conclusion: a measure of ‘closeness,’ or the emotional intensity of a relationship, is on balance the best indicator of the concept of tie strength [whereas] the contamination of duration and frequency by predictors and by one another casts doubt on the quality of either as an indicator of tie strength.” The second is conceptual: interaction frequency is an imperfect indicator of a tie's strength, particularly if the interactions (1) are not all the same length (e.g., “daily” can mean a few minutes a day or all day); (2) do not occur at a constant rate (e.g., monthly meetings can become daily, then return to monthly); (3) have unequal emotional impact (e.g., a day of side-by-side active combat can forge a stronger tie than a day of light training); and, most problematically when considering dormant ties, (4) continue to have a lasting impact, even years later. Thus, for the present research, the perceived closeness that has accumulated over the life of a relationship reflects a tie's strength, and the time that has elapsed since the last interaction determines whether a tie is active or dormant. Tie strength is a perceptual variable; dormancy is a time-based, objective variable, and both weak *and* strong ties can become dormant.

### Hypotheses

To understand the benefits a dormant tie might offer, we integrate two schools of thought on social capital (see

Walter et al. 2007). The “bridging view” of ties emphasizes that weak ties, which tend to bridge socially distant circles (Burt 1992), result in fewer constraints and more diverse information (Granovetter 1973, 1982). Weak ties require less time and energy to maintain (Granovetter 1973, McFadyen and Cannella 2004), freeing up time to do other things (Hansen 1999) and imposing fewer direct and indirect costs. Another bridging benefit is access to novel information, i.e., fresh thinking and unexpected insights. Thus, we suggest that weak ties generally provide two kinds of benefits: *efficiency*, i.e., the ability to obtain information at little cost, and *novelty*, i.e., access to nonredundant information.

In contrast, the “bonding view” of ties emphasizes that strong ties can enhance knowledge transfer by nurturing trust (Krackhardt 1992, Levin and Cross 2004) and a shared perspective (Nahapiet and Ghoshal 1998, Tsai and Ghoshal 1998). Two people with a strong tie are motivated to assist and cooperate with each other (Gambetta 1988, Reagans and McEvily 2003), treat each other well, be more easily available (Granovetter 1982), and expend effort to ensure that a knowledge seeker sufficiently understands and can use newly acquired knowledge (Hansen 1999). Trust also allows each party to predict how the other will use transferred knowledge. In essence, feelings of trust act as governance mechanisms that facilitate exchange (Krackhardt 1992). Thus, trust decreases competitive and motivational barriers, thereby enhancing the value of such interactions (Levin and Cross 2004, Tsai and Ghoshal 1998). Another benefit of strong ties is the increased comprehension of transferred knowledge (Reagans and McEvily 2003, Uzzi 1997): close social interactions forge a common set of goals, values, language, and understanding (Levin et al. 2006, Tsai and Ghoshal 1998). This shared perspective makes it easier to communicate (Argyres 1999, Bolino et al. 2002, Nahapiet and Ghoshal 1998), preventing misinterpretation, misunderstanding, and the potential misuse of information (Cronin and Weingart 2007). People connected by strong ties also develop relationship-specific heuristics that allow them to work out problems “on the fly” (Hansen 1999). Thus, we suggest that strong ties generally provide two main benefits: *trust*, i.e., a greater willingness to engage in productive knowledge transfer, and *shared perspective*, i.e., an enhanced ability to understand and make use of transferred knowledge. In the next sections, we apply these four generic benefits—efficiency, novelty, trust, and shared perspective—to the context of reconnected dormant ties.

### Efficiency and Novelty

Dormancy should loosen a tie’s constraints, allowing it to be more efficient when consulted. (Our focus here is on the time spent connecting, because the time invested in a tie prior to dormancy is a sunk cost.) Although individuals consult current ties out of convenience or

obligation, people can freely choose whether and which dormant ties to reconnect, and they can make their selections from a large pool (Killworth et al. 1990). As a result, people are less likely to reconnect negative or unproductive ties. Moreover, cutting a conversation short—or not having it in the first place—may endanger a current relationship but be less serious for reconnected ties, which can easily return to dormancy if sufficient value does not emerge quickly. This logic should apply whether a dormant tie used to be strong or weak. For example, the natural expectation that weak-tie interactions will be intermittent and short (Marsden and Campbell 1984)—thereby entailing fewer costs and obligations—may be even more prevalent when reconnecting a dormant tie. We would therefore expect people to spend less time consulting with a “dormant strong” tie—i.e., to have more efficient access to that person’s knowledge—than with a current strong tie, and similarly for a dormant weak versus current weak tie. Thus, we propose the following.

**HYPOTHESIS 1A (H1A).** *Reconnecting dormant strong ties will be more efficient than consulting current strong ties.*

**HYPOTHESIS 1B (H1B).** *Reconnecting dormant weak ties will be more efficient than consulting current weak ties.*

As noted, a person’s fund of knowledge does not stagnate just because a tie to that person becomes dormant. Life goes on, and so do new experiences and learning. As a result, the knowledge accumulated while a tie lies dormant may well provide new and unexpected insights if the tie is reconnected. Also, although initial interactions may be truly beneficial, repeated interactions, like those of current ties, often provide diminishing returns (McFadyen and Cannella 2004). All else equal, then, dormant ties should provide access to greater novelty.

For dormant weak ties, there is no reason to think that bridging benefits will diminish during dormancy. On the contrary, previous weak-tie contacts are likely to forge even more new links to different social circles over time, creating additional potential for new information. Thus, the novelty benefits of reconnected dormant weak ties should compare favorably to those of current weak ties. Dormant strong ties, too, should benefit from an increase in novel information. As Delbridge and Mariotti (2007) suggested in their qualitative study of the British and Italian motorsport industries, the decay of strong ties may alleviate redundancy problems, but if revived, these ties may become sources of newly relevant information. Knowledge receivers may also learn more from dormant ties because unexpected information is more vivid than familiar information (Nisbett and Ross 1980). Thus, we propose the following.

**HYPOTHESIS 2A (H2A).** *Reconnecting dormant strong ties will provide greater novelty than consulting current strong ties and, as a result, more useful knowledge.*

**HYPOTHESIS 2B (H2B).** *Reconnecting dormant weak ties will provide greater novelty than consulting current weak ties and, as a result, more useful knowledge.*

### Trust and Shared Perspective

Over and above the effects of efficiency and novelty, strong and weak dormant ties are themselves apt to differ in important ways. Like first impressions, which have surprising strength and persistence (e.g., Schlenker 1980), dormant strong ties should retain much of their strength: their dormancy results from being inactive rather than from a loss of potency. If they are reconnected, we expect that they will “not start from scratch, but from some set of previously attained common understandings and feelings” (Granovetter 1992, p. 34). As time passes, however, and thoughts and feelings begin to fade, a tie’s strength may diminish; how much is an open question. This expectation is consistent with the suggestion by Oh et al. (2006) that ties severed on good terms, e.g., because of retirement or a new job, might still provide benefits when needed. Burt (2005, p. 197, Footnote 22) has also qualified his earlier claims on the “decay” of a tie: “When events pull friends apart—they graduate to positions in different cities, or they marry into different circles—the friendship is not destroyed so much as it goes into remission. It lies there inactive waiting to be revived when occasion permits.”

Thus, we suggest that strong ties may create a fundamental, permanent connection that time apart, on its own, cannot undo. Although relationships might naturally erode over time, reconnecting a previously strong tie should resurface many if not all of its previous trust benefits, e.g., feelings of caring and a motivation to help. Also, the act of reconnecting a strong tie can be emotionally positive—which increases people’s willingness to trust (Dunn and Schweitzer 2005) and to listen and learn (Levin et al. 2010)—making these kinds of reconnections particularly useful. In contrast, reconnecting dormant weak ties should offer fewer trust-related benefits because trust may have been minimal in the first place (Levin and Cross 2004). We therefore propose the following.

**HYPOTHESIS 3 (H3).** *Reconnecting dormant strong ties will provide greater trust than reconnecting dormant weak ties and, as a result, more useful knowledge.*

Likewise, the benefits of a shared perspective developed via a history of close interaction are not likely to disappear, even during dormancy. Although mutual understandings may diminish, they are likely to remain strong, because basic ways of thinking tend not to change fundamentally, even over a period of years (e.g.,

Staw et al. 1986). Thus, people with a previously strong tie should still have the ability to engage in a productive knowledge exchange when they reconnect. For dormant weak ties, however, a shared perspective should not be as relevant, because it was likely never present before. Therefore,

**HYPOTHESIS 4 (H4).** *Reconnecting dormant strong ties will provide greater shared perspective than reconnecting dormant weak ties and, as a result, more useful knowledge.*

## Methods

### Overview

Our most basic empirical goal was to determine whether people would benefit from reconnecting dormant ties. Thus, we asked 224 executives in four Executive MBA classes (three in the United States, one in Canada) to reconnect two of their dormant ties, one strong and one weak. We considered several alternative approaches to this reconnection process. Asking respondents to identify all of their dormant ties before randomly selecting one strong and one weak tie, for instance, would have been tremendously cumbersome; in addition, people do not naturally search among their ties randomly (Hansen 1999, Hansen et al. 2005). Asking respondents to reconnect with people who would be *most* likely to provide useful information, regardless of any other constraints (e.g., convenience), also seemed problematic, because potential usefulness is not the only factor in a reconnection decision. In the end, we tried to preserve as many of the natural aspects of reconnecting as possible; thus, we gave respondents considerable freedom in their selections.

We asked respondents to choose two people with whom they had not communicated for at least three years, “someone with whom you once had a close or strong relationship and [also] someone with whom you once had a weak or distant relationship.” We chose three years because communicating every year or two, e.g., as can occur among colleagues at an annual conference, seemed too much like regular communication, part of an ongoing, continuing relationship. After three years of no contact, we thought that it would be rare for people to feel that a tie was anything but dormant. Admittedly, this cutoff is arbitrary, and future research might explore other criteria. (Within our sample, follow-up analyses, not reported here, did not detect any difference in the impact of dormant ties that had been dormant for three years versus longer.) We encouraged respondents to select contacts who “might provide information, knowledge, or advice that would help you [on] a major, ongoing work project that has significance for your career,” though respondents naturally did not know if these reconnections would actually be useful. By

focusing on a specific project, they could connect their interactions to a concrete set of experiences (Levin and Cross 2004), reducing recall and other biases (Marsden 1990, 1993).

We encouraged them to reconnect by phone or in person rather than via e-mail. Respondents received two voluntary, confidential e-mail surveys, one prior to making their first contacts and the other about a month later, after they had submitted a short essay describing their experiences. Although reconnecting was a course requirement, respondents were told, truthfully, that the course instructor would never see any surveys and would not know who did or did not complete them.

Our first survey used standard egocentric network survey techniques (Burt 1992), asking respondents to list names, initials, or nicknames of up to 15 people with whom they had already consulted about their work project and how well they knew them (especially close, in-between, or distant). We asked them to “include people both inside and outside your organization, such as coworkers, managers, subordinates, contractors, customers, consultants, suppliers, external colleagues, fellow students, friends, etc.” We asked respondents to include sources whether they “were useful *or not*” to reduce selection biases and ensure that the list included typical current ties.

For our second survey, we randomly selected two of these current ties, one especially close and one distant, from the respondent’s first survey, and we asked a series of questions about these two current ties and their two reconnected dormant ties. An alternative comparison might have included their two dormant ties and their two least useful current ties, because reconnecting could be a natural strategy to replace a person’s least useful current ties. Such a comparison might have made dormant ties look especially good; it seemed overly biased and post hoc, though, because people often do not know in advance which contacts will turn out to be useful. Similar problems would also apply if we had focused on the two most useful current ties. Thus, in an attempt to avoid bias in either direction and to try to simulate the decisions facing actual knowledge seekers, we used a person’s current portfolio average for comparisons.

Another approach might have asked respondents to consult two current contacts whom they had not already consulted about their work project. This approach, however, would have doubled the burden on our respondents, and we were interested in comparing reconnected dormant ties to the status quo, i.e., typical current ties. As noted, dormant ties were selected with an eye toward potential usefulness—just like the current ties. Rather than a sampling bias, this is the central aim of knowledge search in organizations. For respondents who had not listed an especially close or distant current tie, we substituted a randomly selected current tie that fell between these two extremes; results were unchanged

with or without these “in-between” ties, so we include them to help compare dormant ties to the full range of current ties, from weak to medium to strong.

### Sample

Nonrespondents received repeated reminders and, in some cases, a follow-up phone call. Ultimately, 129 executives completed both surveys (response rate, 57.6%). This compares favorably to other studies on individuals’ network ties (e.g., Levin and Cross 2004, Obstfeld 2005) and might also be considered high given the imposing time demands on Executive MBAs. Analysis indicated that the gender breakdown of respondents (79.1% male), the only available demographic variable for nonrespondents, was nearly identical to that of the contacted sample (79.5% male;  $t = 0.11$ ;  $p = 0.913$ ).

The average respondent was 38.3 years old (standard deviation (SD) = 5.5), worked in an organization of 22,753 employees (SD = 53,682), and had previously worked in 1.9 other organizations in the same industry (SD = 2.2), his or her current job for 3.5 years (SD = 3.0), current organization for 7.3 years (SD = 5.2), and industry for 12.3 years (SD = 6.0). Respondents had worked on their focal project for a median of four months, with a median estimate of nine months remaining until completion. Respondents spent an average of 29.2% of their workday on this project; 68.2% had worked on at least one other project in the same technical area. Respondents listed an average of 10.1 current ties (SD = 4.0) with whom they had consulted on the project: 4.0 strong, 3.9 medium (in-between), and 2.2 weak ties.

### Measures

*Dependent Variable.* For our main outcome measure, the *receipt of useful knowledge*, we used the items validated at multiple companies from the Cross and Sproull (2004) study of the five types of actionable knowledge. Specifically, respondents rated how much each type of actionable knowledge—i.e., specific answers or input, identifying relevant information sources, problem-solving assistance, validating the respondent’s ideas, and legitimacy—from a given tie contributed to the respondent’s project performance, as well as the tie’s overall contribution (see the appendix for details). A factor analysis identified a single factor (eigenvalues of 3.7, 0.7, 0.6, 0.5, 0.3, 0.3) with high reliability ( $\alpha = 0.87$ ), so we averaged the six items.

We did not attempt to augment these self-reports with independent observations (e.g., supervisors’ ratings) because third parties are rarely in a position to know the details of transferred knowledge let alone its usefulness. Although recipients and sources might differ in their perception of the value of an exchange, knowledge recipients’ definitions of value were our central

interest: “A knowledge seeker is the best, perhaps the only, judge of the usefulness of knowledge received” (Levin and Cross 2004, p. 1482).

*Independent Variables.* We created five dummy variables (coded as 0 for no and 1 for yes) for tie type: *current strong*, *current medium*, *current weak*, *dormant strong*, and *dormant weak ties*.

For *efficiency*, we used the logarithm of total minutes spent consulting with each contact about the work project.<sup>1</sup> For *novelty*, respondents indicated whether and how much they received unexpected, useful insights. For *trust*, respondents rated each of their contacts on benevolence-based or relational trust (Levin and Cross 2004, Levin et al. 2006). For *shared perspective*, respondents rated the extent of similar thinking, goals, and language (Levin et al. 2006, Tsai and Ghoshal 1998). These were single-item measures, which, though not ideal, are typical in network research (e.g., Borgatti and Cross 2003, Seibert et al. 2001). A review by Marsden (1990) suggests they are largely reliable when proper procedures are followed. Accordingly, each item was as specific as possible—including a number of examples—to enhance recall accuracy (see the appendix for the exact wording).

*Control Variables.* To rule out alternative explanations, we controlled for 12 respondent variables and 9 relationship variables (see the appendix). For each respondent, controls related to the work project (e.g., its duration, how revolutionary it was), to the respondents themselves (e.g., their age, experience), and to their organization (e.g., its size). For each relationship, controls included features of the relationship (e.g., demographic similarity of the two parties), the context (e.g., people in common), the knowledge source (e.g., perceived competence), and their interaction (e.g., in-person or not). Communicating in person can convey more nuance and social cues, but because reconnecting is often not in person, we tried to tease apart the impact of reconnecting versus simply communicating in person.

### Analyses

We analyzed the data with hierarchical linear modeling (HLM) (Bryk and Raudenbush 1992), which is ideally suited for nested data (Marsden 1993, van Duijn et al. 1999)—in our case (see Cross and Sproull 2004), knowledge-seeking ties (“level 1”) nested within respondents (“level 2”)—because it does not require independent observations (Hofmann et al. 2000). HLM can formally represent each level of analysis with its own submodel, delineating the variance explained by characteristics of each level. For each tie, predicted intercept and slope values were estimated at both levels, followed by an optimally weighted combination of these estimates using an empirical Bayesian estimation strategy (Hofmann 1997). Model specification included a normal (i.e.,

continuous) distribution of the outcome variable, except for some binary outcome variables, in which case the specification was a Bernoulli distribution.

Following Hofmann (1997), we partitioned the variance in the outcome variables into within- and between-subject components. A one-way analysis of variance (ANOVA) indicated significant between-subject variance for time spent ( $\tau_{00} = 0.05$ ,  $\chi^2[128] = 255.24$ ,  $p < 0.001$ , intraclass correlation coefficient (ICC) = 0.20), trust ( $\tau_{00} = 0.42$ ,  $\chi^2[128] = 260.21$ ,  $p < 0.001$ , ICC = 0.21), and shared perspective ( $\tau_{00} = 0.31$ ,  $\chi^2[128] = 219.28$ ,  $p < 0.001$ , ICC = 0.16), but not for the receipt of useful knowledge ( $\tau_{00} = 0.01$ ,  $\chi^2[128] = 132.08$ ,  $p = 0.384$ , ICC = 0.01) or novelty ( $\tau_{00} = 0.04$ ,  $\chi^2[126] = 139.82$ ,  $p = 0.189$ , ICC = 0.03). To be conservative, we included between-subject control variables in all HLM models. Because our one-way ANOVA detected systematic within- and between-subject variance, we analyzed the data using intercepts-as-outcomes regression models (Hofmann 1997), where  $R^2 = (\sigma_{\text{one-way ANOVA}}^2 - \sigma_{\text{random regression}}^2) / \sigma_{\text{one-way ANOVA}}^2$  (Hofmann 1997, p. 734).

To test H1A, we compared the amount of time spent consulting dormant strong ties versus current strong ties, and for H1B, dormant weak versus current weak ties. For H2A and H2B, we made similar comparisons for levels of novelty and also tested whether these novelty effects mediated the overall impact on the receipt of useful knowledge. We tested H3 and H4 simultaneously by comparing dormant strong to dormant weak ties, to see whether—over and above the effects of efficiency and novelty—a dormant strong tie’s trust and shared-perspective benefits remained potent and available. We also tested whether these two strong-tie benefits mediated the overall impact on the receipt of useful knowledge.

## Results

An initial comparison of the reconnected dormant ties and typical current ties revealed several differences: as expected, reconnections were characterized by more geographically distant and longer-term relationships, were less likely to be within the same organization, involved knowing fewer people in common, and were less often in person (see the top half of Table 3).

### Hypotheses

*Efficiency.* As predicted by H1A, respondents spent significantly less time consulting reconnected dormant strong ties (coefficient of  $-0.22$ ,  $p < 0.001$ ) than current strong ties (Table 2, Model 1). H1B, however, was not supported: although nominally less time was spent consulting dormant weak ties (coefficient of  $-0.35$ ) than current weak ties (coefficient of  $-0.26$ ), the difference was not significant (comparison  $p = 0.284$ ). In a separate analysis (not shown), this difference became

**Table 1 Means, Standard Deviations, and Correlations**

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Receipt of useful knowledge	5.55	0.86													
2. Project length	0.78	0.38	0.00												
3. % of workday on project	0.29	0.26	0.04	0.22*											
4. Network size	10.11	4.04	0.02	0.14	0.17										
5. Job tenure	1.46	0.45	-0.04	0.12	-0.01	-0.02									
6. Organizational tenure	1.80	0.41	-0.03	0.09	-0.09	0.08									
7. Industry tenure	2.11	0.25	0.02	0.03	-0.06	-0.01	0.47**								
8. Prior organizations	0.36	0.30	-0.06	-0.06	0.06	-0.14	0.17	0.24**							
9. Prior project experience	0.68	0.47	0.06	-0.12	0.11	0.05	-0.19*	-0.33**	0.36**						
10. Respondent's age	38.33	5.48	0.14**	0.07	-0.05	0.12	0.15	0.14	0.34**	0.12					
11. Organizational size	3.23	1.32	-0.04	0.05	-0.06	0.13	0.08	0.38**	0.21*	-0.02	0.01				
12. Respondent's gender	0.21	0.41	0.03	0.05	-0.01	-0.06	0.04	-0.08	-0.13	0.07	0.11	0.13	-0.02		
13. Revolutionary project	0.00	0.89	0.06	0.18*	0.12	0.06	-0.03	0.06	-0.24**	-0.24**	-0.27**	-0.14	-0.06	0.02	
14. Communication in person	0.50	0.50	0.00	0.06	-0.01	-0.03	-0.05	0.04	0.02	-0.04	-0.04	0.06	-0.01	0.04	0.04
15. Same gender	0.73	0.44	0.03	-0.06	0.05	0.07	-0.11*	-0.04	0.02	-0.03	-0.04	-0.03	0.01	-0.38**	0.06
16. Same race/ethnicity	0.69	0.46	0.05	0.11*	0.09*	0.03	0.02	-0.02	-0.06	-0.08	-0.01	0.02	-0.10*	0.05	0.04
17. Same age	0.47	0.50	0.04	0.05	-0.01	0.03	0.07	0.02	-0.01	-0.09	0.04	0.10*	0.01	-0.07	-0.03
18. In same organization	0.43	0.50	-0.05	-0.07	-0.11*	0.01	-0.03	0.20**	0.04	-0.16**	0.09	0.04	0.26**	-0.07	-0.03
19. Physical proximity	2.79	1.51	-0.01	0.01	-0.01	-0.08	0.03	0.09*	0.03	-0.06	0.01	0.02	0.08	-0.02	0.01
20. Perceived competence	6.32	0.88	0.44**	0.02	0.04	-0.05	0.01	-0.02	0.00	0.07	0.01	0.10*	0.09	0.10*	-0.03
21. People in common	3.19	2.20	0.08	-0.11*	-0.06	-0.04	0.00	0.10*	0.02	-0.04	0.06	0.00	0.17**	0.00	-0.05
22. Relationship length	1.84	0.44	0.08	0.01	-0.01	0.04	0.07	0.09	0.00	-0.15**	0.01	0.10*	-0.11*	0.07	0.04
23. Time spent	2.00	0.51	0.21**	0.18**	0.19**	0.01	0.03	0.02	0.05	0.04	0.07	0.00	0.03	0.13**	0.03
24. Current strong ties	0.23	0.42	0.09	0.01	0.00	-0.02	0.00	0.03	-0.03	-0.01	0.00	-0.01	0.02	0.01	0.01
25. Current medium ties	0.08	0.28	-0.05	-0.07	-0.03	-0.10*	0.00	-0.02	-0.01	-0.01	0.01	-0.05	-0.04	-0.01	0.05
26. Current weak ties	0.17	0.38	-0.20**	0.08	0.06	0.11*	-0.01	-0.03	0.01	0.02	0.00	0.02	0.01	0.01	-0.02
27. Dormant strong ties	0.27	0.44	0.10*	-0.02	-0.01	0.00	0.01	0.00	0.01	0.02	0.01	0.01	0.00	0.02	-0.01
28. Dormant weak ties	0.25	0.43	0.02	-0.01	-0.03	-0.01	-0.01	0.01	0.01	-0.03	-0.02	0.02	0.00	-0.02	-0.01
29. Novelty	5.40	1.15	0.59**	-0.03	0.02	0.08	-0.13**	-0.09	-0.02	0.02	0.02	0.11*	-0.06	0.04	-0.04
30. Trust	5.10	1.39	0.37**	-0.04	-0.02	-0.11*	-0.07	-0.02	-0.01	-0.01	0.06	0.00	-0.09	0.14**	-0.02
31. Shared perspective	5.20	1.39	0.25**	0.02	0.10*	0.03	-0.10*	-0.08	0.00	0.07	0.12*	-0.10*	0.03	0.03	-0.03

Table 1 (cont'd.)

Variable	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
15. Same gender	-0.06																
16. Same race/ethnicity	-0.01	0.02															
17. Same age	-0.06	0.05	0.00														
18. In same organization	0.28**	0.05	-0.07	-0.07	0.47**												
19. Physical proximity	0.53**	-0.08	0.01	-0.07													
20. Perceived competence	-0.03	-0.02	0.00	0.00	-0.09	0.04											
21. People in common	0.19**	0.04	-0.01	0.01	0.42**	0.38**	-0.02										
22. Relationship length	-0.19**	0.04	0.12*	0.04	-0.24**	-0.15**	0.13**	-0.07									
23. Time spent	0.28**	-0.06	0.02	-0.02	0.23**	0.22**	0.07	0.23**	-0.20**								
24. Current strong ties	0.36**	-0.08	0.01	-0.06	0.37**	0.50**	0.10*	0.37**	0.01	0.32**							
25. Current medium ties	0.05	0.01	0.01	-0.09	0.15**	0.11*	-0.03	0.07	-0.17**	0.05	-0.16**						
26. Current weak ties	0.08	-0.06	-0.07	-0.03	0.14**	-0.04	-0.20**	-0.04	-0.56**	0.07	-0.25**	-0.14**					
27. Dormant strong ties	-0.27**	0.08	0.01	0.14**	-0.28**	-0.29**	0.06	-0.10*	0.34**	-0.13**	-0.33**	-0.18**	-0.28**				
28. Dormant weak ties	-0.17**	0.05	0.04	0.00	-0.30**	-0.22**	0.04	-0.27**	0.24**	-0.27**	-0.31**	-0.17**	-0.26**	-0.34**			
29. Novelty	-0.10*	0.04	0.04	0.07	-0.25**	-0.22**	0.30**	-0.19**	0.13**	0.01	-0.16**	-0.16**	-0.20**	0.16**	0.27**		
30. Trust	0.05	-0.13**	0.01	-0.04	0.05	0.14**	0.31**	0.17**	0.17**	0.20**	0.34**	0.01	-0.30**	0.16**	-0.23**	0.14**	
31. Shared perspective	0.03	-0.05	0.08	0.12*	0.02	0.12**	0.24**	0.17**	0.12*	0.07	0.26**	-0.01	-0.23**	0.14**	-0.18**	0.04	0.46**

Note.  $N = 462$  for Variables 1 and 14–31;  $N = 129$  for Variables 2–13.

\* $p < 0.05$ ; \*\* $p < 0.01$  (two-tailed tests).

marginally significant ( $p = 0.093$ ) when we controlled for the other benefits of a tie, i.e., novelty, trust, and shared perspective. In addition, respondents spent significantly less time consulting their dormant weak ties (Model 1; coefficient of  $-0.35$ ) than their dormant strong ties (coefficient of  $-0.22$ , comparison  $p < 0.001$ ). Thus, dormant strong ties were more efficient than current strong ties (providing full support for H1A), but dormant weak ties were, at best, only marginally more efficient than current weak ties (providing limited support for H1B).

Nevertheless, *both* types of dormant ties—strong ( $p < 0.001$ ) and weak ( $p < 0.001$ )—were more efficient than current strong ties (Model 1). Also, both dormant strong (comparison  $p = 0.593$ ) and dormant weak ties (comparison  $p = 0.284$ ) were similar in efficiency compared to current weak ties. Thus, it would appear that reconnected dormant ties are a lot like current weak ties in terms of being relatively efficient. In addition, if we conceptualize efficiency in terms of benefit per unit of cost (“bang for the buck”) instead of simple costs (i.e., time spent), then the findings support both H1A (dormant strong ties;  $p = 0.020$ ) and H1B (dormant weak ties;  $p < 0.001$ ; see the first line of the bottom half of Table 3).

*Novelty.* Dormant strong ties had significantly higher levels of novelty (coefficient of  $0.67$ ,  $p < 0.001$ ) than current strong ties (Model 3), and dormant weak ties (coefficient of  $0.91$ ) had significantly higher levels of novelty than current weak ties (coefficient of  $-0.27$ , comparison  $p < 0.001$ ). These results support H2A and H2B.

In addition, the novelty provided by dormant ties mediated an overall effect on the receipt of useful knowledge. For dormant strong ties, compared with current strong ties, the standard four-part mediation test was significant: first, the direct effect of dormant strong ties on the receipt of useful knowledge was positive (Model 2;  $p = 0.020$ ); second, novelty had a positive, direct effect on the receipt of useful knowledge (when added to Model 2 without any dummy variables included for tie type, not shown;  $p < 0.001$ ); third, dormant strong ties had a positive effect on novelty (Model 3;  $p < 0.001$ ); and fourth, when novelty was added to Model 2 (not shown), it was significant ( $p < 0.001$ ), whereas dormant strong ties became nonsignificant ( $p = 0.641$ ). Full mediation was also confirmed by a significant Sobel test ( $z = 3.80$ ,  $p < 0.001$ ).<sup>2</sup> Mediation analyses for dormant weak ties, compared with current weak ties, yielded similar results, both for the four-part test (all elements were significant;  $p < 0.001$ ) and the Sobel test ( $z = 5.82$ ,  $p < 0.001$ ). In fact, dormant weak ties (Model 3; coefficient of  $0.91$ ) were associated with even more novelty than dormant strong ties (coefficient of  $0.67$ , comparison  $p = 0.036$ ). In sum, H2A and H2B were fully supported:

**Table 2 HLM Regression Results**

	Outcome variables									
	Time spent (Model 1)		Receipt of useful knowledge (Model 2)		Novelty (Model 3)		Trust (Model 4)		Shared perspective (Model 5)	
<i>Project length</i>	0.18*	(0.08)	-0.10	(0.09)	-0.20	(0.14)	-0.06	(0.18)	0.12	(0.18)
<i>% of workday on project</i>	0.32*	(0.13)	-0.08	(0.14)	-0.06	(0.17)	-0.26	(0.29)	0.39	(0.27)
<i>Network size</i>	0.00	(0.01)	0.01	(0.01)	0.03*	(0.01)	-0.03 <sup>†</sup>	(0.02)	0.03 <sup>†</sup>	(0.02)
<i>Job tenure</i>	0.06	(0.06)	0.01	(0.10)	-0.31**	(0.09)	-0.14	(0.17)	-0.14	(0.18)
<i>Organizational tenure</i>	-0.01	(0.07)	-0.16	(0.11)	0.02	(0.13)	0.15	(0.23)	-0.20	(0.23)
<i>Industry tenure</i>	0.17	(0.12)	0.26 <sup>†</sup>	(0.15)	-0.03	(0.23)	0.14	(0.27)	0.35	(0.34)
<i>Prior organizations</i>	-0.02	(0.10)	-0.44***	(0.13)	-0.14	(0.21)	-0.26	(0.30)	0.23	(0.30)
<i>Prior project experience</i>	0.05	(0.07)	0.18*	(0.08)	-0.02	(0.11)	0.08	(0.15)	0.08	(0.18)
<i>Respondent's age</i>	-0.01	(0.01)	0.02**	(0.01)	0.02*	(0.01)	0.01	(0.01)	-0.04*	(0.02)
<i>Organizational size</i>	-0.02	(0.03)	-0.08*	(0.03)	-0.08*	(0.04)	-0.14*	(0.06)	0.06	(0.06)
<i>Respondent's gender</i>	0.15*	(0.07)	-0.12	(0.09)	0.03	(0.15)	0.16	(0.18)	-0.03	(0.21)
<i>Revolutionary project</i>	0.02	(0.04)	0.11*	(0.05)	-0.04	(0.05)	0.02	(0.09)	-0.05	(0.09)
<i>Communication in person</i>	0.17***	(0.05)	0.00	(0.08)	0.10	(0.10)	-0.02	(0.10)	-0.02	(0.13)
<i>Same gender</i>	0.02	(0.05)	-0.02	(0.08)	-0.01	(0.12)	-0.22 <sup>†</sup>	(0.11)	-0.08	(0.14)
<i>Same race/ethnicity</i>	0.04	(0.04)	0.02	(0.07)	0.07	(0.11)	-0.13	(0.12)	0.18	(0.15)
<i>Same age</i>	0.00	(0.04)	-0.03	(0.06)	0.07	(0.09)	-0.23*	(0.09)	0.45***	(0.11)
<i>In same organization</i>	0.10 <sup>†</sup>	(0.06)	-0.04	(0.10)	-0.08	(0.14)	0.07	(0.12)	-0.06	(0.17)
<i>Physical proximity</i>	-0.03 <sup>†</sup>	(0.02)	-0.03	(0.03)	-0.07 <sup>†</sup>	(0.04)	-0.01	(0.04)	0.02	(0.04)
<i>Perceived competence</i>	0.08***	(0.02)	0.41***	(0.05)	0.36***	(0.06)	0.24***	(0.07)	0.19**	(0.07)
<i>People in common</i>	0.03 <sup>†</sup>	(0.01)	0.04*	(0.02)	-0.03	(0.03)	0.01	(0.02)	0.05 <sup>†</sup>	(0.03)
<i>Relationship length</i>	-0.22**	(0.07)	-0.29**	(0.10)	-0.38**	(0.15)	0.20	(0.13)	0.02	(0.15)
<i>Time spent</i>			0.39***	(0.09)	0.34**	(0.12)	0.20	(0.12)	-0.10	(0.14)
<i>Current strong ties</i>	reference category		reference category		reference category		1.01***	(0.17)	0.48*	(0.19)
<i>Current medium ties</i>	-0.24**	(0.08)	-0.15	(0.14)	-0.28 <sup>†</sup>	(0.16)	0.41*	(0.20)	0.34	(0.24)
<i>Current weak ties</i>	-0.26***	(0.07)	-0.30*	(0.13)	-0.27 <sup>†</sup>	(0.15)	0.09	(0.19)	-0.16	(0.19)
<i>Dormant strong ties</i>	-0.22***	(0.06)	0.27*	(0.12)	0.67***	(0.17)	0.68***	(0.12)	0.31*	(0.13)
<i>Dormant weak ties</i>	-0.35***	(0.06)	0.22 <sup>†</sup>	(0.13)	0.91***	(0.17)	reference category		reference category	
<i>Novelty</i>							0.12*	(0.05)	-0.01	(0.06)
<i>Trust</i>									0.39***	(0.06)
<i>Shared perspective</i>							0.33***	(0.05)		
<i>R<sup>2</sup></i>	0.299		0.301		0.294		0.508		0.401	
<i>Level 1, N</i>	491		485		463		463		463	

Notes. Unstandardized coefficients are shown, with robust standard errors in parentheses, based on intercepts-as-outcomes regression models using hierarchical linear modeling (HLM). For level 2,  $N = 129$  respondents. All variables are grand-mean centered.

<sup>†</sup> $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

both dormant strong and dormant weak ties were positively associated with novelty, which, in turn, was positively associated with the receipt of useful knowledge.

**Trust.** As predicted by H3, dormant strong ties had significantly higher levels of trust (coefficient of 0.68,  $p < 0.001$ ) than dormant weak ties (Model 4). This suggests that dormant strong ties retained some of their trust benefits. Mediation analyses—both the four-part test (all elements significant,  $p < 0.05$ ) and the Sobel test ( $z = 3.04$ ,  $p = 0.002$ )—confirmed that dormant strong ties, compared with dormant weak ties, were positively associated with trust, which, in turn, was positively associated with the receipt of useful knowledge. Thus, H3 was fully supported.

**Shared Perspective.** Dormant strong ties also had significantly higher levels of shared perspective (coefficient of 0.31,  $p = 0.014$ ) than dormant weak ties

(Model 5), supporting H4. Mediation analyses also suggested that dormant strong ties, compared with dormant weak ties, were positively associated with shared perspective, which, in turn, was positively associated with the receipt of useful knowledge: all four elements of the mediation test were significant ( $p < 0.05$ ), though the Sobel test was only marginally significant ( $z = 1.78$ ,  $p = 0.075$ ). Thus, we found at least partial support for H4.

### Tie Decay

We also investigated the decay of the trust and shared perspective benefits by comparing dormant strong to current strong ties. (Because we do not have measures of trust and shared perspective prior to these ties becoming dormant, we assessed decay indirectly by comparing them to current strong ties, which—all else equal—should be similar to the character of these dormant strong ties three or more years ago.) It appears that dormant strong ties did decay somewhat (see Model 4), with

**Table 3 Comparisons of Different Types of Ties**

	Current ties			Dormant ties	
	Strong	Medium	Weak	Strong	Weak
Raw means					
<i>Receipt of useful knowledge</i>	5.63 <sup>a,c</sup>	5.41 <sup>a,b</sup>	5.20 <sup>b</sup>	5.70 <sup>c</sup>	5.59 <sup>a,c</sup>
<i>Time spent</i>	2.26	2.05 <sup>a,b</sup>	2.05 <sup>a</sup>	1.89 <sup>b</sup>	1.76
<i>Novelty</i>	5.07 <sup>a</sup>	4.79 <sup>a</sup>	4.94 <sup>a</sup>	5.72 <sup>b</sup>	5.93 <sup>b</sup>
<i>Trust</i>	5.86	5.12	4.17 <sup>a</sup>	5.47	4.50 <sup>a</sup>
<i>Shared perspective</i>	5.80	5.14 <sup>a</sup>	4.49 <sup>b</sup>	5.51 <sup>a</sup>	4.71 <sup>b</sup>
<i>Communication in person</i>	0.80	0.60 <sup>a</sup>	0.58 <sup>a</sup>	0.28 <sup>b</sup>	0.33 <sup>b</sup>
<i>Same gender</i>	0.66 <sup>a</sup>	0.71 <sup>a,b</sup>	0.69 <sup>a,b</sup>	0.78 <sup>b</sup>	0.76 <sup>a,b</sup>
<i>Same race/ethnicity</i>	0.70 <sup>a</sup>	0.69 <sup>a</sup>	0.62 <sup>a</sup>	0.69 <sup>a</sup>	0.71 <sup>a</sup>
<i>Same age</i>	0.43 <sup>a</sup>	0.32 <sup>a</sup>	0.45 <sup>a</sup>	0.59	0.46 <sup>a</sup>
<i>In same organization</i>	0.75 <sup>a</sup>	0.69 <sup>a</sup>	0.56	0.20 <sup>b</sup>	0.18 <sup>b</sup>
<i>Physical proximity</i>	4.07	3.38	2.66	2.06 <sup>a</sup>	2.20 <sup>a</sup>
<i>Perceived competence</i>	6.43 <sup>a</sup>	6.21 <sup>a,b</sup>	5.90 <sup>b</sup>	6.42 <sup>a</sup>	6.33 <sup>a</sup>
<i>People in common</i>	4.54 <sup>a</sup>	3.90 <sup>a</sup>	3.01 <sup>b</sup>	2.80 <sup>b</sup>	2.22
<i>Relationship length</i>	1.86	1.57	1.30	2.08	2.02
Coefficients (with controls)					
<i>Receipt of useful knowledge</i>	0.00 <sup>a,c</sup>	-0.15 <sup>a,b</sup>	-0.30 <sup>b</sup>	0.27 <sup>d</sup>	0.22 <sup>c,d</sup>
<i>Time spent</i>	0.00	-0.24 <sup>a,b</sup>	-0.26 <sup>a,b</sup>	-0.22 <sup>a</sup>	-0.35 <sup>b</sup>
<i>Novelty</i>	0.00 <sup>a</sup>	-0.28 <sup>a</sup>	-0.27 <sup>a</sup>	0.67	0.91
<i>Trust</i>	0.00 <sup>a</sup>	-0.66	-1.21 <sup>b</sup>	-0.25 <sup>a</sup>	-1.13 <sup>b</sup>
<i>Shared perspective</i>	0.00 <sup>a</sup>	-0.37 <sup>b</sup>	-1.03 <sup>c</sup>	-0.28 <sup>a,b</sup>	-0.95 <sup>c</sup>
<i>Communication in person</i>	0.00 <sup>a</sup>	-0.79 <sup>a,b</sup>	-0.87 <sup>a,b</sup>	-0.93 <sup>b</sup>	-0.79 <sup>b</sup>
<i>Same gender</i>	0.00 <sup>a</sup>	0.25 <sup>a,b</sup>	0.17 <sup>a,b</sup>	0.81 <sup>b</sup>	0.78 <sup>a,b</sup>
<i>Same race/ethnicity</i>	0.00 <sup>a</sup>	-0.12 <sup>a</sup>	-0.15 <sup>a</sup>	-0.37 <sup>a</sup>	-0.24 <sup>a</sup>
<i>Same age</i>	0.00 <sup>a,b</sup>	-0.60 <sup>b</sup>	-0.17 <sup>a,b</sup>	0.57 <sup>a</sup>	0.06 <sup>b</sup>
<i>In same organization</i>	0.00 <sup>a</sup>	0.24 <sup>a</sup>	-0.26 <sup>a</sup>	-1.77 <sup>b</sup>	-1.96 <sup>b</sup>
<i>Physical proximity</i>	0.00	-0.45 <sup>a</sup>	-1.09 <sup>b</sup>	-0.88 <sup>a,b</sup>	-0.78 <sup>a,b</sup>
<i>Perceived competence</i>	0.00 <sup>a</sup>	-0.13 <sup>a,b</sup>	-0.42 <sup>b</sup>	-0.07 <sup>a,b</sup>	-0.16 <sup>a,b</sup>
<i>People in common</i>	0.00 <sup>a</sup>	-0.24 <sup>a,b</sup>	-0.85 <sup>b,c</sup>	-0.76 <sup>b</sup>	-1.28 <sup>c</sup>
<i>Relationship length</i>	0.00 <sup>a</sup>	-0.30	-0.60	0.14	0.07 <sup>a</sup>
<i>N</i>	109–122	38–42	82–87	124–127	118–124

Notes. In each row, numbers that have no superscript in common are significantly different from each other ( $p < 0.05$ ), as determined by HLM regression with no controls (for the raw means, in the top half) or controlling for all the variables in Model 2 of Table 2 (for the coefficients, in the bottom half, shown here with current strong ties as the reference category, i.e., set to 0.00). For example, in the top row, 5.63 shares the “a” superscript with 5.41 and 5.59, so these three raw means are not significantly different from one another; 5.63 also shares the “c” superscript with 5.70 and 5.59, so these are also not significantly different from one another; 5.63 is significantly different from 5.20, though, because these two raw means do not share a superscript in common.

trust levels (coefficient of 0.68) about halfway between current strong (coefficient of 1.01) and medium (coefficient of 0.41) ties, but still well above current weak ties (coefficient of 0.09); that is, whereas dormant strong ties had significantly less trust than current strong ties ( $p = 0.037$ ), their trust was similar to that of current medium ties ( $p = 0.179$ ) and significantly more than that of current weak ties ( $p = 0.002$ ). Also, after controlling for 22 variables (but not novelty or shared perspective), the trust of dormant strong ties was not significantly different from that of current strong ties (bottom half of Table 3;  $p = 0.163$ ).

We further detected no evidence of decay when it came to shared perspective (Model 5): dormant strong ties (coefficient of 0.31) were similar to current strong ties (coefficient of 0.48, comparison  $p = 0.374$ ) and current medium ties (coefficient of 0.34, comparison  $p = 0.906$ ), and they had significantly higher levels of shared

perspective than current weak ties (coefficient of  $-0.16$ , comparison  $p = 0.017$ ; see the bottom half of Table 3 for similar results). Thus, dormant strong ties retained considerable shared perspective, more so than weak ties and just about as much as current strong ties. These findings, overall, support our argument that dormant strong ties were not like weak ties; instead, as predicted, they retained considerable trust and shared perspective—well above that of weak ties.

### Robustness Tests

The executives in our study were overwhelmingly positive about the effects of reconnecting as evident from essays in which they described their reconnections. (Only one respondent encountered a dormant contact who had harbored anger toward him for a previously undiscussed event.) A few reconnections were not useful, though, such as one executive’s emotionally intense

(“it was as if we had been talking regularly for the past seven years”) but ultimately unhelpful strong-tie reconnection (i.e., the benefits were personal rather than relevant to his work project). This suggests that a perceptible halo effect, i.e., an overwhelmingly positive affective bias resulting from the “fun” of reconnecting, is unlikely to account for the results. Further evidence against an affective bias is that dormant weak ties were rated for trust (“this person is extremely concerned about your welfare”) as relatively low yet were still seen to be as useful as current and dormant strong ties.

Because our respondents provided all of the data for this research, there is a potential for common methods bias. We investigated this possibility in a variety of ways. First, a principal components factor analysis revealed not one but several underlying factors, the largest factor accounting for 35.8% of the total variance, well below the 50% cutoff for Harman’s one-factor test (Podsakoff and Organ 1986). In addition, when we used Doty and Glick’s (1998) corrective test to reduce the strength of our findings, the significant effects in our regression analyses in Table 2 remained either fully or marginally significant. Additional observations, like the differentiated pattern of results, including the mediation effects, also argue against common methods problems.

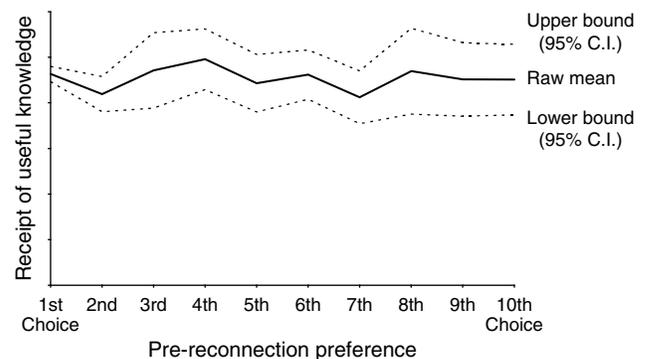
Another potential concern with our study is that the dormant ties selected by respondents may have been much more useful than the broader pool of dormant ties that they could have selected, thereby biasing—or at least limiting—our findings. To address this issue, we collected additional data.

Specifically, we asked a new set of 116 executives, drawn from the same subject pools as before, to think of an important project at work and then rank from most to least preferred their top 10 reconnection choices, i.e., 10 dormant contacts with whom they had not communicated in at least three years. We then asked participants to reconnect with and ask for project-related information or advice from their number 1 choice plus another dormant contact that we randomly selected from their ranked list, i.e., one of the people ranked number 2 to number 10. This allowed us to assess the value of dormant ties that were “deeper in their pool.” (We limited their rankings to 10 dormant ties because our initial sample indicated that they tend to consult an average of 10.1 current ties on their work project.)

Of the 116 executives, 95 completed a post-reconnection survey (response rate of 81.9%). We measured our outcome variable, *receipt of useful knowledge*, as we had before (Cronbach’s  $\alpha = 0.85$ ).

The results suggest that the value of dormant ties does *not* taper off as people move deeper into their pool of dormant ties. Instead, the correlation between pre-reconnection preference rank, which ranged from 1 to 10, and post-reconnection receipt of useful knowledge was small and not statistically significant ( $r = -0.074$ ,

Figure 1 The Pool of Useful Dormant Ties Is Deep



Note. Data are from  $N = 174$  dormant ties (shown with 95% confidence intervals (C.I.)), as described in the Robustness Tests section.

$p = 0.333$ ). This relatively flat pattern can also be seen in Figure 1. In addition, a comparison of the value of dormant contacts ranked as number 1, 2, or 3 versus the value of those ranked as number 8, 9, or 10 did not yield a statistically significant difference:  $F(1, 131) = 0.002$ ,  $p = 0.968$ . Other arbitrarily selected combinations of the ranked dormant ties consistently resulted in nonsignificant effects.

Thus, it appears that the pool of valuable dormant ties is deep—extending considerably beyond the two names selected in our main study. Eventually, of course, we would expect that the value of reconnecting will drop as people run out of useful dormant ties. This is also true for current ties. But these data suggest that this drop-off does not begin, on average, until individuals have moved beyond 10 people in their list of potentially useful dormant ties.

## Discussion

The results of asking executives to reconnect their dormant ties supported our overall argument that reconnecting can provide substantial benefits for knowledge seekers. Specifically, we found that reconnections (1) were efficient, on par with current weak ties, in terms of the amount of time spent consulting with someone for advice on an important work project (providing full support for H1A but only partial support for H1B); (2) provided access to novel knowledge and insights (supporting H2A and H2B); and (3) retained much of their strength—i.e., with little or no decay in trust (supporting H3) and shared-perspective benefits (providing at least partial support for H4)—for previously strong ties. In sum, these reconnected ties were not dead; instead, they were both efficient and effective in providing useful knowledge.

Although not predicted, we also found that dormant weak ties were almost as useful as dormant strong ties. Even though dormant weak ties lagged in trust and shared perspective, they seemed to make up for these

deficits with significantly more efficiency and novelty than the already-high baseline levels of dormant strong ties. Reconnecting dormant strong ties, as predicted, led to all four benefits. The trust of dormant strong ties did decay somewhat over time compared with current strong ties; a smaller drop in shared perspective was not significant. Yet dormant strong ties compensated for any reduced bonding benefits (trust and shared perspective) by having more bridging benefits (novelty and efficiency) than current strong ties. By combining the benefits normally provided by current strong *and* weak ties, dormant strong ties appear to offer a “best of both worlds” approach. This is reflected in one of our executives’ description of his reconnection experience:

I was very surprised by the fresh ideas and the similarities with the problems they had dealt with in their own organizations, and by the confidence I got after hearing a highly experienced executive having similar thoughts.

Dormant strong ties were also more like current strong ties than current weak ties, supporting our argument that once people have exceeded a threshold of intimacy, a relationship qualitatively changes so that time apart has little impact. Previous literature suggested the opposite, that unmaintained ties become increasingly weaker until they die (Burt 1992, 2002; Coleman 1990). Instead, we find that reconnections can quickly feel “as if we had been talking regularly.” In other words, strong ties retained most of their strength, even years later. This is consistent with the notion that emotional closeness—not frequency of recent communication—determines a tie’s strength (Marsden and Campbell 1984).

### Limitations

Like any research, this project has a number of limitations. One potential concern is that respondents’ reconnections were not randomly selected from among all of their dormant ties; they may have targeted those they thought would be particularly valuable. This criterion, however, is often the main purpose of knowledge seeking, and it likely applies to both dormant *and* current ties. In addition, many of our respondents indicated that they had selected people because they would be responsive, not just because they might be useful. This is consistent with our separate robustness test sample, where the average executive’s 10th reconnection choice turned out to be about as useful as his or her first choice (see Figure 1). Nevertheless, future research might examine whether the dynamics of a reconnection differ when the impetus to reconnect arises on its own rather than from a course assignment, as in our study, or when individuals have different goals in mind.

A second concern is that, whereas dormant ties are, by definition, tremendously time efficient during dormancy, reconnecting may involve additional costs that we did not incorporate into our calculations. For example, selecting and locating dormant ties may have been

time consuming (Hansen et al. 2005), though search costs should have dropped dramatically in recent years (Mattioli 2008, Thompson 2008). Another potential concern is that our measure of time spent was focused only on work-related discussions, whereas the reconnecting process may have also included nonwork “catching up” conversations; current ties, however, also involve off-task socializing (Ilgen et al. 1995). Still, future research might investigate the psychological and emotional costs of reconnecting and, at the level of a network, examine the costs and benefits imposed by third parties and other network features like centrality or structural holes (e.g., Burt 1992, Coleman 1990).

A third concern is that respondents who expected to receive little value from reconnecting—but did receive at least some—may have had a positive bias in their evaluations. More generally, any comparison of current versus dormant ties is likely to involve trade-offs between realism and methodological rigor—in terms of which ties are selected, how contact is made, and how evaluations are conducted—and our study is no exception. Although our additional data sample and robustness checks provide some comfort, this nevertheless poses a limitation on our results.

Finally, the social networks literature distinguishes trust created by dyadic ties (i.e., interpersonal, relational trust, a key focus of our study) from that created by a relationship being densely embedded in third-party ties (i.e., structural embeddedness) (Granovetter 1985). Thus, future research might assess whether a given dormant tie retains its strength because of a residual of interpersonal trust or because of the maintenance of mutual third-party contacts. Novelty benefits, too, may be heavily influenced by the surrounding network structure (Burt 1992). It was not feasible in this study to gather data on our respondents’ egocentric networks—given concerns over survey length as well as respondents’ likely inability to accurately assess third-party ties among contacts not seen in at least three years. We did make an (admittedly rough) attempt to assess this issue using the control variable, *people in common*, but future research—perhaps based on archival data or social networking websites—might better assess the role of the broader network structure (Burt 2002).

### Theoretical Implications

This research addresses recent calls in the social networks and social capital literature for more attention to dynamic and process issues, such as tie formation, maintenance, and decay (Parkhe et al. 2006). It also expands the concept of an actor’s social capital by considering both current *and* dormant ties as potential sources of benefits and resources, and we provide a framework of four possible benefits for evaluating these ties. This study also presents a theoretical and empirical analysis of reconnected dormant ties and assesses both strong and

weak dormant ties and their associated benefits. Finally, we provide evidence that the number of dormant ties that turn out to be useful if a person reconnects them is fairly large—at least 10, we find (see Figure 1)—suggesting that a great deal of untapped potential lies in each person’s pool of dormant ties.

Our findings reveal the notion that individuals’ (and perhaps organizations’) social networks have a time dimension, possibly even a memory (Soda et al. 2004): past relations can be reactivated and provide efficient access to potentially critical knowledge and other resources. This idea expands the horizons of social network research far beyond currently existing networks. As the cost of search and reconnection drops, moreover, this gap in the literature may become increasingly problematic. In particular, collective aspects of social capital—such as norms, monitoring, and sanctions induced by closed networks (Coleman 1990)—may extend beyond current ties. Thus, a tie that was previously densely embedded in an interconnected set of relationships may retain some of the effects of network closure, particularly when individuals retain feelings of obligation toward their former ties or when they continue to expect future reconnections. Also, what may *look* like a structural hole between two groups, based on a network of current ties, may actually be full of dormant ties. Thus, reconnecting dormant ties might limit an actor’s need for—or the value of—current bridging ties: individuals might ideally combine their network of current ties with a regular, systematic strategy of reconnecting dormant ties. In fact, some dormant ties might only become important when they can fill the structural holes in a network of current ties. These ideas suggest a variety of new theoretical and empirical avenues for investigating the dynamics of network structures.

Our results also help inform research on knowledge transfer. Prior research on the effects of current tie strength has produced conflicting findings: some studies have reported an overall advantage for stronger ties (e.g., Ghoshal et al. 1994, Krackhardt 1992), others for weaker ties (e.g., Constant et al. 1996, Granovetter 1982, Yli-Renko et al. 2001), and still others for contingent effects (e.g., Hansen 1999, Moran 2005). This ambiguity may be due to the various purposes of a tie (e.g., Hansen 1999)—an idea consistent with our model of strong ties being beneficial because they promote trust and shared perspective, and weak ties being beneficial because they offer efficient access to novel information.

A final implication from the current findings is the notion that network ties may follow a life cycle. A simplified model might include four straightforward stages, each with its own set of concerns: (1) formation, (2) maintenance, (3) dormancy, and (sometimes) (4) reconnection.

In the first stage, forming a new tie often requires emotional and time investments. If dormant ties have

no value, this investment will only pay off for current connections; investments would be lost once a tie became dormant. Fortunately, our results suggest that these investments can have long-term benefits.

In the second stage, maintenance can be time consuming. To prevent dormancy, some people maintain their ties only minimally (e.g., annual lunches), hoping to slow the decay of their relationship. Research suggests that this kind of strategy can be successful and sustainable: ties that might otherwise become dormant (e.g., when people switch firms or move away) can continue to serve as ongoing sources of useful knowledge (Agrawal et al. 2006, Corredoira and Rosenkopf 2010).

In the third stage, research has shown that bridging ties are likely candidates for dormancy (Burt 2002). This may be minimized or avoided in the presence of third-party connections: two parties with common contacts may be less likely to lose touch with each other in the first place. At the same time, the current findings indicate that dormancy may be a more important and ultimately useful stage for network ties than anyone has previously realized.

This is because of the value of the fourth stage, reconnecting. In our view, a one-way communication, such as a broadcast e-mail or holiday card, may prevent further decay of dormant ties but would not constitute a reconnection, i.e., an actual interaction or two-way communication between the two contacts. Once accomplished, reconnecting may be even more beneficial than initiating new ties (Stage 1), albeit drawing from a more finite (though still large) pool of contacts. “Cold calling” by salespeople, for example, has a notoriously low success rate; requests for assistance or advice within a well-defined field (e.g., among colleagues or fellow employees) are better received (Constant et al. 1996, Levine 2005). Our findings suggest that reconnecting dormant ties—especially dormant strong ties—may be more effective than either of these new-connection strategies, possibly because of a “widespread preference of all economic actors to deal with those they have dealt with before. Our information about such partners is cheap, richly detailed, and probably accurate” (Granovetter 1992, p. 42). By reconnecting a dormant tie, however, it becomes, at least temporarily, part of an actor’s portfolio of current ties and may then either be maintained as such, which may make it increasingly similar to other current ties, or be left to decay and drift back into dormancy.

A life-cycle approach to network ties also has implications for understanding social networks, as pigeonholing ties into a single stage may be misleading: today’s dormant tie could be tomorrow’s reconnected tie. Also, just as all dormant ties are not dead, neither may all dormant ties be equally reconnectable or attractive. There is also the open question of whether, and under what circumstances, reconnected ties ultimately return to dormancy,

as well as whether the dormancy period's length is an important factor in the likelihood and value of reconnecting. In addition, individual differences in the willingness to reconnect at all will likely affect broader network structures, e.g., by creating network-bridging opportunities for people who are comfortable with reconnecting.

### Strategic Implications

These findings have potentially important strategic implications, including what might be dubbed the holy grail of networking strategy: people may be able to maximize their network benefits by reconnecting dormant strong ties, because these seem to provide the best effects of strong and weak ties, i.e., efficiency, novelty, trust, and shared perspective. Recent research has sought such a strategy; Levin and Cross (2004), for instance, found that people reported receiving the most useful knowledge from a trusted weak tie—someone they did not know well but with whom they felt a solid connection. Although organization-level interventions can encourage these kinds of connections (Abrams et al. 2003), the natural occurrence of trusted weak ties is relatively rare (Levin and Cross 2004). Dormant ties, in contrast, are naturally plentiful (Killworth et al. 1990), making reconnecting a particularly viable knowledge-seeking strategy. A key hurdle, however, is the inertia that comes with increasing dormancy—a reaction we heard from many of our respondents.

The current research is necessarily silent about the long-term value of reconnecting. Although some reconnected ties may stay connected and others may return to dormancy, a typical tie may follow a pendulum model, moving in and out of dormancy depending on context and other factors. Reconnecting the same dormant tie repeatedly, however, may run the risk of undermining trust, especially if renewed maintenance expectations are not met or if reconnection only occurs for blatantly instrumental purposes.

Our findings may also have implications for organizational-level interactions. Corporate leaders, for example, sometimes reconnect informal ties not with specific individuals but with their replacements (Westphal et al. 2006). This suggests that dormant ties can exist between firms as well as between individuals. If there are analogous effects to the current individual-level findings for organizations, these kinds of reconnections may be particularly important for strategic alliances, which rely on current interfirm ties for information about the reliability and capabilities of potential partners (Gulati 1995). A firm's dormant ties—especially if they retain trust and shared perspective—could augment this information-gathering function. In addition, the interfirm network literature has argued that a weak-tie network is useful for the exploration of new opportunities and the acquisition of new information, whereas a strong-tie network

is well suited for the distribution (exploitation) of existing knowledge (Dyer and Nobeoka 2000, Rowley et al. 2000). Rather than choose one or the other, firms might balance their needs for exploration and exploitation by using their networks of dormant ties to complement their portfolio of current ties.

### Practical Implications

Our findings also have a variety of practical implications. Time and other resource limitations pose a serious constraint on individuals who want to maintain many ties (Dunbar 1993, McFadyen and Cannella 2004). Dormant ties, which require much less maintenance, can offer a cost-efficient means for sustaining a large, diverse network. Social networking websites like LinkedIn and Facebook have reduced search costs to the point that searching for dormant contacts may cost little more than searching for current weak contacts. In the past, it was difficult to stay informed about old contacts, and even if actively pursued, former contacts were hard to track down and reconnect. The new social networking websites have also reduced emotional and inertial obstacles; thus, the propensity to reconnect with previously lost contacts is soaring (Mattioli 2008, Thompson 2008). Although the executives in our sample were initially reluctant to reconnect, their inertia may be similar to the familiar inclination to rely primarily on strong ties when searching for information, even though the benefits of weak ties have been widely recognized (Granovetter 1973, 1982). Reconnecting may thus be a relatively low-cost, high-reward, and widely available option for obtaining useful knowledge.

Reconnecting seems to have tremendous benefits, but it may also have a “dark side.” Networking behavior that is reduced to making a large number of quick, shallow connections, and then either keeping subsequent contact minimal or intentionally severing a tie to reap the benefits of later reconnecting, may not provide the kinds of benefits that we have observed here—and may even prove counterproductive. Despite an emphasis on concepts like efficiency and the desire to obtain useful knowledge, Baker's (2000, p. 19, emphases in original) warning is worth remembering: “If we create networks with the sole intention of *getting something*, we won't succeed. We can't *pursue* the benefits of networks; the benefits *ensue* from investments in meaningful activities and relationships.”

### Conclusion

In contrast to the widespread view that network ties must be continually maintained to be relevant or even useful, this research presents empirical evidence that dormant ties, if reconnected, can be a particularly valuable source of knowledge. In addition, the findings indicate that ties that had been strong can combine some

of the best aspects of both weak and strong current ties, i.e., efficiency, novelty, trust, and shared perspective. In sum, this research identifies dormant ties as an underappreciated but eminently valuable source of social capital—one worth pursuing practically, strategically, and theoretically.

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### Appendix. Survey Items

*Receipt of Useful Knowledge.* To what extent did this component from this person contribute to your performance on your work project? (1 = contributed very negatively; 2 = contributed negatively; 3 = contributed somewhat negatively; 4 = contributed neither positively nor negatively; 5 = contributed somewhat positively; 6 = contributed positively; 7 = contributed very positively; [and for all but overall contribution] NA = did not receive anything like this [recoded as missing value]) Note: If the project that you identified is ongoing, then estimate what your answers would be once the project is completed. [variable calculated as average of six items; Cronbach's  $\alpha = 0.87$ ]

Sometimes when you consult with people, you benefit from their ability to provide the following:

- Specific answers or input: Providing specific answers to your question or solutions to your problems.
- Identifying relevant information sources: Pointing you to relevant sources of information such as other people, paper archives, or databases.
- Problem-solving assistance: Helping you think through a problem (even when they may not have specific information that solves your original problem). These interactions may help you consider important dimensions of a problem and/or anticipate issues likely to appear in the future.
- Validating your ideas: Validating your plans or solutions. These interactions bolster confidence in a plan or solution and improve your willingness and ability to express ideas persuasively to others.
- Legitimacy: Being able to say you have spoken with that person about your plans or solutions. The individual may be in a position of formal authority or a perceived expert and so indicating that you have consulted with such a person lends credibility to your plans or solutions.
- Overall contribution to your performance on your work project.

*Project Length.* Date you became involved in [your work project] (month and year). [recoded as logarithm of number of: months (plus one) from initial involvement until survey date]

*Percent of Workday on Project.* On average, what percentage of a normal work day do you spend on this work project?

*Network Size.* List up to 15 people with whom you have consulted as part of your work on this project. [total number listed]

*Job Tenure.* Number of years in current job. [recoded as logarithm of: months (plus one)]

*Organizational Tenure.* Number of years at organization. [recoded as logarithm of: months (plus one)]

*Industry Tenure.* Number of years in industry. [recoded as logarithm of: months (plus one)]

*Prior Organizations.* Number of prior organizations worked for in the same industry. [recoded as logarithm of: raw number (plus one)]

*Prior Project Experience.* Number of prior projects you have worked on in the same technical area as the work project you selected above. [recoded as 0 = zero; 1 = one or more]

*Respondent's Age.* Year born. [recoded as years until survey date]

*Organizational Size.* Approx. number of people employed by your organization (i.e., size). [recoded as logarithm]

*Respondent's Gender.* (0 = male; 1 = female)

*Revolutionary Project.* Would you say that this project has demanded new skills, knowledge, and/or expertise from you? (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neutral; 5 = somewhat agree; 6 = agree; 7 = strongly agree) How incremental versus revolutionary is this work project for *you personally*? (1 = very incremental; 2 = incremental; 3 = somewhat incremental; 4 = in-between; 5 = somewhat revolutionary; 6 = revolutionary; 7 = very revolutionary) [both items standardized then averaged; Cronbach's  $\alpha = 0.73$ ]

*Communication in Person.* Was [your consulting with each person concerning your project] mostly in person? (0 = no; 1 = yes)

*Same Gender.* Relative to you, what is each person's gender? (0 = different from mine; 1 = same as mine)

*Same Race/Ethnicity.* Relative to you, what is each person's race/ethnicity? (0 = different from mine; 1 = same as mine)

*Same Age.* Relative to you, what is each person's age? (younger than me by 5+ years; my age plus or minus 5 years; older than me by 5+ years; don't know) [recoded as 0 = different age; 1 = same age as respondent]

*In Same Organization.* When you consulted with this person, where was he or she located, in terms of hierarchical level within your organization? [recoded as 0 = not in my organization; 1 = lower, same, or higher than mine]

*Physical Proximity.* When you consulted with this person, where was he or she located, in terms of physical proximity to you? (1 = works immediately next to me; 2 = same floor and same hallway; 3 = same floor but different hallway; 4 = different floor; 5 = different building; 6 = different city; 7 = different country) [reverse coded]

*Perceived Competence.* This person is extremely capable at the work he or she performs. (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neutral; 5 = somewhat agree; 6 = agree; 7 = strongly agree)

*People in Common.* Just prior to consulting with this person, the two of you were both *at that time* in contact with the same people. (1 = not at all; 7 = to a very large extent)

*Relationship Length.* How long has it been since you first met this person? (in years and months) [recoded as logarithm of: the total number of months (plus one)]

*Time Spent.* If you were to add it up, about how much time did you spend consulting with each person concerning your project? (in minutes) [recoded as logarithm of minutes]

*Novelty.* To what extent did this component from this person contribute to your performance on your work project?

Unexpected insights or advice. [same 1–7 scale, including “NA” option, as *Receipt of Useful Knowledge*]

*Trust*. This person is extremely concerned about your welfare. [same 1–7 scale as *Perceived Competence*]

*Shared Perspective*. Just prior to consulting with this person, the two of you shared the same perspective (e.g., thinking alike, similar goals, understanding each other’s language/jargon). [same 1–7 scale as *Perceived Competence*]

## Endnotes

<sup>1</sup>This measure of conversation length is consistent with our focus on accessing a contact’s knowledge—whether a reconnected or current contact—and not on the sunk costs for that tie. Because talking for an extra minute after only a one-minute conversation “feels” like a bigger difference to people than talking for an extra minute after a one-hour conversation, log transformations are more appropriate than raw estimates for assessing individuals’ perceptions of the length of a conversation. Log transformations also reduce skewness and increase the normality of a distribution. For this sample, a maximum likelihood test for the Box–Cox power transformation showed that the maximum normality could be attained at  $\lambda = -0.22$ , which is closest to a log transformation (Neter et al. 1996).

<sup>2</sup>We followed Krull and MacKinnon (1999) in our use of a Sobel test with HLM. The results of structural equation modeling (SEM) were similar. SEM, however, does not properly account for nested data, so we report only the HLM results.

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