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Without Client Losses:  
The Role of Multiplex Ties  
in Exchange Partner Retention

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# Executive Departures Without Client Losses: The Role of Multiplex Ties in Exchange Partner Retention

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## **ABSTRACT**

To reduce vulnerability to exchange relationship loss when executives leave, firms often form multiple ties to the same exchange partners. Despite the assumed importance of interorganizational multiplexity for relationship retention, theory and evidence of its effect are lacking. Analysis of a longitudinal sample of client ties of advertising firms confirms that in general multiplexity improves retention. However, only relationships that span intra-organizational units with convergent interests reduce the positive effect of advertising agency executive departures on client tie loss. The findings highlight the need to consider the implications of intraorganizational structure for theories of interorganizational relationship retention and suggest an additional rationale for the persistence of the holding company structure in professional services firms despite limited returns to scale.

Keywords: Multiplexity; Triads; Networks; Interorganizational Relationships; Relationship Dissolution; Intraorganizational Ties; Executive Departures; Executive Mobility; Client Loss; Advertising Firms; Professional Services.

*“It’s a bit like binding Gulliver.... Each of these individual strings may not be tough enough to hold it, so you’re much better to try and have a whole range of small connections, which actually creates a whole lot of strength, I think, much more strength than one strong piece of rope which be just cut by a knife leaving you with nothing.”*

- Senior partner, management consulting firm

In human capital intensive firms, the loss of executives is frequently accompanied by the loss of important exchange relationships (Broschak, 2004; Eccles & Crane, 1988; Seabright, Levinthal & Fichman, 1992). Exchange relationships between firms are often embedded in social ties between executives (Granovetter, 1985). When a relationship rests more with an executive than the firm, the exchange partner is likely to dissolve its relationship to the firm when the executive leaves. Furthermore, the loss of relationships can harm firm performance, especially when executives join competing firms (Somaya, Williamson & Lorinkova, 2008).

Received wisdom for firms is to build multiple connections to the same exchange partner to prevent relationship loss given executive departures. For example, in accounting firms, multiple offices may hold relationships to the same client. Consulting firms often offer several services to the same client requiring the involvement of multiple divisions in the firm. In advertising, a client may have multiple accounts with the same agency. As described by the consulting firm partner in the quotation above, firms may be better off with a range of ties rather one strong tie to an exchange partner. Nevertheless, empirical studies of the effect of multiple ties on exchange relationship stability are scarce. Furthermore, despite evidence of a positive relationship between executive departures and exchange partner loss, how the use of multiple ties relates to exchange partner retention given executive departures has not been explored. This study addresses these gaps by investigating the effect of multiple ties on the retention of exchange relationships given executive departures.

Understanding when multiple ties are effective for relationship stability is important to theories of network evolution (Baker & Faulkner, 2002; Gulati & Gargiulo, 1999). In the literature, the tendency for two or more different relationships to occur together is referred to as

multiplexity (Wasserman & Faust, 1994). Research at the interpersonal level (Krackhardt, 1998; Verbrugge, 1979) and the interorganizational level (Beckman & Haunschild, 2002; Gimeno & Woo, 1996; Sytch & Tatarynowicz, this issue) has demonstrated that multiplexity clearly has implications for stability and change in networks. Yet, multiplexity as a concept remains largely under theorized (Kuwabara, Luo & Sheldon, 2010: 246) and consequently its implications have not been adequately studied. For example, while studies have identified the conditions under which multiple ties are likely to form among firms (e.g., Beckman, Haunschild & Phillips, 2004), few (if any) have investigated when they are effective at preventing relationship dissolution.

In particular, despite recognition in organization theory that firms are multi-unit actors and that interests among these units may be divergent (Cyert & March, 1963; March, 1962), research has not yet addressed the role played by the intraorganizational structure of a multiplex relationship in stabilizing exchange. A multiplex relationship between two firms can exist when a single unit in the firm has multiple ties to the same exchange partner or when several units in the firm maintain ties to the same exchange partner. By relaxing the assumption that firms are unitary actors, the possibility arises to consider how the divergence of units' interests and distribution of control over the ties comprising the relationship changes the effectiveness of multiplex ties for exchange partner retention. The main contention of this study is that although convergence of interests across ties in multiplex relationships reduces tie dissolution in general, it is not sufficient to reduce tie dissolutions associated with executive departures, which also requires distributed control of the ties in the relationship.

To develop arguments for the effect of multiplex relationships on tie retention, I build on prior research into multiplexity in exchange relationships (Gimeno & Woo, 1996; Shipilov & Li, 2012) and executive departures (Broschak, 2004; Dokko & Rosenkopf, 2010; Somaya et al., 2008). I test the arguments on a longitudinal sample of relationships between advertising

agencies and their clients collected from archival data. In this setting, multiplex relationships vary in the extent to which the control of the ties within the relationship is distributed or concentrated and in the extent to which the interests of the actors maintaining those ties converge or diverge. A multiplex relationship can exist either when a single agency holds multiple accounts with the same client or when multiple agencies in the same holding company have multiple accounts with the same client. Furthermore, while some pairs of agencies have convergent interests and cooperate with one another, others compete for clients despite being in the same holding company.

As an extension of prior theory, this study illustrates that the stabilizing effects of multiplexity given executive departures depend on the convergence of interests of the units maintaining the multiplex relationships and whether control of the multiplex relationship is distributed across or concentrated within units of the firm. A key implication for multiplexity research is that across-unit multiplex ties among non-competing intrafirm units is an organizational form that combines convergent interests needed for learning across ties with distributed control of the ties in the relationship, simultaneously achieving value creation and protecting this value from the departure of individuals. By identifying the type of multiplex ties that protect the firm from the loss of key exchange relationships when executives leave, this study offers a contribution to the literature on executive mobility (Broschak, 2004; Somaya et al., 2008). In particular, the findings of the study offer insight into when the stabilizing effects of multiplex ties are associated with individual members of the firm or with the firm itself. Lastly, the study highlights the need to consider the intraorganizational structure of multiplex relationships in theories of network evolution and suggests an additional rationale for the existence of holding company structures when returns to scale are limited.

## **THEORY AND HYPOTHESES**

### **The problem of executive departures for exchange partner retention**

In human capital intensive industries, opportunities for the development of individual ties are significant (Coff, 1997), and once developed individual ties can be critical to the continuity of exchange relationships (Seabright et al., 1992). At the same time, when exchange relationships are embedded in individual ties, firms risk losing exchange partners when the individuals leave (Broschak, 2004). To minimize this vulnerability, firms form multiple ties to the same exchange partner. For example, Lazega and Pattison (1999) describe how in the law firm they study at least two lawyers were assigned to the case when a new client was brought in to protect the firm from client loss. Nevertheless, although anecdotal evidence indicates that firms use multiplex relationships to stabilize exchange, little is understood about which types of multiplex ties are most effective for slowing exchange partner losses when executives leave the firm. Below I review the literature on multiplexity and develop arguments for the main effect of multiplexity on client retention before turning to the question of when multiplex ties are effective for reducing the likelihood of client loss when executives leave the firm.

### **Multiplexity and exchange network stability**

Early studies of multiplexity focused on interpersonal relationships (Granovetter, 1973; Ibarra, 1992; Kapferer, 1969; Verbrugge, 1979), defining multiplexity as the extent to which a relationship between two people includes different exchange contents, such as friendship and advice. More recently, research extending multiplexity arguments to interorganizational relationships has defined multiplexity broadly as two or more types of relationships occurring together (Beckman et al., 2004; Dhanaraj & Parkhe, 2006; Kenis & Knoke, 2002).<sup>1</sup> Multiplexity occurring in exchange relationships, the focus of this study, is defined by Gimeno and Woo (1996: 323) as "...relations of economic interdependence which are embedded in a larger set of relations between the *same parties*: a medium-range construct which we term *economic*

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<sup>1</sup> Some prior studies consider relationships as multiplex only when the actors play different roles in each of the ties, e.g., alliance partner and board member (Beckman et al., 2004). However, determining whether the roles in each of the ties are in fact distinct is often ambiguous as noted by Kuwabara and colleagues (2010). Therefore, in the current study, while units in advertising firms may play different roles, such as brand development and media buying, the criterion of distinct roles is not required for a given relationship to be defined as multiplex.

*multiplexity*" (emphasis in original). For example, in Uzzi and Gillespie's (1999; 2002) research on banking relationships, when more than one of the services offered by the bank was provided to its customer, such as financial planning and retirement planning, a relationship was considered multiplex.

In prior arguments, multiplexity has been associated with exchange stability via two mechanisms. In the first, multiplex ties provide redundancies that reinforce existing ties and reduce risks associated with exchange (Coleman, 1988; Kenis & Knoke, 2002). The behavior of actors in a multiplex relationship is not only determined by the narrow gains or losses in a single tie, but also by the implications of their behavior for the entire set of ties comprising the relationship (Gimeno & Woo, 1996: 325). Reputational spillovers across the actors maintaining each of the ties in the relationship mean that opportunistic behavior in one relation is likely to be met by sanctions from actors in the other ties in the relationship (Jensen, 2006; Provan, 1993), similar to the enforcement of norms that occurs in closed networks of independent actors (Burt, 2005; Granovetter, 1985). In the second mechanism, multiplex relationships improve exchange stability by increasing complex information sharing and learning between partners (Beckman & Haunschild, 2002; Beckman et al., 2004; Gulati et al., 2011). According to Dhanaraj and Parkhe (2006: 664), in multiplex relationships, firms interact more broadly and deeply with each other and they better understand each other's capabilities and idiosyncrasies, which leads to greater network stability. Similarly, Beckman and Haunschild (2002) argue that a benefit of multiplex relationships is learning involving complex knowledge transfer. When firms interact across different types of relationships, this increases communication and understanding of the partner. The value each partner gains from the relationship is enhanced; and thus, partner firms in multiplex relationships are more likely to continue in the relationships.

Studies of the effect of multiplexity on exchange relationship retention are scarce. However a small set of studies have demonstrated that multiplex relationships provide benefits



associated with exchange stability. For example, in Uzzi and Gillespie's (1999) study of banker-client relationships, the cost of capital for clients was lower when the relationship spanned several services. Beckman and Haunschild (2002) found that multiplexity, defined by the coexistence of a board interlock and an alliance with the same partner, enhanced the learning benefits a firm gained from that partner's experience. In a related study by Beckman and colleagues (2004), firms built more multiplex ties when they were faced with market uncertainty, consistent with the idea that multiplex ties provide stability for firms in uncertain environments. Despite the absence of empirical studies of the effect of multiplexity on exchange relationship retention, existing theory and evidence suggest that the more multiplex a relationship is, the less likely the ties within it should be to dissolve.

However, because prior research on multiplexity has generally treated the organizations in multiplex relationships as unitary actors, the theory overlooks important variation in multiplex relationships. As defined above, a relationship becomes multiplex when more than one type of tie links the partner organizations, and so multiplex relationships often involve more than one intraorganizational unit. Furthermore, a view of organizations as unitary actors assumes that the interests of the units converge. Indeed, convergence of interests is implicitly required for learning and information sharing among units to occur. In fact, firms are comprised of organizational units with interests that may or may not converge (Cyert & March, 1963; March, 1962), and control of the ties comprising a multiplex relationship may be concentrated in one unit or spread across many units in the firm. By considering the intraorganizational structure of multiplex relationships, it becomes possible to develop more nuanced arguments for when multiplexity improves exchange stability and in particular, the role it plays in exchange partner retention when executives leave the firm.

### **Multiplexity in advertising firm-client relationships**

The advertising industry provides an ideal setting to investigate how variations in the intraorganizational structure of multiplex relationships affect exchange partner retention. The basic units of competition in the industry are advertising agencies (von Nordenflycht, 2011). Agencies directly produce advertising campaigns, and each agency has a single identity in the product market. Relationships between agencies and clients are formed when an agency makes a pitch for a client account, and the client awards the account to the agency. Accounts can correspond to products, geographic regions or the type of advertising service provided, and one client may have several accounts (i.e. ties) with the same agency or it may spread its accounts across agencies. Agencies may be independent or member agencies of holding companies. Holding companies do not produce advertising services directly but instead own multiple agencies, each of which retains a distinct identity and operates with considerable autonomy.

Given the multi-agency structure of ad firms and account structure of client relationships, the intraorganizational structure of multiplex relationships can take on two main forms, as illustrated in Figure 1. A multiplex relationship may be “within-agency” such that the same agency maintains several ties to the same client firm, as illustrated by the relationship between Agency *a* and Client *x*. Each tie corresponds to a separate client account acquired via separate pitching processes. Or, it may be an “across-agency” multiplex relationship whereby more than one agency of the same holding company maintains separate ties with the same client firm, as illustrated by the relationship of Client *y* to Agencies *b* and *c* or the relationship of Client *z* to Agencies *c* and *d*. The two types are not mutually exclusive. That is, in addition to its within-agency ties to Agency *a*, Client *x* could also have an across-agency tie to Agency *b*.

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Insert Figure 1 About Here  
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A key feature of the industry is that advertising holding companies may have "duplicate" agencies, i.e., agencies that provide the same services and compete with one another despite

being members of the same holding company (von Nordenflycht, 2011). Historically, norms in the advertising industry prohibited the same advertising firm from serving two or more clients that were competitors. Recognizing that these norms were restricting growth, advertising firms formed holding companies, acquired other agencies, and grouped these into agencies into networks within the holding companies. Chinese walls were put in place between the networks to reassure a client that its information would be kept separate from the sister agency serving its competitor. Holding companies actively encouraged competition between agencies in different networks as a second point of reassurance to clients; that is, to make it clear that the agencies are so independent that they compete with one another for client accounts as if they were standalone agencies. As illustrated in Figure 1, across-agency ties can exist within the same agency network (Client  $z$  – Agency  $c$  – Agency  $d$  in Network  $j$ ) or across networks (Client  $y$  – Agency  $b$  – Agency  $c$  in Networks  $i$  and  $j$ ). Whereas Agency  $c$  has a competitive relationship with Agency  $b$  which is in a separate network, it has a non-competitive relationship with Agency  $d$  which is in the same network.

### **Multiplexity effects on client retention**

As described in the literature review, multiplexity improves relationship stability via two main mechanisms - enforcement of behavioral norms and learning, and these mechanisms also apply to multiplex ties client ties in the advertising industry. First, reputational spillovers across a client's account ties are common both within agencies and across agencies, and these can occur even in the absence of direct contact (Jensen, 2006). Given the significant impact of reputation on performance in these firms (Greenwood, Li, Prakash & Deephouse, 2005), managers have an incentive to punish opportunistic behavior in other ties to the same client in order to safeguard their own tie. They may respond formally by appealing to the parent company to intervene or informally by avoiding future interaction with the agency. As long as managers are aware of

behavior in other ties, extra-relational enforcement of behavior via multiplex ties should be effective for increasing the stability of the ties in the relationship (Gimeno & Woo, 1996).

Likewise, in the advertising context, learning across ties in multiplex relationships also improves stability. When multiplex ties are held within the same agency, i.e., within-agency multiplex ties, the client ties are maintained by the same unit of competition. Therefore a manager maintaining one account tie has an incentive to improve the performance of other ties to the same client. This increases the likelihood that learning and knowledge transfer will occur across the client account ties, improving the value the client receives in each account. Similarly, in across-agency multiplex ties because the agencies are part of the same firm, a potential for learning and knowledge transfer across ties also exists though to a lesser extent because the learning occurs across intra-organizational boundaries (Argote & Ingram, 2000). Although “duplicate” agencies within a holding company (i.e., agencies that compete with one another for clients) may not seek to learn from one another, concerns for the overall reputation of the holding company mean that multiplex ties involving these competing agencies facilitate the enforcement of behavioral norms associated with preservation of the holding company’s reputation. Thus, the combined effect of learning and the enforcement of behavioral norms in multiplex ties make across-agency multiplex relationships effective for improving the stability of the ties in multiplex relationships. Therefore, I expect that client ties embedded in either within-agency multiplex ties or across-agency multiplex ties will be less likely to dissolve than those that are not embedded in multiplex ties. These arguments lead to the following two hypotheses:

*Hypothesis 1: The likelihood of the dissolution of an agency-client tie decreases the more the tie is embedded in within-agency multiplex ties.*

*Hypothesis 2: The likelihood of the dissolution of an agency-client tie decreases the more the tie is embedded in across-agency multiplex ties.*

## **Multiplexity effects on client retention given executive departures**

Having multiple ties to the same client is associated with improved client tie retention through the mechanisms of enforcement of behavioral norms and learning. While these are sufficient to explain the general effect of multiplexity on exchange stability, they are incomplete when developing theory for the effect of multiplex ties on client tie loss when executives leave. In this case, the question is not simply whether the presence of multiplex ties stabilizes the relationship but whether that relationship stability is associated with individual members of the firm or with the firm itself.

**Distributed control.** In an intraorganizational perspective on multiplex relationships between firms, a key source of variance across multiplex relationships is the extent to which control over the constituent ties is concentrated or distributed within the firm. Control refers to the rights to make decisions regarding the use of the ties in the relationship, for example, the right to decide to form or dissolve the ties. When multiple organizational units maintain the ties, control is more distributed than if a single unit maintained the ties. In the advertising context, the distribution of control differs for ties embedded in within-agency multiplex ties and those embedded in across-agency multiplex ties. In the former, either a single executive or a management team controls the within-agency ties comprising the multiplex relationship. In the latter, a single executive or management team would have less (or no) control over the other ties comprising the across-agency multiplex relationship.

An implication of the distribution of control is that although at the parent firm level the relationship is clearly dyadic, at the organizational unit level the relationship may display properties usually associated with triads, i.e., three-actor relationships. As outlined by Simmel (1950), triads differ from dyads in three critical respects. First, the influence of an individual member is lower in a triad, and thus, group interests can outweigh individual interests. Second, embedding a dyad in a triad lowers the relative bargaining power of each of the individuals

maintaining each dyad. Third, conflicts among members are more easily resolved as the third party can act as mediator. As a result, actors who are part of a triad are “less free, less independent, and more constrained” than actors in dyadic relationships (Krackhardt, 1998: 24).

Applied to multiplex relationships between firms, these triadic properties reduce the potential for executives to disrupt the client relationship by leaving the firm. Across-agency ties reduce the influence and bargaining power of the executives maintaining the ties, and the departure of an executive is less disruptive. For example, within holding company Omnicom, advertising agency Abbott Mead Vickers BBDO had an account with client Mars for its Milky Way candy bar, and its sister agency in the same network, Energy BBDO, had Mars’ Wrigley chewing gum account (O’Leary, 2010). In this case, the impact of an executive departure on the potential loss of either of the accounts would be lower than if the client, Mars, were tied to only one of the agencies.. Although within-agency ties are effective for reducing client loss in general, the concentrated control that characterizes these ties makes them ineffective for reducing the effect of executive departures on client loss. In contrast, the greater the number of across-agency multiplex ties in the relationship, the more distributed the control of the relationship will be. Accordingly the likelihood of client loss when executives leave the firm should decrease with increasing across-agency multiplex ties. Formally,

*Hypothesis 3: The positive effect of executive departures on tie dissolution decreases the more the tie is embedded in across-agency multiplex ties.*

**Convergent interests.** As described above, the distribution of control of the ties comprising the client relationship across agencies improves tie retention when executives leave. Yet, the stabilizing effects of across-agency ties also depend in part on the extent to which the interests among the agencies are convergent (Cyert & March, 1963; March, 1962). As noted by Gimeno and Woo (1996: 349), "Intrafirm coordination and incentives of the organizational actors with decision-making responsibilities in the different relations are critical for obtaining

the benefits of economic multiplexity." Likewise, research on triads has shown that convergence of interests is a critical condition for triad stability (Shipilov & Li, 2012; Sytch & Tatarynowicz, this issue). When the interests of members of a triad are divergent, as is the case with triads comprised of a customer and two rival suppliers, the triad is referred to as a multiplex triad (Shipilov & Li, 2012: 475). As a form of organization-market interface (Baker, 1990; Baker et al., 1998), multiplex triads exhibit both market and hierarchical characteristics but preserve key market features including competition among suppliers. Unlike triads studied in prior work in which all three actors play similar roles and are assumed to collaborate, the divergence of roles and interests that characterizes multiplex triads makes these less likely to form and once formed, more prone to dissolution.

Arguments for multiplex triads suggest that despite the distributed control of the ties that aid tie retention when executives depart the firm, because across-agency multiplex ties to competing agencies are also characterized by low convergence of interests, the more a multiplex relationship includes ties to sister agencies that are competitors, the less effective it will be for reducing tie loss when executives leave. Divergent interests limit learning and knowledge sharing across ties. For example, in Tsai's (2002) study of a petrochemical company, competition between units altered the effects of coordination mechanisms on knowledge sharing. Similarly, Hansen, Mors and Løvås (2005) found that competition among intraorganizational units in a large, high-technology company had a positive significant effect on search and transfer costs impeding knowledge sharing between the units. Because a client receives only a low (or no) additional benefit to having its accounts in the same holding company, the presence of other account ties does not reduce the likelihood that it will move its business elsewhere when executives depart. For example in 2004, J. Walter Thompson and Ogilvy & Mather, two agencies in the same holding company, WPP, pitched against one another for a client's coffee account. However, they also held ties to the same client, Kraft, at the time

(Bussey, 2006). Given the competitive nature of the relationship between J. Walter Thompson and Ogilvy & Mather, the additional benefit of multiplex ties to Kraft was low, and the likelihood of retention or dissolution of the ties in the relationship to Kraft given executive departures would not have been likely to differ from that of a single, standalone tie.

In contrast, the convergence of interests among across-agency multiplex ties to non-competing sister agencies is high. When the agencies do not compete, they are more likely to share complex information and learning which increases the value to the client. For example, when agencies are in the same network, one agency may develop the brand, and a second agency applies the brand in the firm's marketing campaign in a specific geographic region. Severing one or the other agency tie would decrease the overall value received by the client. Because across-agency multiplex ties to non-competing agencies are characterized by a convergence of interests, they aid in stabilizing the relationship when executives leave. Across-agency multiplex ties to competing agencies are characterized by divergent interests, and therefore they provide little or no additional stability. Thus, the negative effect of across-agency multiplex ties on the likelihood of client loss when executives leave should be greater the more the multiplex ties are to non-competing agencies. Formally,

*Hypothesis 4: The negative interaction effect of across-agency multiplex ties and executive departures on tie dissolution increases with the proportion of non-competitive ties.*

## **METHODS**

### **Empirical setting**

The predictions are tested on a longitudinal sample of client ties of advertising firms generated from archival data. Advertising firms' services include for example brand development, the creation of television, print or other media advertising, direct marketing campaigns and media buying. Their delivery depends primarily on human capital such as market



expertise, creative talent and relationship management skills (von Nordenflycht, 2011). Although the majority of advertising agencies are independent, a significant percent of overall client exchange occurs with agencies that are members of holding companies. For example, the share of total industry revenues of the top four holding companies in 2001 was estimated to be as high as 74 percent (Dooner, 2002) with more conservative estimates between 30 and 40 percent (Silk & King, 2008; von Nordenflycht, 2011).

Exchange in the advertising industry often occurs via long-term relationships, and the development of individual ties between the advertising firm and its clients is common (Baker et al., 1998; Broschak, 2004). As with other professional service firms, the critical assets are often embodied in human assets rather than in the production process (Coff, 1997), and the human assets are only partially under the firm's control. Tales of executives departing with valuable client accounts are frequently recounted. For example, the departure of Sir Frank Lowe from advertising firm Interpublic Group in 2003 and the subsequent transfer of a 50 million GBP Tesco account from Interpublic to his new firm attracted much attention from the media and industry participants. While the size of the client account lost in this example is unusually large, the fear of client loss when executives depart is common. Advertising firms therefore go to great efforts to "institutionalize" their client relationships (personal interview, 2003).

A key concern with prior research on the effects of executive departures on relationship dissolution is that exchange partner dissatisfaction rather than executive loss drives dissolution (Broschak, 2004; Doyle, Corstjens & Michell, 1980). An empirical strategy that examines dissolutions following a shock or disruptive event can alleviate these concerns by reducing the relative influence of exchange partner dissatisfaction on relationship dissolution. To address this concern, the hypotheses are tested on a sample of agency-client relationships post-merger. Mergers are disruptive events that change the merged firms' networks (Capron, 1999; Madhavan, Koka & Prescott, 1998). In the advertising industry, whereas outside of the merger

context, the most commonly cited reason for client departures is dissatisfaction with the advertising agency, post-merger other factors such as conflict with other client accounts are more likely to drive client departures (Henke, 1995; Michell, Cataquet & Hague, 1992; Rogan, 2013). For example, when Interpublic Group of Companies acquired True North in 2001, Pepsi, a long standing client of True North left the merged company due to a conflict with its rival Coca-Cola, a client of Interpublic, despite being highly satisfied with the work of True North. In contrast, more than three years following the merger and independent of conflicts, Coca-Cola moved several of its accounts to new agencies, seeking “a new face and voice for the world's most recognizable brand” signalling its dissatisfaction with the work of its incumbent agency, McCann Erickson of Interpublic (Parpis, 2004). By testing the hypotheses on a set of client relationships post-merger and controlling for known factors that lead to dissolutions such as conflicts, the relative influence of general client dissatisfaction is reduced. However, because the choice to acquire is not entirely exogenous to the advertising firm-client relationships, there is potential for selection bias in the analyses. Thus, as a robustness check, I also report the results of an estimation including a correction for selection into merger.

### **Sample**

The dataset is a longitudinal sample of client relationships of advertising agencies in North America and Europe that were involved in a completed merger or acquisition in the year 2000 in the US Standard Industry Classification (SIC) code 7311, “Advertising agencies” as indicated in SDC Platinum™. The advertising agencies were matched to the corresponding records listed in the Standard Directory of Advertising Agencies (also known as The Advertising Redbooks™). The Redbooks are the most comprehensive source of data on advertising agencies worldwide and include information on firm location, size, annual billings, executive names and functions, and client relationships. Full data were available in The Redbooks for 10 mergers from a population of 36. There were no significant differences in means and standard deviations

between the population and the sample for date announced, date effective, percent shares acquired or estimated integration level. Because the majority of advertising firms in the sample had multiple agency structures, the 10 mergers yielded a total of 108 agencies. The client names listed by each of the agencies in the sample in The Redbooks were used to construct a set of 3,256 advertising firm-client relationships (1,322 clients across 108 agencies). Data on the advertising agency executives were gathered from the agencies' listings in The Redbooks. Client data were collected from a set of databases published by Bureau Van Dyk (AMADEUS, OSIRIS, and ORBIS). Clients were hand-matched between The Redbooks and the databases using the client name, its location (or the agency's location) and, if given, the description of the account in The Redbooks. The final sample with complete data for all independent variables included 2,313 relationships. T-tests for differences in means and standard deviations for the full and final samples showed a bias toward client relationships held by larger agencies (employees), older agencies, and agencies with higher annual billings. I tracked the survival of these relationships for three years (2000 to 2003) in The Redbooks or until the relationship failed or was censored, resulting in a final sample of 4117 dyad-years with complete data.<sup>2</sup>

### **Dependent and independent variables**

The main dependent variable is a dichotomous variable set to one if the agency-client tie dissolved in that year. A tie is coded as dissolved the first year the advertising firm no longer lists the client account in its Redbooks record. If a tie did not dissolve in the observation period or if data were not available, the relationship was considered censored.

The explanatory variables are executive departures and a set of multiplexity measures - within-agency multiplex ties, across-agency multiplex ties and the proportion of non-

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<sup>2</sup> I also collected a control sample to conduct a robustness check of the results including a selection correction. I randomly selected 220 firms from the population of advertising firms in the United States or Europe in the year 2000 not involved in an acquisition two years before and after (1998 to 2002) from The Redbooks, mirroring the selection criteria for the main sample. The final control sample with complete data for all independent variables included 2,462 relationships. The survival of the relationships was tracked from 2000 to 2003, resulting in a control sample of 6,011 dyad-years.

competitive ties. Executive departures are measured as the proportion of agency executives leaving the agency annually. Departure is defined as the absence of an executive name listed by the agency in the previous year from the agency's Redbooks entry in the current year. Because an executive is rarely dedicated to only one client but rather attends to multiple client accounts (Broschak, 2004), the data do not link executives to specific client accounts; and therefore, it was not feasible to identify specific client-advertising executive ties. Nevertheless, because the executives listed by the agencies are not an exhaustive list of all employees but instead the key executives such as the Managing Director or Creative Director, it is reasonable to assume that they were involved in all or most of the client relationships of the agency. The executive data were aggregated to the agency level. The proportion of departures was calculated as the count of departures divided by the count of executive listed.

Economic multiplexity, the focus of this study, derives from arguments regarding the structural embeddedness of relations (Gimeno & Woo, 1996; Granovetter, 1985). Whereas structural embeddedness describes the extent to which connections exist among a set of actors given the number of possible connections among those actors, economic multiplexity describes the extent to which connections exist between two actors given the number of possible connections between the actors. That is, a relation is multiplex to the extent that it is "embedded in a web of other relations among the same parties." (Gimeno & Woo, 1996: 324). Therefore, multiplex relationships were measured in two ways. First, a relationship is multiplex if a single agency maintains multiple ties to the same client firm, i.e. within-agency multiplex ties. The within-agency multiplex tie score for a given tie is calculated as the number of accounts the agency has with each client divided by the agency's total accounts, excluding the focal account tie. Second, a relationship is multiplex when the agency is tied to a client who has a tie to another agency in the same holding company as the focal agency, i.e. across-agency multiplex ties. Because the number of other agencies to which a focal agency has ownership ties limits the

number of potential across-agency ties for a given agency-client tie, the measure is normalized by the count of possible ties and calculated as,

$$t / [n(n-1)/2]$$

where  $t$  is the count of account ties not including the focal account tie and  $n$  is the number of agencies in the advertising parent firm. The measure is best understood as multiplex tie density, or the extent to which a given dyad is embedded in the number of across-agency multiplex ties possible (Borgatti, Everett & Freeman, 2002). Given the skewed distributions of both measures, I took the natural log of each and included these in the main models. The interaction of executive departures and across-agency multiplex ties was created by taking the product of the mean centered variables (Aiken & West, 1991).

To capture differences in the nature of the relationships between agencies in the same holding company, a measure of the extent to which the agency-agency ties in across-agency multiplex relationships were competitive was included. In the advertising industry, holding companies are organized into sub-structures called “networks.” Agencies in the same network are incentivized to cooperate, or at a minimum, they are not allowed to compete with one another. In contrast, competition between agencies in different networks is common and often encouraged by parent firms. For example, in 2003, of the nine agencies competing for Johnson & Johnson’s Tylenol account, four of these were agencies from different networks within the same advertising firm, Interpublic Group of Companies (*Adweek*, 2003). Multiplex client ties across non-competing sister agencies arise when the client seeks an additional service (e.g., direct marketing in addition to television advertising) or randomly. Multiplex ties across competing sister agencies can arise when the client chooses to spread its business across agency networks to prevent its competitors from benefiting from the advertising firm's services, or simply by chance due to the independent pitching and awards process across accounts. The extent of competition among agencies in across-agency multiplex ties was measured as the

proportion of non-competitive ties and constructed by counting the number of across-agency multiplex ties involving agencies in the same network divided by the count of all across-agency multiplex ties surrounding the agency-client dyad. A three-way interaction effect of the proportion of non-competitive ties, across-agency multiplex ties and proportion of executive departures and the relevant set of two-way interactions were constructed by taking the products of the mean centered variables (Aiken & West, 1991).

### **Control variables**

Relationship controls include the duration of each multiplex relationship measured as the sum of the durations of the ties comprising the relationship minus the longest tie duration. An indicator set to one if a new tie was added to each multiplex relationship in the past three years was included in all models to distinguish between relationships that are growing and those that are stagnant and possibly more likely to dissolve. Other controls include tie duration and an indicator set to one if the data for tie duration were truncated (Cox & Oakes, 1984), i.e., if the relationship started before 1980 or data were not available.

Client controls include measures of client size and client diversification. Large clients have been found to be less likely to dissolve their relationships to advertising firms (Baker et al. 1998). The size measure was constructed as revenue rank based on sales data reported by the clients (reverse-coded).<sup>3</sup> A dichotomous variable set to one if the client was unranked (i.e. did not have revenue data available) was also included in the models. Clients may be more likely to add and drop agencies when they enter and exit new industry sectors. Thus, client industry diversification, measured as the industry sector Herfindahl index, and the annual change in diversification were included. Competitive overlap or conflicts with other clients in the same industry could also affect a client's propensity to terminate its relationships so a control for the

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<sup>3</sup> A rank of 10,000 was assigned to those clients for whom revenue data were not available, and thus could not be ranked prior to reverse coding the rank.

count of client accounts in the same industry (4-digit SIC code) in the advertising firm's portfolio was included as a control.<sup>4</sup>

Advertising agency controls include a control for the agency size measured as count of employees, logged, and the age of the agency, logged. A control for the agency's performance was also included. The losses and additions of client accounts are key indicators of agency performance, and therefore, the proportion of client accounts lost by the agency in each year offset by new client account additions was included in all models. Agencies also vary in the number of executives they report. The potential for a given executive to develop individual ties to a client is greater when there are fewer clients per executive. Therefore, a measure of the ratio of the count of agency executives to the count of clients is included as a control. An indicator set to one if the agency is part of the target firm was also included. The sum of CLIO awards the advertising firm won between 1995 and 1999 was included as a proxy for firm quality. The CLIO Awards is the world's most recognized global awards competition for advertising, design, and interactive, and winning awards signals the quality of the advertising firm's creative work (Von Nordenflycht, 2007). The count of agencies in the advertising firm was included to control for advertising firm size. Lastly, a measure of the count of alternative advertising agencies in the same city as the advertising agency, logged is included to control for the possibility that when alternatives are not available, clients are unlikely to dissolve their relationship with the merged firm.

## **Analysis**

The main dependent variable, client tie dissolution, is dichotomous and therefore, a logistic estimation is appropriate. Although dissolutions were reported annually, in reality they could occur at any point in the year. Thus, the discrete time hazard model with the complementary log-log link function, which accounts for both the discrete nature of the data as

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<sup>4</sup> Prior work also has shown a significant effect of the difference in competitive overlap and its interaction with tie duration on the likelihood of tie dissolution (Rogan, 2013). The results reported in Table 2 are robust to including these additional control variables.

well as the continuous nature of the actual dissolutions, was the best choice for the analysis (Allison 1982, 1984). Because there are multiple observations for each advertising firm, the data violate the assumption of independence in regression analysis, which can bias the standard errors. To address non-independence of observations, all models are estimated using robust standard errors clustered by the advertising parent firm-client parent firm dyad. Although the influence of unobserved heterogeneity cannot be ruled out entirely, I took the following steps to address it. First, the models are estimated including merger fixed effects, which provide a conservative control for merger characteristics and parent firm heterogeneity. Second, in robustness checks described below, I estimated client industry fixed effects models, and report results including the inverse mills ratio as a selection correction as some unobserved factors that drive mergers could also affect relationship dissolution.

## RESULTS

Table 1 reports the descriptive statistics and correlations. Two control variables, an indicator of recently added ties to the relationship and the multiplex relationship duration are highly correlated with across-agency multiplex ties and the proportion of non-competitive ties suggesting that multicollinearity could be an issue. An examination of collinearity diagnostics indicates that the mean variance inflation factor is 1.80 and the maximum is 2.96, below the threshold of ten proposed by Studenmund (2006).<sup>5</sup> Estimations excluding the control variables generate consistent results indicating that multicollinearity is not a concern. As a second check, I also estimated the models using the orthogonal components of the highly correlated variables (Golub & Van Loan, 1996), and the results were consistent with the ones reported in Table 2.<sup>6</sup>

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Insert Tables 1 and 2 About Here  
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<sup>5</sup> Collinearity diagnostics were computed in Stata using the *collin* command.

<sup>6</sup> The following variables were orthogonalized using Stata's *orthog* command: across-agency multiplex ties, proportion non-competitive multiplex ties, multiplex relationship duration, and tie added to relationship in past three years.



Table 2 reports the results of the tests of the hypotheses. Model 1 includes the control variables. The proportion of executive departures is positively and significantly related to relationship dissolution consistent with prior research. In Model 2, the first two hypotheses regarding the effects of the multiplexity variables are tested. A significant, negative coefficient for a variable indicates that the likelihood of tie dissolution is significantly higher than the likelihood of tie dissolution for a tie not embedded in multiplex ties. Both within-agency multiplex ties and across-agency multiplex ties are negatively and significantly related to relationship dissolution, supporting Hypotheses 1 and 2. Model 3 provides significant support for Hypothesis 3 predicting that across-agency multiplex ties decrease the positive effect of the proportion of executive departures on client relationship dissolution.<sup>7</sup>

Model 4 in Table 2 includes the three-way interaction effect of the proportion of non-competitive ties, across-agency multiplex ties and proportion of executives departing as well as the two-way interaction effects and constituent effects. The coefficient on the three-way interaction term is negative and significant, indicating that the negative effect of across-agency multiplex ties on client loss given executive departures increases the greater the proportion of non-competitive ties. As a further test of the significance of the three-way interaction effect, I implemented the difference in slope test according to the methods proposed by Dawson and Richter (2006).<sup>8</sup> Hypothesis 4 is supported if, for the effect of executive departures on tie dissolution, the slope of high across-agency multiplex ties and high proportion of non-competitive ties is less positive than the slope of high across-agency multiplex ties and low

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<sup>7</sup> Although not explicitly theorized, because the control of within-agency multiplex ties is less distributed than the control of across-agency multiplex ties, one would expect the size of the effect of the across-agency multiplex ties and executive departures interaction to be greater than the size of the effect of the within-agency multiplex ties and executive departures interaction. To confirm this, I estimated a model including both interaction terms. The interaction of across-agency multiplex ties and executive departures is significant, but the interaction of within-agency multiplex ties and executive departures is not; and by implication the size of the interaction effect of across-agency multiplex ties is greater.

<sup>8</sup> Thank you to the review team for suggesting the additional test of the three-way interaction effect.

proportion of non-competitive ties. The test confirms that the difference in slopes is less positive and significant at  $p < 0.00$ , supporting Hypothesis 4.

### **Interpretation**

The drop in significance for the constituent effect of across-agency multiplex ties and the constituent effect of its interaction with executive departures in Model 4 indicates that despite the significant coefficients in Models 2 and 3, Hypothesis 2 and Hypothesis 3 are only conditionally supported. Across-agency multiplex ties do have a significant effect on tie dissolutions, but only when the ties are to non-competing agencies; and the significant negative effect of across-agency multiplex ties on client dissolutions when executives depart is contingent upon having multiplex ties to non-competitive agencies. The significant support for three-way interaction indicates that the negative effect of across-agency multiplex ties on tie dissolution given executive departures is greatest when the proportion of non-competitive ties is high. This adds an interesting dimension to the results and, despite the conditional support for Hypothesis 2 and Hypothesis 3, provides a novel finding.

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Insert Figure 2 About Here  
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Examination of the conditional probabilities of tie dissolution and related graphs provides useful information. Figure 2 depicts the three-way interaction effect of executive departures, across-agency multiplex ties and the proportion of non-competitive ties. The graphs are based on conditional probabilities calculated from estimates from Model 4 in Table 2. All variables are at the mean except for the interacted variables, which vary as indicated. As illustrated across the graphs, the negative effect of across-agency ties on client relationship dissolution given executive departures is greatest when the proportion of non-competitive ties is high (one standard deviation above the mean). A comparison of the conditional probabilities of tie dissolution shows that when executive departures and non-competitive ties are high, a one

standard deviation increase in across-agency multiplex ties decreases the probability of tie dissolution by 80%. In contrast, when non-competitive ties are low, the effect of across-agency multiplex ties is negligible. In the discussion section, I consider the implications of the pattern of findings for the arguments developed in the paper and for research on multiplex relationships and relationship retention.

### **Robustness checks**

I conducted several robustness checks of the results. By definition, independent advertising agencies have no across-agency multiplex ties, and therefore in the main models, the values for across-agency multiplex ties for independent agencies were set to zero. To ensure that these observations were not biasing the effects of across-agency multiplex ties on client loss, I estimated the models omitting observations from independent agencies, and found results consistent with the full sample results. Aggregating the measures to the advertising agency level and estimating their effects on the count of client tie dissolutions experienced by each agency annually produces a similar pattern of results; however the interaction effect of across-agency multiplex ties on tie loss was not contingent upon the proportion of non-competitive ties in the agency level analysis. It is also possible that the rate of churn in client ties could vary by client industry. Therefore, I estimated the models including fixed effects for client industries defined at the two-digit SIC code level and the results were consistent with those reported in the main analysis. I also estimated the models using different constructions of the multiplexity variables. Using the logged count of within-agency multiplex ties or the logged count of across-agency multiplex ties generates a consistent pattern of results.

To ensure that the findings were not subject to selection bias in the sample, I also estimated the models including a selection correction. Using Lee's (1983) generalization of Heckman's (1979) two-stage selection model, I estimated the inverse mills ratio from a first stage model predicting the likelihood of experiencing a merger and included this in the second

stage model. A dichotomous variable, public firm, set to one if the advertising firm was publicly owned, was included as an instrumental variable in the first stage of the selection model.<sup>9</sup> The second stage model results including the selection correction are consistent with the main models, and the selection correction is not significant.

As a final robustness check, I estimated the models using alternative constructions of the proportion of executive departures measure. While all advertising firm employees could in theory interact with clients, certain roles are less likely to do so and the departure of executives from these roles has a lower impact on client departures. Estimating the models using executive departures eliminating back office functions (finance, legal, and administration) generates consistent results for the effects of across-agency multiplex ties given executive departures. Likewise estimating the models using a measure of top management team departures (i.e. CEO, Chairman, Managing Director, Founder, Vice President) rather than all executive departures also generates consistent results.

### **Alternative explanations**

Although the analysis provided significant support for the argument that multiplex ties reduce the likelihood of client tie dissolution, at least two alternative explanations are worthy of consideration. First, client characteristics, such as the complexity of the client needs, could confound the relationship between multiplex ties and tie dissolution if clients with more complex needs are both more likely to use multiplex ties and less likely to dissolve their ties to agencies. To ensure that this was not the case, all models in the main analysis were estimated including a control for the size rank of the client and the client's industry diversification, as large, diversified clients are more likely to have complex project needs. Neither control was significant, and the estimations produced the same pattern of support for the hypotheses.

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<sup>9</sup> Proper identification of a selection model requires an instrumental variable that affects the likelihood of experiencing a merger, but does not directly affect the likelihood of client relationship dissolution (Greene 1997: 288). Prior research has found that public ownership is positively related to the likelihood of being involved in a merger (Pagano, Panetta, & Zingales, 1998). At the same time, whether a firm is publicly or privately owned does not have a direct effect on the firm's ability to retain executives or clients.

Nevertheless, because the rank measure was imputed for some observations, I re-estimated the models including only those observations with client revenue data (2451 of 4117 observations are dropped), and the same pattern of support was found. I also reconstructed the rank measure replacing missing revenue data with the mean value. The results were consistent with those reported in Table 2. Using the actual revenue data with missing values replaced by the mean or minimum value also generated consistent results. Together the pattern of results indicates that even after controlling for variation in client needs, multiplex ties significantly reduce the positive effect of executive departures on client loss.

A second alternative argument is that multiplex ties reduce the vulnerability of firms to the loss of exchange relationships by reducing the likelihood that executives leave the firm, rather than reducing the effect of their departures on client loss. When an executive is working for a client whose relationship is embedded in multiplex ties, the executive may be less able to transfer the client tie to another firm. This increases switching costs for the executive and acts as a disincentive to leaving the firm (Gilson & Mnookin, 1985). By reducing the departures of executives, multiplex ties indirectly prevent client loss. However, a test of this mediation effect following the procedures outlined by Baron and Kenny (1986) and Kenny (2008) was not significant, and the mediation model was rejected.

## **DISCUSSION**

As noted in the introduction, a problem for human capital intensive firms is the loss of exchange relationships when executives leave the firm. As confirmed by the findings in this study, embedding ties to exchange partners in multiplex relationships does aid in relationship retention. Multiplex relationships provide greater enforcement of behavioral norms and opportunities for learning that generally make the ties within them less likely to dissolve. However, as an extension to prior theory, this study provided arguments and evidence for the role of the intraorganizational structure of multiplex relationships in relationship retention.

Whereas multiplex relationships comprised of ties to a single unit of the firm improved tie retention in general, only multiplex relationships that spanned non-competing intraorganizational units reduced the impact of the departure of executives on tie loss. Because control of the relationship is distributed across organizational units, the influence of executive departures is reduced. At the same time, if the distribution of control is accompanied by a high divergence of interests, i.e., when the intraorganizational units maintaining the relationship compete with one another, the effects of across-unit multiplex ties for client retention given executive departures are insignificant. In contrast, when the interests of the units maintaining the relationship converge, learning across ties combined with distributed control allow for the simultaneous creation of value and protection of that value for the firm from executive departures.

### **Theoretical implications and extensions**

The introduction of the intraorganizational structure of multiplex relationships between firms to multiplexity arguments has several implications for network theory. First, the arguments provide additional insight into the factors affecting tie preservation and dissolution. This study is one of the first to provide empirical evidence of the stabilizing effects of multiplex relationships, supporting prior theory on multiplexity in interfirm relationships (e.g., Gimeno & Woo, 1996; Kim, Oh & Swaminathan, 2006). This study also extends theory by arguing and showing that not all multiplex ties improved stability – only those with convergent interests.

Second, consistent with prior research (Broschak, 2004), the study confirmed that exchange relationship dissolution is more likely following the exits of managers. Yet, it also showed that the positive effect of executive departures on tie dissolution was significantly lower for ties embedded in relationships that spanned non-competing intraorganizational units. Thus, although individual level ties are important to the preservation of relationships (Broschak, 2004), firm level bonds also play a significant role (cf. Barden & Mitchell, 2007; Dokko &

Rosenkopf, 2010; Rosenkopf, Metiu & George, 2001). Multiplex ties are one lever a firm can use to reduce its dependence on the specific individuals maintaining its relationships.

A third implication of this study is that research on interorganizational relationships must account for the intraorganizational structure of relationships to fully explain variance in their performance effects. A few exceptional studies have begun to do this. For example, in Reagans and Zuckerman's (2001) study of corporate R&D teams, productivity was highest for those teams characterized by dense intra-team networks and sparse extra-team networks. Likewise, Vissa and Chacar (2009) found that the performance benefits of structural holes in entrepreneurial teams external networks were contingent upon the internal cohesion of the team. Differences in the intraorganizational structures of interfirm relationships could explain part of the variance in the performance effects of these relationships.

This study's arguments and findings for the effects of the intraorganizational structure of multiplex relationships on tie dissolution suggest an extension to existing conceptualizations of dyads and triads in interorganizational network theory (cf. Baker & Faulkner, 2002; Madhavan, Gnyawali & He, 2004; Shipilov & Li, 2012). As more ties are added to a relationship and these ties span intraorganizational units, a multiplex relationship that is dyadic at the parent firm level is perhaps better conceptualized as a hybrid between a dyad and triad, as summarized in Table 3. Multiplex hybrids exist when two units of the same firm maintain ties to the same exchange partner, and the relationship between the units can be competitive or non-competitive. Like multiplex dyads, the convergence of interests in multiplex hybrids comprised of non-competitive units makes these effective for reducing tie dissolution in general. Unlike multiplex dyads, the distribution of control of non-competitive multiplex hybrids makes these effective for reducing tie loss when the individuals maintaining the ties leave the firm. Furthermore, when the units maintaining the ties in a multiplex hybrid compete with one another, the addition of ties to a relationship does not stabilize the relationship; instead the units act as independent firms like

members of a multiplex triad. In short, the non-competitive multiplex hybrid offers a unique combination of the distributed control and convergent interests needed to reduce tie loss when individuals maintaining the ties leave the firm. As a further extension, it is also possible that multiplex triads could display properties normally associated with multiplex dyads. For example, as noted by Madhavan, Gnyawali and He (2004), triads vary in the motivations for their formation. When a triad is formed with a countering motive, i.e., when two actors close a triad to reduce the value appropriated by the third actor, the interests of the two actors converge and the potential for the triad to behave as a dyad arises. Thus, the current study points to the need to incorporate the microstructures of triadic relationships into network theory to develop more complete arguments for the performance outcomes associated with dyads and triads.

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Insert Table 3 About Here  
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### **Generalizability**

The findings of the study have clear practical implications for advertising firms and the use of multiple ties to reduce vulnerability to client account loss when executives leave. The multi-agency structure of advertising holding companies provided an ideal setting for exploring the implications of differences in the intraorganizational structure of multiplex ties for client retention. The findings can be generalized to industries of firms with similar structures (e.g., investment banking divisions (Hayward & Boeker, 1998), consulting firm country offices (Mors, 2010; Singh, Hansen & Podolny, 2010) or hospital networks (Westphal, Gulati & Shortell, 1997)). For example, in many professional service firms, several country offices may work with the same client. To the extent that control over decisions regarding the client is distributed across the countries rather than concentrated with one office, the multiplex ties comprising the relationship should reduce the firm's vulnerability to client loss when executives leave. Although in this study agencies were the relevant intraorganizational units, in other



industries the relevant unit could be at a higher or lower level in the firm. For example, Bendapudi and Leone (2002) document how Procter & Gamble deploys cross functional teams to visit its customers and Frito Lay pairs junior and senior sales representatives on calls to avoid the client becoming tied to a single sales representative. The distribution of control of relationships in these examples occurs at a lower level within the hierarchy than in the current analysis. However, the mechanisms of convergence of interest and distribution of control can still be applied to develop a set of predictions specific to the industry.

### **Limitations and directions for future research**

This study is the first to examine the effect of multiplex ties on exchange relationship dissolution and the findings point to several directions for future research. First, given data limitations it was not possible to track where executives moved after departing the firm. However, future studies observing where executives move and whether their clients follow would offer insight into the reasons for the executive departures as well as the role that multiplex ties play in the retention of clients (cf. Somaya et al., 2008). It is also possible that multiplex ties may prevent client tie loss given solo departures of executives but are less effective for collective departures, in which a team of executives across the divisions or offices tied to the client leaves the firm intact (Groysberg, 2010; Wezel, Cattani & Pennings, 2006). Studies of the effects of multiplex ties given collective executive departures on client loss would add further nuance to the arguments regarding the effect of multiplex ties on the stability of exchange. Second, due to data availability, this study examined only the advertising firm-side multiplexity of the relationships. To be sure, different client units could maintain ties to the same advertising firm. Although the arguments developed here regarding the effect of distribution of control and convergence of interests on tie loss would apply to the client side as well, client-side multiplexity merits further empirical investigation. Third, the arguments assume that exchange partners form and maintain relationships to gain economic value. However, exchange partners

stay in relationships for non-economic value as well, for example, because affective commitments have developed between exchanger partners (Lawler & Yoon, 1996). Future research could explore which types of multiplex ties are most likely to lead to affective commitments and the effect of these on tie retention. Lastly, this study focused on multiplex ties in which an ownership tie joined two actors who were each tied to the same exchange partner via a market tie. Given the ubiquity of these relationships in professional services, such as ties across multiple offices of a consulting firm or across multiple divisions of a bank to the same client, the findings are applicable to a significant portion of firms. Nevertheless, future research on multiplex ties comprised of other types of ties, such as alliances rather than ownership ties or market ties, on the stability of exchange relationships would further inform our understanding of the role of multiplex ties in network evolution.

### **Contributions**

In summary, this study offers three contributions. Its main contribution is to the literature on multiplexity in interorganizational relationships (e.g., Beckman & Haunschild, 2002; Gimeno & Woo, 1996). As a departure from prior multiplexity studies that treat firms as unitary actors, in this study, firms were treated as multi-unit actors. As shown here, multiplex relationships vary in the extent to which they span intraorganizational units in the firm, distributing control over the relationship, and this variance has significant implications for the retention of relationships. The introduction of intraorganizational structure to theories of multiplexity offers a potential explanation for why multiplex ties have been found to be beneficial in some studies and not in others (Kuwabara et al., 2010: 251). Future studies adopting an intraorganizational perspective could bring additional insight not only to the performance consequences of multiplex ties but also to the motivations for their formation.

The study also offers a contribution to research on executive mobility effects on exchange relationships (e.g., Broschak, 2004; Somaya et al., 2008). As Somaya and colleagues

(2008: 940) propose: “External social capital may be especially transferable with employee mobility in those knowledge-based services in which the external relationship is not tied to ... a complex set of ties between multiple actors in the two firms.” As shown here, embedding relationships in multiplex ties across units of a firm does reduce the loss of exchange partners normally associated with loss of human capital. This finding is particularly relevant to professional services firms that are highly vulnerable to the loss of both human and social capital (Coff, 1997). Unlike previously identified practices of partnership governance and collegial controls whose effectiveness is limited by the firm size (Greenwood & Empson, 2003; von Nordenflycht, 2011: 141), the effectiveness of multiplex relationships for relationship retention is not limited to small firms. Thus, in contrast to a view that human capital intensive firms are easily held up by human assets that comprise them, the findings of this study show that in fact, firms can reduce this vulnerability by distributing control of exchange relationships across units of the firm.

Finally the study provides insight to research on organizational forms in professional service firms (Greenwood, Hinings & Brown, 1990; Greenwood et al., 2005; von Nordenflycht, 2011). In particular, the findings of the study offers an explanation for why the holding company form has persisted in the advertising industry rather than the multidivisional form (Williamson, 1975) despite negligible scale economies in the industry (Silk & Berndt, 1993; 1995). As noted by von Nordenflycht (2011), a key source of value generated by holding companies is mitigating the high transaction costs between outside investors and agency owners. As a complementary explanation, this paper suggests that the holding company form also plays a key role in reducing the vulnerability of firms to the loss of relational assets when executives leave the firm. Thus, unlike the multidivisional form, the holding company form enables firms to distribute control of key client relationships across units, improving retention of these clients despite turnover of executives.

In closing, the observation that intraorganizational structure affects the benefits associated with relationships between firms opens an area of research into the interplay between organizational forms and interfirm exchange. Not only do intraorganizational structures coordinate activities within the firm; they also can affect the stability of the firm's interorganizational exchange relationships.

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**TABLE 1**  
**Descriptive statistics and correlations<sup>a</sup>**

	<b>Variable</b>	<b>Mean</b>	<b>S.D.</b>	<b>1.</b>	<b>2.</b>	<b>3.</b>	<b>4.</b>	<b>5.</b>	<b>6.</b>	<b>7.</b>	<b>8.</b>
1.	Client Relationship Dissolution	.20	.40								
2.	Proportion of Agency Executives Departing	.28	.29	.07							
3.	Within-agency Multiplex Ties, Ln	-3.10	.87	-.08	-.05						
4.	Across-agency Multiplex Ties, Ln	.01	.02	-.14	.04	.12					
5.	Proportion Non-competitive Ties	.28	.42	-.14	.01	.09	.59				
6.	Multiplex Relationship Duration, Ln	1.12	1.53	-.13	.07	.19	.75	.72			
7.	Tie Added to Multiplex Relationship in Past 3 Years	.31	.46	-.10	.03	.12	.64	.72	.78		
8.	Account Relationship Duration	4.18	3.00	-.07	.07	-.03	.02	-.03	.12	-.04	
9.	Relationship Duration Truncated	.18	.38	-.09	.12	.03	.14	.15	.22	.13	.16
10.	Reverse Coded Client Rank, Ln	5.32	4.54	-.13	.02	-.08	.45	.48	.55	.51	.05
11.	Client Not Ranked in Fortune Data	.60	.49	.15	-.05	-.11	-.54	-.50	-.63	-.53	-.07
12.	Client Industry Diversification	.22	.34	-.10	-.01	.13	.43	.41	.50	.40	.03
13.	Change in Client Industry Diversification	.00	.08	.03	-.01	-.02	-.09	-.01	-.15	-.08	-.05
14.	Client Accounts in Same SIC Code	1.50	4.29	.07	-.13	.03	-.11	.05	-.07	.01	-.04
15.	Count of Agency Employees, Ln	5.11	1.29	-.06	.04	-.09	.10	.13	.15	.17	-.12
16.	Agency Age, Ln	3.42	.80	.10	.08	-.33	-.12	-.22	-.17	-.18	.10
17.	Prop Accounts Lost (Offset by Additions)	-.04	.30	.35	.20	-.07	-.17	-.12	-.05	-.05	-.01
18.	Ratio of Executives to Client Accounts	.50	.76	.02	-.06	.18	-.06	-.07	-.03	-.01	.05
19.	Target	.07	.26	.03	.01	.11	-.11	-.16	-.07	-.06	.07
20.	Sum of Awards Won by Ad Firm	.59	6.14	-.02	.08	-.01	-.04	-.06	-.04	-.03	-.01
21.	Count of Agencies in Ad Firm, Ln	2.93	.69	-.06	.11	-.03	-.02	.08	.17	.15	.09
22.	Count of Alternative Agencies in City, Ln	4.07	1.95	-.16	.10	.06	.11	.21	.20	.21	-.02

<sup>a</sup> N=4117 dyad-years

	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.
10.	.11												
11.	-.14	-.70											
12.	.03	.47	-.62										
13.	-.08	-.02	.03	.19									
14.	-.10	-.09	.03	.00	.04								
15.	.03	.17	-.22	.19	.04	-.06							
16.	-.10	-.07	.08	-.10	-.00	.03	.11						
17.	.03	-.08	.14	-.13	-.02	.08	-.22	-.02					
18.	.05	-.03	-.05	.05	-.00	-.04	.01	-.10	.06				
19.	-.09	-.06	.01	.02	.03	-.09	-.08	-.09	-.07	.20			
20.	-.03	-.00	-.02	-.00	.03	-.03	-.01	-.05	.06	.00	.30		
21.	.09	.13	-.05	.01	-.04	-.02	.10	.00	.21	-.01	-.15	.00	
22.	.07	.11	-.18	.18	.02	.05	.33	-.10	-.18	.01	.14	.01	.05

**TABLE 2**  
**Likelihood of client relationship dissolution: Discrete time complementary log-log models<sup>a</sup>**

	Model 1	Model 2	Model 3	Model 4
Multiplex Relationship Duration, Ln	-0.00 (0.06)	0.07 (0.07)	0.09 (0.07)	0.09 (0.07)
Tie Added to Multiplex Relationship in Past 3 Years	0.05 (0.15)	0.12 (0.16)	0.12 (0.16)	0.21 (0.19)
Account Relationship Duration	-0.04** (0.02)	-0.05** (0.02)	-0.05** (0.02)	-0.05** (0.02)
Relationship Duration Truncated	-0.37** (0.13)	-0.39** (0.14)	-0.38** (0.14)	-0.37** (0.14)
Reverse Coded Client Rank, Ln	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Client Not Ranked in Fortune Data	0.39** (0.15)	0.32* (0.15)	0.31* (0.15)	0.31* (0.15)
Client Industry Diversification	-0.08 (0.18)	-0.07 (0.18)	-0.09 (0.18)	-0.04 (0.18)
Change in Client Industry Diversification	0.33 (0.62)	0.35 (0.58)	0.34 (0.59)	0.44 (0.56)
Client Accounts in Same SIC Code	0.02* (0.01)	0.02+ (0.01)	0.02+ (0.01)	0.02* (0.01)
Count of Agency Employees, Ln	0.08+ (0.04)	0.07 (0.04)	0.06 (0.04)	0.06 (0.04)
Agency Age, Ln	0.22*** (0.06)	0.18** (0.06)	0.18** (0.06)	0.17** (0.06)
Prop Accounts Lost (Offset by Additions)	2.72*** (0.19)	2.69*** (0.19)	2.70*** (0.19)	2.71*** (0.19)
Ratio of Executives to Client Accounts	0.03 (0.05)	0.05 (0.05)	0.05 (0.05)	0.05 (0.05)
Target	0.56** (0.19)	0.57** (0.19)	0.57** (0.19)	0.53** (0.19)
Sum of Awards Won by Ad Firm	-0.02* (0.01)	-0.02* (0.01)	-0.02* (0.01)	-0.02* (0.01)

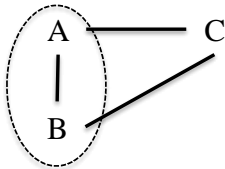
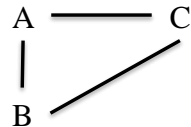
	Model 1	Model 2	Model 3	Model 4
Count of Agencies in Ad Firm, Ln	(0.01)	(0.01)	(0.01)	(0.01)
	-1.11	-1.13	-1.09	-0.83
	(1.16)	(1.13)	(1.13)	(1.18)
Count of Alternative Agencies in City, Ln	-0.11***	-0.11***	-0.11***	-0.10***
	(0.02)	(0.03)	(0.02)	(0.03)
Proportion of Agency Executives Departing	0.48**	0.49**	0.41*	0.64**
	(0.17)	(0.17)	(0.17)	(0.19)
H1: Within-agency Multiplex Ties, Ln		-0.11*	-0.11*	-0.11*
		(0.05)	(0.05)	(0.05)
H2: Across-agency Multiplex Ties, Ln		-10.95*	-9.95*	-7.86
		(4.84)	(4.28)	(5.32)
H3: Across-agency Multiplex Ties, Ln * Prop. Execs Departing			-23.42*	-5.86
			(9.23)	(12.30)
Non-competitive Ties				-0.40*
				(0.19)
Across-agency Multiplex Ties, Ln * Non-competitive Ties				4.26
				(10.92)
Non-competitive Ties * Prop. Execs. Departing				0.52
				(0.34)
H4: Across-agency Multiplex Ties, Ln * Prop. Execs. Departing * Non-competitive Ties				-73.96*
				(29.34)
Log Likelihood	-1661.91	-1655.78	-1653.04	-1648.36
Degrees of Freedom	30	32	33	37
$-2(LL_1-LL_2)^b$	7.81**	12.26**	5.48*	9.36*

+ p < 0.10  
\* p < 0.05  
\*\* p < 0.01  
\*\*\* p < 0.001

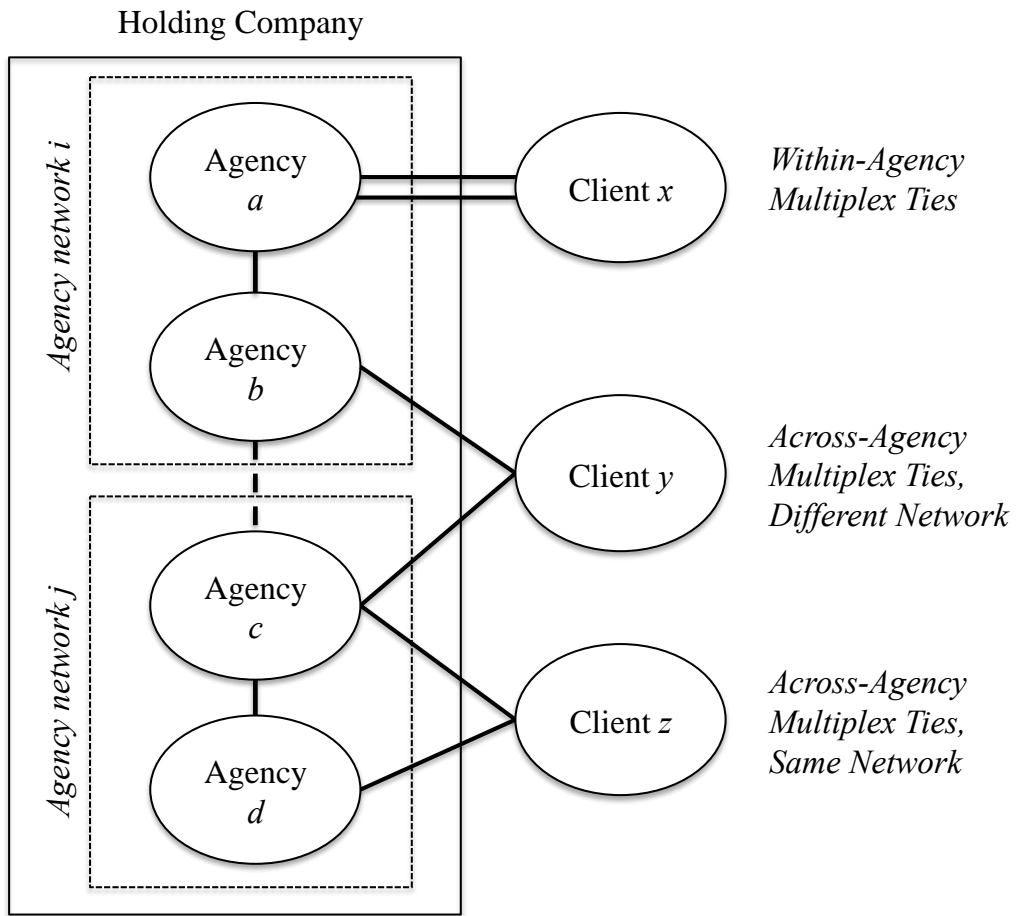
<sup>a</sup> N=4117; All models include four duration intercepts for the years in the observation period and merger fixed effects; Robust standard errors clustered by ad firm-client parent pairs are given in parentheses.

<sup>b</sup> The log-likelihood comparison of model fit is made to the previous model. For the change in model fit for Model 4, p=0.05.

**TABLE 3**  
**Multiplex relationship types and tie dissolution**

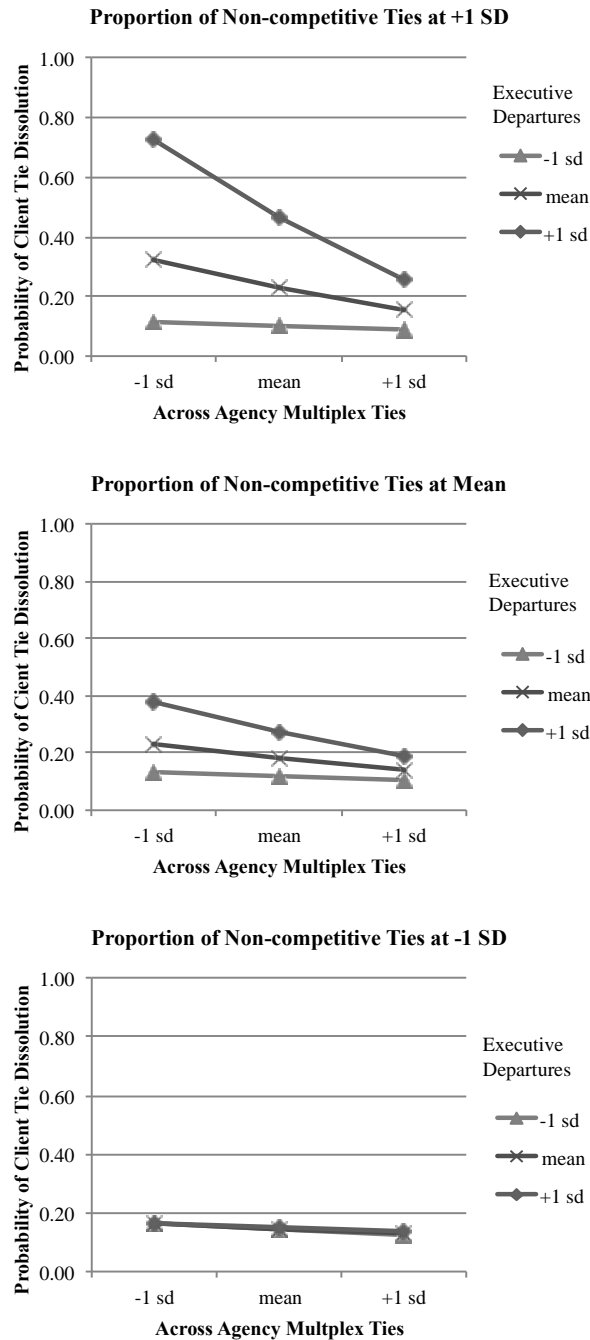
<b>Relationship Type</b>	<b>Definition</b>	<b>Structure</b>	<b>Distribution of control</b>	<b>Convergence of interests</b>	<b>Reduce tie loss?</b>	<b>Reduce tie loss when individuals leave?</b>
Multiplex Dyad	One unit, A, maintains more than one type of tie to exchange partner, C.	A $\equiv$ C	Low	High	Yes	No
Multiplex Hybrid	Two units, A and B, of the same parent organization maintain ties to exchange partner, C					
		Non-competitive	High	High	Yes	Yes
		A – B relationship is:				
		Competitive	High	Low	No	No
Multiplex Triad	Two organizations, A and B, maintain ties to exchange partner, C					
		Non-competitive	High	Moderate	Yes	No
		A – B relationship is:				
		Competitive	High	Low	No	No

**FIGURE 1**  
**Multiplex relationships between advertising agencies and clients**



**FIGURE 2**

**Probability of client relationship dissolution: Three-way interaction effect of across-agency multiplex ties, executive departures and non-competitive agency ties<sup>a</sup>**



<sup>a</sup>The graphs are based on conditional probabilities calculated using estimates from Model 4 in Table 3. All variables are at the mean except across-agency multiplex ties, executive departures and proportion of non-competitive ties, which vary as indicated.



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