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American Sociological Review, Vol. 63, No. 2 (Apr., 1998), 147-177.

Stable URL:
http://links.jstor.org/sici?sici=0003-1224%28199804%2963%3A2%3C147%3AHOTMTC%3E2.0.CO%3B2-A

American Sociological Review is currently published by American Sociological Association.

HAZARDS OF THE MARKET: THE CONTINUITY AND DISSOLUTION OF INTERORGANIZATIONAL MARKET RELATIONSHIPS*

Wayne E. Baker
University of Michigan

Robert R. Faulkner
University of Massachusetts

Gene A. Fisher
University of Massachusetts

We propose a theory of the market as an "intertemporal" process that integrates multiple theoretical perspectives. Using event-history methods, we analyze the dissolution of interorganizational market ties between advertising agencies and their clients as a function of three forces—competition, power, and institutional forces. The informal "rules of exchange" institutionalized in the "emergence" phase of the advertising services market include exclusivity *(sole-source) and* loyalty *(infrequent switching). We find that most exchange relationships between advertising agencies and their clients are indeed exclusive, and most last for several years; but competition, power, and institutional forces support or undermine these rules. Most institutional forces reduce the risk of dissolution of agency-client ties. Powerful advertising agencies mobilize resources to increase tie stability, but powerful clients mobilize resources to increase or decrease stability. Competition is the weakest market force, but it has a consistent and substantial effect on tie dissolution: Competition always increases the risk of dissolution. We conclude that the market is institutionalized as imperfectly repeated patterns of exchange, because competition and changing norms about the duration of market ties destabilize market relationships.*

The right to make and break relationships is a defining characteristic of modern society (Coleman 1974:24–25). This right exists in all modern social institutions, but it has not been studied evenly (Mortensen 1988). For example, the birth and death of marital relationships, marriage and divorce, are studied as often as the birth and death of persons. In contrast, the birth and death of *organizations* receive far more attention than the formation and dissolution of the *relationships* between organizations. Typically, this right of organizations to make and break relationships is a *background assumption*, not a subject of inquiry. That is, an institutionalized means for making and breaking ties—

* Direct correspondence to Wayne Baker, Department of Organizational Behavior, University of Michigan School of Business, 701 Tappan Street, Ann Arbor, MI 48109-1234 (wayneb@umich.edu). This research was supported by a grant from the American Sociological Association, Fund for the Advancement of the Discipline. Versions of this paper were presented at the Interdisciplinary Committee on Organizational Studies (ICOS) at the University of Michigan, the Rational Choice Conference in New York City, the Department of Organizational Behavior at Northwestern University, the Department of Social and Decision Sciences at Carnegie Mellon University, and the Euro Conference on Social Research (ICOR) held at Friedrich-Alexander Universität, Erlangen-Nuremberg, Germany. We are grateful for helpful comments received at these presentations and to Douglas Anderton, Phillip Bonacich, Ronald Breiger, Kathleen Carley, Michael Cohen, Randall Collins, Jane Dutton, David Krackhardt, Roseanne Martorella, Anjali Sastry, Harrison White, and Kazuo Yamaguchi for comments on various drafts. We acknowledge the research efforts of "The Madison Avenue" study group, and especially the work of Dee Weber, Heather Noseworthy, Melissa Bator, and Doug Myers. We thank the four anonymous *ASR* reviewers for their helpful and insightful comments and suggestions.

usually the market—must operate so that certain social or economic processes can occur, but its existence is assumed. In economics, for example, " . . . the firm and the market are, for the most part, assumed to exist and are not themselves the subject of investigation" (Coase 1988:5; also see Hirschman 1970, 1982). This is what Barber (1977) called "the absolutization of the market" in economics.

To some extent, the absolutization of the market also occurs in sociology (Barber 1977). Except for Weber ([1922] 1978), the market was largely neglected in classical sociology (Barber 1977; Swedberg 1993, 1994). The new sociology of markets has opened the "black box" of the market, but the field is still young (Swedberg 1994). Sustained sociological interest in markets dates only from the early 1980s and emerged as part of the "new" economic sociology (Swedberg 1993). Generally, a market mechanism is assumed to operate behind the social phenomena being studied. For example, organizational ecologists analyze the births and deaths of organizations, arguing that competition and legitimation drive their rise and fall (Hannan and Carroll 1992; Hannan and Freeman 1989). Competition depends on the existence of markets, but the market itself is not the subject of direct study. Organizational ecology has made substantial contributions to the understanding of organizations and, in doing so, deserves its leading role in organizational theory. We argue, however, that a *demography of interorganizational relationships* is needed in addition to a demography of organizational populations. Our study moves in that direction.

We use the phrase "hazards of the market" in two ways that together capture the essence of our study. First, the phrase indicates the operation of an institutionalized mechanism for making and breaking relationships that, by its nature, puts participants and their relationships at risk. This is the market: a "social institution which facilitates exchange" (Coase 1988:8). It is hazardous because revenues, profits, reputations, and careers are subject to the whims of customers who can (and often do) exercise the "exit option" (Hirschman 1970). Customers exit, for example, when a competitor woos them away or when their needs change and a supplier can no longer satisfy them. The market is often called "capricious" because such factors are mostly outside an organization's control. Second, we use the phrase in the technical sense of event-history methods to indicate the likelihood that a market tie is at risk or "hazard" of dissolution (e.g., Yamaguchi 1991). We estimate the hazard rate of the dissolution of interorganizational market relationships, showing that the dissolution of market ties is a function of competition, power, and institutional forces.

The dynamics of interorganizational ties have received little attention, despite strong sociological interest in interorganizational relations (Aldrich 1979; Aldrich and Marsden 1988; Mizruchi and Schwartz 1987; Nohria and Gulati 1994). Most often, researchers consider ties cross-sectionally (e.g., Baker 1990; Burt 1992; Han 1994; Laumann and Knoke 1987; Podolny 1993). The few exceptions to this approach focus almost exclusively on *non*market ties, such as joint ventures and strategic alliances (Gulati 1995; Kogut 1989; Powell, Koput, and Smith-Doerr 1996). Joint ventures and alliances, along with mergers, director interlocks, and political activity, are methods used to circumvent, supersede, or co-opt the market (Baker 1990; Pfeffer 1987). Economists, for example, view joint ventures and alliances as instances of market *failure*. So, although these nonmarket ties are important interorganizational arrangements, their dynamics tell us more about *avoidance* of the market than about how the market *operates*.

One of the few quantitative studies of the dynamics of interorganizational market ties involves the analysis of the duration and dissolution of relationships between auditing firms and their corporate clients (Levinthal and Fichman 1988; Seabright, Levinthal, and Fichman 1992).[1] This study revealed that the risk, or hazard, of dissolution exhibits an in-

[1] The lack of large-scale, longitudinal studies of interorganizational *market* relationships is surprising. Most studies of market relationships among organizations are case studies, "think pieces," or analyses of a small set of relationships (Hallén, Johanson, and Seyed-Mohamed 1991; Johanson and Mattsson 1987). Large-scale, longitudinal studies of relationships among organizations are limited primarily to *non*market ties (e.g., joint ventures and alliances).

Table 1. Comparison of Market Interfaces for Coca-Cola Co. and Pepsico, Inc., 1985 and 1987

Coca-Cola Co.					Pepsico, Inc.				
	Number of Accounts					Number of Accounts			
Agency	1985	1987	Change	(Change)[2]	Agency	1985	1987	Change	(Change)[2]
SSC&B	5	2	−3	9	BBDO	5	6	+1	1
McCann-Erikson	2	4	+2	4	Tracy-Locke	3	3	0	0
Lowe Marchalk	2	6	+4	16	J. Walter Thompson	2	2	0	0
McDonald & Little	2	0	−2	4	FCB	2	2	0	0
Burrell	1	1	0	0	Mingo-Jones	1	1	0	0
Castor Spanish	1	1	0	0	Conill	1	1	0	0
Total accounts	13	14	+1	—	Total accounts	14	15	+1	—
Number of market ties	6	5	—	—	Number of market ties	6	6	—	—
Concentration index	.077	.120	—	—	Concentration index	.069	.093	—	—
Root mean square change			2.345		Root mean square change			.408	

Source: *Standard Directory of Advertisers.*

Broken market tie.

verted curvilinear pattern: a "honeymoon effect" where the hazard increases in the early years, peaks, and then declines in the later years (also see Fichman and Levinthal 1991). Unfortunately, a focus on client-auditor ties limits generalizability and the range of issues that can be explored. The market for auditing services is unusual because the possible interorganizational arrangements are restricted to "monogamous" dyads (i.e., sole-source). The Securities Act of 1933 requires every public corporation to retain an independent auditor (Han 1994:644). A corporation uses one and only one auditor at a time; even shifting from one to another raises suspicions that the company is "shopping" for a favorable audit (Levinthal and Fichman 1988:349). Few markets are restricted to dyads in this way. For example, sole-source is only one of several possibilities for most professional services markets—such as investment banking, management consulting, advertising, and law—where the use of multiple suppliers is common (Baker 1990; Burt 1992; Nelson 1988; Podolny 1993; Uzzi 1996). Studying a market without the sole-source restriction allows us to explore a wider range of theoretical questions and to generalize to typical market institutions.

Theory development is facilitated when one study builds on another as "[n]ew data exert pressure for the elaboration of a conceptual scheme" (Merton 1949:102). Our study builds on the prior study of client-auditor dyads in three ways. First, we examine the dynamics of interorganizational market ties for a different professional service—advertising—instead of considering buyer-seller ties in an unrelated industry such as manufacturing. The professional services provided by auditors and advertising agencies are different, of course, but their markets and tasks share some important characteristics, which makes advertising a good subject for study. The critical *difference* between these two markets is the distribution of possible interorganizational arrangements: the dyad as the *only* choice (auditing) versus a full range of structural possibilities (advertising). (For illustration, consider the complexity of the client-agency interfaces used by Coca-Cola Co. and Pepsico, Inc.; see Table 1.)[2] Second, we analyze the same inter-

[2] For example, Arthur Young was Pepsi's auditor in 1985 and 1987; Ernst & Whinney was Coca-Cola's auditor in 1985 and 1987. Pepsi, however, used six advertising agencies in 1985 and six in

temporal pattern, the continuity and dissolution of market relationships, and use similar estimation methods.[3] Third, we consider similar concepts to explain the dissolution of client-agency ties. We include, however, additional concepts and measures to more fully explain the dynamics of market ties, especially for markets where multi-sourcing is practiced. Finally, we propose a theory of market-tie dissolution that subsumes the conceptual framework of the study of client-auditor dyads and lifts the analysis of the right "to establish and break relationships" (Coleman 1974:24–25) to a higher theoretical level.

A THEORY OF CONTINUITY AND DISSOLUTION

We view the market as an *intertemporal process of economic exchange between buyers and sellers.* The focus on *intertemporal process* contrasts sharply with economic theories of exchange, which largely ignore the role of time (Williamson 1991:94). "In the model of a perfect market," Coleman (1990) notes, "transactions are both costless and instantaneous. But in the real world transactions are consummated only over a period of time" (p. 91). An advertising campaign, for example, is conceived, developed, and rolled out over a long period of time, and sometimes over many years.

The intertemporal process of exchange in a given market reflects the particular ways in which *rules of exchange* have become institutionalized. Rules of exchange (along with property rights, governance structures, and conceptions of control) are the "institutions" or "shared rules" that compose a market as a social institution (Fligstein 1996: 658).[4] Rules of exchange are collective understandings, formal and/or informal, of "who can transact with whom and the conditions under which transactions are carried out" (Fligstein 1996:658). These rules govern, for example, the use of the "exit option" (Hirschman 1970)—the ease with which and conditions under which buyers and/or sellers may exercise the modern right to break relationships (Coleman 1974). This right to break relationships exists as part of the "cultural tool kit" (Swidler 1986) available to market actors, but this right can be institutionalized in different ways in different markets (and in different phases of a market's development). For example, a market might be institutionalized into fixed long-term relationships and stable role structures, such as White's (1981a) production markets, where the rules of exchange discourage easy exit. Another market, such as the New York garment industry studied by Uzzi (1996), might operate with rules of exchange that allow exit but do not encourage it. And a market close to the economic ideal, such as investment banking (Baker 1990) or the securities market (Baker 1984), operates with rules of exchange that encourage the exit option.

The patterns of intertemporal exchanges among buyers and sellers offer important clues to the rules of exchange in action in a given market, noting, of course, that the ideal rule and the rule in practice might be quite different. A pattern of frequent switching might imply, for example, that the rules of exchange include "free and easy" exit from (and entry into) exchange relationships, or

1987, while Coca-Cola used six agencies in 1985 and five in 1987 (see Table 1 for details).

[3] Continuity and dissolution are intimately related: The presence of one implies the absence of the other. This relationship may be stated as an identity: prob(continuity) = 1 – prob(dissolution). We focus on the hazard, or probability, of dissolution, but alternatively this could be stated as the hazard or likelihood of tie continuation. There are, of course, alternative foci. The dynamics of relationships can be studied as (1) the *formation* of relationships, such as the selection of strategic alliance partners (Gulati 1993, 1995) or director interlocks (Stearns and Mizruchi 1988); (2) the *reconstitution* of broken ties, such as the reformation of broken director interlocks (Palmer 1983; Stearns and Mizruchi 1986); (3) the *generativity* of relationships, such as the extent to which firms with many alliances create even more alliances (Gulati 1995; Powell et al. 1996); and (4) the *continuity* (or duration) of relationships (Kogut 1989). A complete study of the market institution would include all four dynamics, but this goal is beyond the scope of a single article.

[4] Certain markets are also institutionalized in the everyday sense of having a designated place of trade housed in a formal organization that sets the rules and regulations of trading (such as the Chicago Board of Trade; e.g., Baker 1984). This, however, is not our emphasis in this article.

what Baker (1990) calls the "transaction" orientation. Stable relationships and infrequent switching, in contrast, might imply that the rules of exchange favor "exclusivity" or "loyalty" (Hirschman 1970), or what Baker (1990) calls the "relationship" orientation. Of course, many intermediate points exist between these extremes (Baker 1990; Baker and Faulkner 1991).

A market becomes institutionalized in phases—emergence, stability, and possibly crisis (Fligstein 1996). Emergence is the period of greatest fluidity because roles, social relations, and other aspects of the social structure and culture of the market are not yet solidified (Fligstein 1996:664); shared understandings of the rules of exchange, for example, have not yet emerged. Consider the evolution of three important rules of exchange in the market for advertising services: *fixed prices* (the customary 15-percent fixed commission), *exclusivity* (sole-source relationships), and *loyalty* (infrequent switching).[5] We refer to these as the "original rules" of the market. By the end of the nineteenth century, advertising agency N. W. Ayer developed and proposed the "open contract plus commission" policy, which had two important features: (1) It specified compensation to the agency as a fixed percentage of billings, and (2) it bound the client and the agency for a year or longer (Leiss, Kline, and Jhally 1986:107). The first feature (fixed prices) was accepted only gradually by other agencies; eventually, however, it was endorsed by the agencies' professional association (Leiss et al. 1986:107). This pricing rule, once institutionalized, proved to be amazingly durable—"the commission method of compensation has survived unending controversy and sporadic campaigns to abolish it" (Pope 1983:116) and "today it remains the basic system for billing" (Leiss et al. 1986:107).

The second feature of the N. W. Ayer model was a proposed answer to questions that were the subject of considerable controversy in the formative period of the market: How long "should" an agency-client relationship last? How much business "should" a client give to an agency? How difficult "should" it be for a client to exit a relationship, and under what conditions "should" it happen? "By the early years of the century," observes Pope (1983), "advertising men [sic] were trying to establish a *taboo* against luring rival accounts by aggressive solicitation and were urging clients not to switch agencies for trivial causes . . . " (p. 163; italics added). From time to time, the American Association of Advertising Agencies tried unsuccessfully to ban speculative presentations (a practice by which a rival agency attempts to lure away a competitor's clients). Agencies favored the ban, but it "did not always appeal to the national advertisers who footed the agencies' bills" (Pope 1983:166). Agencies and clients favored the prohibition against conflicting accounts (when an agency handles the accounts of a client's competitor) (Pope 1983:163). Eventually, agency-client relationships were stabilized by such informal rules as giving an incumbent agency "90-day notice" of the client's intention to exit, providing an incumbent agency with a formal notice that the account is going to be put up for review, and refraining from soliciting rival agencies "on the sly" (Kent 1985). By World War I, the informal rules of exclusivity and loyalty were firmly established (Leiss et al. 1986:107).

Our data begin *after* the emergence phase, during the period of institutionalization Fligstein (1996) calls "stability": "a market in which the identities and status hierarchy of firms (the incumbents and the challengers) are well known and a conception of control that guides actors who lead firms is shared" (p. 663). Individuals may come and go in a stable market institution, but the status hierarchy (Podolny 1993) remains stable (Powell and Smith-Doerr 1994:377).

Our data may also include part of the third phase—crisis—the period in which a market is transformed by the invasion of newcomers, economic crisis, and political interven-

[5] These three rules of exchange also emerged in many other professional service markets during their formation (Baker 1990; Baker and Faulkner 1991). The advertising market is unusual, however, because these rules are *informal* collective agreements, not *formal* rules imposed by law and regulation. In contrast, the Securities Act of 1933 imposed a *formal* rule of exclusivity on relationships between auditors and their corporate clients (Han 1994), and the securities industry operated with a *formal* rule of fixed brokerage commissions well into the 1970s (Eccles and Crane 1988).

tion of the state (Fligstein 1996:668). For example, the deregulation of the securities industry is often cited as a major cause of the breakdown of exclusive, long-term exchange relationships in the financial services industry (e.g., Eccles and Crane 1988). Political intervention has not been a cause of crisis in the advertising industry, but the industry did experience the invasion of newcomers, economic crisis, and other changes that could undermine the shared rules of exchange. The 1980s witnessed an influx of new advertising firms, the *de*diversification of corporate clients (Davis, Diekmann, and Tinsley 1994), the development of new global marketing strategies, a wave of mergers and acquisitions, and changes in macroeconomic conditions. All of these changes should have put pressure on the original rules of exchange, inducing the development of "new" rules of exchange, or at least opening the doors to experimentation with new rules of exchange, and creating confusion about the "proper" institutional rules to follow. If new rules of exchange emerged in the 1980s, they should be observable in the changing patterns of intertemporal exchange between buyers and sellers in the advertising industry.

Assumptions

Our theory of the dynamics of interorganizational market relationships is based on three assumptions:

(1) *The continuity and dissolution of interorganizational market ties are a function of three forces: competition, power, and institutional forces.* Most theoretical approaches emphasize only one of the three. Competition, for example, is the key idea of economic theory, where it is assumed to be the primary (if not the only) force operating in economic and noneconomic institutions. "Competition may be the spice of life, but in economics it has been more nearly the main dish" (Stigler 1968:181; also see Scherer 1980:9–21). Sociologists emphasize power, but they often downplay competition (e.g., Pfeffer 1987:27). The new institutionalism in organizational analysis emphasizes institutional forces but downplays power and neglects competition (Powell 1991:184, 191). To understand the dynamics of interorganizational market relationships, we argue, all three forces must be considered together.

(2) *Competition, power, and institutional forces differentially influence the continuity and dissolution of interorganizational market ties.* *Competition* is a destabilizing force that increases the risk of dissolution (Fligstein 1996:659). We consider the influence of competition at two levels: "the conduct of sellers" and "the market structure" (Scherer 1980:9–10).[6] The conduct of sellers is often called "rivalry." Rivalry is consistent with Adam Smith's idea of competition as the striving of sellers for the patronage of buyers, Weber's ([1922] 1978:635) definition of competition as two or more sellers vying "for opportunities of exchange" with a buyer (Burt 1992; Simmel 1950:154–62), as well as commonsense notions of "competition" in business (also see Swedberg 1994: 271). "Market structure" is a view of competition as "structural conditions" in a market or industry. For example, the structural conditions of perfect competition include many small buyers, many small sellers, homogeneous products, and an absence of barriers to entry (Scherer 1980; Schmalenese and Willig 1989). The markets for wheat and soybeans are classic examples.

The influence of *power* on the risk of dissolution depends on who has the power—the seller or the buyer. Generally, we assume that when the buyer has power, market ties are put at risk; when the seller has power, ties are more likely to be continued. We agree with Fligstein's (1996:657) important insight that the social structure of a market is ". . . best viewed as attempts to mitigate the effects of competition with other firms," but we argue that this depends on the perspective one takes. Market relationships often are built on a basic asymmetry—sellers want to keep their customers, but customers are open to switching. Buyers and sellers have different reasons (and different abilities) to pursue stable or unstable exchange relationships. Advertising agencies, for example, generally

[6] Of course, there are other emphases. Schumpeter ([1942] 1975:81–86), for example, would call "market structure" an example of "ordinary" competition, a structure that would be destroyed by the revolutionizing effects of competition for new technologies, new methods of production, or new organizational forms.

want to "lock in" their customers and avoid the "discipline" imposed by an active exit rule (Hirschman 1970). Agency attempts to ban speculative presentations is a case in point. Buyers may or may not prefer stable relationships, depending on their assessment of the services they buy, the benefits of switching (e.g., better service, higher quality), and the costs of switching (e.g., transaction costs). Sometimes both sides of an exchange relationship prefer the same rules of exchange, such as the rule of exclusivity. But even this can be contested, as when the advertising agency Saatchi and Saatchi tried, with varying success, to convince its clients that it could handle their competitors' accounts without a conflict of interest. Such actions highlight the fact that both sides of the advertising market mobilize resources in ways that have consequences for the (in)stability of exchange relationships.

We view power from the perspective of resource dependence: "Intercorporate relations can be understood as a product of patterns of interorganizational dependence and constraint" (Pfeffer 1987:40; also see Pfeffer and Salancik 1978). A resource is "any *valued* activity, service or commodity" (Cook 1977: 64, italics in original). Power is the ability of one organization in an exchange relationship "to determine the nature of the interorganizational exchange," such as the ratio of resources given to resources received (Cook 1977:66). For example, a powerful client can compel an agency to provide additional services for the same fee. The power of one organization in an exchange relationship is proportional to the dependence of the other organization. Pfeffer (1987) argues that power is important when market actors suffer from uncertainty and ambiguity—when they don't know the proper course of action, and therefore are vulnerable to the claims made by powerful others attempting to "define the situation." Because the quality of advertising is very difficult to measure a priori *or* post hoc, for example, buyers are more susceptible to assurances, promises, and arguments made by big (high-status) agencies than they would be if quality could be easily and precisely measured. This sociological concept of power, then, differs from the economist's definition of "market power" (the extent to which a firm can lower its volume and increase prices, due to structural imperfections of the market, the pure case of which is a monopolist facing a very large number of very small buyers).

Institutional forces reduce the hazard of dissolution. We define institutional forces to include general isomorphic pressures for conformity to prevailing norms (DiMaggio and Powell 1983; Han 1994) about the rules of exchange (Fligstein 1996), and the development of personal ties and organizational-level investments that bind organizations together, transmit norms, and promote uniformity of organizational practices (Abrahamson and Fombrun 1994; DiMaggio and Powell 1983; Granovetter 1985; Johanson and Mattsson 1987; Macaulay 1963; Uzzi 1996; Williamson 1985). For example, the risk of dissolution of client-auditor dyads is lower when there is an "attachment" (personal ties) between the employees of the two firms (Seabright et al. 1992). This effect of social ties on risk of dissolution is consistent with the arguments of institutional theory (DiMaggio and Powell 1983; Galaskiewicz and Wasserman 1989), social exchange theory (Blau 1964; Cook 1977), the theory of social embeddedness (Granovetter 1985; Uzzi 1996), and transaction cost economics (Williamson 1985).

(3) *The stability of a market depends on the relative strengths of competition, power, and institutional forces.* We define the stability of a market as the extent to which market relationships continue uninterrupted from period to period. The observed stability of market ties is a function of the effects of competition, power, and institutional forces. All three forces do not "push" in the same direction; rather, the observed stability of market ties can be interpreted as the *net effect* of opposing forces. Competition, for example, is a destabilizing force (e.g., Fligstein 1996:659). Therefore, if competition is the strongest force, market ties should exhibit a lack of continuity (i.e., a high risk of dissolution) from one period to the next. In contrast, institutional forces stabilize exchange (Abrahamson and Fombrun 1994; DiMaggio and Powell 1983).[7] For example, if the his-

[7] For example, the survival rates of organizations increase as ties become embedded (Baum and Oliver 1992; Uzzi 1996): By extension, we

torical rules of exchange still prevail in the advertising industry today, we would expect to observe stable relationships that reflect conformity to the rules of exclusivity and loyalty (Leiss et al. 1986; Pope 1983). If institutional forces compose the strongest force, market ties should exhibit continuity (i.e., a low risk of dissolution) from one period to the next. Indeed, if institutional forces were the *only* force operating in the market, we argue that exchange relationships would settle into fixed, stable, long-term relationships, such as those observed by White (1981a, 1981b) in production markets.

Hypotheses

Our main thesis is that the dynamics of market relationships are driven by competition, power, and institutional forces. We now describe the specific effects of each force, which are developed primarily from the perspective of a client obtaining advertising services. Each hypothesis assumes that all other factors are held constant (ceteris paribus). Concepts, measures, and hypotheses are summarized later in Table 3 (see p. 168).[8]

Competition. Competition can take place along a number of dimensions: price, quality, service, delivery times, and so on. Price plays a leading role in economic theories of exchange, but in the real world its importance is variable. Generally, sellers try to *avoid* direct price competition, using legal and illegal means to do so (Baker 1990; Baker and Faulkner 1993; Fligstein 1996:659–60; Schumpeter [1942] 1975:84). Buyers also try to avoid making their sellers compete primarily on price when doing so would impair long-standing relationships, prevent sellers from making long-term investments on behalf of the relationship (e.g., capital expenditures), or jeopardize the sellers' survival. Such behavior has been observed in industries as different as investment banking (Eccles and Crane 1988) and automobile parts supply (Best 1990). Direct price competition is difficult to avoid in markets that approximate the ideal of perfect competition. In contrast, price is far less important in markets where (1) products or services are complex, customized, unique, and difficult to compare; (2) quality is ambiguous and the link between quality and performance (outcomes) is loose and difficult to measure; and (3) market conditions are imperfectly competitive. In such situations, so-called *nonprice* forms of rivalry (such as quality or service) are more important than price.[9]

The markets for most professional services embody the three characteristics above. As a result, most professional service firms differentiate themselves primarily by nonprice forms of rivalry. For example, auditors differentiate themselves by status and reputation, not by differences in price (Han 1994). The price of an audit is less important than the status of the auditor (and hence the perceived quality of the audit); price is so unimportant in the decision to retain or switch auditors that it is not included in the analysis of the continuity and dissolution of client-auditor ties (Levinthal and Fichman 1988; Seabright et al. 1992). Similarly, advertising agencies differentiate themselves primarily by perceived quality and service, not by differences in price (fees). Indeed, disagreement about agency compensation is only one of twelve reasons why clients drop agencies (Rutherford, Thompson, and Stone 1992:1–2). In general, the "problem of price" for many professional services is solved by price-fixing—setting a fixed percentage of some accounting measure, such as advertising's customary 15-percent commission of the total dollar cost of media buys. This is an example of the "social understandings" by which market actors avoid direct price competition (Fligstein 1996:659).

argue that the survival rates of market *relationships* also should improve as they become embedded in social networks.

[8] Arguably, some measures could be classified under more than one force. Our definitions of competition, power, and institutional forces are theoretical distinctions, and the available empirical measures do not always match such theoretical distinctions perfectly. Nonetheless, we attempt to place each measure in its most appropriate location.

[9] The role of nonprice forms of rivalry is often unwelcome in economic theory because, as Schumpeter ([1945] 1975) noted, "As soon as *quality competition* and *sales effort* are admitted into the sacred precincts of theory, the price variable is ousted from its dominant position" (p. 84, italics added).

We observe the level of competition in the market for advertising services as it is revealed in the extent of rivalry and market structure (Scherer 1980). We expect the consequences of competition in one period—the continuity or dissolution of market ties—to be determined by the level of competition (rivalry and market structure) in the previous period. The winners are the sellers whose ties are continued; the losers are those whose ties are cut. *Rivalry* can be conceptualized as the "organization-market interface," operationalized as (1) the *number of sellers* with whom a focal organization (the client) transacts in a given period, and (2) the *distribution of business* among these sellers (Baker 1990:593). Members of a client's "stable" of agencies, for example, are rivals for new business and the continuation of old business; they are opponents competing "for opportunities of exchange" with the buyer (Weber [1922] 1978:635). Both economic logic and social exchange theory (e.g., Cook 1977) suggest that the stability of a client's ties is inversely correlated with the number of alternatives a client has. Specifically, we hypothesize:

Hypothesis C_1: The number of agencies used in time t is positively related to the hazard of dissolution of a market tie in time $t + 1$.[10]

Distribution of business refers to the allocation of business among sellers (in our case, allocation of advertising accounts among agencies). A buyer that spreads its business evenly among its sellers employs a "transaction" strategy that stimulates rivalry among sellers; conversely, a buyer that spreads its business unevenly among its sellers employs a strategy that reduces rivalry (Baker 1990: 595–96).

Hypothesis C_2: The *distribution of business* (measured as the Herfindahl index) is negatively related to the hazard of dissolution of a market tie in time $t + 1$.

That is, an even distribution of business (a low Herfindahl) should result in a higher risk of dissolution than an uneven distribution of business (a high Herfindahl). Sole-source supply is achieved when a client pushes the distribution of business to the extreme—all business is given to a single agency. This is a "relationship" strategy that promotes the highest level of continuity (Baker 1990:594–95). A relationship strategy might create a discontinuous effect on the hazard of dissolution. For example, increasing concentration from 95 percent to 100 percent indicates a fundamental shift in strategy—from multisource to sole-source—compared to moving from 90 percent to 95 percent, even though each shift involves a 5-percentage-point increase. To capture this possibility, we hypothesize:

Hypothesis C_3: A sole-source strategy in time t is negatively related to the hazard of dissolution of a market tie in time $t + 1$.

The structural conditions of competition—market structure—can favor one side of the market over the other (Schmalenese and Willig 1989). This is captured in common colloquial expressions, such as "It's a buyer's market" and "It's a seller's market." When market structure favors agencies (a "seller's market"), we expect a lower risk of dissolution of client-agency ties; generally, agencies want to keep the business they have, and they rarely "fire" their clients. Conversely, when market structure favors clients (a "buyer's market"), we expect a higher risk of dissolution; when clients face an abundance of alternative suppliers, they are more likely to switch. As the number of sellers and number of buyers are basic characteristics of market structure, the ratio of sellers to buyers captures the net effect of structural conditions that can favor either side of the market.[11] Specifically, we hypothesize:

Hypothesis C_4: The ratio of the total number of sellers (agencies) in the market to the total number of buyers (clients) in the market in time t is positively related to the hazard of dissolution in time $t + 1$.

[10] "Competition" hypotheses are indicated by "C," "power" hypotheses by "P," and "institutional force" hypotheses by "I."

[11] The marriage market is another example. South and Lloyd (1995) found, for example, that the sex ratio is related to the risk of marital dissolution: This risk is greater "when either husbands or wives encounter a relatively sizable quantity of alternatives to their current spouse" (p. 31). Unlike our hypothesis, however, their hypothesis is *curvilinear*: When there are more men than

The seller-buyer ratio represents an important feature of the structural conditions of competition, but it does not indicate the overall pattern (network) of exchange in a market. Two markets can have the same seller-buyer ratios yet experience very different networks of exchange. We define "network" here to be the set of economic exchanges between buyers and sellers in a given period, where a tie represents the exchange of fees for services. Network centralization, a key macro-level concept in network analysis, captures important differences in network structure (Bonacich 1991; Freeman 1979; Wasserman and Faust 1994).[12] When network centralization is low, the network of economic exchange is relatively flat, indicating a structural condition of high competition (i.e., a "level playing field"). In contrast, high network centralization indicates a "peaked" or hierarchical network of exchange, representing a structural condition of low competition (i.e., an "uneven playing field").

Network centralization in a market like advertising is a special case in network theory because exchanges take place *between* two populations of actors, buyers and sellers.[13] This case is called a two-mode network (e.g., Bonacich 1991; Faulkner 1983; Wasserman and Faust 1994). Most markets are natural two-mode networks because the typical market institution is composed of a separate "demand crowd" and "supply crowd" (Polanyi 1957:170). A two-mode network yields two views of network centralization, one for each side of the market, allowing us to distinguish the structural conditions of competition for each side.

Hypothesis C_5: The centralization of the seller side of the economic network in time t is negatively related to the hazard of dissolution of a market tie in time $t + 1$.

High (low) centralization of the agency side of the economic network indicates low (high) competitive conditions for agencies, and hence a low (high) risk of a broken tie.

Similarly, we hypothesize:

Hypothesis C_6: The centralization of the client side of the economic network in time t is negatively related to the hazard of dissolution of a market tie in time $t + 1$.

Power. Power and dependence play important roles in the dynamics of interorganizational relationships (Pfeffer and Salancik 1978). For example, corporations deliberately manipulate the number and intensity of ties with investment banks to reduce dependence and enhance power (Baker 1990). A similar logic, we argue, operates in client-agency relationships. Corporate clients depend on advertising agencies for the creation of advertisements, information, and access to advertising buyers (e.g., the television networks and stations). Agencies can also provide downside insurance.[14] Corporate dependence on agencies for such resources is a source of power for agencies. Clients can reduce their dependence, however, by using such tactics as dropping, continuing, adding, and switching agencies. Over time, clients allocate and reallocate their business in ways that compel agencies to provide better qual-

women *or* more women than men, the risk of divorce goes up. In our case, the effect of the ratio of sellers to buyers on risk of dissolution is *linear*: When there are more agencies than clients, the risk of dissolution goes up; when there are more clients than agencies, the risk goes down.

[12] Network centralization is a measure of a whole network; centrality is a measure of an individual node's position in the network (Freeman 1979). These are also known as "graph centralization" and "point centrality," respectively. Network centralization and point centrality are different but computationally related. Network centralization is a summary measure of the distribution of individual (or point) centralities, taking its minimum when all actors are equally central, and its maximum when one actor "completely dominates or overshadows" the others (Wasserman and Faust 1994:177).

[13] Most social networks are one-mode networks, where ties take place among members of a single population. One-mode networks occur in so-called exchange markets, where an actor can be a buyer, seller, or both, such as the stock or commodity markets (Baker 1984), but these are not common market institutions.

[14] For example, advertising agency Ogilvy & Mather paid the television and magazine advertising bills of its longtime client Mattel when the toy maker neared bankruptcy (Pendleton 1988). Similar rescues occur in other professional services. For example, Goldman Sachs, a leading investment bank, helped Ford Motor Company through its difficult times in the early 1980s (Baker 1990:597).

ity, additional services, put better "creatives" on an account, cut costs, and so on. Agencies respond to these tactics because they are subject to a key dependency as well—they rely on clients for products and services that need to be advertised. Without clients with products to sell, an advertising agency is out of business.

We build on prior conceptualizations of power in relationships between clients and providers of professional services (Baker 1990; Han 1994; Podolny 1993; Seabright et al. 1992). A change in a client's *resource needs*—a change in the level of dependence for services or products provided by a supplier—can influence the risk of dissolution. For example, "external verification" is the resource a company needs from its auditor (Seabright et al. 1992:133). The task of verification becomes more demanding when the company's audit situation becomes more complex; as a client's auditing task becomes more complex (measured as change in various accounting measures), the likelihood of a broken client-auditor tie increases (Seabright et al. 1992:133, 146). A client's needs for advertising resources stems from its need to differentiate its products and stimulate demand. As a client's needs for advertising increase, the risk of a broken client-agency tie increases.

Hypothesis P_1: An increase in a client's needs for advertising resources in time t is positively associated with the hazard of dissolution of a market tie in time $t + 1$.

Organizational size is used as an indicator of power (Uzzi 1996:674–702), though size is open to different interpretations (e.g., see Pfeffer and Salancik 1978:131–39). For example, size can be viewed as a buffer against environmental pressures and protection against failure (Pfeffer and Salancik 1978: 131–39; Uzzi 1996:688). Size can indicate the "attractiveness" of a client; large clients often can demand more from their suppliers by virtue of their size (Baker 1990:603). Indeed, many an agency lives in fear that it could lose a big client and therefore willingly acquiesces to client demands (Mayle 1990: 139). Client size also might indicate the extent to which a buyer's and seller's interests in stability coincide. A stable market depends on stable relationships, particularly among the largest firms (Fligstein 1996:667). The large firms, which are the incumbents in a market, have a stake in maintaining the structural status quo; the small firms, which often are the challengers to the big players, have an interest in undermining stable relationships (Fligstein 1996). All these reasons point in the same direction:

Hypothesis P_2: Client size in time t is negatively related to the hazard of dissolution of a client-agency tie in time $t + 1$.

Alternatively, size can indicate a big corporate staff and the ability to manage many suppliers. For example, large corporations have big finance departments and a superior management capacity, which enables them to use a "transaction" strategy—that is, use many banks and spread business evenly across banks (Baker 1990:609). If the same logic operates in client-agency ties, then client size puts client-agency ties at risk. Thus, the alternative to Hypothesis P_2 is that client size in time t is positively related to the hazard of dissolution in time $t + 1$.

Financial status, the overall economic condition of a firm, is used as an indicator of power and dependence in interorganizational relationships. For example, director-interlock analysts find that financial status (measured as the debt-to-equity ratio) is positively correlated with the number of interlocks (Dooley 1969; Pfeffer 1987), suggesting that dependent companies (high ratios) try to overcome dependence by forming director interlocks. A financially weak company may drop and switch agencies, especially if lackluster financial performance is blamed on the "poor" quality of its advertisements. Indeed, switching agencies boosts the short-term price of a company's stock because doing so sends a positive message to investors that a company is revising its marketing and advertising strategy (Rutherford et al. 1992). Financially strong clients, however, may have less need to switch agencies as a way to reduce dependence, especially if they attribute their financial success to the "superior" quality of their advertisements and want to continue working with their agencies (and/or they "buy" their agencies' attempts to convince them that their success is "caused" by exceptional advertisement quality). Specifically, we hypothesize:

Hypothesis P_3: The financial status of a client in time t is negatively related to the hazard of dissolution of a market tie in time $t + 1$.

And,

Hypothesis P_4: An improvement in financial status from time t to time $t + 1$ is negatively related to the hazard of dissolution.

Social status is an important concept in the sociology of markets (Eccles and Crane 1988; Han 1994; Podolny 1993). We adopt Podolny's (1993) definition of a producer's status in a market "as the perceived quality of that producer's products in relation to the perceived quality of that producer's competitors' products" (p. 830). In professional service markets like advertising, buyers are uncertain of the actual quality of products and services offered. Therefore, buyers use status "as a *signal* of the underlying quality of a firm's [e.g., advertising agency's] products" (Podolny 1993:831, italics in original). Agency status is valued by clients because it reduces uncertainty about the actual creativity of agencies, the actual quality of advertisements, and the actual effect of advertisements on outcomes (product sales). This reliance of clients on agency status makes status a source of power for agencies. And when agencies have power, they tend to be kept by their clients.

Hypothesis P_5: Agency status in the advertising industry at time t is negatively related to the hazard of dissolution of a market tie in time $t + 1$.

Centrality in networks provides access to or control of resources like information (Bonacich 1987; Burt 1992; Cook and Yamagishi 1992; Freeman 1979; Wasserman and Faust 1994). Centrality puts an actor in "the thick of things"—a central actor gets more, better, and faster information. We argue that the economic network of exchange (where a tie is the exchange of fees for products or services) serves as a network of communication. Customers and suppliers are important parts of an organization's "external intelligence network" (Baker 1994:61–64).[15] An agency that occupies a central position in the network of economic exchange is more valuable to its clients than an agency in a peripheral position, because the central agency gets better, faster, and more information about market conditions, new marketing ideas, competitors' actions, consumer trends, and so on. Because market actors value information (Stinchcombe 1990), access to (or claims of access to) information is a source of power in client-agency relationships. Moreover, the central actors in a market have a strong interest in maintaining the stability of the social structure of a market (Fligstein 1996:667). Therefore:

Hypothesis P_6: Agency centrality in time t is negatively related to the hazard of dissolution in time $t + 1$.

However, clients get information by virtue of their own centrality in networks of exchange, which can reduce the need for information provided by their agencies. Agency centrality and client centrality may be counterbalancing forces; if so, client centrality and the hazard of dissolution should be positively related. If, however, central clients as well as central agencies have similarly strong interests in maintaining the stability of the social structure of the market (Fligstein 1996:667), we would expect to observe a negative relationship between client centrality and dissolution hazard. Given that the exchange relationship is built on a basic asymmetry:

Hypothesis P_7: Client centrality in time t is positively related to the hazard of dissolution in time $t + 1$.

Client sales is used as an indicator of *perceived advertising effectiveness* because the purpose of advertising is to improve the client's "top line" (sales). The causal link between advertising and a client's sales, however, is indirect, loose, and ambiguous. It is impossible to "prove" that an advertising campaign did or did not increase sales; so

[15] For a specific example, Baker (1994) reports the case of a CEO who "tapped advertising and media types to garner information about competitors. 'The people [who] sell us space in the trade papers,' he told me, 'are the greatest contact people in the world. I would pump them as to what was happening with my competitors'" (p. 64).

many factors influence sales that alternative explanations cannot be ruled out. Nonetheless, both clients and agencies attribute changes in sales to the efficacy of advertising as they struggle to "make sense" (Weick 1995) of an inherently ambiguous and uncertain situation. Clients, for example, often blame agencies for falling sales and use such attributions to justify firing them.

Hypothesis P_8: An improvement in sales (i.e., perceived advertising effectiveness) from time t to time $t + 1$ is negatively related to the hazard of dissolution of a market tie in time $t + 1$.

Institutional Forces. Institutional theory implicitly assumes that competition is the only force in competitive settings and institutional isomorphism is the only force in institutional settings (Powell 1991:183–86).[16] We agree with Powell (1991:184) that this view "cedes too much terrain to market processes." Institutional forces operate in all institutions, noneconomic and economic (Fligstein 1996). We focus on the extent to which the risk of dissolution of client-agency ties is influenced by conformity to norms about the rules of exchange, notably the duration of market relationships.[17] All social relationships are subject to norms about longevity or "socially expected durations" (Merton 1982). An example is the "normative presumption of continuity" in client-professional relationships (Merton 1982:280). Indeed, the original rules of exchange in the advertising industry included exclusivity and loyalty (Leiss et al. 1986; Pope 1983), which combine to create a "normative presumption of continuity" in client-agency ties. Socially expected durations are important because expectations can influence *actual* duration. For example, expectations of continuity in market ties are self-fulfilling—when a buyer and a supplier expect their relationship to continue, it does (Heide and John 1990).

We observe two mechanisms of institutional isomorphism in the dynamics of client-agency ties: (1) general isomorphic pressures for conformity to industry norms about continuity, and (2) social embeddedness, the formation of two types of social networks (personal ties and interorganizational ties) that cross organizational boundaries and promote conformity of organizational practices. Of course, these are analytical distinctions; institutional mechanisms can overlap in practice (e.g., see DiMaggio and Powell 1983). An important difference between the two, however, is the *method* of transmission of norms. In the first mechanism, organizational decision-makers are influenced via *impersonal* methods of transmission, which can be as simple as reading about client-supplier relationships in popular industry publications such as *Advertising Age* and *Institutional Investor* (Johnson 1994; Pendleton 1988). In the second mechanism, decision-makers are influenced via *personal* methods of transmission, such as their personal ties. Abrahamson and Fombrun (1994:737) observe, for example, that buyers and suppliers socialize each other and create shared belief systems, leading to a conformity of organizational practices. These are "local cultures" that guide interaction in markets (Fligstein 1996: 657).

If the original rules of exchange and norms about duration change, then *isomorphic pressure* bears on the continuity of actual relationships. In investment banking, for example, the "relational" norm of the 1970s (loyal sole-source ties with banks) gave way to the "transactional" norm of the 1980s (opportunistic use of multiple banks) (Baker 1990; Eccles and Crane 1988). Many corporations conformed to the transactional norm, ending sole-source relationships and spreading business among multiple banks (Baker

[16] This is so, Powell (1991:183-86) argues, because research on institutions has become too restricted, resulting in a separation of competitive (market) settings from institutional settings. This separation stems from the initial formulations of institutional theory, which distinguished between technical versus institutional sectors (e.g., Meyer, Scott, and Deal 1981) and competitive versus institutional isomorphism (Tolbert and Zucker 1983; DiMaggio and Powell 1983).

[17] DiMaggio and Powell (1983) pose the core question in institutional analysis: "[W]hy is there such startling homogeneity of organizational forms and practices?" (p. 148). Most answers to this question focus on the similarity of *organizations* and the homogeneity of *organizational fields* (Powell and DiMaggio 1991). We focus on the similarity of *social relationships* (the extent to which client-agency ties are influenced by conformity to norms about duration).

1990). In the 1980s, advertising, law, and other professional services experienced a similar shift from relational to transactional practices as corporate clients imitated the shift in the financial industry (Baker and Faulkner 1991). This "transactionalization trend" may have continued in the 1990s, but this has not been tested. We expect to observe the general isomorphic effects of norms about the duration of client-agency ties in three period effects.

Hypothesis I_1: The hazard of dissolution of market ties in the "relational" 1970s is lower than the hazard of dissolution in the "transactional" 1980s.

And,

Hypothesis I_2: The continuation of the transactionalization trend into the 1990s results in a higher hazard of dissolution for ties in the 1990s, compared with the 1980s.

We define social networks here as the set of personal ties and interorganizational ties that cross the boundary between buyer and seller. Following the study of client-auditor ties, these two types of social networks are considered *individual attachments* (personal ties) and *structural attachments* (interorganizational ties) (Seabright et al. 1992). These social ties are different from the economic ties created by the exchange of fees for services. The relationship between economic ties and social ties is that the former become "embedded" in the latter (Granovetter 1985). Social networks *facilitate* economic exchange by generating trust, discouraging malfeasance, improving coordination of activities and joint problem-solving, permitting the transfer of confidential and sensitive information, and speeding communication across organizational boundaries (Granovetter 1985; Uzzi 1996; Van de Ven 1976). These social networks are carriers of norms about organizational practices and hence are mechanisms of institutional isomorphism (DiMaggio and Powell 1983; Friedkin 1984). For example, social networks produce similar patterns of corporate gift-giving (Galaskiewicz and Wasserman 1989), similar patterns of corporate contributions to political action committees (Mizruchi 1989), and the adoption of similar tactics to defend against hostile takeovers (Davis 1991). In general, interconnected organizations develop shared beliefs and adopt similar organizational practices and strategies (Abrahamson and Fombrun 1994; Johanson and Mattsson 1987; Palmer, Jennings, and Zhou 1993).

Social networks stabilize exchange (Granovetter 1985) and increase the continuity of market ties (Abrahamson and Fombrun 1994). For example, individual attachments (personal ties) lower the risk of dissolution of client-auditor ties. Measuring individual attachments as the tenure of the client's chief financial officer, Seabright et al. (1992:152) found that longer tenure decreases the hazard of dissolution. Based on this finding, we expect that the continuity of a client's executives should lower the hazard of dissolution of client-agency ties. When these attachments are broken, the market tie is put at risk. When a top executive *departs* from a client company, the company may lose important personal ties with its agencies.

Hypothesis I_3: The *exit* of a top executive from the client company between time t and $t + 1$ is positively associated with the hazard of dissolution of a market tie in time $t + 1$.

Correspondingly, when a *new* executive *arrives* at a client company, ties with current agencies are put at risk for a number of reasons: The new executive may not have personal ties with the company's current agencies; the new executive may have established personal ties with different agencies; and the new executive may hold a radically different philosophy about the organization and how it should relate to its agencies.[18] For example, soon after Lou Gerstner joined IBM

[18] We define top executives to include the board chair, CEO, president, and chief financial officer. The *exit* of a top executive and the *arrival* of a top executive often do not coincide. If they coincided perfectly, the correlation of the two variables, exit and arrival, would be +1. As shown in Table 2, however, the variables are almost uncorrelated ($r = .007$). Role consolidation occurred frequently in the study period. For example, a CEO might leave a company (coded as an exit), but the role of CEO might be assumed by the current president, who becomes president *and* CEO (this is *not* coded as an arrival).

as its CEO and board chair, he reorganized the sales and marketing organization, cut ties with IBM's 42 advertising agencies, and consolidated all advertising with a single agency, Ogilvy & Mather (Taylor 1995). Therefore:

Hypothesis I_4: The *arrival* of a new top executive between time t and $t + 1$ is positively associated with the hazard of dissolution in time $t + 1$.

Because we analyze advertising, we can consider a form of individual attachment that does not exist for auditing: the use of *in-house* services. A public corporation must use an external auditing firm (Han 1994: 644), but it can use an in-house agency to create its own advertising. Personal ties (i.e., individual attachments) are likely to form with an in-house agency because individuals are employees of the same company, work in close proximity with other employees, and their personal ties do not cross an external organizational boundary. Therefore, we expect that a tie to an in-house agency has a lower risk of being dissolved, compared with ties to outside agencies.

Hypothesis I_5: If a tie is an in-house-agency tie in time t, then we hypothesize that its presence in time t is negatively associated with the hazard of dissolution of the in-house tie in time $t + 1$.

DiMaggio and Powell (1983:154) argue that isomorphic pressures are "built into" exchange relationships between buyers and suppliers. These structural attachments, such as mutual investments in specialized policies, coordinated procedures, and joint technologies, reduce the risk of dissolution (Seabright et al. 1992). The duration of a market tie is an indicator of structural attachments because it reflects "the history of organizational investments made since the formation of the interorganizational relationship" (Seabright et al. 1992:127). The duration of client-auditor relationships exhibits a curvilinear pattern, a "honeymoon effect," where the risk of dissolution increases in the early years, peaks at four years, and declines thereafter (Levinthal and Fichman 1988). We expect a similar honeymoon pattern here, although the peak may be different. This honeymoon effect is captured in two expected patterns:

Hypothesis I_6: Tie duration is positively associated with the hazard of dissolution, and the square of tie duration is negatively associated with the hazard.

We also may be able to infer the presence of structural attachments from the historical pattern of a client's allocation of business to its agencies. If a client exhibits a history of "churning" business—frequently switching agencies and reallocating accounts among agencies—structural attachments between the client and its agencies have little opportunity to form. In contrast, if a client maintains a stable allocation of business—keeping the same agencies and the same accounts with the same agencies—structural attachments are established. We can observe the historical pattern of a client's allocation of business directly from our data on the economic ties between clients and agencies. For example, Coca-Cola's allocation of business is much less stable than PepsiCo's (Table 1), suggesting that structural attachments are much less likely to form between Coca-Cola and its agencies compared with PepsiCo and its agencies. Consequently, Coca-Cola's ties have a higher risk of dissolution.

Hypothesis I_7: A history of "churning" business at time t is positively related to the hazard of dissolution of a tie in time $t + 1$.

Structural attachments may not survive a merger or acquisition. When companies merge, agencies may be dropped due to supplier redundancy (duplication of capabilities), conflicts of interest, or simply the power of the dominant party in the merger to break the structural attachments of the other party. The effect of mergers and acquisitions on dissolution should depend on whether the client is the *acquirer* or the *target* (the acquired company). Mergers usually involve the union of unequal parties; the target falls under the management and control of the acquirer. The acquirer is more likely to keep its agencies and drop the target's because it wants to integrate the target's products and services into its own advertising strategy, or because the acquirer wishes to preserve its structural attachments to its own agencies. For example, when Nestlé acquired Alpo Petfoods, Nestlé dropped Alpo's longtime

advertising agency, Weightman Group (Loro and Gleason 1995).

Hypothesis I_8: If a client is the *acquirer* between time t and $t + 1$, we expect a lower hazard of dissolution in time $t + 1$.

And,

Hypothesis I_9: If a client is the *target* between time t and $t + 1$, we expect a higher hazard of dissolution in time $t + 1$.

Controls. Macroeconomic conditions can influence the dynamics of client-agency ties. For example, bad economic times might impel clients to slash their advertising budgets and drop agencies. Therefore, we include change in the gross domestic product (GDP) as a control variable.

DATA, MEASURES, AND METHODS

To build on the previous study of client-auditor relationships (Seabright et al. 1992; Levinthal and Fichman 1988), we chose a different professional service, advertising. The markets and tasks for auditors and advertising agencies share some important features: (1) Each market contains many sellers of various sizes and many buyers of various sizes. (2) Client relationships tend to last for several years (unlike, for example, the quick, short-term deals in investment banking). (3) Tasks are complex and customized. (4) The "production process" is continuous rather than discrete (such as the short-term deals in investment banking). (5) The "product" (audit and advertisement) is subject to scrutiny, interpretation, and consumption by multiple audiences, both inside and outside the client organization. The critical *difference* in these two services is that the dyad is the *only* choice for auditors ("monogamy"), whereas a full range of structural possibilities exists for advertising agencies ("polygamy").

Sample

Our unit of analysis is the client-agency tie in a given year. To obtain our sample of these market ties, we first drew a systematic sample of client companies with market values of $50 million or more from the 1,963 companies in the 1985 Compustat Datafile. We chose 1985 because it is the approximate midpoint in the time span under consideration. We oversampled companies that advertise frequently, based on National Register Publishing's 1985 *Standard Directory of Advertisers* (informally known as the Redbook). Our final sample includes 398 companies (a systematic sample of 20.3 percent). Analyses of the effects of oversampling frequent advertisers showed that oversampling increased the precision of the estimates of effects of company related variables (e.g., financial status, number of employees, sales), but did not bias the estimates of these coefficients.

After our sample of companies was selected, we consulted the Redbook again to determine all agencies used by the 398 companies in 1971, 1973, and so on up to 1993. A total of 1,644 agencies were used.

Measures

Dependent variable. We measure *dissolution* as a dichotomous variable indicating whether a given seller (advertising agency) used at time t is dropped or kept at time $t + 1$ (where 1 = tie is cut; 0 = tie is not cut). *Dissolution means a completely broken tie.* We do not define dissolution as a decrease in tie strength (e.g., as when an agency loses one of multiple accounts with a buyer). For example, Coca-Cola Co. dissolved only one market tie from 1985 to 1987—the tie with McDonald & Little (see Table 1).

Measures of competition. *Rivalry* is measured as the number of advertising agencies used, the Herfindahl measure of concentration (distribution of business among agencies), and a dummy variable for sole-source (i.e., only one agency used), all at time t. We rescale the Herfindahl index to have a lower bound of 0 and an upper bound of 1 to facilitate comparisons among companies with differing numbers of agencies. The Herfindahl index for company j is calculated as $\Sigma(s_i^2)$ where s_i is the share of company j's accounts held by agency i. This index has a maximum value of 1, when all of the company's advertising accounts are held by one agency. H reaches its minimum value of $\frac{1}{k}$ when all of company j's accounts are spread evenly among its k agencies. Accordingly, the concentration index is

$$C = \frac{\left(H - \frac{1}{k}\right)}{\left(1 - \frac{1}{k}\right)}. \quad (1)$$

If a company has only one agency, C is undefined and is assigned the value 0; a dummy variable captures the effect of one agency.

Market structure is indicated by the ratio of sellers to buyers and two measures of network centralization, all at time t. The number of sellers is the total number of advertising agencies in the United States in each year of our study, estimated from the Census of Service Industries (U.S. Bureau of the Census, various years). The number of buyers is the total number of advertisers who purchased $70,000 or more of advertising in a year, estimated from the Redbook. This number of advertisers is larger than the number of advertisers in the population we sampled. We use the larger number to indicate the overall structural conditions of competition in which the sampled companies operate. Network centralization of the buyer side and of the seller side is calculated using Bonacich's (1991) method of calculating simultaneous group and individual centralities (i.e., two-mode centrality). Following a suggestion from Bonacich (personal communication), we estimated network centralization as the highest centrality score in each year.

Measures of power. *Company power* is indicated by resource needs, organizational size, financial status, point centrality, and perceived effectiveness of advertising (sales). *Resource needs* are measured as the change in the number of different two-digit SIC codes for a client company from time t to $t + 1$ and as the change in the index of qualitative variation (IQV) of two-digit SIC codes from time t to $t + 1$. This index reverses the Herfindahl index of concentration and standardizes it to have a maximum of 1 and a minimum of 0 (Bohrnstedt and Knoke 1982:76). A high IQV means that a company is very diversified. *Organizational size* (of client) is measured as the logarithm of the number of employees (in thousands) at time t. *Financial status* is measured as an index determined by combining through factor analysis four financial indicators: dividends per share, the logarithm of market value, the logarithm of ratio of long term debt to equity, and the ratio of earnings to price per share. *Point centrality* is calculated using Bonacich's (1991) method for two-mode networks.[19] *Perceived effectiveness* is measured as the change in the logarithm of client sales (in millions of dollars) from time t to time $t + 1$.

Agency power is measured on two dimensions: social status and information access. The published rankings of professional service firms—advertising, investment banking, auditing, and others—are widely and commonly used in their respective industries as measures of "status" and proxies for quality. Accordingly, we measure *social status* as the rank of the agency in industry standings at time t. These rankings, published annually in *Advertising Age,* are based on the total billings of an agency to all of its clients. We coded the top 200 agencies, assigning a score of 200 to the highest ranking agency, 199 to the second highest, and so on; a score of 0 was assigned to any agency not appearing in the top 200. We also measure social status as the number of clients an agency has at time t, estimated from the ties recorded in our sample. The number of clients is weighted by the clients' sales, which assigns higher status to an agency with only a few clients with big sales than to an agency with several clients with low sales. We measure *information access* as the agency's point centrality at time t, using Bonacich's (1991) two-mode method, adjusted for network size (described in note 19).

Measures of institutional forces. We measure institutional forces as general isomorphic effects and social embeddedness. *General isomorphism* is measured by one dummy variable that indicates whether the period of risk of dissolution, the time from t

[19] Centrality scores estimated this way are highly correlated with network size (e.g., the number of clients). To remove the effect of size, centrality scores were regressed on the number of clients present in each network and an adjusted centrality score was computed as *Adjusted Centrality = Centrality − b × Number of Clients* (where b is the regression coefficient). This adjustment creates a centrality measure that is uncorrelated with network size. We adjusted both client and agency centrality and used the adjusted centrality scores for point centrality and in the computation of network centralization.

to $t + 1$, ends in the 1970s; another dummy variable indicates whether the period of risk of dissolution ends in the 1990s. Social embeddedness is represented by individual and structural attachments. *Individual attachment* is measured as the *exit* of a top executive during the period in which the tie is at risk of dissolution, the *arrival* of a new top executive during the same period of risk, and the presence of an in-house agency in time t. Top executives are defined as the board chair, chief executive officer (CEO), president, and chief financial officer, as reported in *Standard and Poor's Directory of Corporations*. We tracked the names and titles of each company's top executives from period to period. If an executive appeared in time t but not in time $t + 1$, exit was set to 1 for period $t + 1$. If an executive appeared in time $t + 1$ but not in time t, arrival was set to 1. In other words, exit and arrival track the appearance or disappearance of one or more top executives from the company roster. *Structural attachment* is measured as the duration of the client-agency tie up to time t and the square of tie duration up to time t. It is measured as the root-mean-square number of changes in the allocation of business between time $t - 1$ and t, given by

$$\sqrt{\frac{\sum\left(A_t - A_{t-1}\right)^2}{N}}, \qquad (2)$$

where A is the number of accounts, and N is the number of agencies (see Table 1 for examples). We measure the stability of the allocation of business in the interval *preceding* the period of risk of dissolution to ensure temporal priority in our assessment of the client's *history* of allocation business. Taking data from annual volumes of *Mergers and Acquisitions*, we created dummy variables to indicate whether a client acquires another company, or whether a client is acquired by another company, during time t to $t + 1$.

Control variable. We control for changes in the economy by including the change in the gross domestic product (GDP). GDP is in constant 1987 dollars (U.S. Department of Commerce, Bureau of Economic Analysis). Change in GDP is measured as 1 minus the ratio of GDP in time t to GDP in time $t - 1$.

Model

Our dependent variable is the dissolution of market ties. The duration of a tie is determined by the length of time between its initiation and its end.[20] Accordingly, we focus on the risk of dissolution (hazard) of established ties. Failure time models are usually employed to represent the time until a failure takes place, in our case the dissolution of the market tie, or to estimate the risk of termination at any given time. Although time until dissolution is continuous, we use a discrete failure time model because the events we are observing take place within discrete intervals (i.e., between time t and $t + 1$).

In the discrete model, time until tie dissolution has a discrete distribution with values of 1, 2, 3, and so on, indicating the period during which the dissolution took place. The hazard of the event occurring at some point between time t and $t + 1$ is assumed to be constant over the interval between t and $t + 1$, but the hazard may vary from one time interval to the next. The hazard is the conditional probability that the dissolution of a tie will occur, given that the tie had not dissolved before time t. In a direct analogue to the proportional hazards model, we assume that the independent variables multiplicatively increase or decrease the hazard of dissolution. Thus, the hazard rate for a given set of independent variables, $X_1, X_2, \ldots, X_k$, is

$$P_t = 1 - \exp[-\exp(\alpha_t + \beta_1 X_{1,t} + \beta_2 X_{2,t} + \ldots + \beta_k X_{k,t})] \qquad (3)$$

(Prentice and Gloeckler 1978).

We assume that a continuous time, proportional hazards model has generated our observations, but because our data are grouped time intervals, we use a discrete hazard model to estimate the contribution of the independent variables to the hazard. A continu-

[20] Ties were initiated in every period of our study. We did not expect the year of initiation to affect the risk of dissolution of the tie, and a preliminary analysis (not shown), which included dummies for the starting year, confirmed that when a tie begins makes no difference. When the tie is in effect *does* make a difference in the risk of dissolution, which is captured in our period dummies for the 1970s and 1990s.

ous time model, such as the well-known Cox proportional hazards model, cannot be used, because grouping the data has created the presence of many ties with exactly the same survival times, a condition that can severely bias coefficient estimates. Kalbfleisch and Prentice (1980) argue that a discrete time model is preferable when survival times are frequently the same. Prentice and Gloeckler (1978) show that one can use the discrete hazard model (above) to obtain unbiased estimates of the coefficients of a continuous time proportional hazards model. Some discrete time hazard models can be biased by the length of the interval over which the data are grouped (Flinn and Heckman, 1980; Singer and Spilerman, 1976). The discrete logit model, for example, is subject to time-aggregation bias when the grouping intervals are long, unless the baseline hazard does not vary across intervals (Myers, Hankey, and Mantel 1973). The Prentice-Gloeckler specification (1978) avoids time-aggregation bias, even when the grouping intervals are long and the baseline hazard is a function of time, as is the case in our data.

Omitting from the model variables related to the hazard rate can bias estimates of the coefficients of the variables included in the model, particularly those that specify the behavior of the hazard over time. The estimated hazard rate becomes biased toward negative duration dependence (Heckman and Singer 1984:77–78). We adjust for the unobserved heterogeneity embodied in the omitted variables by introducing into the Prentice-Gloeckler (1978) model a gamma mixture distribution to summarize unobserved individual heterogeneity, as proposed by Meyer (1990, eqs. 6 and 7). The estimation procedure was programmed in STATA by Jenkins (1995). As expected, adjusting for unobserved heterogeneity changed the estimates of several of the coefficients. Most notably, in the model without correction for unobserved heterogeneity, the log of the hazard decreases linearly with duration of the tie, while in the adjusted model the log of the hazard is a concave quadratic function of the duration of the tie. The effect of duration in the adjusted model accords with the "honeymoon effect" identified by Levinthal and Fichman (1988) for client-auditor ties.

FINDINGS

Basic Patterns of Exclusivity and Loyalty

The original rules of exchange governing agency-client relationships—exclusivity (sole-source) and loyalty (infrequent switching)—appear to operate over the study period, though imperfectly. On average, the majority of companies (54.3 percent) each year engage in exclusive relationships, using only one agency per year. More than three quarters (76.4 percent) use three or fewer agencies per year. Only 10 percent use six or more agencies per year. (The number of agencies used per company per year ranges from 1 to 59, with a mean of 2.94 and a standard deviation of 4.11). Most companies switch agencies infrequently; the average market tie lasts about five years. Half of all market ties last four years or longer; one of four lasts eight years or longer. About three quarters of market ties present in one period (time t) are present in the next (time $t + 1$). The average probability of dissolution over all years and all market ties is about .28. (Of course, these simple estimates do not reflect left truncation and right censoring of the observations. The "actual" duration, for example, is probably somewhat longer.) Our estimated average duration of client-agency ties is very similar to the average duration of client-agency ties estimated by Hart (1985) in a smaller sample. It is also similar to the average duration of some nonmarket interorganizational relationships, such as strategic alliances between competitors (Kogut 1989).

Causes of Continuity and Dissolution

The results support our theory that the continuity and dissolution of market ties are a function of three forces—competition, power, and institutional forces. (Means, standard deviations, and correlations are reported in Table 2; the effects of the three forces on dissolution are summarized in Table 3.) First, we report the findings for each force separately, holding constant the influences of the other two forces and the control variable, change in GDP. (Note that change in GDP is negatively related to the hazard of dissolution, suggesting that clients tend to stay with their agencies when macroeconomic condi-

Table 2. Means, Standard Deviations, and Correlations for Variables in the Analysis

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
(1) Number of agencies	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(2) One agency (dummy)	−.34	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(3) Concentration of accounts	.03	−.28	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(4) Sellers to buyers ratio	−.00	−.04	−.02	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(5) Buyer network centralization	−.07	.03	.03	−.72	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(6) Seller network centralization	−.11	.00	.04	.13	.01	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(7) Log number of employees	.38	−.40	.15	.11	−.08	−.03	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(8) Index of financial status	.24	−.21	.14	.15	−.15	−.02	.29	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(9) Change in financial status	.00	.04	.00	−.02	.02	.00	−.01	−.20	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(10) Change in log of sales	−.12	.19	−.04	−.07	.07	.02	−.13	−.01	.03	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(11) Change in no. of SIC codes	−.02	−.02	−.02	−.09	.06	−.07	.05	−.03	−.01	.01	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(12) Change in IQV of SIC codes	−.07	.03	−.03	−.07	.05	.01	.31	−.03	−.02	.03	.31	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(13) Index of agency status	−.12	−.02	.08	.05	−.05	−.02	.14	.03	−.02	−.02	.00	.01	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—
(14) Agency range of clients	−.13	−.04	.09	.13	−.01	.00	.14	.03	−.03	−.04	−.02	−.01	.72	1.00	—	—	—	—	—	—	—	—	—	—	—	—
(15) Client centrality	−.22	.10	.02	.26	−.30	.07	−.07	−.04	−.02	.03	−.11	−.06	.22	.30	1.00	—	—	—	—	—	—	—	—	—	—	—
(16) Agency centrality	.16	−.06	.02	.05	−.05	.09	.12	.05	−.02	.00	−.03	−.02	.27	.44	.35	1.00	—	—	—	—	—	—	—	—	—	—
(17) In-house agency used	−.00	.09	−.05	.04	−.04	−.00	−.00	.03	−.02	.05	−.00	−.01	−.14	−.11	−.05	−.05	1.00	—	—	—	—	—	—	—	—	—
(18) Executive departs company	.02	−.04	−.00	−.07	.01	−.13	.07	−.12	−.03	−.05	.01	−.00	.03	.03	.09	.04	−.02	1.00	—	—	—	—	—	—	—	—
(19) New company executive	.07	−.04	.00	.01	−.01	−.03	.11	−.02	−.03	−.04	−.04	.04	.03	.04	.06	.04	−.02	.01	1.00	—	—	—	—	—	—	—
(20) Tie duration	−.11	.07	.01	.21	−.20	−.01	.06	.07	.03	.01	−.04	−.01	.20	.22	.15	.06	.04	.00	.03	1.00	—	—	—	—	—	—
(21) RMS change in agencies	.41	−.32	.31	.04	−.02	−.02	.23	.21	−.00	−.10	.04	−.04	.03	.02	−.15	.07	.02	−.02	−.04	−.08	1.00	—	—	—	—	—
(22) Client makes acquisition	.32	−.11	.05	.13	−.12	.00	.30	.13	.01	−.03	.08	.02	−.02	.00	−.16	.06	.03	−.04	.03	.03	.22	1.00	—	—	—	—
(23) Client is acquired	.26	−.08	.03	.09	−.15	−.04	.15	.03	−.02	−.04	−.05	.01	−.01	.01	.02	.06	−.01	−.01	.10	.04	.07	.04	1.00	—	—	—
(24) Period dummy (1970s)	−.12	.06	.03	−.55	.50	.40	−.13	−.15	.01	.10	.05	.08	−.06	−.11	−.12	−.00	−.04	.02	.01	−.18	−.11	−.12	−.12	1.00	—	—
(25) Period dummy (1990s)	−.07	−.03	.01	.71	−.29	.48	.07	.07	−.02	−.05	−.07	−.02	.04	.09	.12	.08	.03	−.16	−.01	.14	.01	.07	.07	−.27	1.00	—
(26) Change in GDP	−.00	.02	−.03	−.07	.17	−.69	−.02	−.04	−.00	.05	.06	−.00	−.02	−.03	−.06	−.09	−.01	.16	.03	−.05	−.02	−.03	−.06	.13	−.47	1.00
Mean	8.87	.13	.06	.94	.23	.18	3.66	.26	−.00	.02	.16	.00	78.24	5.34	−.02	.01	.02	.27	.28	3.07	1.38	.29	.10	.19	.23	.02
Standard deviation	8.96	.34	.08	.17	.13	.05	1.40	.59	.26	.10	2.40	.20	85.69	6.35	.06	.04	.15	.45	.45	2.28	1.28	.73	.39	.39	.42	.02

tions improve and drop them when macroeconomic conditions worsen.) Second, we view the results via a sensitivity analysis, comparing the *relative* effects of the three forces on the hazard of dissolution of client-agency ties.

Competition. Three of six measures of competition significantly influence the continuity and dissolution of client-agency ties (Table 3, Hypotheses C_1, C_3, C_5). Generally, if a client uses more agencies in time t (i.e., rivalry is high), the risk of dissolution of a tie in time $t + 1$ is greater (Hypothesis C_1). If a sole-source strategy is used (i.e., only one agency), the risk of dissolution is lower (Hypothesis C_3). Similarly, the more structural conditions of competition (i.e., market structure) approximate the perfectly competitive ideal in one period, the higher the probability of dissolution of a market tie in the next period. The centralization of the seller side of the network is related as hypothesized to the risk of dissolution; a more centralized seller network means a lower hazard of dissolution (Hypothesis C_5). Contrary to expectations, the model shows no support for the hypotheses that the seller-buyer ratio or buyer network centralization influence the hazard of dissolution (Hypotheses C_4, C_6).

Power. Seven of ten measures of power are significantly related to the hazard of dissolution (Hypotheses P_2, P_3, and P_5 through P_8). Resource needs, as indicated by change in number of SIC codes and change in IQV of SIC codes, are *not* significantly related to the dissolution of client-agency ties (Hypothesis P_1). However, organizational size of client is significantly related to the hazard of dissolution of client-agency ties, as hypothesized: Larger clients tend to keep their agencies (Hypothesis P_2). Financial status also is significantly related to the risk of dissolution of client-agency ties, as expected (Hypothesis P_3): Stronger financial status in time t results in a lower hazard of dissolution in time $t + 1$. However, change in financial status does not significantly influence the hazard (Hypothesis P_4). Agencies with higher status enjoy greater continuity of relationships with their clients. The higher the rank of an agency in time t, the lower the risk of dissolution in time $t + 1$, and the wider an agency's range of big clients, the lower the risk of dissolution of client-agency ties (Hypothesis P_5). Both agency centrality and client centrality are significantly related to the hazard of dissolution. Agency centrality and client centrality have opposite effects on the hazard, as expected: The higher the centrality of the agency, the lower the hazard of dissolution (Hypothesis P_6), but the higher the centrality of the client, the higher the hazard of dissolution (Hypothesis P_7). Finally, we find that an improvement in sales from time t to time $t + 1$ lowers the hazard of dissolution, as expected (Hypothesis P_8).

Institutional Forces. Seven of ten measures of institutional forces are significantly related to the risk of dissolution (Hypotheses I_1, I_2, I_3, I_5, I_6, I_9). We hypothesized that we would observe general isomorphic pressures in three period or decade effects (Hypotheses I_1, I_2). Contrary to the widely held belief that the 1980s were the "decade of the deal" (low loyalty and frequent switching), the 1970s actually were *more* transactional than the 1980s. That is, client-agency ties in the 1970s were associated with a *higher* hazard of dissolution compared with the 1980s, contrary to our expectations (Hypothesis I_1). The 1990s are more transactional than the 1980s, as expected (Hypothesis I_2).

Because changes in top management reflect discontinuity in individual attachments, we expected that the departure or arrival of a top executive would put client-agency ties at risk (Hypotheses I_3, I_4). Our results show, however, the opposite effect: The departure of a top executive *lowers* the hazard of dissolution of client-agency ties, while the arrival of a new top executive has no effect. Individual attachments established with an in-house agency significantly lower the risk of dissolution of a tie with such an agency, as expected (Hypothesis I_5).

Structural attachments also influence the risk of dissolution. The history of a tie, its duration, exhibits a curvilinear pattern: The risk of dissolution increases in the early years of a client-agency relationship, peaks at around 11 years, and declines thereafter. This pattern is indicated by a significant and positive coefficient for tie duration and a significant *negative* coefficient for the square of tie duration, both as expected (Hypothesis I_6). The RMS measure of instability does not significantly influence the risk of dissolution, contrary to expectations (Hypothesis

Table 3. Maximum Likelihood Coefficients from a Discrete Proportional Hazards Model Regressing Dissolution of Market Ties between Time *t* and *t* + 1 on Measures of Competition, Power, and Institutional Forces: 398 Companies and Their Advertising Agencies, 1971 to 1993

Concept	Variable, Time (*t*)	Hypothesis	Hypothesized Effect on Dissolution	Coefficient	*z*-value
Competition					
Rivalry	Number of agencies used, *t*	C_1	+	.011*	2.13
	Concentration of accounts, *t*	C_2	−	−1.043	−1.93
	One agency used (dummy), *t*	C_3	−	−.418**	−3.35
Market structure	Ratio of sellers to buyers, *t*	C_4	+	.216	.18
	Seller network centralization, *t*	C_5	−	−7.160*	−2.34
	Buyer network centralization, *t*	C_6	−	−.431	−.57
Power					
Resource needs	Change in number of SIC codes, *t* to *t* + 1	P_1	+	−.024	−1.58
	Change in IQV of SIC codes, *t* to *t* + 1	P_1	+	−.118	−.66
Organizational size	Log of number of employees, *t*	P_2	−	−.121***	−3.87
Financial status	Index of financial status, *t*	P_3	−	−.176**	−2.79
	Change in financial status, *t* to *t* + 1	P_4	−	−.199	−1.32
Social status	Agency rank, *t*	P_5	−	−.003***	−3.90
	Agency range of clients, *t*	P_5	−	−.019*	−1.99
Centrality	Agency centrality, *t*	P_6	−	−.184*	−.17
	Company centrality, *t*	P_7	+	1.575*	2.47
Perceived effectiveness	Change in log of sales, *t* to *t* + 1	P_8	−	−.838*	−2.15
Institutional Forces					
General isomorphism	Period dummy, *t* is in 1970s	I_1	−	.684**	2.23
	Period dummy, *t* is in 1990s	I_2	+	.864**	3.18
Individual attachment (personal ties)	Executive departs company, *t* to *t* + 1	I_3	+	−.194**	−2.46
	New company executive, *t* to *t* + 1	I_4	+	.028	.38
	Inhouse agency (dummy), *t*	I_5	−	−1.080**	−3.27
Structural attachment (interorganizational ties)	Tie duration, up to *t*	I_6	+	.671***	6.52
	Square of tie duration, up to *t*	I_6	−	−.061***	−7.85
	Root mean square change in agencies, *t* − 1 to *t*	I_7	+	−.002	−.07
	Client makes acquisition, *t* to *t* + 1	I_8	−	.055	1.05
	Client is target of acquisition, *t* to *t* + 1	I_9	+	.212*	2.48
Control Variable					
Macroeconomic change	Change in GDP, *t* − 1 to *t*		−	−21.431*	−2.54
Constant				−.309	−.38
Heterogeneity variance (gamma distribution)				.107	.63

Note: Measures are adjusted for unobserved heterogeneity; N = 5,415 company-agency ties; log likelihood = −2,038.

*$p < .05$ **$p < .01$ ***$p < .001$ (two-tailed tests)

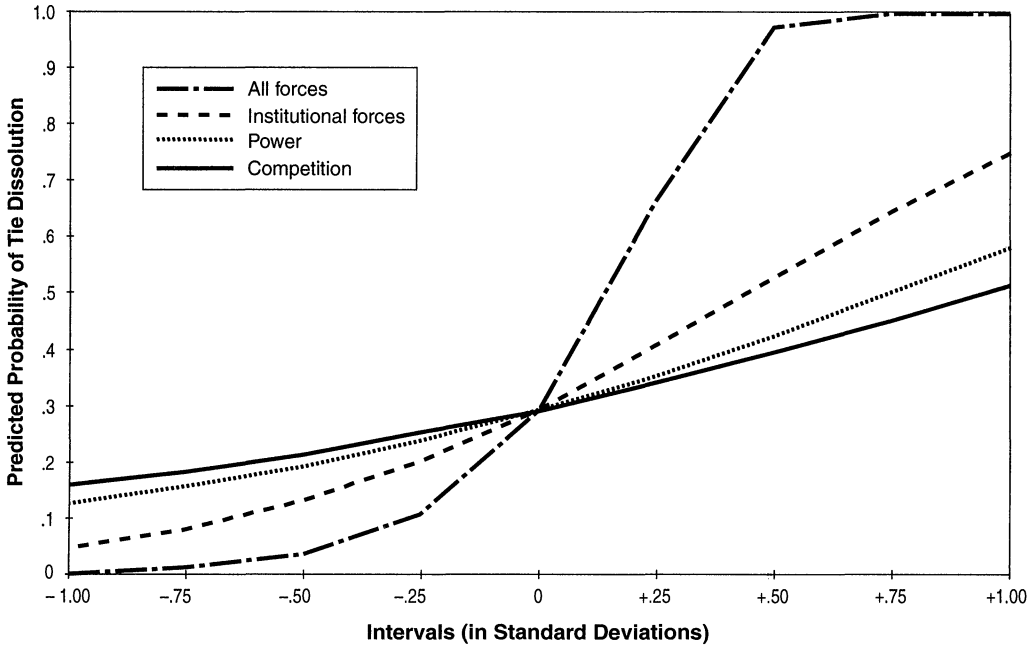

Figure 1. Sensitivity Analysis of Three Market Forces

I_7). It appears that the "churning" of business by a client does not raise the risk of a broken tie. Finally, a client acquiring another company has no significant effect on the dissolution of a client-agency tie (Hypothesis I_8). As expected, when a client is the *target* of a merger or acquisition, the risk of dissolution of its ties with agencies increases (Hypothesis I_9), suggesting that such major changes break the structural attachments between client and agency.

Sensitivity Analysis

We use a sensitivity analysis to assess the relative importance of each of the three forces. Results are displayed in Figure 1 and were generated as follows.

We first established the upper and lower bounds of the distribution of predicted probabilities of dissolution. A value in the upper (lower) bound is the highest (lowest) predicted probability attainable when all variables operate with their maximum (minimum) effects on dissolution, that is, when each variable is set to maximally increase (decrease) the predicted probability of dissolution. The distributions of the upper and lower bounds are shown in Figure 1 as the highest curve to the right of the mean and the lowest curve to the left of the mean, respectively. The points on the curve represent predicted probabilities at the mean and fixed intervals from the mean. The intersection of all curves near the center of Figure 1 indicates the predicted probability of all forces operating at their mean values.[21] The next point to the *right* of the mean on the upper curve is obtained by moving all variables .25 standard deviations from their means in the way that *maximizes* their impact on dissolution. The next point to the *left* of the mean on the lower curve is obtained by moving all vari-

[21] This result is determined by multiplying the average values of the variables and the coefficients from Table 3. The sum of the products and the constant yield the index value, which is then converted to a probability of dissolution. To determine the effect of each force shown in the curves on the right side of Figure 1, a coefficient with a positive sign is multiplied by its mean plus an interval above its mean (such as .25 standard deviations). A coefficient with a negative sign must have its sign reversed before it is multiplied by its mean plus an interval above its mean. The opposite procedure is followed to calculate the minimum effects on dissolution shown in the curves on the left side of Figure 1.

ables .25 standard deviations from their means in the way that *minimizes* their impact on dissolution. This procedure is repeated at .5, .75, and 1 standard deviations, respectively. After establishing the upper and lower bounds, we evaluate the impact of each force at various intervals from the mean. To calculate the effects shown to the *right* of the mean, we (1) hold the variables associated with the other two forces and the control variable at their average values, and (2) set each variable associated with the force in question to have its *maximum impact* on the probability of dissolution. To calculate the effects shown to the *left* of the mean, we repeat (1) and (2), but set the variables to have their *minimum impact* on the probability of dissolution.

As shown in Figure 1, institutional forces compose the strongest force in the market for advertising services. Competition is the weakest force. Power falls between institutional forces and competition, although it is closer to competition than to institutional forces.

DISCUSSION AND CONCLUSION

The market is "a social institution which facilitates exchange" (Coase 1988:8). The institutionalization of a market is a "political-cultural construction" reflecting power struggles among firms attempting to control the market and ensure their survival (Fligstein 1996).[22] This power struggle, as Weber ([1898] 1990:45) saw, includes both a "struggle of competition" among rivals "vying for opportunities of exchange" (Weber ([1922] 1978:635) and an "interest struggle" between the buyer and seller engaged in an actual exchange relationship (Swedberg 1994:264–65). We have attempted to explore these ideas by examining the dynamics of market relationships in the American advertising industry from 1971 to 1993.

Long before the period we study, the advertising industry went through its tumultuous "emergence" phase, the time in which the institutional rules of exchange were as yet undefined and up for grabs (Fligstein 1996). Shared understandings about the rules of exchange eventually coalesced into the informal rules of exclusivity, loyalty, and fixed prices (the 15-percent commission) (Leiss et al. 1986; Pope 1983), which "set the institutional stage," so to speak, for our analysis of the continuity and dissolution of client-agency ties.

The original rules of exchange still operate, although imperfectly. The majority of companies (54.3 percent) use a single advertising agency, suggesting the rule of exclusivity. In contrast, only 30 percent of companies use a single investment bank (Baker 1990:607).[23] Most agency-client relationships endure for at least four years, and the average tie lasts about five years, suggesting the rule of loyalty. Of course, these simple statistics cannot control for the various factors that influence the number and longevity of exchange relationships. Most of our analysis, therefore, has focused on exploring and specifying the conditions under which these original rules of exchange are followed, reinforced, transgressed, and transformed.

We show that the dynamics of market relationships are a function of three forces—competition, power, and institutional forces. Competition disrupts. The power struggle among rival agencies "vying for opportunities of exchange" (Weber ([1922] 1978:635; Swedberg 1994:271) with corporate clients increases the hazard of dissolution of market ties. We observed the destabilizing effects of competition at two levels—rivalry among firms and the structural conditions of competition. Buyers and sellers sometimes have different interests in the stability of market ties. Corporate clients, for example, may prefer the destabilizing effects of competition because it produces the competitive benefits of

[22] Fligstein (1996) also emphasizes the role of the state in market-building, maintenance, and crisis. We have focused on the power struggle among firms, primarily because the state has been a more or less constant influence in the advertising industry (unlike, say, the financial markets, which are heavily regulated and subject to such dramatic changes as deregulation).

[23] Baker's (1990:607) estimate of 30 percent exclusivity in investment banking covers the years 1981 through 1985. We find that 54.14 percent of all companies had exclusive (sole-source) advertising relationships during the same years (mean = 3.23, S.D. = 5.00), which is very close to our estimates for all the years in our study.

higher quality and better service.[24] In the very uncertain game of advertising, clients are ever-hopeful for the next great idea. Even in the early years of the advertising industry, clients resisted attempts to ban speculative presentations (Pope 1983:166). Nonetheless, clients do want stability because the costs of switching can be high (e.g., the time needed to "educate" a new agency about the client's business is costly) (Kent 1985). Usually, advertising agencies have an even stronger interest in stability than do their clients; generally, we find, agencies prefer to keep the business ties they have. In the "interest struggle" (Weber [1898] 1990:45) with existing clients, therefore, an agency's objective is to convince its clients of the superior quality and effectiveness of their advertising (or, at least to convince them that the costs of switching are higher than the costs of staying).

Power provides buyers and sellers with the means to enact their interests in stability. In an uncertain and ambiguous market, such as advertising, the powerful party in an exchange relationship is better able to "define the situation" in ways that further its interests. Consider, for instance, the ability of the agency to enact its interest in stability when client sales increase and the client is financially successful. As our data show, rising sales result in greater continuity of the client-agency relationship; similarly, financially successful clients tend to keep their agencies. The simplistic explanation of these temporal patterns is that the advertising "works"—rising sales and financial success are "caused" by the agency's superior advertisements and so the client sticks by the agency. The causal link between advertising and a client's sales, however, is indirect, loose, and ambiguous. Advertising research has been able to demonstrate only that advertising increases consumer *awareness* of products and services; it has not been able to demonstrate that increased awareness leads to *decisions* to purchase. Sensemaking is more about *plausibility* than accuracy (Weick 1995), and in the interest struggle between clients and agencies the "story" that rising sales and financial strength are "caused" by superior advertising is usually the winning definition of the situation.

Uncertainty makes social status an important "*signal* of the underlying quality of a firm's products" (Podolny 1993:831, italics in original). Status is used as a signal of quality in investment banking (Podolny 1993), film making (Faulkner 1983, Faulkner and Anderson 1987), auditing (Han 1994), and, as we find, in advertising. Uncertainty about agency performance and the loose link between advertising and sales performance makes status an indicator of quality. High-status agencies tend to be kept by their clients. High status reduces the client's uncertainty about the actual creativity of agencies, the actual quality of advertisements, and the actual effect of advertisements on outcomes (the client's sales). High status provides agencies with a plausible story to convince clients to stick with them; it also provides actors inside the client company with a plausible story to defend their choice of agencies.

Large clients tend to keep their agencies, suggesting that large clients have less need to drop and switch agencies as tactics to reduce dependence and gain power. Large clients may be able to get their way by "bullying" their agencies. In fact, such behaviors are gleefully reported in popular accounts of the advertising industry (Mayle 1990). More important, however, the negative effect of client size on the hazard indicates that the buyer's and seller's interests in stability coincide. The disastrous consequences of losing a large client heightens the usual agency desire to keep clients happy (Pendleton 1988; Sellers 1997). But large clients also have an interest in continuity. As Fligstein (1996:667) argues, large market actors are a "major force" holding together established markets. "To produce a stable order where firms survive is a relatively difficult problem, . . . [and o]nce stability is attained, actors in firms are loathe to engage in actions that undermine their incumbency" (p. 667). This line of reasoning is strengthened by our finding that agency centrality improves the stability of exchange relationships (i.e., lowers the hazard of dissolution). Client centrality, however, decreases the stability of ex-

[24] In many markets, competition also generates lower prices (which is a key benefit of competition cited by economists). In the advertising industry, however, the institutional rule of fixed prices (the 15-percent commission) remains strong (Leiss et al. 1986:107).

change relationships (i.e., raises the hazard of dissolution), indicating that the information benefits of agency centrality are offset or counterbalanced by the information benefits of client centrality. The contrary effects of client centrality and agency centrality on stability suggests that the view of the social structure of a market as an attempt "to mitigate the effects of competition with other firms" (Fligstein 1996:657) depends on the perspective one takes, the buyer's or the seller's, as we argued in Assumption 2.

Institutional forces generally reduce the risk of dissolution. Isomorphism through individual attachments (personal ties) and structural attachments (interorganizational ties) tends to lower the hazard of dissolution, supporting the theoretical argument that isomorphic pressures are "built into" exchange relationships between buyers and suppliers (DiMaggio and Powell 1983:154; also see DiMaggio and Powell 1991; Granovetter 1985; Uzzi 1996). For example, individual attachments formed with an in-house agency reduce the risk of dissolution of the in-house tie. Similarly, structural attachments between client and agency reduce the hazard of dissolution. If these structural attachments are not broken by a merger in which the client is a target, the client-agency tie is more likely to continue. If a client-agency relationship survives its "honeymoon" and gets past the peak risk of "divorce," the relationship is more and more likely to continue. We document a honeymoon pattern in advertising relationships that is similar in *shape* to the honeymoon pattern discovered by Levinthal and Fichman (1988) in auditing relationships. The *peak* of the curve, however, is much later: The risk of dissolution of relationships with auditors reaches its maximum in 4 years, but the risk of dissolution of relationships with advertising agencies reaches its maximum in 11 years. This difference suggests that a much stronger rule of loyalty (infrequent switching) operates in the advertising services market than in auditing services.

Our greatest surprise is the "decade effect" on stability. Contrary to expectations, the lowest hazard of dissolution occurs in the 1980s, not the 1970s. (This could result from a statistical artifact caused by left-censoring, but supplemental analyses suggest left-censoring is not a problem.) We thought that the 1970s would exhibit the lowest hazard, net of other factors, because this decade is located in the "stability" phase (Fligstein 1996) of the market for advertising services, and as such should exhibit the most conformity to the original rules of exchange—exclusivity, loyalty, and the socially expected duration of "continuity." We thought that the 1980s would exhibit a higher hazard, net of other factors, because this decade experienced the invasion of newcomers and economic crisis (e.g., influx of new advertising firms, *de*diversification of corporate clients, mergers and acquisitions, macroeconomic changes). Once we controlled for various causes of continuity and dissolution, however, we observed a significant tendency for *greater stability* of client-agency ties in the 1980s. This stability could indicate the persistence of the original rules of exchange in the advertising industry. Generally, people "fall back on earlier, overlearned, and often simpler responses" during times of emotional arousal and crisis (Weick 1995:101). Perhaps during the 1980s, market actors fell back on the original rules of exchange. In the 1990s, the hazard of dissolution increases, as expected. This could indicate the emergence of *new* rules of exchange in advertising analogous to the "transactional" rule in investment banking (Baker 1990). If so, this would support the prediction that all markets for professional services are subject to a general transactionalization trend in the 1990s (Baker and Faulkner 1991). It may be too soon to tell, however, whether the higher hazard rate for agency-client ties in the early 1990s represents a permanent change in the informal rules of exchange or only a temporary aberration from the original rules.

All three forces—competition, power, and institutional forces—influence client-agency ties, but their importance varies. Competitive forces compose the weakest force, and institutional forces compose the strongest. This may surprise those who believe, as many economists do, that competition is the *only* force in economic institutions (Stigler 1968; Williamson 1985). Our conclusion that competition is the weakest force does not negate the basic fact that competition is *the* constitutive feature of a market (e.g., Schumpeter [1942] 1975; Weber [1922] 1978). All mar-

kets operate under the premises of competition, no matter how stable they may be. Even a monopoly is subject to the effects of competition from new technologies or new entrants, which can abruptly end a monopoly's advantage (Schumpeter [1942] 1975:81–86). Nonetheless, in the market for advertising services, the destabilizing effect of competition is curbed by the stabilizing influences of power and institutional forces.

All established markets operate with institutional rules governing the roles and responsibilities of market actors and the rules of exchange. These rules or shared understandings result from the power struggle between buyers and sellers and the role of the state (Fligstein 1996). In the power struggle between buyers and sellers, each side mobilizes resources to enact its particular interests in the (in)stability of exchange relationships. These interests often do not match. Generally, sellers prefer more stability than buyers do, in order to shield themselves from the "discipline" of competition; but buyers too have interests in maintaining exchange relationships. The observed patterns of continuity and dissolution reveal the net result of the power struggle between buyers and sellers.

The hazards of the market for advertising services appear to have increased for agencies during the early 1990s. This higher risk of dissolution implies that the agencies' interests in stability may be giving way to the clients' interests in more fluidity. This trend is noted in the business press (Sellers 1993, 1997). Even though the market for advertising services is more hazardous, it "lags" in the general trend toward transactionalization set by such "leading" markets as investment banking (Baker 1990) and auditing (Han 1994; Levinthal and Fichman 1988). This suggests that rules of exchange may *diffuse* across markets as the results of the power struggle in one market are imitated by the market actors in another market. The invasion of *firms* can undermine the stability of a market (Fligstein 1996:669); we speculate that the invasion of *strategies* (new rules of exchange) can undermine the stability of a market as well. And, just as invading firms "are more likely to come from nearby rather than distant markets" (Fligstein 1996:669), we argue that invading strategies are more likely to come from nearby markets—hence the influence on advertising of the "transactional rules" (multiple and shorter-lived relationships) from financial services and auditing. Distant markets, however, may operate with entirely different rules of exchange. During the same years professional services were undergoing a transactionalization trend, industrial markets experienced the *opposite* trend: a movement away from many short-term ties toward exclusive and loyal "partnerships" between buyers and industrial suppliers (Baker 1994:241–62; Baker and Faulkner 1991; Best 1990).

Our study is one step in the development of a demography of interorganizational relationships. It complements the field of organizational ecology, which focuses on the demography of organizational populations (births and deaths of organizations). Our results show that the mortality of market relationships is a function of the institutional rules of exchange created during the emergence of the market, which are supported, reinforced, violated, and transformed over the years by the interplay of competition, power, and institutional forces. A next step is to examine the birth of market relationships as a function of the original rules of exchange as they are maintained and undermined by the same three forces. Finally, just as organizational ecology has analyzed interactions across organizational populations (Hannan and Carroll 1992), a demography of interorganizational relationships can examine the diffusion of rules of exchange across markets. The continued development of a relational demography would enhance the sociological understanding of a defining principle of modern society—the right to make and break relationships (Coleman 1974:24–25).

Wayne E. Baker *is Associate Professor of Organizational Behavior at the University of Michigan Business School, and Faculty Associate at the Institute for Social Research, University of Michigan. His research interests include organizations, networks, the sociology of markets, and culture.*

Robert R. Faulkner *is Professor of Sociology at the University of Massachusetts, Amherst. His research interests include organizations, careers, corporate crime, and the sociology of jazz.*

Gene A. Fisher *is Associate Professor of Sociology at the University of Massachusetts, Amherst.*

His research interests include quantitative methods, economic sociology, and the sociology of culture.

REFERENCES

Abrahamson, Eric and Charles J. Fombrun. 1994. "Macrocultures: Determinants and Consequences." *Academy of Management Review* 19:728–55.

Aldrich, Howard E. 1979. *Organizations and Environments*. Englewood Cliffs, NJ: Prentice-Hall.

Aldrich, Howard E. and Peter V. Marsden. 1988. "Environments and Organizations." Pp. 361–93 in *Handbook of Sociology*, edited by N. J. Smelser. Beverly Hills, CA: Sage.

Baker, Wayne E. 1984. "The Social Structure of a National Securities Market." *American Journal of Sociology* 89:775–811.

———. 1990. "Market Networks and Corporate Behavior." *American Journal of Sociology* 96:589–625.

———. 1994. *Networking Smart*. New York: McGraw-Hill.

Baker, Wayne E. and Robert R. Faulkner. 1991. "Strategies for Managing Suppliers of Professional Services." *California Management Review* 33:33–45.

———. 1993. "The Social Organization of Conspiracy: Illegal Networks in the Heavy Electrical Equipment Industry." *American Sociological Review* 58:837–60.

Barber, Bernard. 1977. "Absolutization of the Market." Pp. 15–31 in *Markets and Morals*, edited by G. Bermant. Washington, DC: Hemisphere Publishing.

Baum, Joel A. C. and Christine Oliver. 1992. "Institutional Embeddedness and the Dynamics of Organizational Populations." *American Sociological Review* 57:540–59.

Best, Michael. 1990. *The New Competition: Institutions of Industrial Restructuring*. Cambridge, MA: Harvard University Press.

Blau, Peter M. 1964. *Exchange and Power In Social Life*. New York: Wiley.

Bohrnstedt, George W. and David Knoke. 1982. *Statistics for Social Data Analysis*. Itasca, IL: F. E. Peacock.

Bonacich, Phillip. 1987. "Power And Centrality: A Family of Measures." *American Journal of Sociology* 92:1170–82.

———. 1991. "Simultaneous Group and Individual Centralities." *Social Networks* 13:155–68

Burt, Ronald S. 1992. *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.

Coase, Ronald H. 1988. "The Firm, the Market, and the Law." Pp. 1–31 in *The Firm, the Market, and the Law*, edited by R. H. Coase. Chicago, IL: University of Chicago Press.

Coleman, James S. 1974. *Power and the Structure of Society*. New York: W. W. Norton.

———. 1990. *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.

Cook, Karen S. 1977. "Exchange and Power in Networks of Interorganizational Relations." *Sociological Quarterly* 18:62–82.

Cook, Karen S. and Toshio Yamagishi. 1992. "Power in Exchange Networks: A Power-Dependence Formulation." *Social Networks* 14:245–65.

Davis, Gerald F. 1991. "Agents without Principles? The Spread of the Poison Pill through the Intercorporate Network." *Administrative Science Quarterly* 36:583–613.

Davis, Gerald F., Kristina A. Diekmann, and Catherine H. Tinsley. 1994. "The Decline and Fall of the Conglomerate Firm in the 1980s: The Deinstitutionalization of an Organizational Form." *American Sociological Review* 59:547–70.

DiMaggio, Paul J. and Walter W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48:147–60.

———. 1991. "Introduction." Pp. 1–38 *The New Institutionalism in Organizational Analysis*, edited by P. J. DiMaggio and W. W. Powell. Chicago, IL: University of Chicago Press.

Dooley, Peter C. 1969. "The Interlocking Directorate." *American Economic Review* 59:314–23.

Eccles, Robert G. and Dwight B. Crane. 1988. *Doing Deals: Investment Banks at Work*. Boston, MA: Harvard Business School Press.

Faulkner, Robert R. 1983. *Music on Demand: Composers and Careers in the Hollywood Film Industry*. New Brunswick, NJ: Transaction Books.

Faulkner, Robert R. and Andy B. Anderson. 1987. "Short-Term Projects and Emergent Careers: Evidence from Hollywood." *American Journal of Sociology* 92:879–909.

Fligstein, Neil. 1996. "Markets as Politics: A Political-Cultural Approach to Market Institutions." *American Sociological Review* 61:656–73.

Flinn, Chiristopher J. and James J. Heckman. 1980. "Models for the Analysis of Labor Force Dynamics." Discussion Paper 80–3. Chicago, IL: Economics Research Center, NORC.

Fichman, Mark, and Daniel A. Levinthal. 1991. "Honeymoons and the Liability of Adolescence: A New Perspective on Duration Dependence in Social and Organizational Relationships." *Academy of Management Review* 16: 442–68.

Freeman, Linton C. 1979. "Centrality in Social Networks: Conceptual Clarification." *Social Networks* 1:215–39.

Friedkin, Noah E. 1984. "Structural Cohesion and Equivalence Explanations of Social Homogeneity." *Sociological Research and Methods* 12:235–61.

Galaskiewicz, Joseph and Stanley Wasserman. 1989. "Mimetic Processes within an Interorganizational Field: An Empirical Test." *Administrative Science Quarterly* 34:454–79

Gulati, Ranjay. 1993. "The Dynamics of Alliance Formation." Ph.D. dissertation, Harvard University, Cambridge, MA.

———. 1995. "Social Structure and Alliance Formation Patterns: A Longitudinal Analysis." *Administrative Science Quarterly* 40:619–52.

Granovetter, Mark. 1985. "Economic Action and Social Structure: A Theory of Emdeddedness." *American Journal of Sociology* 91:481–510.

Hallén, Lars, Jan Johanson, and Nazeem Seyed-Mohamed. 1991. "Interfirm Adaptation in Business Relationships." *Journal of Marketing* 55:29–37.

Han, Shin-Kap. 1994. "Mimetic Isomorphism and Its Effect on the Audit Services Market." *Social Forces* 73:637–63.

Hannan, Michael T. and Glenn Carroll. 1992. *Dynamics of Organizational Populations: Density, Legitimation, and Competition.* New York: Oxford University Press.

Hannan, Michael T. and John Freeman. 1989. *Organizational Ecology.* Cambridge, MA: Harvard University Press.

Hart, Norman. 1985. "A Natural Selection (Choosing an Ad Agency)." *Marketing* 22:31–33.

Heckman, James J. and Burton Singer. 1984. "Econometric Duration Analysis." *Journal of Econometrics* 24:63–132.

Heide, Jan B. and George John. 1990. "Alliances in Industrial Purchasing: The Determinants of Joint Action in Buyer-Supplier Relationships." *Journal of Marketing Research* 37:24–36.

Hirschman, Albert. 1970. *Exit, Voice, and Loyalty.* Cambridge, MA: Harvard University Press.

———. 1982. "Rival Interpretations of Market Society: Civilizing, Destructive, or Feeble?" *Journal of Economic Literature* 20:1463–84.

Jenkins, Stephen P. 1995. "Easy Estimation Methods for Discrete-Time Duration Models. *Oxford Bulletin of Economics and Statistics* 57:129–38

Johanson, Jan and Lars-Gunnar Mattsson. 1987. "Interorganizational Relations in Industrial Systems: A Network Approach Compared with the Transaction-Cost Approach." *International Studies of Management and Organization* 17:34–48.

Johnson, Bradley. 1994. "Tumult Ahead for IBM, Ogilvy." *Advertising Age*, May 30, pp. 36–37.

Kalbfleisch, John D. and Ross L. Prentice. 1980. *The Statistical Analysis of Failure Time Data.* New York: John Wiley and Sons.

Kent, Debra. 1985. "When to Fire Your Ad Agency and How to Avoid Needing to." *Business Marketing*, September, pp. 1, 58, 60, 62, 64, 66.

Kogut, Bruce. 1989. "The Stability of Joint Ventures: Reciprocity and Competitive Rivalry." *Journal of Industrial Economics* 38:183–89.

Laumann, Edward O. and David Knoke. 1987. *The Organizational State.* Madison, WI: University of Wisconsin Press.

Leiss, William, Stephen Kline, and Sut Jhally. 1986. *Social Communication in Advertising.* Toronto, Ontario: Methuen.

Levinthal, Daniel A. and Mark Fichman. 1988. "Dynamics of Interorganizational Attachments: Auditor-Client Relationships." *Administrative Science Quarterly* 33:345–69.

Loro, Laura and Mark Gleason. 1995. "Weightman Copes with Mergers." *Advertising Age*, October 30, p. 4.

Macaulay, Stewart. 1963. "Non-Contractual Relations in Business." *American Sociological Review* 28:57–66.

Mayle, Peter. 1990. *Up the Agency.* New York: St. Martin's Press.

Merton, Robert K. 1949. *Social Theory and Social Structure.* Glencoe, IL: Free Press.

———. 1982. "Socially Expected Durations: A Case Study of Concept Formation in Sociology." Pp. 262–83 in *Conflict and Consensus: A Festschrift in Honor of Lewis A. Coser*, edited by W. W. Powell and R. Robbins. New York: Free Press.

Meyer, Bruce D. 1990. "Unemployment Insurance and Unemployment Spells." *Econometrica* 58:757–82

Meyer, John W., W. Richard Scott, and Terrence E. Deal. 1981. "Institutional and Technical Sources of Organizational Structure: Explaining the Structure of Educational Organizations." Pp. 151–78 in *Organization and the Human Services*, edited by H. D. Stein. Philadelphia, PA: Temple University Press.

Mizruchi, Mark S. 1989. "Similarity of Political Behavior among Large American Corporations." *American Journal of Sociology* 95:401–24.

Mizruchi, Mark S. and Michael Schwartz, eds. 1987. *Intercorporate Relations: The Structural Analysis of Business.* Cambridge, England: Cambridge University Press.

Mortensen, Dale T. 1988. "Matching: Finding a Partner for Life or Otherwise." *American Journal of Sociology* 94(supp.):S215–S240.

Myers, Max H., Benjamin E. Hankey, and Nathan

Mantel. 1973. "A Logistic-Exponential Model for Use with Response Time Data Involving Regressor Variables." *Biometrics* 29:257–69.

National Register Publishing. Various years. *Standard Directory of Advertisers* (Redbook). New Providence, NJ: National Register Publishing.

Nelson, Robert L. 1988. *Partners with Power: Social Transformation of the Large Law Firm.* Berkeley, CA: University of California Press.

Nohria, Nitin and Ranjay Gulati. 1994. "Firms and Their Environments." Pp. 529–55 in *The Handbook of Economic Sociology*, edited by N. J. Smelser and Richard Swedberg. Princeton, NJ: Princeton University Press.

Palmer, Donald. 1983. "Broken Ties: Interlocking Directorates and Intercorporate Coordination." *Administrative Science Quarterly* 28:40–55.

Palmer, Donald, P. Devereaux Jennings, and Xuegang Zhou. 1993. "Late Adoption of the Multidivisional Form by Large U.S. Corporations: Institutional, Political, and Economic Accounts." *Administrative Science Quarterly* 38:100–31.

Pendleton, Jennifer. 1988. "Marriages Made in Heaven." *Advertising Age*, March 14, pp. 3, 74.

Pfeffer, Jeffrey. 1987. "A Resource Dependence Perspective on Interorganizational Relations." Pp. 22–55 in *Intercorporate Relations: The Structural Analysis of Business*, edited by M. S. Mizruchi and M. Schwartz. Cambridge, England: Cambridge University Press.

Pfeffer, Jeffrey and Gerald Salancik. 1978. *The External Control of Organizations: A Resource Dependence Perspective.* New York: Harper and Row.

Podolny, Joel M. 1993. "A Status-Based Model of Market Competition." *American Journal of Sociology* 98:829–72.

Polanyi, Karl. 1957. "The Economy as Instituted Process." Pp. 243–70 in *Trade and Market in the Early Empires: Economies in History and Theory*, edited by K. Polanyi, C. Arensberg, and H. Pearson. Chicago, IL: Henry Regnery.

Pope, Daniel. 1983. *The Making of Modern Advertising.* New York: Basic.

Powell, Walter W. 1991. "Expanding the Scope of Institutional Analysis." Pp. 183–203 in *The New Institutionalism in Organizational Analysis*, edited by W. W. Powell and P. J. DiMaggio. Chicago, IL: University of Chicago Press.

Powell, Walter W. and Paul J. DiMaggio, eds. 1991. *The New Institutionalism in Organizational Analysis.* Chicago, IL: University of Chicago Press.

Powell, Walter W., Kenneth W. Koput, and Laurel Smith-Doerr. 1996. "Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology." *Administrative Science Quarterly* 41:116–45.

Powell, Walter W. and Laurel Smith-Doerr. 1994. "Networks and Economic Life." Pp. 368–402 in *The Handbook of Economic Sociology*, edited by N. J. Smelser and R. Swedberg. Princeton, NJ: Princeton University Press.

Prentice, Ross and L. Gloeckler. 1978. "Regression Analysis of Grouped Survival Data with Application to Breast Cancer Data." *Biometrics* 34:57–67.

Rutherford, Ronald C., Donald L. Thompson, and Robert W. Stone. 1992. "The Impact of Changes in Advertising Agencies on Corporate Common Stock Prices." *Journal of Current Issues and Research in Advertising* 14:1–8.

Scherer, Frederick M. 1980. *Industrial Market Structure.* Boston, MA: Houghton-Mifflin.

Schmalensee, Richard and Robert D. Willig, eds. 1989. *Handbook of Industrial Organization.* Vol. 1. Amsterdam, Holland: North-Holland.

Schumpeter, Joseph A. [1942] 1975. *Capitalism, Socialism, and Democracy.* New York: Harper and Row.

Seabright, Mark A., Daniel A. Levinthal, and Mark Fichman. 1992. "Role of Individual Attachments in the Dissolution of Interorganizational Relationships." *Academy of Management Journal* 35:122–60.

Sellers, Patrica. 1993. "Do You Need your Ad Agency?" *Fortune*, November 15, pp. 147–64.

———. 1997. "Leo Burnett: Undone by an Upstart." *Fortune*, May 26, pp. 99–104.

Simmel, Georg. 1950. *The Sociology of Georg Simmel*, translated and edited by K. H. Wolff. New York: The Free Press.

Singer, Burton and Seymour Spilerman. 1976. "Some Methodological Issues in the Analysis of Longitudinal Surveys." *Annals of Economic and Social Measurement* 5:447–74.

South, Scott J. and Kim M. Lloyd. 1995. "Spousal Alternatives and Marital Dissolution." *American Sociological Review* 60:21–35.

Stearns, Linda Brewster and Mark S. Mizruchi. 1986. "Broken-Tie Reconstitution and the Functions on Interorganizational Interlocks: A Reexamination." *Administrative Science Quarterly* 31:522–38.

———. 1988. "A Longitudinal Study of the Formation of Interlocking Directorates." *Administrative Science Quarterly* 33:194–210.

Stinchcombe, Arthur L. 1990. *Information and Organizations.* Berkeley, CA: University of California Press.

Stigler, George J. 1968. "Competition." Pp. 181–86 in *International Encyclopedia of the Social Sciences*, vol. 3, edited by D. L. Sills. New York: Free Press.

Swedberg, Richard. 1993. *Explorations In Economic Sociology.* New York: Russell Sage.

———. 1994. "Markets as Social Structures." Pp.

255–82 in *The Handbook of Economic Sociology*, edited by N. J. Smelser and R. Swedberg. Princeton, NJ: Princeton University Press.

Swidler, Ann. 1986. "Culture in Action." *American Sociological Review* 51:273–86.

Taylor, Paul. 1995. "What's the Big Idea?" *Financial Times*, March 2, p. 14.

Tolbert, Pamela S. and Lynne G. Zucker. 1983. "Institutional Sources of Change in the Formal Structure of Organizations: The Diffusion of Civil Service Reform, 1880–1935." *Administrative Science Quarterly* 30:22–39.

U.S. Bureau of the Census. Various years. *Census of Service Industries: Establishment and Firm Size Series*. Washington, DC: U.S. Bureau of the Census.

Uzzi, Brian. 1996. "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect." *American Sociological Review* 61: 674–98.

Van de Ven, Andrew H. 1976. "On the Nature, Formation, and Maintenance of Relations among Organizations." *Academy of Management Review* 1:24–36.

Wasserman, Stanley and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. Cambridge, MA: Cambridge University Press.

Weber, Max. [1922] 1978. *Economy and Society: An Outline of Interpretive Sociology*, translated by E. Fischoff et al., edited by G. Roth and C. Wittich. Berkeley, CA: University of California Press.

Weick, Karl E. 1995. *Sensemaking in Organizations*. Thousand Oaks, CA: Sage.

White, Harrison C. 1981a. "Where Do Markets Come From?" *American Journal of Sociology* 87:517–47.

———. 1981b. "Production Markets as Induced Role Structures." Pp. 1–57 in *Sociological Methodology*, edited by S. Leinhardt. San Francisco, CA: Jossey-Bass.

Williamson, Oliver E. 1985. *The Economic Institutions of Capitalism*. New York: Free Press.

———. 1991. "The Logic of Economic Organization." Pp. 90–116 in *The Nature of the Firm*, edited by O. E. Williamson and S. G. Winter. New York: Oxford University Press.

Yamaguchi, Kazuo. 1991. *Event History Analysis*. Applied Social Research Methods Series, 28. Newbury Park, CA: Sage.