MOVING BEYOND DYADIC TIES: A NETWORK THEORY OF STAKEHOLDER INFLUENCES

TIMOTHY J. ROWLEY
University of Toronto

Stakeholder theory development has increased in recent years, in part because of its emphasis on explaining and predicting how an organization functions with respect to the relationships and influences existing in its environment. Thus far, most researchers have concentrated on dyadic relationships between individual stakeholders and a focal organization. Using social network analysis, I construct in this article a theory of stakeholder influences, which accommodates multiple, interdependent stakeholder demands and predicts how organizations respond to the simultaneous influence of multiple stakeholders.

One of the most popular trends in business and society literature is the identification and management of stakeholders, which many scholars have used as a framework for integrating and organizing research in the field. Since Freeman published his seminal piece (1984), Strategic Management: A Stakeholder Approach, a number of researchers even have proposed a stakeholder "theory of the firm" (Brenner, 1993; Brenner & Cochran, 1991). Those developing stakeholder theory have concentrated on classifying stakeholders into useful categories that provide an understanding of how individual stakeholders influence firms' operations. However, a comprehensive theory of the firm requires not only an explanation of stakeholder influences but also how firms respond to these influences. Furthermore, to describe how organizations respond to stakeholders, scholars must consider the multiple and interdependent interactions that simultaneously exist in stakeholder environments.

One approach for understanding stakeholder environments is using concepts from social network analysis to examine characteristics of entire stakeholder structures and their impact on organizations' behaviors, rather than individual stakeholder influences. Employing social network concepts will generate an explicit theory of stakeholder influences based on the structural characteristics of an organization's network of

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relationships. The theory's logic is derived from Oliver's (1991) examination of organizational responses to external influences and addresses this question: How does the structure of an organization's stakeholder relationships affect its response to stakeholder pressures? I argue that the density of the stakeholder network surrounding an organization and the organization's centrality in the network influence its degree of resistance to stakeholder demands. As a consequence of this examination, I identify four types of firm behaviors related to resisting stakeholder pressures: commander, compromiser, subordinate, and solitariant. This theory contributes to stakeholder research by providing a mechanism for conceptualizing the simultaneous influence of multiple stakeholders and predicting organizational responses to these forces.

I begin the article with a discussion of stakeholder literature and then examine the major principles of social network analysis. I argue that social network analysis offers a worthwhile perspective, both as a theoretical contributor and a methodological tool, for advancing stakeholder theory. From this analysis I build a theory of stakeholder influence using social network concepts, and I generate propositions and a typology of how organizations resist stakeholder pressures.

**STakeholder: Handmaiden Concept to Master Theory**

Galaskiewicz (1996) describes network research as a "handmaiden theory" since it is often used to support the elaboration of other theories but rarely becomes the focus of its own development. Stakeholder theory has a similar history. Evidence of stakeholder concepts can be traced as far back as Barnard (1938), and these concepts are present in the thinking of systems theorists (March & Simon, 1958) and corporate planners (Mason & Mitroff, 1981). Since the existence of stakeholders is a consistent dimension in all organizational life, and therefore difficult to discount in any organization model, many theorists use stakeholder ideas to support their arguments. It was not until Freeman (1984) integrated stakeholder concepts into a coherent construct, however, that "stakeholderism" moved to the forefront of academic attention.

A number of scholars in the business and society field have developed and enhanced Freeman's work. Carroll (1989) was one of the first to use the stakeholder approach explicitly as a framework for organizing business and society topics. Brenner and Cochran (1991) and Hill and Jones (1992) offered stakeholder models as alternative approaches to Wood's (1991) corporate social performance (CSP) framework for integrating the field. Their efforts have led other researchers to realize that the stakeholder model potentially could "explain and guide the structure and operations of the established corporation" (Donaldson & Preston, 1995: 70). Several authors (Brenner & Cochran, 1991; Donaldson & Preston, 1995; Hill & Jones, 1992; Jones, 1995) have treated the stakeholder construct as the foundation for a theory of the firm and as a framework for the business
and society field. Thus, stakeholder thinking has matured from a handmaiden logic supporting the advancement of other theories to a master theory in its own right. Whether a stakeholder theory currently exists is a matter of debate. Nevertheless, efforts to create testable stakeholder theory (Jones, 1995), as well as Brenner and Cochran's (1991) work, are evidence of a movement toward theory explaining how organizations function.

THE STATE OF STAKEHOLDER THEORY DEVELOPMENT

Brenner and Cochran argue that a stakeholder theory of the firm should describe and predict how organizations will operate under various conditions (1991: 452). In this section I argue that although existing research provides classifications of the different types of stakeholder influences, it does not explain how firms react to these influences. Thus, further progress toward a stakeholder theory of the firm requires consideration of new research directions that describe how firms are likely to respond to stakeholder influences.

Stakeholder theory development has centered around two related streams: (1) defining the stakeholder concept and (2) classifying stakeholders into categories that provide an understanding of individual stakeholder relationships. One of the primary challenges in stakeholder analysis has been the construction of a universally acceptable definition of the term "stake" (Donaldson, 1995). Starik (1994) notes that although there has been an abundance of articles and books using the stakeholder framework since Freeman's (1984) work, the meaning of the term "stakeholder" has not been applied consistently. Freeman's definition of stakeholder, "any group or individual who can affect or is affected by the achievement of the firm's objectives" (1984: 25), still provides the core boundaries of what constitutes a stake. Although debate continues over whether to broaden or narrow the definition, most researchers have utilized a variation of Freeman's concept. For example, Hill and Jones define stakeholders as "constituents who have a legitimate claim on the firm" (1992: 133). Carroll (1993) also argues that groups or individuals can be stakeholders by virtue of their legitimacy, but he broadens the scope of the definition to include those who have power (the ability to impact the organization). Clarkson (1995) suggests an alternative approach for identifying and evaluating stakeholder claims, which narrowly casts stakeholders as risk-bearers. He argues that a stakeholder has some form of capital, either financial or human, at risk and, therefore, has something to lose or gain depending on an organization's behavior.

Regardless of how Freeman's (1984) definition is modified, there is a core idea underlying the stakeholder concept. Under any definition within the stakeholder perspective, organizations are required to address a set of stakeholder expectations; thus, management choice is a function of stakeholder influences (Brenner & Cochran, 1991). Consequently, the
main objectives in stakeholder research have been to identify who a firm's stakeholders are and to determine what types of influences they exert.

A stakeholder theory of the firm, however, requires not only an understanding of the types of stakeholder influences but also how firms respond to those influences. Although focusing on individual stakeholder relationships is appropriate for classifying types of stakeholders, this analysis cannot be extended to predict firms' behaviors because each firm faces a different set of stakeholders, which aggregate into unique patterns of influence. Firms do not simply respond to each stakeholder individually; they respond, rather, to the interaction of multiple influences from the entire stakeholder set. Thus, explanations of how organizations respond to their stakeholders require an analysis of the complex array of multiple and interdependent relationships existing in stakeholder environments.

Extant research has concentrated on producing classification schemes for categorizing stakeholders according to the types of influences they exert on organizations. Several schemes exist, including Carroll's (1989) environmental sorting and primary and secondary classification; Freeman's (1984) internal and external change distinction; and the Scandinavian contributions, which focus on types of transactions (Nåsi, 1995). Common to all of these categorizations is a focus on individual stakeholder influences and the dyadic ties between an organization and each of its stakeholders. For example, Freeman's (1984) model conceptualizes the organization at the center of the stakeholder set and considers only relationships involving the focal organization. Graph 1, in Figure 1, depicts the typical scope of relationships captured by the stakeholder framework when the analytical focus is on individual stakeholder influences. Although this line of investigation has provided many insights into how stakeholders influence organizations and is necessary for explaining how organizations function, it is not sufficient for predicting organizational responses.

Since stakeholder relationships do not occur in a vacuum of dyadic ties, but rather in a network of influences, a firm's stakeholders are likely to have direct relationships with one another. Freeman and Evan (1990) argue that the stakeholder environment consists of "a series of multilateral contracts among stakeholders" (1990: 354). This proposed shift in our conceptualization of the stakeholder environment is illustrated in Graph 2 (Figure 1), which displays ties between stakeholders that surround the focal organization. In reality, it is unlikely that all stakeholders will be linked directly to each other, as is the case in Graph 2, but the nature of any existing between-stakeholder relationships influences a stakeholder's behavior and, consequently, the demands it places on the focal organization.

For example, in 1988 McDonnell Douglas, an aircraft manufacturer, awarded Convair a contract to build the fuselages and cargo doors for the DC-10 aircraft. Convair's engineers tested a new electrical locking mecha-
FIGURE 1
Network Structures: Patterns of Relationships

Graph 1

Graph 2

Graph 3

Graph 4

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nism proposed by McDonnell Douglas and reported that it was unsafe. However, McDonnell Douglas ignored Convair’s warning, and the report never reached the Federal Aviation Administration (FAA), since Convair’s contract with McDonnell Douglas prevented it from reporting directly to the FAA. The DC-10 received FAA certification in 1971, and approximately 6 months later, a DC-10 crashed because of a failure in the cargo door’s locking system. This case can be placed into a network framework in which McDonnell Douglas is the focal organization falling between two stakeholders that do not share a relationship. If a between-stakeholder relationship had existed in this case—that is, if the FAA had a relationship with Convair—the FAA would have had information on the problems of the new locking system and would have exerted more pressure on McDonnell Douglas to rectify this safety issue. Furthermore, if Convair and the FAA were connected, McDonnell Douglas might never have attempted to build the DC-10 with a potentially faulty lock design, since certification of the aircraft would have been more difficult. This example illustrates that the existence of relationships between stakeholders can affect the behavior of stakeholders and focal organizations.

In addition, the focal organization is more than simply the central point of its own stakeholders: it is also a stakeholder of many other focal points in its relevant social system. The organization is not necessarily at the center of the network; therefore, treating its position as a variable in its complex social system provides one with an opportunity to understand more fully how patterns of stakeholder interactions impact the organization. Graph 3 (Figure 1) shows a focal organization in a network of stakeholders, each possessing its own set of stakeholders. It is apparent from this perspective that organizations are not necessarily at the center of the stakeholder set; hence, an organization’s position in its network is an important determinant of its behavior.

In this article I adopt a different analytical focus from past stakeholder research by examining the complex interaction of multiple and interdependent stakeholders. Similar ideas have been mentioned by Donaldson and Preston, who state that “stakeholder management requires, as its key attribute, simultaneous attention to . . . all appropriate stakeholders” (1995: 67). To date, however, no researcher has integrated this concept into stakeholder theory systematically. The theory I develop here, which relies on social network constructs, is an initial attempt to consider the influence of the multiple interactions comprising stakeholder environments on focal firms’ behaviors.

NETWORKS AND APPLICATIONS TO STAKEHOLDER THEORY

Researchers increasingly are using social network analysis to extend their understanding of many behavioral and social phenomena. Wasserman and Faust (1994) provide a comprehensive list, including community elite decision making (Laumann & Pappi, 1973), social influence (Marsden
& Friedkin, 1994), power (Brass & Burkhardt, 1993), and innovation diffusion (Burt, 1987). Often undervalued, relational systems are fundamental aspects of social life and have helped increase “explained variance” in several social science models. But what exactly is the social network perspective? Several comprehensive reviews are available (Nohria & Eccles, 1992; Wasserman & Galaskiewicz, 1994; Wellman & Berkowitz, 1988). Table 1 provides a summary of Wellman’s (1988) list of principles, which describe social network analysis and the basic network assumptions as summarized by Galaskiewicz and Wasserman (1994).

“Instead of analyzing individual behaviors, attitudes and beliefs, social network analysis focuses its attention on how these interactions constitute a framework or structure that can be studied and analyzed in its own right” (Galaskiewicz & Wasserman, 1994: xii). Granovetter (1985) states that social actors are embedded in a relational system, and one must conceive of this relational context to understand their behaviors. The purpose of network analysis is to examine relational systems in which actors dwell and to determine how the nature of relationship structures

### TABLE 1
Network Analysis Principles and Assumptions

<table>
<thead>
<tr>
<th>Principles&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Assumptions&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Methodological Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior is interpreted in terms of structural constraints on activity rather than in terms of inner forces within units.</td>
<td>Actors and their actions are viewed as interdependent units.</td>
<td>What are the boundaries of the network under study?</td>
</tr>
<tr>
<td>Analyzes focus on the relations between units.</td>
<td>Relational ties (linkages) between actors are channels for transfer of “flow” of resources.</td>
<td>What type(s) of relations will be measured? Do the relations measured represent the range of relevant components of the construct?</td>
</tr>
<tr>
<td>A central consideration is how the pattern of relationships among multiple (actors) jointly affects network members’ behavior.</td>
<td>Network models focusing on individuals view the network structure environment as providing opportunities for and constraints on individual actions.</td>
<td>Will binary or value data be collected? Does the operationalization of the relationship construct(s) require assessing the strength of the ties?</td>
</tr>
<tr>
<td>Analytical methods deal directly with the patterned relational nature of social structure.</td>
<td>Network models conceptualize structure (whether social, economic, political, and so forth) as enduring patterns of relations among actors.</td>
<td>Are the ties directional or nondirectional? Are the exchange ties between network partners reciprocal?</td>
</tr>
</tbody>
</table>

<sup>a</sup> Taken from Wellman (1988).

<sup>b</sup> Taken from Galaskiewicz and Wasserman (1994).
impacts behaviors. The primary focus of social network analysis is the interdependence of actors and how their positions in networks influence their opportunities, constraints, and behaviors (Wasserman & Galaskiewicz, 1994).

One can understand the network analysis approach by considering studies that examine organizations' propensities to adopt new technology. Whereas some social science researchers often consider organizational attributes as determinants (e.g., size, age, structure, diversification structure, and current technology utilization), social network theorists examine relational data (Wasserman & Faust, 1994). These theorists exclusively examine the pattern of relationships between members of the relevant network, arguing that the structure of the network and the organization's position in the network determine its propensity to adopt new technologies. W. R. Scott makes a distinction between attribute and relational data: "relate to the attitudes, opinions and behaviors of agents, in so far as these are regarded as the properties, qualities or characteristics, which belong to them as individuals or groups" (1991: 2). In contrast, relational data are the ties relating one actor to another and cannot be classified as properties of individual actors because they exist only as part of a group of actors. In other words, relational data are properties of a system of actors (Wellman & Berkowitz, 1988).

The network analysis approach has potential for stakeholder researchers, because they can use it to examine central elements in the stakeholder perspective and to move research in a valuable direction. For instance, network theorists conceptualize an organization's environment as a set of social actors; traditional stakeholder scholars also view an organization in terms of its relationships with a set of actors in its environment. However, stakeholder researchers have not considered stakeholder influences beyond the dyadic level. Network analysis provides a means for examining how the pattern of relationships—the "interaction of interactions" (Nohria, 1992)—in a stakeholder environment influences an organization's behavior.

In sum, social network analysis offers scholars valuable insights for developing stakeholder theories. Network models begin where stakeholder research stops—the dyadic relationship—and examine systems of dyadic interactions, capturing the influence of multiple and interdependent relationships on organizations' behaviors. I propose expanding the boundaries of an organization's relevant environment beyond the organizational set perspective (Evans, 1968), which is commonly used in stakeholder research to conceptualize the environment from the standpoint of a focal organization and examine only its direct relationships with other social actors (see Graph 1, Figure 1; Scott, 1992). Nohria (1992) argues that, from the network perspective, the relevant environment is much broader than the organizational set. Through a network perspective, researchers can apply a societal sector view of the environment, which is defined as "(1) a collection of organizations operating in the same domain, as iden-
tified by the similarity of their services, products or functions, (2) together with those organizations that critically influence the performance of the focal organizations: for example, major suppliers and customers, owners and regulators, funding sources and competitors" (Scott & Meyer, 1991: 117). The ideas in this article are developed using a focal firm viewpoint, but I incorporate the broader societal sector concept of the environment: the environment consists of a group of similar firms, such as an industry group or strategic group, and the aggregate network of each firm's organizational set. I use two network concepts—density of this network and centrality of the focal firm in the network—in this article as an initial step toward understanding the structural influences in this expanded view of the stakeholder environment. These concepts are discussed after the type of organizational behavior under examination has been specified.

ORGANIZATIONAL RESISTANCE TO STAKEHOLDER INFLUENCES

As mentioned above, a primary goal in stakeholder theory is to explain and predict how organizations function with respect to stakeholder influences (Brenner, 1993). Oliver's (1991) insightful integration of resource dependence theory and institutional theory provides a worthwhile context for studying organizational responses to stakeholder pressures. She identifies a continuum of behaviors, ranging from passive compliance with external pressures (institutional theory) to active manipulation and control of external pressures (resource dependence theory). At the resource dependence end of the continuum, an organization is able to manipulate the allocation of critical resources actively through strategies designed to gain control over the organization's exchange partners (Pfeffer & Salancik, 1978; Thompson, 1967). Under other conditions an organization must acquiesce to external pressures, since its survival is contingent on its compliance with expectations from institutional constituents, such as the state, and professional and interest groups (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Zucker, 1977). In short, this analysis focuses on the conditions determining the degree of resistance a firm exerts against external pressures.

The stakeholder framework is well suited for pursuing this analysis. Both Oliver's utilization of institutional and resource dependence theories and the stakeholder perspective focus on how forces external to the organization affect its behavior and structure. Oliver states, "According to both institutional and resource dependence perspectives, organizational choice is limited by a variety of external pressures (Friedland and Alford, 1987; Meyer et al., 1983; Pfeffer and Salancik, 1978) . . . , and organizations must be responsive to external demands and expectations in order to survive (Meyer and Rowan, 1977; Pfeffer and Salancik, 1978)" (1991: 146). Both institutional and resource dependence theories emphasize that organizations face a variety of external pressures and that these demands must be managed for the organization to survive (Scott, 1992). This view is
shared by the stakeholder perspective, which argues that management choice and organizational survival are functions of how well the organization satisfies its stakeholders (Brenner & Cochran, 1991: 453; Carroll, 1989: 61). Furthermore, Oliver suggests that the external pressures outlined by institutional and resource dependence theories come from "those who shape and enforce institutional rules and beliefs" and "those who control scarce resources," respectively (1991: 148). In other words, the source of these external pressures is the organization's set of stakeholders.

It is not yet clear, however, why an alternative approach to Oliver's analysis will be valuable. Oliver offers a typology of organizational responses and argues that organizations can acquiesce, compromise, avoid, defy, or manipulate external influences. Further, her insightful analysis identifies antecedent conditions under which each response strategy is likely to be utilized. Predictions of particular response strategies are difficult, however, because multiple conditions that have opposite effects on the type of strategy chosen can influence the organization's behavior concurrently. For example, legitimacy and constraint, two separate antecedent conditions in Oliver's framework, can coexist. Oliver (1991) argues that external pressures generated from constraint factors are likely to lead to the avoid, defy, or manipulate behaviors. The legitimacy condition suggests that these same behaviors will rarely occur. Thus, one option for extending Oliver's work is to develop theory on how the interaction of these conditions impact organizational response strategies.

In this article I adopt an alternative approach, examining the influence of structural conditions on organizations' response strategies. In the remaining portion of the article, I examine how aspects of an organization's stakeholder network, namely network density and the focal organization's centrality, impact the focal organization's degree of resistance to stakeholder pressures.

Density

Oliver (1991) argues that the interconnectedness of relational networks influences an organization's degree of resistance to institutional pressures. An environment's interconnectedness is comparable to network "density," a popular term used in social network analysis to describe the structure of a given network. Density is a characteristic of the whole network; it measures the relative number of ties in the network that link actors together and is calculated as a ratio of the number of relationships that exist in the network (stakeholder environment), compared with the total number of possible ties if each network member were tied to every other member. A complete network is one in which all possible ties exist. Graph 2, in Figure 1, has a density of 1, since all actors have direct ties to one another. Graph 1, the traditional stakeholder perspective, illustrates a network with a lower density than Graph 2.

Meyer and Rowan (1977) state that relational networks elaborate and
transfer institutional myths between organizations. They suggest that relational networks are fundamental elements forcing organizations toward conformity, since institutional values are diffused across networks when these networks allow for coordination and information exchange between participants (Oliver, 1991).

Two characteristics of density are relevant to examining organizational responses to stakeholder pressures. First, as density increases (and the number of ties between network members grows), communication across the network becomes more efficient. By virtue of having many ties, the network structure facilitates information exchange among all its regions. In sparsely connected networks some sections of the network may become isolated, or segregated cliques develop, restricting communication between groups of actors. Second, as Meyer and Rowan (1977) suggest, the consequence of dense network structures is the diffusion of norms across the network. Through extensive ties between network members, actors form patterns of exchange and produce shared behavioral expectations. In their study of mimetic processes, Galaskiewicz and Wasserman (1989) make a similar argument, stating that organizations in the same network imitate one another's behaviors in an attempt to be perceived as legitimate players. Thus, as interorganizational linkages become more dense, behaviors become more similar across the network, and the likelihood that shared behavioral expectations will be established increases.

These consequences of dense networks—efficient communication and the establishment of shared behavioral expectations—have explicit implications for how stakeholder environments influence the focal organization’s behavior. Oliver summarizes the effects of density on behavior:

[Density] facilitates the voluntary diffusion of norms, values, and shared information (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Pfeffer and Salancik, 1978). Because highly interconnected environments provide relational channels through which institutional norms can be diffused, this tends to create more implicit coordination and collectivization in a given environment, [and] more consensus on diffused norms. (1991: 171)

The existence of institutionalized norms suggests that stakeholders have established agreed-upon behavioral constraints. Thus, in the stakeholder perspective the diffusion of norms leads to visible and shared expectations within the stakeholder environment. As a result, a focal organization planning to resist pressures from its stakeholders will have difficulty playing one group against another or finding a sympathetic group of stakeholders with whom it can form an alliance. In sum, densely tied networks produce strong constraints on the focal organization’s actions.

Along with fostering shared expectations, dense networks furnish stakeholders with the capacity to monitor the focal organization’s actions more efficiently. Since dense networks form efficient communication
systems, the network structure forms a mechanism for collectively monitoring the focal organization, as well as for coordinating pressure on it to match expectations. Actors are more likely to establish coalitions if they do not have to experience the costs of forming new relationships (Mintzberg, 1983). The existence of a dense stakeholder network facilitates the formation of coalitions since, by definition, a densely connected network exhibits many relationships between stakeholders.

Thus, the combination of shared expectations, the ease of information exchange between stakeholders, and the potential for coalition formation, all of which characterize dense networks, tend to produce strong unified stakeholder pressures and to lead organizations toward conformity. In contrast, in less dense networks information exchanges between stakeholders are impeded by sparse, fragmented network structures. As a result, stakeholders' elaboration of expectations and ability to monitor the focal organization's actions are limited. These conditions give the focal organization more discretion over its actions since it experiences less unified pressure from its stakeholders. Furthermore, sparsely connected networks are more likely to exhibit multiple conflicting stakeholder influences, since shared behavioral norms are less likely to form (Oliver, 1991). Consequently, the focal organization is unable to conform to stakeholder expectations because satisfying one set of stakeholders requires defying the expectations of other stakeholders.

Proposition 1: As network density increases, the ability of a focal organization's stakeholders to constrain the organization's actions increases.

Centrality

Whereas density characterizes a network as a whole, "centrality" refers to an individual actor's position in the network relative to others. Researchers applying this measure purport that it evaluates an actor's prominence (Wasserman & Galaskiewicz, 1994) or power (Brass & Burkhardt, 1993). Similar to formal power, which among many conceptualizations may be defined by a hierarchical position, network centrality implies a position of status. "The key difference between formally and informally (network) derived power is that the latter comes from actors' positions in the actual patterns of interactions that define a social network" (Ibarra, 1993: 476). Centrality refers to power obtained through the network's structure, as opposed to power gained through individual attributes. Three types of centrality commonly are discussed in the social network literature, with each corresponding to a different aspect of an actor's positional status. Brass and Burkhardt (1993) clearly outline these components, stating that "degree," "closeness," and "betweenness" centrality are measures of an actor's number of direct ties to other actors, independent access to others, and control over other actors, respectively.
One can define an actor's degree centrality by the number of ties he or she has with other actors in the network. The intuition behind degree centrality is that players "well connected"—in terms of having many relations—in their local environment will have access to many alternative sources of information, resources, and so forth. Graph 1, in Figure 1, shows the focal organization in a highly central position, where it has access to all other actors.

Closeness centrality defines an actor's ability to access independently all other members of the network (Freeman, 1979). One can measure an actor's closeness centrality by summing the lengths of the shortest paths (geodesic) from him or her to all other actors (Wasserman & Faust, 1994). For example, in Graph 3, in Figure 1, actor B is two steps from R, P, M, E, A, and D and is four steps—in this case the maximum number of steps—from J and K. The most central actors have the shortest aggregate distances to all other actors. Brass notes, "A central actor can reach other actors through a minimum number of intermediary positions and is therefore dependent on fewer intermediary positions than the peripheral actors" (1984: 521). An actor possessing low closeness centrality is highly dependent on other actors (intermediaries) to access other regions of the network. Accordingly, closeness centrality measures an actor's independent access to different points in the network. When an actor is "close" to all the others, he or she can spread information quickly throughout the network. Freeman associates closeness centrality with efficient communication, stating that closeness "means fewer message transmissions, shorter times and lower costs" (1979: 225).

Betweenness centrality is similar to closeness centrality, since both measures consider access to other actors, but it is based on the viewpoint of an intermediary actor who is positioned between other actors, rather than the standpoint of the "sending" and "receiving" actors who must form exchanges via third parties. Betweenness centrality measures the frequency with which an actor falls on the geodesic paths between pairs of other actors (Freeman, 1979). Again, the focal organization in Graph 1, in Figure 1, is in a highly central position, since all actors (or stakeholders) must go through it to communicate or exchange resources with other parts of the network. Freeman (1979) conceptualizes betweenness centrality as the extent to which an actor has control over other actors' access to various regions of the network. If actor A is connected to actor C only through actor B, such as in Graph 4 in Figure 1, then actor B controls all resource flows between them. Whereas closeness centrality indicates an actor's degree of independence (the ability to access other nodes through the least number of intermediaries), betweenness centrality captures an actor's ability to control others. Actors with high betweenness centrality are brokers or gatekeepers in the sense that they facilitate exchanges between less central actors (J. Scott, 1991).

Each centrality measure attempts to identify actors occupying important or prominent positions from which they can exert influence on other
actors, but each measure describes and measures a different property of an actor’s location (Wasserman & Faust, 1994). It is also noteworthy to state that degree, closeness, and betweenness centrality do not always produce similar rankings. In his investigation of all possible five actor networks, Freeman (1979) concluded that all three measures assign the maximum centrality to star (Graph 1) structures and the minimum score to the circle or complete (Graph 2) networks. However, between these extreme types of structures, the three centrality measures differ in their rankings. Furthermore, Freeman’s (1979) work suggests that betweenness centrality is the most appropriate for measuring the ability to control information flows across networks.

As an initial step in integrating social network analysis with stakeholder theory development, I examine here the influence of the focal organization’s betweenness centrality\(^1\) on its behaviors. The focal organization’s betweenness centrality—the extent to which it acts as an intermediary between its stakeholders—is a significant factor influencing how much the organization will resist stakeholder pressures. As stated above, betweenness centrality considers an actor’s position in relation to information flows across the network and measures the actor’s ability to control the flow of information. Central actors are considered brokers or gatekeepers, since they facilitate exchanges between other actors (Freeman, 1979; J. Scott, 1991) and are able to manipulate information, either by preventing or biasing communications across the network. Thus, when the focal organization is in a central position, it is able to influence behavioral expectations and manage information flows so that its actions either go unnoticed or are presented in a self-serving fashion. The focal organization’s centrality is a significant factor impacting its ability to resist stakeholder pressures.

**Proposition 2:** As the focal organization’s centrality increases, its ability to resist stakeholder pressures increases.

In sum, by examining stakeholder influences beyond dyadic relationships, we open the door to the richness of structural influences. As an initial step in introducing social network tools to stakeholder research, I develop in this article theory describing the relationship between an organization and the structure of its environment: network density influences the stakeholders’ ability to constrain the focal firm, and the focal firm’s centrality influences its ability to resist stakeholder constraints (and influence stakeholder expectations). Thus, the stakeholder network is a source of power for both stakeholders and the focal firm. By examining the “interaction” of density and centrality, I describe the rela-

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\(^1\) For the remainder of this article, “centrality” refers more specifically to betweenness centrality.
tive power balance inherent in different types of network configurations and the roles focal firms adopt in these different network structures.

NETWORK CONFIGURATIONS AND FIRM STRATEGIES

The interaction of density and focal firm centrality produces different types of network structures, which influence the relative power balance between a focal firm and its stakeholders. In this section I consider situations in which there are either "high" or "low" degrees of density and centrality (see Table 2), and I predict how firms will respond to different network configurations. Although density and centrality obviously are not dichotomous variables, these extreme cases provide a framework for understanding different behaviors.

High Density/High Centrality

In a highly dense network, stakeholders are able to constrain the focal firm, whereas a highly central focal firm is able to resist stakeholder pressures. Combined, these conditions produce a specific network configuration that influences how the focal firm will respond to stakeholder demands. The network has an efficient communication structure between stakeholders and produces shared behavioral expectations. Further, the focal organization is in a prominent position and is capable of influencing information flows. Thus, stakeholders and the focal organization are able to impact each other: stakeholders can coordinate their efforts to monitor and punish the focal organization, and the focal organization can influence the formation of expectations. As a result, both the stakeholders and the focal firm are highly susceptible to each other's actions and have the power to influence one another. Moreover, the focal organization faces an uncertain environment since its stakeholders are capable of forming a strong, unified force against it. According to both institutional and resource dependence theories, "organizational decision makers have a strong preference for certainty, stability, and predictability" (Oliver, 1991: 170). Pfeffer and Salancik (1978) assert that firms often engage in negotiations with their exchange partners to reduce uncertainty.

Thus, when a centrally located focal organization faces a densely connected set of stakeholders, it will want to decrease the degree to which its stakeholders could exercise their ability to change the firm's behavior.

TABLE 2
A Structural Classification of Stakeholder Influences: Organizational Responses to Stakeholder Pressures

<table>
<thead>
<tr>
<th>Density of the Stakeholder Network</th>
<th>Centrality of the Focal Organization</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Compromiser</td>
<td>Subordinate</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Commander</td>
<td>Solitarian</td>
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Stakeholder pressures, especially unforeseen demands, could disrupt the organization’s performance. As a result, the focal organization will become a compromiser, attempting to balance, pacify, and bargain with (Oliver, 1991) its influential stakeholders. The goal of a compromiser is to negotiate a mutually satisfactory position, which at least minimally appeases stakeholder expectations, and to achieve a predictable environment in which the firm’s stakeholders are unlikely to oppose its actions collectively. Under these conditions a focal firm that strongly resists stakeholder demands may face a continuous struggle without resolution, thereby creating an uncertain future for itself.

Proposition 3: Other things being equal, under conditions of high density and high centrality, the focal organization will adopt a compromiser role, attempting to negotiate with its stakeholders.

One example of an organization playing a compromiser role is United Way of America (UWA). This organization occupies a central position among many local United Ways, coordinating fund-raising campaigns and charity fund allocations. The local United Ways, in turn, reach out to their communities and interact with a dense array of donors and governments. Thus, UWA is a central actor in a dense network and manages its operations by negotiating and bargaining with its stakeholders. This behavior was particularly evident during the aftermath of allegations of financial abuse and the resignation of UWA President William Aramony. When local United Ways responded by withholding voluntary dues payments, UWA’s Board of Governors instituted concessions to their existing policies. The compromise reached included new financial controls and board representation from local United Ways.

Low Density/High Centrality

Under low density and high centrality conditions, the focal organization is capable of resisting stakeholder pressures. A low density network impedes information flows, monitoring efforts, and the formation of shared norms. Mintzberg (1983) argues that when stakeholders are not united in their pressures on the organization, as is the case in low density networks, they will become passive. Similarly, Jacobs (1974) argues that a fractioned and widely dispersed group of stakeholders cannot exert unified pressure on the focal organization. Furthermore, a centrally

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2 The phrase “other things being equal” provides a means of examining the primary relationship under study while recognizing the existence of intervening factors not stated in the proposition. For example, although a firm may have the ability to act as a compromiser, it may not actually choose this pattern of behavior because it may lack the ability to accurately comprehend its environment or because it may not understand the relationship between the environment and its actions. However, other things being equal (or, in other words, holding other factors constant), there is a relationship between the structure of the stakeholder network and how the focal firm behaves.
located firm is well positioned to shape the formation of behavior expectations. These conditions afford the focal firm wide discretion, since the firm faces few constraints and occupies a powerful position in the network. As a result, the relative power balance shifts in favor of the focal organization, and, accordingly, the focal firm will adopt a commander role, attempting to control information flows, influence behavior expectations, and co-opt stakeholders (Oliver, 1991). As a commander, the focal firm will use its powerful gatekeeper position to control network exchanges and the formation of shared norms.

**Proposition 4:** Other things being equal, under conditions of low density and high centrality, the focal organization will adopt a commander role, attempting to control stakeholder behaviors and expectations.

The Colombian drug cartel, although an illegal organization, provides an interesting illustration of commander behavior. Viewed in organizational terms, the Colombian drug cartel is composed of a network of distribution channels that link cocaine suppliers to various "wholesalers." Participants in illegal networks minimize the number of relationships (forming a low density network) to maintain secrecy and protect themselves from investigation (Goffman, 1970). Further, Baker and Faulkner (1993) argue that the core players in illegal networks will occupy central positions and will attempt to maintain low density structures. A highly central position in a low density network protects the core players: law enforcement investigators have limited pathways into the organization and few witnesses for prosecution (Baker & Faulkner, 1993), and the central actor is able to control information flows and behavioral norms. Thus, Colombian drug cartel leaders maintain secrecy by occupying a commander position among a network of distributors, who have minimal interaction with one another. Cartel operations are "successful," in part, because the leaders can minimize and manipulate information flows across the network.

**High Density/Low Centrality**

Under these circumstances, the focal organization is in a vulnerable position. The network structure allows for efficient communication between stakeholders, and the focal organization is unable to influence the information exchange process from its peripheral position. Mintzberg argues that "when the [stakeholders] speak with a clear voice, the organization must typically follow suit with a consistent set of goals" (1983: 98) In addition, Mintzberg suggests that the distribution of power between an organization and its external influences is, in part, based on each actor's ability to access information. A focal organization positioned on the periphery of the network is at a power disadvantage since it does not have easy access to information flows. Consequently, a focal firm holding a peripheral position in a high density network will become a subordinate
to its well-organized stakeholders, acceding to their expectations (Oliver, 1991). The subordinate accepts established norms and complies with its stakeholders’ expectations.

Proposition 5: Other things being equal, under conditions of high density and low centrality, the focal organization will adopt a subordinate role, attempting to comply with stakeholder expectations.

A subordinate is not in a position to resist stakeholder pressures, and an organization that supplies a single product to a single customer is likely to be in a subordinate position. For example, Pfeffer and Salancik (1978) describe the asymmetric relationship between General Motors and its network of relatively small suppliers. These suppliers furnish “virtually 100 percent of their output to General Motors,” but each one contributes only a small proportion of General Motors’ inputs (1978: 53). Thus, suppliers are unable to (individually) resist institutional pressures exerted from a more central actor, such as General Motors.

Low Density/Low Centrality

In a low density/low centrality situation, the focal organization is unable to manipulate established norms, for it does not occupy an influential position in the network. However, the organization faces few constraints from its sparsely connected stakeholders. Because information does not flow readily across the network and because monitoring is difficult, the focal organization’s actions may go unnoticed to a certain extent. In other words, its activities are not easily discernible since it has few relationships with other social actors. For example, Powell (1988) has demonstrated that a book publishing firm was able to prevent external demands from impacting its technical operations by isolating its production facilities: the manufacturing department maintained a minimum number of linkages with external actors and was able to elude external pressures to change its manufacturing processes. A focal firm occupying a peripheral position in a low density network has the ability to obscure its activities and will adopt a solitarian role, attempting to avoid stakeholder scrutiny through buffering and concealing behaviors (Oliver, 1991). Given these structural conditions, the focal organization is somewhat isolated and independent from other social actors and can pursue its goals without experiencing significant demands from stakeholders.

Proposition 6: Other things being equal, under conditions of low density and low centrality, the focal organization will adopt a solitarian role, attempting to avoid stakeholder pressures.

Organizations rarely can occupy solitarian positions for extended periods of time, since essential resources are often obtained through interactions with various other social actors. "Hermitlike" behavior, charac-
teristic of solitarians, would limit most organizations' abilities to acquire resources, eventually crippling their attempts to grow or achieve some measure of stability. NASA, however, occupied a solitarian position during the late 1960s. Initially, NASA was in a network of reporting relationships and was responsible for filing regular reports detailing its activities to government agencies overseeing its performance. However, in the push to get American astronauts on the moon before the end of the decade, NASA was relieved of many of its reporting duties. In essence, then, NASA was separated from demanding stakeholders and was given the freedom of a solitarian position to develop creatively a plan for performing a lunar walk.

DISCUSSION

Translating the propositions offered above into testable hypotheses requires that attention be given to several issues. First, it is noteworthy to state that the propositions are presented as descriptive rather than prescriptive theory: the model is not prescribing strategies that lead to superior performance as much as it is describing the roles (patterns of behaviors) firms adopt under the conditions specified in the typology (Table 2). However, one extension of this article may be to examine whether firms should adopt the indicated roles in order to achieve high performance. At this early stage of theory development, though, it is logical to begin empirical tests by examining whether the theory does, in fact, describe how firms react to their stakeholder environments.

The third column, Methodological Issues, in Table 1 provides a summary of issues common to most empirical network studies. One challenge in network analysis is defining network boundaries—that is, deciding which actors to include in the network. Knoke (1994) argues that researchers can focus on three alternative aspects of a study to define network boundaries: (1) actor attributes, (2) types of relations under study, or (3) a central issue or event providing the setting for the study. In the realm of stakeholder research, analysts can focus on stakeholders with common attributes, such as customers or suppliers. Alternatively, researchers can focus on types of relationships, such as resource exchanges, information sharing, interpersonal ties, or interlocking directorates. Finally, a particular event or issue, such as a proposal for new antismoking laws, can be used to define network boundaries if it brings together an identifiable group of stakeholders.

Regardless of the approach taken to define a network, researchers often have difficulty identifying the complete set of organizations and relationships constituting the network. The snowball technique is a practical and useful approach for accurately defining network boundaries and collecting relational data (J. Scott, 1991; Wasserman & Faust, 1994). The first step involves identifying a core subset of actors within the network, such as firms producing similar products or services. Via interviews, researchers
ask informants from the initial group of organizations to nominate other actors (or stakeholders) to whom their firms are linked through specified types of relationships, such as resource and information exchanges, and interlocking directorates (Marsden, 1990). Researchers then interview (or survey) informants from the group of nominated organizations, who are also asked to nominate relevant actors. This process is repeated until few new actors are nominated, and what results is a relatively complete set of data describing network participants and relationships.

A second issue to consider is what types of relations to measure and what aspects of these relations are relevant to the behaviors in the network. In some incidences multiple ties must be considered, because the relevant network consists of several types of relationships that influence the behavior being investigated. For example, DiMaggio (1986) collected multiple tie data for a network of 165 theater managers and aggregated these relationships into a composite measure. Although collecting data on multiple ties may provide a more robust measure, the validity of aggregating relationships to represent the theoretical construct depends on the theoretical constructs and the nature of exchanges between actors in the actual study.

A third issue is whether to collect value or binary data. Value ties measure the intensity or importance of each relation, whereas binary measures indicate only the presence or absence of a relation between two actors (J. Scott, 1991). When using value data, researchers assign each relationship a weight indicating the intensity of the relation relative to other ties. In addition, some types of relationships are directional, since one node in the relationship is a “sender” of the exchange and the other node is a “receiver” (Krackhardt, 1992). Directional ties, as well as the other relational characteristics identified above, can provide important information about networks, but it is vital for researchers to consider both the theoretical logic and the details of the network used to test the theory when they are determining what aspects of the relationship will be part of a study’s data collection. Network analysts often need to interview network members to determine the relevant set and aspects of relationships to consider in the data collection, because many of these decisions are network specific (Marsden, 1990).

**CONCLUSION**

In this article I argue that to build a stakeholder theory of the firm, researchers must move beyond the analysis of dyadic relationships. Stakeholder research has concentrated primarily on classifying individual stakeholder relationships and influences. However, this analysis cannot be extended to explain how a firm reacts to its stakeholders, because each firm faces a different set of stakeholders, which aggregate into unique patterns of influences. Thus, firms do not respond to each
stakeholder individually, but instead must answer the simultaneous demands of multiple stakeholders.

This article contributes to stakeholder research by providing a mechanism for describing the simultaneous influence of multiple stakeholders and for predicting firms’ responses. The model herein, which incorporates social network constructs (density and centrality), moves beyond the traditional analysis of dyadic ties and considers structural influences and the impact of stakeholders who do not have direct relationships with the focal firm but who affect how the firm behaves nevertheless.

This article also contributes to organizational theory by extending Oliver’s (1991) efforts to converge institutional and resource dependence theories. Institutional and resource dependence theorists argue that external pressures drive an organization’s behaviors and that these forces come from those who shape institutional rules and those who control scarce resources, respectively. The stakeholder perspective I utilize in this article is useful for this analysis, because it explicitly examines the sources of these external pressures and can consider how the organization relates to both its institutional and resource-based stakeholders. In addition, by examining structural conditions influencing whether a firm passively accepts externally imposed constraints or actively pursues opportunities to resist and control external demands, I furnish in this article further support for viewing these theories as complementary perspectives. My analysis expands the view of the environment from the organizational set perspective, which concentrates on the focal firm and its direct exchange partners, to the broader societal sector view (Scott & Meyer, 1991), which includes indirect relationships and influences. As a result, this perspective provides researchers with a means for examining a wider range of relevant factors influencing organizational interactions.

In a similar vein, this article should motivate researchers to take further steps to integrate network analysis with resource dependence theory (Pfeffer & Salancik, 1978). Resource dependence theorists concentrate on relational content—the power/dependence flowing across relationships—and consider resource control as a paramount source of power. Network analysts focus on relational context—the structure of relationships—and argue whether the shape, form, and characteristics of networks, independent of the nature of relations or participants’ individual attributes, are worthy of study (Brass, 1984; Wellman, 1988). Thus, whereas the resource dependence view considers resource attributes and the nature of direct relationships as sources of power, network analysis examines structural constraints and opportunities for accessing other players as another source of power.

These perspectives, however, are not necessarily competing views. Instead, social network analysis should be regarded as a complement to resource dependence, describing structural elements and influences not captured by other theories. Cook and Whitmeyer explain that “some
network analysts have downplayed any consideration of the individual actor, and some exchange theorists have undertheorized social structure” (1992: 123). Thus, the model I present here represents only a subset of variables, albeit an important subset, explaining the complex system of interorganizational relationships. However, “no single theoretical perspective will enable us to explain everything about organizational interaction” (Cook, 1977: 77); therefore, future theoretical development relies on efforts to consider the contribution of each theory and to integrate these valuable perspectives into a more comprehensive framework.

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Timothy J. Rowley is completing his doctoral studies at the University of Pittsburgh and is a lecturer at the Rotman School of Management, University of Toronto. His current research interests include social network analysis, the development of stakeholder theory, interorganizational relations, and corporate social performance.