TOWARD A STAKEHOLDER THEORY OF THE FIRM:
THE CASE OF THE SATURN PARTNERSHIP

Thomas A. Kochan
Saul Rubinstein

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The Case of the Saturn Partnership

Thomas A. Kochan  
Sloan School of Management  
Massachusetts Institute of Technology

and

Saul Rubinstein  
School of Management and Labor Relations  
Rutgers University

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Abstract

This paper seeks to engage the organization theory community in contemporary debates over the role of the corporation in American society by building a stakeholder theory of the firm. We develop a set of normative premises and positivist propositions derived from these debates, from a combination of organization and industrial relations theories, and by using data from the Saturn Corporation. Three questions are posed for a stakeholder theory: (1) Under what conditions is a stakeholder firm likely to emerge, (2) what are the critical determinants of performance in a stakeholder firm, and (3) what will determine the sustainability and diffusion of this organizational form in the American environment? The history, design features, and dynamics of the labor-management partnership at Saturn are used to illustrate and interpret a specific case of employees as stakeholders. Saturn's governance structure, work organization, and internal processes fit the characteristics of a stakeholder firm. Employees establish themselves as critical stakeholders by using their knowledge to improve organizational performance. The local union likewise contributes to firm performance by organizing workers into a dense social network that contributes to problem solving, conflict resolution, and quality improvement. However, the legal and political environment in which the firm operates produces considerable uncertainty over the sustainability and diffusion of Saturn's features in particular, and the stakeholder organizational form in general. Additional hypotheses and research questions are proposed to continue theory building around the more general model of the stakeholder firm. Organization theorists are encouraged to take up the analysis of stakeholder models and thereby contribute to the contemporary and future debates over the role the corporation in American society.
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The purpose of the American corporation is to maximize shareholder wealth. From this basic legal principle, flows the objective function and important features of the organization design, control systems, governance structures, and the legal rules and norms that structure employment relations in American firms. In recent years, however, both this conception of the corporation and the employment relations system which it fosters have come under increasing challenge as concerns are voiced over, among other things, corporate downsizing, stagnant real wages, growing income disparities, increases in contingent work, and declining union representation (New York Times, 1996).

Some of those concerned about these issues implicitly or explicitly cast their critiques in the language of multiple stakeholders. That is, they argue that firms are composed of multiple interests or stakeholders each of which contributes to the firm and therefore has a legitimate claim against its resources equivalent to the claims of shareholders (Hutton, 1995; Reich, 1996).

Although the stakeholder idea has been advanced in the organizational theory literature for some time (Freeman and Reed, 1983; Freeman, 1984; Evan and Freeman, 1988; Donaldson and

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Preston, 1994; Evan, 1978), it has yet to be defined in a way that allows it to be developed into a clear theory with propositions suitable for empirical testing. Organization theorists and researchers will need to bring greater conceptual clarity and precision to this concept if the field is to heed the call to contribute to theoretical and policy debates over the basic goals of the corporation and its role in society (Stern and Barley, 1996; Selznick, 1996).

Another set of critiques of the American corporate form has come from industrial relations researchers and policy analysts who argue that the law and institutional arrangements structuring traditional employment relationships no longer serve the needs of either workers or firms (Kochan, Katz, and McKersie, 1986; Commission on the Future of Worker Management Relations, 1994a). One school of thought in this field (Kochan et. al., 1986; Kochan and Osterman, 1994) suggests that the trial and error struggles to adapt traditional practices have identified the features of a transformed model of employment relations that are better suited to the current environment and needs of the parties. The transformed model seeks to increase flexibility in the use of human resources and worker participation and influence at all levels of the enterprise, from the workplace to the highest levels of strategic decision-making, in return for greater commitment and contribution of the workforce and their representatives to improve the economic performance of the enterprise. It rejects a key premise built into American labor law and shareholder maximizing models, namely, that strategic decisions about how to compete or produce can be separated from decisions over how to distribute the gains or losses that result from organizational activities (Coase, 1937). In this way the workforce appears to become a stakeholder in the firm. Thus, the transformed industrial relations model might be viewed as a specific case of a stakeholder firm, one that focuses on employees as stakeholders.
Neither the stakeholder nor the transformed industrial relations perspectives have been developed into a complete theory of the firm. Nor do we have well documented empirical studies that explore the dynamics of organizations that approximate the models implied by these arguments from which such a theory might be developed inductively. This paper attempts to begin filling this void by using data from a case study of the Saturn Corporation to develop a theory of the firm in which employees are critical stakeholders.

Our approach is to first present a set of normative premises and positivist propositions as starting points for building a general stakeholder theory of the firm. These are derived from contemporary debates about the corporation in society and from existing organization and industrial relations theories as well as from our observations at Saturn. Then we apply these general propositions to the specific case of employees as stakeholders and use them to interpret the experiences of management and labor in implementing Saturn’s organizational principles and design over the first decade of its life. The final section of the paper then returns to the more general case and proposes additional hypotheses and research ideas for deepening stakeholder theory. As such our approach fits Weick’s (1995) description of “theorizing,” i.e., building theory by iterating between inductive and deductive methods.

Saturn is an ideal laboratory for such an analytical effort since it appears to embody more of the features of a stakeholder firm and a transformed employment relationship than perhaps any other large scale organization in America today. Yet, as will be developed below, these features also make it vulnerable to critics and opponents, making it also a study in the politics of creating and sustaining a stakeholder firm in the American environment. Thus, this case also offers
insights into the broader political dynamics facing workers, unions, and others seeking to change
the balance of power and the role of the corporation in the American economy and society.

The Theoretical Task

The first task of a stakeholder theory is one of definition. What defines a stakeholder firm
and how does it differ from a conventional American style profit maximizing firm? Unfortunately,
although the term is often used, it is seldom (if ever) explicitly defined. For our purposes,
however, we will define a stakeholder as an individual or group with an ongoing interest in the
economic well-being of an enterprise and that contributes valued resources needed for the firm to
be successful. A stakeholder firm then is one whose purpose is to achieve the joint objectives of
parties with different interests. The stakeholder firm seeks to maximize the joint welfare or utility
of the interests involved (Blair, 1995) and to distribute the returns produced equitably among
these interests. However, whether it achieves joint maximization or requires some tradeoff
between or among the different stakeholder interests is an empirical question, depending on the
firm’s performance. A key distinction, however, from a shareholder maximizing model is that
stakeholders have a legitimate claim over the residual resources of the firm. Implicit in this
definition is the notion that not all the stakeholders seek to “maximize” the same things. Owners,
for example will want to maximize the financial return on their investment. Employees may want
to balance their short term financial return (in the form of wages and benefits) against their
interests in long term employment security or their interest in fair treatment and
challenging/satisfying work experiences. For a stakeholder firm to be viable over time, it must
demonstrate its ability to both achieve these multiple objectives and to distribute them in ways
that maintain the commitment of the different parties.
A further definitional clarification is required if, as we do in this paper, focus on employees as stakeholders. That is, how, if at all, is a stakeholder firm different from what is increasingly described as a "high performance" firm (Lawler, 1986). Indeed, the two share many design features. However, we see the key difference as follows. A stakeholder firm has a different set of goals or objective function from a shareholder firm while a high performance firm follows means or strategies to achieve the traditional goal of maximizing shareholder wealth that have the additional benefit of producing positive results or mutual gains for employees. This is often referred to as a high productivity/high skills and wages strategy (Kochan and Osterman, 1994). But a high performance firm does not alter the basic objectives of the traditional firm.

This definition begs an important question: Who are the stakeholders? Often this term is extended to include any group that contributes resources without which the organization would cease to exist (SRI, 1963) and thus employees, suppliers, communities, even customers are often included under this term. In this paper we take a more modest and limited approach and develop a specific theory based only on employees as stakeholders and leave the development of a more general theory to a later date.

What questions should a stakeholder theory address? We believe the most critical question lies in explaining what would it take for stakeholder firms to emerge, perform effectively, survive and be sustained over time, and increase in number? We believe the most critical question lies in explaining why, if this is a desirable organizational form, don't more of them exist in the U.S.? In what follows, we break these general questions down into the following discrete components:

1. What factors lead to the emergence or formation of a stakeholder model of organization?
What are the key organizational features (governance, design, internal processes, etc. that affect the performance of a stakeholder firm?

What determines the sustainability and diffusion of this organizational form in the American environment?

The Normative Underpinnings of the Stakeholder Model

Before outlining the positive elements of a stakeholder theory of the firm, the normative underpinnings of this conception of the firm needs to be made explicit. The soul of a good theory lies in its normative foundations. Freidman (1958) embeds classical and neo-classical economics in the values of individualism and freedom. Weber emphasized the importance of the Protestant Ethic in the rise of capitalism (Giddens, 1976). Marx’s explanations and predictions about the evolution of society rested on the conviction that the emerging capitalist system he was observing would lead to greater exploitation of the working class and therefore an alternative economic system in which the working class owned the means of production would be preferable. Institutional theories evolved first in economics out of a conviction that the laws and research methods of classical economics did not and should not apply to labor since labor embodies a human element that makes it more than just another “commodity” (Dorfman, 1949: McNulty, 1980).

Yet despite the importance of normative assumptions and values in the social sciences, organization theory in general, and theories of the firm in particular, have seldom examined the normative foundations or values that influence the framing of research problems and theorizing.²

² The recent exchange on "what is not theory" in Administrative Science Quarterly (Sutton and Staw, 1995; Weick, 1995; DiMaggio, 1995) is an example. The values or the normative concerns that motivate theorists and influence how they frame the questions of interest are not mentioned in the various contributions devoted to theorizing in organization research.
Events, however, may force organization theorists to reexamine the normative underpinnings of their theories and to reposition organization theory in its larger societal context (Stern and Barley, 1996). Indeed, we may be entering another historic phase over the debate of the American corporation equivalent to those of the populists in the 1890s that gave rise to the anti-trust legislation or of the New Dealers in the 1930s that gave rise to legislation governing financial markets and corporate governance as well as the rights of workers to bargain with employers over employment conditions.

Why are debates over the role of the corporation in society once again now emerging as a significant political and analytical issue? One reason is that the pendulum may be swinging back after a decade of shareholder revolts that ushered in a renewal of investor capitalism (Useem, 1996; Bowman and Useem, 1996). The net effects of the battle over the “market for corporate control” (Jenson, 1989) of the 1980s and early 1990s has been to shift power to shareholders, perhaps at the expense of other organizational interests. Second, there is growing recognition of a breakdown in the implicit “social contract” between employees and employers that seemed to allow firms and employees to jointly prosper in the three decades that followed World War II. That contract essentially had two key elements: worker (especially manager) loyalty was exchanged for long term security (Hecksher, 1995) and productivity and profits were exchanged for real wage improvement (Thurow, 1996). The restructuring and downsizing of large firms and increased willingness to lay off managers and other white collar employees broke the first element of the contract. The stagnation of real wages from 1973 to the present and the growth in inequality of incomes broke the second element of the contract.
Third, those who come from an industrial relations tradition are concerned about the social and economic costs of the long term decline of the American labor movement. A deeply held tenet of industrial relations theory is that strong and independent institutions for worker representation and voice are critical to a democratic society. Yet neither industrial relations theorists nor policy makers are indifferent to the forms worker representation and voice take in the economy and at the workplace. Unions and other forms of voice can and do impose costs as well as confer benefits on society and to the individuals they represent and the organizations in which their members work. Thus, contemporary debates within the industrial relations profession revolve around how to revive worker representation and the forms it might best take to meet the needs of the workforce and perform its economic and democratic functions.

Finally, current debates over the role of the corporation in society reflect a deep and growing distrust of the public in a number of society’s institutions. Trust and respect for corporations, unions, government, and religion have all declined consistently in the past decade (Gallup, 1996). Relations across institutions—business-government, business-labor, etc. appear to have become more polarized (Kochan, 1995). Thus, the search for an alternative conception of the firm should be seen as part of the broader reexamination of institutions in society that is likely to dominate political and analytical debates for the foreseeable future.

Corporations, like any institution, must serve the interests of society. Thus, debates over the appropriate purpose(s) of corporations ultimately comes down to the partly normative and partly positive argument over which form (or under what conditions) better serves society’s interests. The shareholder maximizing model of the firm rests on the assumption that society’s resources are allocated most efficiently through corporate forms that have one superordinate goal,
i.e., to maximize the wealth of those who provide it with financial capital. The stakeholder model offers a different normative assumption: society is best served by corporate forms that seek to organize its multiple interests in ways that maximize their joint welfare and that divide these returns equitably among the different interests. Which of these conceptions is most appropriate is partly a political question and partly an empirical issue. Debates over both these issues will, however, be greatly influenced by the performance of organizations that attempt to embody stakeholder principles in their design and operations. Thus we believe the major tasks for organization theory and research are to develop the normative and positive elements of a stakeholder theory of the firm, collect the empirical data needed to test these propositions, and help develop the managerial methods and skills that help stakeholder firms prosper.

Fragments of a Stakeholder Theory of the Firm

Fragments of theoretical arguments for a stakeholder theory can be found in disparate literatures ranging from organizational theory, the economics of organizations in general and in particular those that compare American and Japanese corporations, and industrial relations, particularly models of transformed labor-management relationships. Taken together, these fragments suggest several tentative answers to the questions posed above. We will present these features in propositional form to make them easily testable in future work and then illustrate them with our data and experiences at Saturn. The reader should be aware, however, that as noted above, in reality these propositions were derived iteratively as we sought to organize and make theoretical sense out of our observations of Saturn over the course of this research.

The propositions presented below are first framed in a general enough way to apply to any potential stakeholder (e.g., suppliers, retailers, communities, etc.). From these general
statements, we then derive specific propositions for the special case of employees. We return to the more general case in the Discussion section of the paper.

We organize the propositions around two axis that are critical to our definition of a stakeholder and a stakeholder firm. One axis addresses the characteristics and behaviors that determine whether or not an individual, group, or organization fits the definition and requirements needed to be a stakeholder. The second axis addresses whether what we will call the governance structure, i.e., the organizational and institutional features that together structure the production and distributional functions of the enterprise, produce and, over time, reproduce, the stakeholder firm.

**Question 1: When do Stakeholder Firms Emerge?**

The shareholder maximizing firm emerged in American society when finance capital was the critical scarce resource or asset needed to form organizations of sufficient scale to take advantage of mass markets (Roe, 1994). For other resources to gain stakeholder status they must also supply critical resources or assets to the enterprise. Moreover, the relationship must be reciprocal. That is, the success of the enterprise must be critical to the value of the asset so that its owners can legitimately claim a “property right” equivalent to the property rights of the financial investors who pooled and invested their resources to create and sustain the enterprise. Finally, the contest for legitimacy and influence is not predetermined by natural forces; it is partly volitional and strategic in the sense that not all participants want to commit their energies and resources to the enterprise and share in governance responsibilities and not all have the power to assert their claims to stakeholder status and influence even if they have a legitimate claim to such status. Thus, leadership, strategic choice, and power also influence the emergence of stakeholder
firms. With these generic propositions in mind we can now explore the more specific conditions under which employees might be expected to emerge as key stakeholders.

**Employee Features**

**Knowledge As An Asset.** Why would we expect to see more organizational forms emerge now and in the future that embody employees as critical stakeholders? To see why this is the case, we need to explore the role of knowledge as a strategic asset in the modern firm.

Firms rely on different mixes of capital, material, technical, locational, and human assets to achieve a sustainable competitive advantage. The modern American corporation and the shareholder maximizing principle emerged in an era where access to large pools of finance capital was the most important new resource to be mobilized (Berle and Means, 1932; Chandler, 1978; Roe, 1994). More recently a variety of alternative conceptions of the firm are evolving out of models that view knowledge as a critical asset and source of competitive advantage (Drucker, 1980; Thurow, 1996; Arrow, 1996). The basic proposition in these models is that in organizations where worker knowledge is a critical asset, human resource policies will be designed to reduce the incentives or the ability of knowledge workers to leave and thereby take the firm’s assets with them (Rebitzer and Taylor, 1995). One way to do so is to make employees partners by giving them a stake in the financial performance of the firm and a voice in its governance structures. In some cases this financial stake is explicit as in employee ownership plans (ESOPs) (Blasi and Kruse, 1991; Blasi, 1995). In other cases, particularly in professional services such as law, health, and consulting the organization may take the form of partnerships rather than public corporations. One study of law firms, for example, examines the structural and incentive features of partnerships in which employees can “hold up” the firm by virtue of their
ability to leave the organization and take their clients with them. This threat leads to alternative organizational forms and compensation rules that bind partners to the organization by putting a high percentage of their compensation at risk but rewarding partners well for their loyalty and contributions to the firm (Rebitzer and Taylor, 1995). This perspective suggests that as knowledge becomes a more critical asset or source of strategic advantage, organizations will implement various types of explicit or implicit partnership arrangements, all of which serve to treat knowledge workers as critical stakeholders. Thus, an initial requirement for employees to become stakeholders is that the knowledge they possess is a critical asset to the firm.

Proposition 1:
The more important employee knowledge is to the success of the firm, the more likely employees will emerge as an influential stakeholder.

The Role of Specific Human Capital. Under what conditions would we expect employees to want or believe it appropriate to seek stakeholder rights in an organization? Blair’s (1995) theory of the role of human capital in firms provides some insight on this question. Blair (1995) argues that employees share a residual risk in their employment relationship with the firm and, therefore, should be residual claimants against the value created. Her argument focuses on the specific human capital employees build up over time in employment relationships and thus serves as the mirror image of the knowledge-as-an-asset proposition. She argues that the shareholder maximizing model assumes employees are paid wages determined by competitive labor markets while the providers of equity capital absorb the residual risks associated with their investments. If all other parties to the organization also receive fixed payments for their contributions that are independent of variations in firm specific performance, then maximizing shareholder wealth is
equivalent to maximizing the total wealth of the firm. But, since shareholders absorb the risk, they are entitled to control the corporation in their interests.

The argument that shareholders are the sole residual risk bearers breaks down, however, in organizations where employees either receive a wage premium for their specific human capital and/or are compensated in part based on firm performance. Where either of these conditions hold, employees bear residual risks similar to shareholders. In the former case, the risk lies in the costs of job loss since the employees would not be able to fully replace their current wage in the external labor market. In the latter case the risk lies in the variability of employee income that is due to variations in firm performance. Blair argues that in either case employees should be entitled to a role in the governance and control of the firm. In both situations, Blair (1995) makes the case for maximizing the total wealth of the firm among all residual claimants (shareholders and employees) rather than just shareholders. Moreover, we might expect that employees themselves will want to achieve stakeholder rights and influence in settings where they are sharing residual risks. One typically sees this interest expressed directly when employees purchase or negotiate an ownership stake in their firm (Blasi and Kruse, 1991). However, if Blair's arguments are correct, a broader but more latent demand for the rights of ownership exist among employees that have built up stocks of specific human capital in their firms.

Proposition 2:
Employees will be motivated to create a stakeholder firm to the extent that their compensation is contingent on firm performance and/or their long run economic welfare is dependent on continued employment with the firm, i.e., when employees would experience significant economic losses if required to find employment in the external labor market.

Governance Arrangements
The Role of Leadership and Power. Strategic choice (Child, 1972), institutional (Selznick, 1949; DiMaggio and Powell, 1983; DiMaggio, 1988), and resource dependency (Pfeffer and Salancik, 1978) perspectives on organizations all agree that leaders, i.e., those who control the decisions over how to attract and maintain resources needed from the environment, have some discretion over what weight to give to different environmental forces and yet are to some extent constrained by the relative power of those forces. It is this combination of discretion and constraints that gives rise to the notion that organizational decision-makers and leaders to some extent enact their environments (Weick, 1983) and, over time, shape the values or organizational culture of the firm. This is particularly true of the founders and other leaders who shape the firm in its formative stages (Schein, 1983). Thus, we see the initial choices as shaped by a mixture of the values that leaders ascribe to different stakeholder interests and the power of the different stakeholders to constrain the choices available.

Much of the organizational behavior literature on stakeholders ascribes a great deal of importance to the values and leadership styles of top executives. Freeman (1984) and Donaldson and Preston (1995), for example, argue that managers must view their roles as one of balancing, coordinating, and integrating the interests of the firm’s multiple stakeholders. This role definition, however, departs from the more widely accepted definition of management’s role as an agent of shareholders’ interests.

Organizational researchers who have employed this perspective in empirical studies (Kotter and Heskett, 1993) also emphasize the leadership style of top management. They argue that some CEOs’ vision or personal values will lead them to adopt a stakeholder perspective in dealing with employees, shareholders, customers, etc. Regardless of the legal or organizational
structures under which they work, these leaders see their role as one of balancing the needs of multiple constituencies and thus shape their behavior and the policies of the firm accordingly. Little attention is given, however, to why some CEOs would adopt this perspective, or what structures or incentives determine whether or not this leadership style is supported or institutionalized in on-going organizational operations and through leadership successions. Thus, while hardly a sufficient condition, this view suggests the following proposition:

Proposition 3:
Top executives must embody the values and leadership styles consistent with a stakeholder perspective for this organizational form to emerge.

Industrial relations theory shares the view that organizations have some discretion in choosing how to respond to or shape their environments, however, industrial relations models tend to give greater weight to power relationships among the contending interests or external resources (Kochan, Katz, and McKersie, 1986). The industrial relations view goes roughly as follows. Leadership is unlikely to be enough. Strong forces will resist the sharing of power and returns with non-shareholder interests. Some independent source of power is likely to be needed for employees to gain sufficient influence in decision-making to create a stakeholder firm. Unions are the traditional source of independent power for workers. However, traditional unions embedded in traditional bargaining relationships are kept at arms-length from management and do not have access to the strategic decisions affecting organizational design. Instead, unions (and workers) are, according to both American law and custom, supposed to focus only on distributional issues, leaving strategic issues to management. Thus, for employees to have a voice in these decisions requires a union leadership that accepts and champions the features of a transformed employment relationship (Kochan, Katz, and McKersie, 1986).
The theory of transformed industrial relations was derived from the problems observed in the 1980s with the New Deal industrial relations system (Kochan, McKersie, and Cappelli, 1984; Katz, 1985; Kochan, Katz, and McKersie, 1986). The essence of the New Deal model is that (1) managers, as agents of the shareholders retain the rights to make entrepreneurial decisions free of interference of workers or their union representatives, (2) workers and their unions have the right to negotiate only over the impacts of managerial decisions on wages, hours, and working conditions, and (3) the employment relationship on a daily basis is regulated by the terms of the labor contract and workers achieve a voice through their union representatives or by filing a grievance when they believe their rights under the contract have been violated. Over time, this system leads to increasingly detailed written rules governing the labor process.

The transformed model grew out of experiments by workers, unions, and companies to improve performance by introducing greater flexibility, employee participation, and union-management consultation into decision-making. A central proposition in this model is that efforts to transform the relationship at one level of the firm depend on achieving reinforcing changes at other levels. That is, employee participation at the workplace will only be sustained over an extended period of time if reinforced by employment security protections or assurances, and an effective voice for worker interests in the strategic decisions that affect the long run future of the enterprise. Thus, the transformed model of industrial relations envisions a firm in which employees earn a voice in the governance process by contributing to its economic performance through their participation in decision-making and by increasing flexibility by giving up some of the work rules that protected them in the traditional New Deal model.
Thus, we suggest a second feature of the governance structure or process needed for a stakeholder firm to emerge in the American environment:

Proposition 4:

A stakeholder design for an organization is more likely to be chosen when employees have a union or other independent source of power whose leaders believe in taking an active role in the strategic management of the firm.

**Question 2: What are the Critical Features needed to make a Stakeholder Firm Succeed?**

A stakeholder firm is composed of, legitimates, and gives voice to the existence of multiple interests each of which has goals that must be satisfied. Since the activities of the stakeholders are highly interdependent, i.e., the behavior of one affects the behavior of others, their interests can be both shared and different, and power is more widely dispersed across groups and throughout the hierarchy, there is a high potential for both conflict (Schmidt and Kochan, 1972; Jehn, 1995) and for the enhancements to performance that potentially resides in groups or teams (Cohen and Bailey, 1996). Thus, the critical organizational tasks for a stakeholder firm are to (1) mobilize the stakeholders to commit their assets in ways that contribute to performance and (2) resolve the conflicts that arise when multiple interests share power in the governance process. These requirements have profound implications for the psychological or social contract between the employee and the firm and for the structures and processes that govern employment relations.

**Employee Features**

**Use of Discretionary Knowledge and Effort.** For employees to be stakeholders they must contribute to the success of the firm by using their discretionary effort (i.e., their knowledge or
other sources of human capital) to enhance firm performance. This can take the form of improving productivity and quality through continuous improvement efforts, contributing to the innovation process by creating new products or by reducing the time required to bring new products to the market, etc. The key feature, however, is that employees remain motivated and committed to contributing to firm performance and do not fall into behavior patterns described in the classic studies of group norms (Chinoy, 1955; Roy, 1953) which produce standard or accepted production rates that are enforced by group norms and in which “rate busters” are penalized. The organizational governance features obviously play a role in shaping these norms and will be discussed below, however, collective and individual employee attitudes and behavior also influence effort norms and behavior. This is why firms that seek to create “high commitment” norms (Walton, 1985; Lawler, 1986) often prefer to build new organizations in greenfield sites in which employees can be carefully selected, screened, and socialized to fit the high commitment model of effort and behavior, recognizing it is more difficult to modify work and group norms once they are established in an organization’s work culture. Whether or not a new site and carefully selected and socialized workforce is available or the workforce comes with an embedded work culture or not, employees must be willing and able to use their discretionary knowledge and effort to contribute to enhancing firm performance in significant ways for them to behave as stakeholders.

Proposition 5: Employees must use their discretionary knowledge and effort to contribute to firm performance if they are to be stakeholders in the firm.

Governance Features
Aoki's J Form. A clear conception of the features of the structure and employment practices of a Japanese stakeholder firm is found in Aoki's (1986; 1990) comparison of Japanese and American corporations. Aoki describes the Japanese corporation (J-form) as a coalition between shareholders and employees with managers serving as mediating agents. The dense network of cross-holding among shareholders (largely institutional investors such as banks, insurance companies, and other companies linked together within a common group or keiretsu) provides stability and patient capital. Shareholders receive their returns through a combination of long term capital gains, interest on debt securities, and income from direct sales to the firm. Employees are rewarded with employment security, promotional opportunities, wages tied to seniority and performance, and retirement benefits that reward long service. Shareholders and employees have a common interest in organizational growth and stability. Human resource practices support pursuit of these shared objectives through heavy investment in on-the-job training, employee suggestion systems and quality circles, and extensive labor-management consultation. Human resources executives are paid salaries equivalent to other executives and play an influential role in the top governance structures of the firm.

Information exchange and coordination play key roles in Aoki’s model of the Japanese firm. Horizontal coordination that occurs through information exchanges substitutes for the hierarchical control systems built into the traditional American corporation (Aoki, 1990). Horizontal coordination and information sharing are encouraged by organizational design features that break from the American legal and managerial traditions of separating those who plan and supervise from those who execute work assignments. Among these features are job rotation, enterprise unions that include blue collar, white collar, and managerial employees, extensive use of
teams and other problem solving processes that support the sharing of knowledge needed to improve work unit and organizational performance.

While Aoki developed his conception of the firm based on a simplified prototypical Japanese organization, he suggests that it is not culturally bound to Japanese society. Rather, it may fit those environments in which markets demand product variety, where the technology can be informed by and made more productive with worker knowledge, where the market conditions support a premium on quality, innovation, and rapid response to changing consumer preferences, and where the regulatory environment supports these organizational features.

Thus, unlike the American organization theorists who argue top management will be the catalyst for implementing a stakeholder perspective by shaping the organization’s culture, the Japanese corporation’s structure, financial markets, governance arrangements, coordination processes, and human resource practices serve as complementarities (Milgrom and Roberts, 1993) that give rise to and institutionalize this conception of the firm. This view therefore suggests that, to function effectively, organizations that treat employees as influential stakeholders will need to have the following complementary features:

Propositions 6a-e:

a. Sources of capital that are patient, i.e., that focus on long run returns to shareholders, and that derive their returns in multiple ways;

b. Governance structures that provide an influential role to employee interests and human resource considerations;

c. Coordination mechanisms that achieve high levels of vertical and horizontal information exchange and that decentralize planning and supervisory functions to those doing the work;

d. Human resource policies, e.g., compensation, training, staffing and employment security, etc. that build loyalty and commitment to the firm.

e. Labor-management institutions that are enterprise based.
The Role of Conflict and its Resolution. Conflict theory (Schmidt and Kochan, 1972) would predict stakeholder firms would experience high levels of conflict because of the increased influence of employees that had heretofore been in a low power position and the increased interdependence among parties in a mixed motive setting. Conflicts that in the past were suppressed by either an imbalance of power or by limiting interactions among these parties through hierarchical or functional specialization can now be more readily surfaced. These conflicts can either be constructive in that they identify individual concerns and organizational problems that need to be addressed in order to maintain commitment and improve performance, or if not resolved satisfactorily, can generate conflict traps and produce a recurring cycle of low trust and high conflict (Fox, 1974). This implies that conflict resolution becomes a more important organizational process in a stakeholder firm. On the other hand, the changed incentive structures of stakeholder firms, i.e., the acceptance of the legitimacy of and the shared burden of pursuing multiple interests, might imply that mutual gains are possible if the parties are willing and able to adopt integrative bargaining strategies and behaviors (Walton and McKersie, 1965; Walton, McKersie, and Cutcher-Gershenfeld, 1995). In either event, regardless of whether one predicts greater or less potential conflict, the critical task for the organizational and industrial relations processes in which conflicts surface and are managed, therefore, is to promote the effective resolution of conflicts in ways that enhance the achievement of both separate and shared objectives (Cutcher-Gershenfeld, 1990). However, ineffective conflict resolution that degenerates into a low trust/high conflict cycle or equilibrium will exact a high price on the performance of a stakeholder firm (Jehn, 1995). For this reason, we see conflict resolution processes as a critical feature of the governance structure of a stakeholder firm. The governance
structure must give voice and representation to employee interests in both production and
distributional decisions, but in doing so conflicts must be resolved in ways that both add value to
the firm and address critical stakeholder concerns and interests. Thus, the transformed perspective
on industrial relations continues to emphasize the value of collective representation of workers by
a union or some other institutional arrangement, however, the union or alternative institutional
arrangement must function in a way that aids articulation and aggregation of employee interests
and conflict resolutions that add value to the enterprise.

Thus the role of a union or other collective body designed to give voice to workers as
stakeholders must change substantially in a transformed employment relationship. Under the New
Deal model, unions existed as a countervailing force whose power was derived from their ability
to withhold their members’ collective labor (Gailbraith, 1967). If unions contributed to improved
productivity or efficiency it was only indirectly through their “shock effects” on management
(Slichter, Healy, and Livernash, 1960; Freeman and Medoff, 1984). That is, as unions increased
wages, benefits, and working conditions, management had to find ways to become more efficient
in order to recoup the costs of these improved benefits. While periodically unions and employers
would seek to cooperate and to improve their relationships, these episodes seldom survived over
time and were not institutionalized into the structure and process of management or the
governance of the firm (Gershenfeld, 1987). Instead, unions came to be viewed as outside forces,
or third parties, only to be brought in by workers when they deeply distrusted management.

The transformed model of industrial relations radically alters the traditional view and role
of unions, or other forms of collective representation. While unions continue to be held
accountable for representing their members’ economic and other interests as employees, they are
also responsible for adding value to the enterprise by facilitating employee participation and voice throughout the different levels of the organization. The old adage associated with traditional industrial relations that “management manages and workers and their unions grieve is replaced by a perspective that treats worker representatives as active participants in the management and governance process. In return for a voice in management, union leaders are expected to accept greater responsibility for organizational decisions. The role of union leaders thus becomes one of both representing members’ interests in negotiations and facilitating worker involvement and voice in decision-making on a more continuous basis. This becomes a difficult balancing act, one that few union leaders have been successful in carrying out over extended periods of time. Thus, union leaders can expect to encounter significant political risks in adapting to their new roles in stakeholder firms.

Proposition 7a-b:

a. Collective representation of workers contributes to the effectiveness of a stakeholder firm by surfacing and resolving conflicts and facilitating worker involvement and voice in problem solving, decision-making, and administration on a continuous basis.

b. The form of representation adopted must achieve an effective balance between adding value to the enterprise and representing the specific interests of the workforce.

**Question 3: Are Stakeholder Firms Sustainable in America?**

Corporations are assumed to be going concerns. That is, they are expected to have an indefinite life, one that goes beyond its founders or original participants. Legal rights, contracts, and procedures govern the transfer of ownership and responsibilities assumed by new entrants to the organization. However, firms can and do fail, the importance of different assets change over
time, and new leaders take up positions of influence who may not share the same values and
commitments of their predecessors. Moreover, any single enterprise is embedded in a larger
normative and institutional setting where ideology and interests compete for legitimacy and
resources, and are reinforced by legal doctrines and requirements that have been enacted in
response to and reinforce the prevailing norms, ideologies, and distribution of power. Any change
in the legal status of stakeholders in the corporation will therefore likely provoke a political battle
since it will challenge the prevailing ideologies regarding property rights, governance rules and the
laws regulating the roles of different organizational participants. Thus, for a stakeholder
conception of the corporation to survive over time and diffuse to significant numbers of
enterprises, it will need to not only demonstrate its ability to perform well, but also maintain the
commitment of successive generations of participants and leaders and manage the political battles
needed to change prevailing ideologies, laws, and norms. As we will see, this is particularly
problematic for employees as stakeholders because stakeholder firms confront not only the norms
and ideologies and power of corporations but also deeply embedded ideologies and norms
regarding the role of employees as collective interests, i.e., the role of unions in American society.

Employee Features

One frequently observed feature of employee owned firms or partnerships is that they tend
to dissolve when the original owners or partners turnover, retire, or profit sufficiently from their
investment that they are induced to sell their “shares” and allow the firm to be transformed into
traditional ownership and governance arrangements. At a more psychological level, later
generations of new hires may lack the same high commitment and willingness to use their
discretionary efforts to enhance firm performance as those present in the early years of the
organization's life. Similarly, to the extent that stakeholder perspectives are not shared by all who come into leadership positions in organizations, stakeholder firms are vulnerable to leadership succession episodes. Thus, how to sustain the economic and psychological commitment of successive generations of employees and leaders to their stakeholder roles appears to be a serious challenge in making the stakeholder firm a going concern. Indeed, this may be one of the reasons why stakeholder firms are difficult to sustain in an American environment where labor mobility tends to be relatively high by international standards. To overcome these tendencies there needs to be some broad recognition of the value created by the stakeholder model and incentives for successive generations of organizational participants to maintain and/or develop these attributes through socialization.

Proposition 8: For stakeholder firms to survive over time there must be means of transferring both the psychological and economic stakeholder attributes across generations of leaders and employees.

Governance Features

The Political Environment of Stakeholder Firms. Stakeholder models have come and gone at various points in American history. In the 1960s, for example, a debate arose over the social responsibilities of corporations. Advocates argued that corporations should voluntarily allocate some of the firm's resources to address social objectives believed to be important to society. Yet these arguments have been severely criticized by defenders of the shareholder maximizing model, ranging from Milton Friedman (1970) to the editors of The Economist (1996), to those in powerful finance and economic policy making positions in business and government (Business Week, 1996). While the social responsibility argument is not perfectly analogous to the stakeholder conception developed here, we take away from this history the expectation that
arguments for an alternative to the shareholder maximizing model are likely to encounter a hostile response from the mainstream finance and economics profession and the dominant political culture. As such, organizations that implement a stakeholder model represent a political intervention as well as an economic and organizational experiment.

Proposition 9:

Firms that seek to institutionalize stakeholder principles into their operations will face strong opposition from traditional allies of the shareholder maximizing model in dominant positions in business, government, media, and academia.

The Politics of Transformed Industrial Relations. Like the stakeholder conception of the firm, the transformed model of industrial relations lives in a highly charged and rather hostile political and legal environment. First, the prevailing labor law limits it by drawing a clear line of demarcation between the rights and responsibilities of "employees" and "managers" as both individuals and collective groups (Weiler, 1990; Gould, 1994). Second, a political stalemate between business and labor over how to change labor law has prevailed for the last twenty years (Mills, 1978; Kochan, 1995) making it difficult to update the law to accommodate the worker and union roles required for a transformed employment relationship and stakeholder firm to function effectively.³ Third, there is a major debate within the labor movement over the wisdom and

³The clearest example of the stalemate is the failure of the Commission on the Future of Worker Management Relations created by the Clinton Administration in 1993. That Commission was asked to recommend how to modernize labor policies to allow for greater employee participation and to overcome the high levels of conflict associated with the union organizing and recognition process. Members of the Commission differed over how far to go in recommending changes in the law that would support the transformed model of industrial relations and for different reasons, both organized labor and business opposed radical changes to the traditional system. In the end, this opposition resulted in a set of compromise recommendations (Commission on the Future of Worker Management Relations, 1994b; Kochan, 1995). Even these, however, were too controversial for both labor and management and the political stalemate continues.
viability of the types of partnerships embodied in the transformed model. This debate is particularly strong within the United Automobile Workers (UAW) (Parker and Slaughter, 1988). Fourth, there is strong ideological opposition within business to the features of the transformed model that increase labor’s voice and power in strategic and governance issues and processes within the corporation.

Thus, just as the stakeholder conception of the firm operates in a highly charged and hostile political environment, so do efforts to test, much less institutionalize, the features of the transformed industrial relations model. Stakeholder models that embody transformed industrial relations structures and processes, therefore, can be expected to engender considerable resistance and debate.

Proposition 10:
Organizations with transformed industrial relations will encounter considerable resistance and debate since some of their features may violate prevailing labor laws and challenge deeply held ideological positions regarding the role of unions.

Methods and Data

The data for this study come from a long term research project with the Saturn Corporation and UAW Local Union 1853. Since Saturn’s inception, we, along with other members of our research group, have tracked its history through discussions with the union leader who championed the project within the international union and with his counterpart in the General Motors Corporation, plant visits during the years prior to the production of the first car in 1990, and since then, through on-site interviews, observations, surveys, and participation in meetings and seminars with union and management officials. Our relationship with Saturn reflects the partnership norms embedded in the organization’s mission statement and core principles. From
the beginning, union and management representatives urged us to work with them as partners rather than “study” them at a distance as outside researchers. This provided us with excellent access and cooperation. At the same time, our relationship was and continues to be one of researchers, not consultants to the firm or the union. We have, however, fed back results of our work to Saturn and UAW representatives earlier than would be normal for outside social science researchers. In several cases, our results led to changes in the partnership designed to address problems we observed. The data for this study therefore consist of a mix of historical interpretation based on interviews with the founders of Saturn, direct participant observation and intervention in the partnership, interview and field notes, internal survey data collected by the local union and/or the company’s organizational development group, and survey data collected as part of our own research program. Together the data collection phase spans the period from 1990 to January, 1997.

We present our interpretations of events at Saturn as an exercise in developing a grounded theory (Glaser and Strauss, 1967) of the stakeholder perspective on the firm. We did not go into this project with a stakeholder model in mind. Instead, the idea of using a stakeholder perspective to interpret what we observed at Saturn developed as we searched to find a way to conceptualize and assess the dynamics of the labor-management partnership that is embodied in Saturn’s organizational design and is evolving over time. In turn, the more we explored the nascent literature on stakeholders, the more it appeared that Saturn fit many of the features discussed in this literature. Thus, we saw an opportunity to both interpret what we were observing and provide empirical data needed to further develop this model of the firm.
In what follows we will describe the history, design features, and dynamics of the Saturn partnership in ways that both illustrate (test is too strong a term given the iterative way in which the theory was developed) the propositions summarized above in practice and demonstrate the difficulties encountered in creating and sustaining this type of enterprise in the American environment. While we present this as a single case study, wherever possible, we use variations in practices observed across different individuals and organizational units and over time at Saturn to provide a more conventional test of some of these propositions (Harris and Sutton, 1986). Specifically, we report the results of a network analysis designed to test whether and how one unique feature of the partnership, the co-management process at the work unit level, contributes to enterprise performance.

Results

Saturn’s Creation: The Role of Leadership and Power

Table 1 presents a timeline of critical events in Saturn’s history to date. Saturn is a wholly owned division of General Motors (GM) with manufacturing operations in Spring Hill, Tennessee that produces sedans, coupes, and station wagons for the small car market primarily for sale in North America. It currently employees approximately 9,000 workers, approximately 7,300 of which are members of the UAW. Production began in 1990. In 1995 production was approximately 290,000 vehicles and in 1996 production expanded to approximately 310,000 vehicles.

In 1982 GM’s engineering staff conducted a study that concluded under existing management practices and labor-management relations the company could not profitably build small cars in North America, and therefore GM formed a joint alliance with Japanese and Korean
producers to import cars for this market segment. GM estimated that overseas production of small cars could save $2000 per vehicle over its domestic production costs. Concern over the loss of jobs in the U.S. led Alfred Warren, the Vice President of Labor Relations at GM, and Donald Ephlin, the Vice President of the UAW for the GM Department, to propose formation of a joint study team to explore whether it would be possible to design an organization and employment system capable of producing a small car competitively in the U.S. with American workers under a UAW contract. What became known as the “Committee of 99” ultimately recommended a radically new organizational form in which work would be organized into teams, work rules would be drastically simplified, and the union would be a partner in decision-making from the bottom to the top of the organization (O'Toole, 1996). Saturn was also to serve as a laboratory for innovation that might be transferred back to GM. The preamble to Saturn’s original 1985 collective bargaining agreement included:

_Saturn and the Union, as early as the spring of 1983, recognized the need for a new approach to union/management relations and the more effective use of human resources if assembly of small cars was to be feasible in the United States. GM and the Union met and authorized the establishment of a study center to explore the possibility of innovative approaches to staffing and operating a manufacturing and assembly operation for the production of small cars in the United States._

Further, Saturn’s Mission Statement has two parts:

1. _To market vehicles developed and manufactured in the United States that are world leaders in quality, cost and customer satisfaction through the integration of people, technology, and business systems._

2. _To transfer knowledge, technology and experience throughout General Motors._

In a 1991 interview, Roger Smith, GM’s CEO during the creation and early development of Saturn stated its goal as:

_Improving the efficiency and competitiveness of every plant we operate...Saturn is the key to GM’s long-term competitiveness, survival, and success as a domestic producer._
Thus, from its outset, Saturn was created to address the interests of shareholders for a small car that would be profitable and help the rest of GM to learn from this experience and the interests of GM employees and the UAW to provide jobs for UAW members.

These were controversial and risky proposals for UAW leaders. There was considerable opposition within the UAW Executive Board since these ideas deviated from traditional seniority, compensation, and work organization principles and took the union into the management and governance process in ways that traditionalists felt would jeopardize the union’s independence. Clearly, without the strong personal leadership and support of Ephlin, the UAW would not have ratified the Saturn labor agreement and gone along with the new role for the union (O’Toole, 1996).

The proposed design for Saturn provoked equally strong debate and controversy within GM and in the broader business community. One of the most controversial features of the plan was that the company would voluntarily recognize the UAW in the new facility before any workers were hired. This provision was later challenged by the National Right to Work Committee, national anti-union lobbying group, on the grounds that such pre-hire agreements violate the National Labor Relations Act. The case was eventually dismissed by the National Labor Relations Board in 1985 shortly after President Reagan visited the new Saturn facility and described the union-management agreement as the most important experiment in labor relations in the country.

This early history is consistent with Propositions 3 and 4. Leadership was important to creation of this stakeholder model, however, in this case leadership within the union was equally important to leadership within the company. Moreover, without the presence of a strong union
able to assert its voice in the strategic decisions that had to be made to embark on and approve this project, the stakeholder design would not have been chosen. GM would have continued to import small cars from its international partners. But, as will be noted below, the internal opposition within both the union and company (and the larger business and labor communities) did not go away and would continue to affect the evolution and sustainability of this enterprise.

**Organizational Design and Employment Practices**

The functional equivalents of many of the structural features of the stakeholder model as described by Aoki were built into the organizational design and employment system of Saturn. Table 2 summarizes these features.

Worker knowledge and commitment to improvement are seen as key organizational attributes for accomplishing Saturn’s objectives. To achieve high levels of skill development new Saturn members received from 350 to 700 hours of training before they were allowed to build a car. Recognizing the need for commitment to continuous organizational learning, the union in 1991 proposed linking training to the yearly risk and reward compensation plan. Every Saturn employee’s pay is tied to an annual organization-wide goal of obtaining at least ninety-two hours of additional training.
Work is organized into self managed teams (called work units modules), 80 percent of the workforce is covered by a no layoff commitment, minimal compensation is tied to the industry average, however, additional rewards are contingent on meeting negotiated performance criteria, decision-making is based on consensus principles operating through “decision rings” at the business unit (plant), manufacturing council (manufacturing operations), and strategic action council (senior executive) levels, and information is to be shared openly and widely throughout the organization. The local union is represented in each of these forums as well, and as will be described below, in the line management structure.

The features of the organization design are quite consistent with those identified in Aoki’s J-form firm and organizations (propositions 6a-e) and with the view that worker knowledge is a critical organizational asset (proposition 1). The risk-reward compensation system, along with the high base wages and benefits of autoworkers make employees residual risk holders at Saturn. They would experience substantial economic losses if this organization failed. This motivates employees to assert their interests as stakeholders in the management and governance processes at Saturn. The next logical question, therefore, is whether these structural features, i.e., horizontal coordination through information exchange, joint governance arrangements, contingent compensation, job rotation, strong enterprise-focused local unions, etc., have been translated into worker behavior and organizational processes that in fact contribute to enterprise performance. Interest in this question led us to focus on the co-management process in action.

The Co-Management Process

Aoki’s model stresses the importance of lateral communication and information sharing as a means for coordination and control in a stakeholder firm. At Saturn, the co-management
process, and particularly, the role that union partners play in the management process, appeared to us to be an example of this in action. Indeed, the local union’s internal structure and governance process created a large and dense social network of representatives located in key decision-making positions across the work units and the three plants in the Saturn manufacturing complex. In total, over 400 members serve as partners to a manager and/or as an elected union officer at Saturn. The local union organized a large number of opportunities for these members to interact that went well beyond the sparsely attended local union meetings typical of most local unions in the U.S. These included such things as bi-weekly “Congresses” in which all officers and appointed partners were expected to attend and at which a mixture of local union affairs and issues related to the partnership and operations at Saturn were discussed, “one on one” member surveys in which these officials interviewed local union members about problems or issues at Saturn, social activities such as softball and bowling teams, etc. We also observed a number of incidents in which these local union members and officers would draw on their networks to solve problems informally without going through normal hierarchical channels. In one case during an interview we were conducting with module advisors in the Panel Assembly module, a team leader came into the office stating a team member thought the torque on his air gun was improper for screwing down the panel under the wiper blades. Improper torque would lead to a loose panel and possibly some rattling. The module advisor called down the line to the Car Final module and asked his counterpart there to check the wiper panels. Upon learning that the defect had been passed on and was likely to be present in cars ready for shipping, this module advisor mobilized several colleagues to repair all defective vehicles including those in possession of the carrier (against company security rules) before any cars with loose panels were shipped. This rapid
mutual adjustment between module advisors in different departments was impressive. Equally surprising was their willingness to take risks and responsibility for fixing problems rather than sending them up the chain of command for a decision. This indicated a certain level of trust, and strong horizontal communication and coordination between co-managers. Observation of examples like this led us to hypothesize that the co-management process was behaving like a dense social network of lateral contacts that contributed to informal, on-line problem solving at Saturn. To test whether this was the case, we carried out a network analysis of the co-management process among the work unit module advisors, the rough equivalent of a second level of supervision in a traditionally structured firm. The detailed results of this analysis are presented elsewhere (Rubinstein, 1997) and are summarized in Figure 1 and Table 3. Specifically, we tested whether the communications occurring within this network of represented and non-represented managers were related to quality performance.

The Communications and Coordination Network

Represented and non-represented module advisors completed daily communications and time use logs for a two week period in May, 1993 to provide the data on the frequency and content of their communications with other module advisors and the technical and functional staff supporting the manufacturing process (e.g., engineering, maintainence, etc.). These data were subjected to a network analysis that described the density of communications, the centrality of the represented and non-represented module advisors, and the specific topics discussed, and then related these communications patterns to the quality performance (levels of first time quality and degree of improvement in first time quality) for each module.

Figure 1 contains a graph of the communications network of the module advisors. It is partitioned into the three business units (plants) with Vehicle Systems (assembly) in the upper left, Body Systems in the center, and Powertrain (engine and transmission manufacturing) in the lower
right. Each plant is further partitioned between union and non-represented module advisors. For purposes of comparison communications densities within each group of union and non-represented module advisors for each business unit are reported. The numbers reported in Figure 1 indicate that during this two week period the union represented module advisors in vehicle systems communicated regularly with 26.3% of the other module advisors in this business unit. This compares to 17.3% of the non-represented module advisors in vehicle systems who communicated with each other over this time period. In both Vehicle Systems and Body Systems the union module advisors have higher communication densities than do their non-represented counterparts. Powertrain densities for both groups were the same.

These communications densities were further broken down according to the topics discussed. The overall centrality (number of links) and density measures as well as communications on quality issues were then related to the quality levels and rates of improvements in each module. These results are shown in Table 3. The modules were divided into two groups - High First Time Quality Improvement and Low First Time Quality Improvement. As we can see from Table 3, the grouping of modules with the highest level of quality improvement also had significantly higher levels of communications by the represented module advisor. This was true for communications centrality (the overall level of communications), and for group centrality (communications with other represented module advisors within each plant). Most striking are the differences in communications frequency, specifically on the subject of quality.

Departments were also divided into two groups based on their 1993 level of first time quality. As Table 3 shows, the level of communication and coordination is related to first time
quality performance. The overall site-wide communications centrality of the represented module advisors is significantly higher in the High FTQ group. Similarly, the density of communications among represented module advisors within each group (plant) was significantly higher in the High FTQ group. Communications on quality was significantly higher for both represented and non-represented module advisors in the High FTQ group, although the represented level of 3.46 quality communications was greater than the non-represented level of 2.21. Regression results controlling for differences in technology and business unit confirmed the significance of the relationship between communications density of the represented module advisors and quality performance (Rubinstein, 1997).

In summary, the network analysis shows that (1) union module advisors participate in a dense communications network with their peers and with their management appointed counterparts, and (2) the more such communications occurs, the higher the quality performance of their module. Thus, where the co-management process functions in this fashion, the union-management partnership is adding value to the corporation in a fashion consistent with that predicted by Aoki's model of a stakeholder firm and proposition 7a pertaining to the role of a union in a transformed relationship and organization.
The Union as a Representative Body

Propositions 7b suggests that a union in a stakeholder firm must also continue to perform as an effective representative of its members’ specific interests. How to balance this role with its role as a partner in management has been a difficult challenge for the local union at Saturn, as it has been historically for American unions engaged in other types of union-management cooperative relationships (Gershenfeld, 1987). Some of the difficulty may relate to the complicated local-national union structures of American unions, however, some may reflect the inherent tension between intra-organizational relations in a democratic union engaged in mixed motive relations with an employer (Walton and McKersie, 1965).

Aoki lists an enterprise union as one of the complementary features of the J-organization. American unions such as the one representing workers at Saturn have several features that differentiate them from enterprise unions in Japan. First, the Saturn local union is part of the UAW international union. Traditionally, UAW contracts are negotiated company wide (i.e., a national contract covers all of GM’s facilities, another (very similar) national contract covers Ford workers, etc. Each plant negotiates a local supplement to the national contract covering work rules specific to that operation. Saturn deviates from this arrangement by having its own collective bargaining contract separate from the national agreement. However, the local union is bound by the UAW constitution and the international negotiates with the Saturn Corporation and assigns a representative to oversee the Saturn local. This international representative sits on the Strategic Advisory Council at Saturn. The question, therefore, does this structure allow the UAW local at Saturn to serve as the functional equivalent of a Japanese enterprise union?
Some features of the union's role appear to be functionally equivalent. First, union members' and officers' long term economic and job security interests are tightly tied to the survival, growth, and profitability of Saturn. By accepting a job at Saturn UAW members originally gave up transfer rights to other GM jobs. The vast majority, therefore, hope to complete their careers at Saturn. The compensation system at Saturn places a minimum of ten percent of union member's pay at risk, and provides a reward-sharing component that can (and has to date) produced bonuses when the firm meets negotiated performance targets. The terms of the 1992 contract renewal made the risk portion of pay contingent on completion of training and established a reward portion based on quality, output, and profitability goals that produced bonuses of $2,600 in 1992, $3,000 in 1993, $6,000 in 1994 and $10,000 in both 1995 and 1996.

Michael Bennett, the president of Saturn's local union from its inception through 1995 also articulated a view of the union that embodies the essence of the enterprise union perspective, namely, that long term security is a result of workers' contributions to firm performance, not a right conferred through contractual negotiations. He notes that Saturn's model of worker representation is based on the premise that long term employment security cannot be negotiated independent of the economic performance of the firm, nor solely through collective bargaining after all strategic decisions have been made by management. Rather, in his view employment security can only be achieved over the long run by both contributing to the economic performance of the firm and participating directly in business planning and decision-making processes to insure that worker interests are given appropriate consideration (Bennett, 1988).

Yet the Saturn local is a part of the UAW international union and carries over many of the traditions, structural features, and political processes that have been part of the UAW-GM
relationship for years. Some of these operate to limit the enterprise focus of the local union. For example, the decision over whether to invest in a second generation product (Mod 2 in Saturn language) (Hax, 1994) has been heavily influenced by GM-UAW interests. GM’s corporate executives and UAW national union leaders had to balance the desire of the local union at Saturn for expansion and further investment against the interests of other local unions competing for GM’s investment dollars and new job opportunities. The national union leaders took the position that it made little sense to expand operations at Saturn given the excess capacity that existed in other GM plants slated for closure as their product lines were retired. Eventually, the UAW national leadership’s views prevailed.

Contract negotiations provided another forum where local and national practices and norms have come into conflict over issues such as length of the workday and workweek, shift premiums, absenteeism policies, the role of seniority, the election versus joint selection of module advisors, and the election of union representatives to handle grievances. In each case, the debate over whether to “allow” or “accept” the local union’s proposal to depart from national patterns and practices centered around whether this would erode industry standards the union had fought hard to achieve and to enforce. Thus, the union at Saturn has deeper interests and roles in the enterprise that need to be balanced against its historic principles and the shared interest in maintaining high labor standards throughout the industry.

The local union also experienced considerable internal political turmoil and debate over its role in the partnership. The first president of the local was challenged by an opposition candidate
(and an opposition "caucus") in 1993 elections. Similar opposition arose prior to the 1996 elections, leading the incumbent caucus to separate the roles of MAC advisor and president which resulted in its retaining both positions. Survey data and our own observations at Saturn clearly showed a growing restiveness among rank and file members at Saturn throughout the 1992-96 time period. Our focus group interviews as well as the union’s internal member to member survey data found that much of the concern reflected a feeling that while the union was doing a good job of representing the memberships’ collective interests through the partnership, it was applying insufficient resources to its more traditional role as a representative of individual workers with particular concerns or grievances. As a result, the 1994 labor agreement provided for the election of a set of union representatives who would be responsible for handling member grievances in a fashion similar to the traditional grievance committee member role of other American unions (including the UAW). These data also showed that throughout this period a sizable majority of the membership continued to support the partnership and believed it was preferable to the traditional UAW-GM relationship, while they wanted opportunities for more individual representation of their specific concerns. Thus, the union implemented this change to achieve a better balance between its role as a management partner which enhanced collective representation, and its ability to achieve individual representation of workers’ specific interests.

Conflict and its Resolution

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4The UAW has a long history of "caucuses", i.e., groups that organize a slate of candidates for elected office. The "Reuther Caucus" was in control of the national union leadership positions from the election of Walter Reuther in 1948 to well after his death in 1970 (Lichtenstein, 1995). Currently there is an "administration" caucus and a "peoples" caucus vying for control within the local union at Saturn.
As the above examples begin to suggest, Saturn has experienced significant intraorganizational conflict over its history. Two features of these conflicts stand out. First, they seldom took the form of bilateral, labor-versus-management conflicts. Instead, they often involved multiple groups with different and shifting coalitions reflecting both different horizontal and vertical interest groupings. Some, as noted above, involved differences between the local and the national union. Some involve differences among managers and workers located in the Spring Hill manufacturing operations versus engineers located in Troy, Michigan. Some reflected differences across the three business units (plants) in Spring Hill. Second, neither these conflicts, nor those that did follow more traditional labor and management interest group lines, were resolved crisply through a single negotiated agreement or unilateral management decision. Instead, conflicts played out in a more extended set of discussions, often taking place in multiple forums until either a consensus emerged or a crisis forced a final decision. One example of this was a 1992 incident to protest what the union and its members perceived to be a weakening of management commitment to building and shipping high quality products. In this case the union members wore black armbands in the plant to symbolize their mourning of the changed management policy. Another occurred over whether to choose a GM plant as a supplier in the face of evidence indicating an outside, non-union supplier could deliver the part with newer technology at a more favorable price. Other sources of conflict arose over difficulties encountered in resolving production problems identified by work teams that required design changes subject to approval from engineers located in Michigan, differences of view over how much autonomy should be afforded the separate business units (plants), concerns over how to
evaluate the performance of module advisors (supervisors), and issues involving the terms of employment governing contract employees working in the cafeteria.

One fascinating conflict arose when the union leadership felt the company was moving too slow in responding to production problems identified by rank and file workers. To document the magnitude of these problems, the union conducted a survey of its members and presented management with a list of over 1,000 problems awaiting management attention. The presentation was made at an afternoon meeting in a large bay of the assembly plant with over two hundred workers and managers listening as workers, union representatives, and some of their management allies summarized the list of problems for Saturn's senior executives. As a result, a new problem-solving initiative was put in place and more engineers from Michigan were relocated to the Spring Hill facility to work on the accumulated list of problems.

Leadership Succession

Managing in a fashion that supports and sustains the type of partnership described above requires a leadership philosophy and style that is not often found or rewarded within American management. Saturn's president from 1986 to 1995, Richard (Skip) Lefauve described his approach to management as follows:

We walk the line between providing independence and autonomy and having interdependence recognized and honored. In this way, management and union balance one another, and the partnership brings to bear different needs for control. The union is in the room, not talked to about the decision afterwards. The process is inclusion, not consultation. Real value comes from shared ownership of the decision itself, which also produces better outcomes.

By 1996 both LeFauve, the the top management leader, and Bennett, the top union leader, who developed and sustained the partnership principles through Saturn's first decade were succeeded
by new leaders. While both successors espouse the principles of their predecessors, as will be noted below, they also face conflicting pressures from other executives within GM and the leadership of the international UAW to function in more traditional ways. Whether the partnership principles survive this succession is uncertain at this stage in the organization’s history.

External Relations

Propositions 9 and 10 suggest that firms designed around stakeholder principles would experience considerable opposition and resistance from both traditional business and labor groups, albeit for very different reasons. In fact, Saturn seems to be leading a rather schizophrenic existence in its external relations. On the one hand, its success in the marketplace and the receptivity of consumers and the general public to the “A Different Kind of Company, a Different Kind of Car” slogan it used in its advertising has made it very difficult for critics within GM to publicly criticize Saturn. Business Week (1992: 86) put it as follows:

Saturn’s sudden blast up the sales charts is heartening for it troubled parent. ... As foreign rivals continue to flood the market with new models, Saturn is meeting these head-on. Almost overnight, Saturn has become the highest quality American-made brand, with as few defects as Hondas and Nissans. It’s stunningly successful at satisfying the customer, trailing only Lexus and Infiniti, according to researcher J.D. Power & Associates. So the auto maker clearly has a winner on its hands. Now the question is: Will GM know what to do with it?

On the other hand, there is significant resistance within GM to Saturn. The same Business Week article cited above contained the following comments on the reaction of executives within GM’s Chevrolet unit:

Call it a case of bad sibling rivalry. While wunderkind Saturn Corp. basks in the limelight with its hot-selling new cars, Chevrolet has been shunted aside...."All that money that
went to Saturn during the past half-dozen years and the other GM divisions left Chevrolet naked.” (says a Chevrolet dealer) (p.90).

These views also limit the transfer of learning and innovations from Saturn to other parts of GM, even though one of Saturn’s stated objectives was to serve as a laboratory for experimentation and learning for the corporation. An anecdote illustrates this point. At a briefing of senior GM executives on the results of the network analysis we discussed how to get others in the company to learn from these data. Two comments illustrate the essence of the problem better than any others. One executive said:

It’s ironic but unfortunately true that Ford has learned more from Saturn than we have in GM.

Another said:

Is there some way you can present these data in a more generic form so that our managers won’t know they are from Saturn? Once they know you’re talking about Saturn, they’ll just tune you out and say, ‘they’re different.’

Resistance is equally strong within the UAW international leadership. As noted earlier, Saturn is identified with the leadership of Donald Ephlin, the UAW vice president who led the effort to get GM to invest in this project and led the campaign to get the UAW Executive Board to approve the controversial provisions of the initial Saturn labor agreement. Ephlin subsequently retired from the UAW in part because of differences in philosophy with other top UAW leaders. The current president of the UAW has been critical of Saturn and opposes adopting the Saturn contract to other plants. This is one reason why GM decided to build the second generation Saturn in another GM plant rather than approve the request from Spring Hill to expand and build the new model there. The UAW international leaders argued against expanding the Spring Hill facility and favored an alternative proposal to build vehicles under the Saturn nameplate in another
plant that was scheduled to have excess capacity. The company and union decided on this alternative and subsequently negotiated a local contract for this facility that embodies some of the teamwork principles found at Saturn (and a considerable number of other UAW local agreements) but kept the local agreement under the provisions of the national contract. The effect is to further isolate the Saturn local union in Spring Hill and to limit the diffusion of Saturn's version of a labor-management partnership.

Saturn’s visibility also makes it subject to plaudits and criticisms from external sources. For example, the Work in America Institute, a national non-profit organization devoted to promoting new models of labor-management cooperation and work innovation, has sponsored an on-going stream of study tours to Saturn for national and international groups. On the other hand, Saturn was consciously not invited to testify before a national commission charged with the task of updating labor law because neither the national level labor nor the employer leaders who were consulted on which organizations should testify wanted to showcase Saturn. It was too controversial within both labor and business circles.

Finally, although there have not yet been serious legal challenges (apart from the initial challenge to the pre-hire union recognition agreement) to Saturn's labor-management practices, some of them clearly are inconsistent with the National Labor Relations Act. For example, the deep involvement of workers and union officers in managerial roles is inconsistent with the doctrine that there is to be a clear line of demarcation between bargaining unit members (workers) and supervisors (managers). Extending voluntary recognition to the union before any employees were hired is generally illegal under labor law, even though the National Right to Work Committee lost this argument in this particular case.
These are only isolated examples of the broader reality: the Saturn partnership is the most controversial innovation in labor-management relations and organizational governance found in America today. It has ardent supporters and vigorous critics. It challenges deeply ingrained ideological principles, traditions, and legal doctrines. It therefore serves as a symbol for a “different kind of company” with all the advantages and risks attendant to such a position. Saturn’s ultimate fate probably depends less on its objective performance than on how these external and internal political dynamics are managed and play out (Hancke and Rubinstein, 1995). But the lesson we draw from this highly charged debate is that stakeholder firms that embody similar features to Saturn’s that increase employee influence and involve collective representation will evoke similar intense debates. For these organizational forms to be widely adopted and to survive will require changes in both corporate and labor law and considerable shift in power and ideology in society.

Discussion

Saturn is an evolving organization in which employees collectively have taken on many of the characteristics of critical stakeholders and the organization’s structure and governance process were designed in ways necessary for a stakeholder firm to succeed. The company can only meet the objectives of its shareholders if employees contribute their knowledge to managing and improving the production process. Our analysis of the co-management process documents at least one aspect of the union-management partnership that contributes to the performance of the enterprise. However, the long term survival of this type organizational form is far from certain. It remains vulnerable to several external threats in the American environment: (1) ideological opposition to the expanded role of the union in decision-making and organizational governance,
and (2) a legal environment that discourages employees and their representatives from participating in the management and governance processes of the firm.

In addition to these external threats, Saturn could eventually fail if it does not produce sufficient financial returns to GM and/or it may lose the autonomy from the international union and national labor contract that our analysis suggests is critical to its survival as a stakeholder form of organization. Continuity of support through successive CEOs and international union presidents and officers is far from guaranteed. Within Saturn, the failure to manage conflicts effectively could also threaten the viability of the partnership by weakening employee willingness to contribute their discretionary efforts to the firm.

Although our analysis focused on employees as stakeholders, Saturn's design also incorporates and depends on other stakeholders as well. For example, the company's marketing strategy, captured in its advertising slogan, "A Different Kind of Company, a Different Kind of Car," places tremendous emphasis on achieving and maintaining high levels of customer satisfaction and loyalty. Thus Saturn carries over the same partnership principles that govern employee relations into the relationships with its retailers. The trust and commitment embedded in the retailer-producer partnership is essential for retailers to make another key part of the company's marketing strategy work, that is its fixed price, "no haggle" sales practice. To avoid the temptation of an individual dealer to defect from this strategy requires overcoming a classic prisoner's dilemma bargaining problem that can only be resolved and sustained by structuring the incentives and the culture of the relationship in ways that allow both the manufacturer and the retailers to prosper. Similarly, Saturn has moved toward single source suppliers linked to the company with long term contracts and thus suppliers become a more critical resource to the
company than in the more traditional settings where the company purchases parts from multiple competing vendors. Thus, the stakeholder principles and propositions developed here appear to apply these relationships as well.

Analysis of the full range of stakeholders embedded in this organization lies well beyond the scope of our research. Yet by focusing on employees as stakeholders in this case we have derived a number of generic propositions for a stakeholder model of the firm that might apply to other stakeholders as well. We encourage their examination and testing by other organizational researchers.

It is not clear to us that Saturn or other organizations that attempt to adopt this organizational form can survive in the present environment. Yet, regardless of Saturn’s future, we expect to see increasing numbers of organizations adopt some or all of the features seen here as human capital and other non-financial assets rise in importance in organizations and begin to challenge the supremacy of finance capital in shaping organizational strategies, designs, and governance arrangements. If this is true, organizational theorists and practitioners will face a tall order in rethinking basic concepts and practices and engaging the debates that lie ahead. Yet if the social critiques of the American corporation and employment relationship outlined at the start of this paper are valid, this tall order needs to be addressed both by the analytical research community and by the policy makers and organizational leaders who will shape future organizations. We hope this paper sparks debate within the organizational theory research community over these issues so that if and when the policy and organizational debates begin in earnest, we will have something substantive to contribute.
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### Table 1

**Partnership Evolution and Development**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>GM Small Car Study</td>
</tr>
<tr>
<td>1983</td>
<td>Joint GM/UAW “Committee of 99” Study World Class Manufacturing</td>
</tr>
<tr>
<td>1985</td>
<td>Memorandum of Agreement on Saturn Corporation</td>
</tr>
</tbody>
</table>
| 1986 | Joint Supplier Selection Begins  
First UAW Hiring |
| 1987 | Approval of Initial $1.9 Billion Saturn Capitalization by GM Board of Directors |
| 1988 | Addition of Jointly Selected UAW Module Advisors as Partners |
| 1989 | Addition of Jointly Selected UAW Crew Coordinators and Staff Partners |
| 1990 | First Car off the Line  
First Local Union General Election |
| 1991 | Second Crew Added  
First Member-to-Member Survey  
Agreement Renewal Process  
Withdrawal of UAW International Representative From SAC |
| 1992 | First Election of Team Leaders (Work Unit Counselors)  
Second Member-to-Member Survey |
| 1993 | Local Referendum on Partnership  
Second Local Union Election  
Third Member-to-Member Survey |
| 1994 | Saturn Integrated into GM’s Small Car Group  
Skip LeFauve Promoted to Head Small Car Group  
Agreement Renewal Process Results in Establishment of 14 Elected Crew Coordinators |
| 1995 | Election of 14 Crew Coordinators with Authorization to File Grievances  
Don Hudler, former VP Marketing replaces LeFauve as Saturn President |
| 1996 | Mike Bennett Resigns as Local Union President, Retaining Position as MAC Advisor  
Joe Rypkowski Succeeds Bennett, becoming the 2nd of President of UAW Local 1853  
Bennett and Rypkowski both Win in Third Local Union Election  
GM Announces Saturn Expansion to Wilmington Assembly Plant |
<table>
<thead>
<tr>
<th>Saturn’s Organizing Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat people as a fixed asset. Provide opportunities for them to maximize their contributions and value to the organization. Provide extensive training and skill development to all employees.</td>
</tr>
<tr>
<td>The Saturn organization will be based on groups which will attempt to identify and work collaboratively toward common goals.</td>
</tr>
<tr>
<td>Saturn will openly share all information including financial data.</td>
</tr>
<tr>
<td>Decision making will be based on consensus through a series of formal joint labor-management committees, or Decision Rings. As a stakeholder in the operation of Saturn the UAW will participate in business decisions as a full Partner including site selection and construction, process and product design, choice of technologies, supplier selection, make-buy decisions, retail dealer selection, pricing, business planning, training, business systems development, budgeting, quality systems, productivity improvement, job design, new product development, recruitment and hiring, maintenance, and engineering.</td>
</tr>
<tr>
<td>Self-managed teams or Work Units will be the basic building blocks of the organization.</td>
</tr>
<tr>
<td>Decision making authority will be located at the level of the organization where the necessary knowledge resides, and where implementation takes place. Emphasis will be placed on the work unit.</td>
</tr>
<tr>
<td>There will be a minimum of job classifications.</td>
</tr>
<tr>
<td>Saturn will have a jointly developed and administered recruitment and selection process, and work units will participate in hiring their own team members. Seniority will not be the basis for selection, and the primary recruiting pool will consist of active and laid off GM/UAW employees.</td>
</tr>
<tr>
<td>The technical and social work organization will be integrated.</td>
</tr>
<tr>
<td>There will be fewer full time elected UAW Officials and fewer Labor Relations personnel responsible for contract administration.</td>
</tr>
<tr>
<td>Saturn’s reward system will be designed to encourage everyone’s efforts toward the common goals of quality, cost, timing and value to the customer.</td>
</tr>
</tbody>
</table>

*Source: Saturn's 1985 Collective Bargaining Agreement*
Table 3

Communications and Quality Improvement

<table>
<thead>
<tr>
<th>Overall Centrality</th>
<th>High Quality Improvement</th>
<th>Low Quality Improvement</th>
<th>T-statistic</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rep Advisor</td>
<td>21.5</td>
<td>15.8</td>
<td>2.117**</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(8.13)</td>
<td>(6.19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Rep Advisor</td>
<td>19.2</td>
<td>17.9</td>
<td>0.508</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.13)</td>
<td>(4.99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Centrality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep Advisor</td>
<td>8.7</td>
<td>5.4</td>
<td>2.751**</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(4.02)</td>
<td>(2.11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Rep Advisor</td>
<td>4.4</td>
<td>4.1</td>
<td>0.478</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.45)</td>
<td>(1.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Communications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep Advisor</td>
<td>4.1</td>
<td>1.7</td>
<td>2.789**</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>(2.08)</td>
<td>(1.41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Rep Advisor</td>
<td>1.5</td>
<td>1.9</td>
<td>0.844</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.32)</td>
<td>(1.11)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Communications and First Time Quality

<table>
<thead>
<tr>
<th>Overall Centrality</th>
<th>High FTQ</th>
<th>Low FTQ</th>
<th>T-statistic</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rep Advisor</td>
<td>18.62</td>
<td>11.43</td>
<td>2.897***</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(6.98)</td>
<td>(5.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Rep Advisor</td>
<td>14.47</td>
<td>15</td>
<td>0.232</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6.04)</td>
<td>(5.79)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Centrality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep Advisor</td>
<td>7.438</td>
<td>6.125</td>
<td>1.09</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(3.86)</td>
<td>(2.87)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Rep Advisor</td>
<td>4.647</td>
<td>3.727</td>
<td>1.505</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.41)</td>
<td>(1.67)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Density</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep Advisor</td>
<td>0.102</td>
<td>0.059</td>
<td>4.006***</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(0.036)</td>
<td>(0.024)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Rep Advisor</td>
<td>0.091</td>
<td>0.104</td>
<td>1.025</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td>(0.033)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Communications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep Advisor</td>
<td>3.46</td>
<td>1.76</td>
<td>2.170**</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>(2.15)</td>
<td>(1.44)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Rep Advisor</td>
<td>2.21</td>
<td>1.12</td>
<td>2.603**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.13)</td>
<td>(1.05)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* significant at the .10 level
** significant at the .05 level
*** significant at the .01 level

(standard deviations in parentheses)
Figure 1. Communications Density Among Module Advisors

Saturn Site-Wide

T: 2.413**
N: 114
Group: Non-Rep  Rep
Density: 23.3%  28.6%

Vehicle Systems (VS)  Body Systems (BS)  Powertrain (PT)

<table>
<thead>
<tr>
<th>T</th>
<th>N</th>
<th>Group</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>VS</td>
<td>3.122***</td>
<td>52</td>
<td>Non-Rep</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rep</td>
</tr>
<tr>
<td>BS</td>
<td>1.501</td>
<td>38</td>
<td>Non-Rep</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rep</td>
</tr>
<tr>
<td>PT</td>
<td>0.066</td>
<td>24</td>
<td>Non-Rep</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rep</td>
</tr>
</tbody>
</table>

* significant at the .10 level
** significant at the .05 level
*** significant at the .01 level