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Structural Holes, CEOs, and Informational Monopolies: The Missing Link in Corporate Governance

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THE MISSING LINK IN CORPORATE GOVERNANCE[*]

Lawrence E. Mitchell[†]

Where was the board? This is the question that has resounded throughout the business and scholarly communities, as well as the public more broadly, as scandals from Enron to WorldCom and more have come to light over the last several years. Traditional corporate governance scholarship, as well as generally accepted legal principles, tell us that the board is the ultimate corporate monitor, the failsafe for managerial excesses and the circuit breaker in times of corporate crisis.[1] But case after case of corporate scandal, as well as garden-variety stockholder litigation, reveals that boards were

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1 *See, e.g.*, Edward S. Adams, *Corporate Governance after Enron and Global Crossing: Comparative Lessons for Cross-National Improvement*, 78 IND. L. J. 723, 725-29 (2003); Richard S. Booth, *Form and Function in Business Organizations*, 58 BUS. LAW. 1433, 1448 (2003); Michael P. Dooley, *Two Models of Corporate Governance*, 47 Bus. Law. 461, 527 (1992); Martin Lipton, *Corporate Governance in the Age of Finance Corporatism*, 136 U. PA. L. REV. 1, 6 (1987); *see generally* Robert W. Hamilton, *Corporate Governance in America 1950-2000: Major Changes But Uncertain Benefits*, 25 J. CORP. L. 349 (2000); ADOLPH A. BERLE & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY (1932).

unaware of internal corporate misbehavior until matters reached the point of crisis.[2]

The board may not be the culprit. Many of the scandals, such as CEO Dennis Kozlowski's use of Tyco as his personal piggybank, senior executives and the CEO of WorldCom's fictionalized financial statements, Andy Fastow's enormous profits at Enron's expense under CEO Jeff Skilling, and a host of shareholder suits, suggest that the board may have been ignorant of what was occurring in the corporation beneath them, not necessarily because they weren't doing their jobs, but because they were *unable* to do their jobs. The relevant information was hidden from them or falsified. The implication is that often it was senior executives, and especially the CEO, who were at fault—not the board.[3]

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[2] Obviously, boards in litigation over corporate scandals have a conflict of interest with CEOs and other corporate managers who they are likely to blame, and claim their own ignorance, which poses some problem of their credibility. But the issue of inadequately informed boards has been sufficiently common through modern corporate history that substantial board ignorance of managerial shenanigans seems like a reasonable assumption.

[3] Certainly from the criminal perspective of these scandals it is the CEO and senior executives who are being indicted and convicted, not the board. *See, e.g.*, Press Release, United States Dep't of Justice, Four Former Qwest Communications Executives Indicted for Fraud (Feb. 25, 2003), *available at* http://www.usdoj.gov/opa/pr/2003/February/03_crm_112.htm (last visited Feb. 23, 2005) (announcing the indictment of four executives at Qwest Communications, including Qwest's former Chief Financial Officer for Qwest's Global Business Unit; a senior vice president, another vice president, and Qwest's assistant controller).

TYCO: This February, the former Chief Financial Officer of Tyco International, Mark H. Swartz, was indicted on tax evasion charges. The indictment alleges that Swartz illegally evaded nearly $5 million in personal federal income taxes. Brooke A. Masters, *Tyco Official Indicted on More Charges*, WASH. POST, Feb. 20, 2003, at E4.

DYNEGY: In January, the U.S. Attorney's Office for the Southern District of Texas obtained a seven-count indictment charging Michelle Maria Valencia, a former senior natural gas trader with Dynegy Marketing and Trade, with filing bogus reports to the Federal Energy Regulatory Commission that are used to calculate the "index" price of natural gas. *Record Home Sales*, WASH. POST, Jan. 28, 2003, at E2.

EL PASO: In Houston last December, a federal grand jury returned an indictment against Todd Geiger, an energy trader at El Paso Corporation, on charges of falsely reporting price information to the Federal Energy Regulatory Commission and wire fraud as part of a scheme to manipulate energy prices. *Productivity, Services Grow*, WASH. POST, Dec. 5, 2002, at E2.

MERCURY FINANCE: In December, the U.S. Attorney's Office for the Northern District of Illinois obtained an indictment of Bradley Vallem, the former treasurer of the now-defunct Mercury Finance Company, on bank fraud and wire fraud charges in connection with his participation in a scheme to overstate revenue and hide losses of more than $30 million. John Schmeltzer, *Mercury Finance ex-CEO indicted; Lawyer says Client to Plead Not Guilty*, CHI. TRIB., Feb. 3, 2005, at C1.

COMMERCIAL FINANCIAL SERVICES: In December, the U.S. Attorney's Office for the Northern District of Oklahoma and the Justice Department's Criminal Division obtained the indictment of Commercial Financial Services' former CEO William

This is particularly striking in light of the fact that corporate governance scholarship, at least since the time of Berle and Means, has focused on the board as the corporate constituent best situated to manage or monitor the corporation's affairs and overcome the intrinsic conflict of interest that arises when corporate managers have access to the shareholders' money. That scholarship, as well as a variety of reform efforts and a substantial amount of case law, has viewed board structure as the solution to what has become known, for the last thirty years, as the "agency problem" in corporate governance.[4]

Drawing on economic sociology, I argue that corporate law reform efforts have focused on the wrong actors: while the law's principal interest is board governance, it should instead focus on the CEO and how the relationship between internal corporate structures and board structures provide opportunities for misconduct.[5] While the CEO is important to the initial inquiry, the real problem goes even deeper; the focus of corporate law should be on the CEO and the entire senior

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Bartmann for mail fraud, wire fraud, bank fraud and money laundering. *Fallen Firm's CEO Faces Fraud Claims in Federal Indictment*, CHI TRIB., Dec. 13, 2002, at D3.

INFORMIX: In November, the U.S. Attorney's Office for the Northern District of California obtained the indictment of former Informix CEO Phillip White on charges of securities, mail and wire fraud in connection with financial accounting fraud at the database software company. Matt Richtel, *Finding Wrongs, Through the Prism of Silicon Valley*, N.Y. TIMES, Dec. 30, 2002, at C1.

PEREGRINE SYSTEMS: In November, the U.S. Attorney's Office for the Southern District of California obtained the conviction by guilty plea of Ilse Cappel, an assistant treasurer at Peregrine Systems, a San Diego software company. Cappel pleaded guilty to a charge of conspiracy to commit bank fraud. Don Bauder, *White-Collar Crimes Won't Elude Justice*, SAN DIEGO TRIB., Nov. 23, 2002, at C1.

ENRON: Four former Enron employees and former Arthur Andersen accountant David Duncan have pleaded guilty to various charges and are cooperating with investigators. Former Chief Financial Officer Andrew Fastow has been indicted on 78 counts, and three former British bankers have been indicted in connection with an Enron deal. *2002 Will Be Remembered as the Year Executives Paid the Price for Cooking Their Books, Wall Street Shame*, SEATTLE TIMES, Dec. 29, 2002, at E1.

[4] *See* Laura Lin, *The Effectiveness of Outside Directors as a Corprate Governance Mechanism: Theories and Evidence*, 90 NW. U.L. REV. 898 (1996); A.L.I., PRINCIPLES OF CORPORATE GOVERNANCE: ANALYSIS AND RECOMMENDATIONS §3A.01 (1992). *See also* Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 955 (Del. 1985).

[5] Bebchuk, Fried, and Walker understand the role of CEO power in the context of compensation issues. *See* Lucien Ayre Bebchuk et al., *Managerial Power and Rent Extraction in the Design of Executive Compensation*, 69 U. CHI. L. REV. 751, 753-61 (2002); LUCIAN BEBCHUK & JESSE FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION (2004); Donald C. Langevoort, *The Human Nature of Corporate Boards: Law, Norms, and the Unintended Consequences of Independence and Accountability*, 89 GEO. L.J. 797, 797-802 (2001) (explaining the source of bargaining defects in analyzing the role of the CEO in relation to board structure).

management structure of the corporation, examining the relationship of that structure to the board's ability to perform. Questions of whether the board should manage or monitor,[6] whether its role is political,[7] whether it should be concerned with the provision of resources as the most efficient way to limit agency costs,[8] or as a mediator of team production,[9] whether the board is subject to structural bias,[10] whether it is reliable because of its members conflicting interests,[11] or whether the board is subject to the perils of groupthink,[12] all take a back seat to this fundamental structural question. Focusing on the board without paying attention to these structural characteristics of the corporation will not change the status quo, no matter how dramatic the reforms.[13]

I have based my conclusion on the combination of two interrelated hypotheses, which, taken together, offer powerful insight into the role of corporate structure. They are:

1. Corporations that have inside boards will have a weak CEO (one who is dominated by the board); and

2. Corporations that have independent boards will have a strong CEO (one who dominates the board).

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[6] *See* Hamilton, *supra* note 1.

[7] *See* Anup Agrawal & Charles R. Knoeber, *Do Some Outside Directors Play a Political Role?*, 44 J.L. & ECON. 179 (2001).

[8] *See* Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure*, 31 J. FIN. ECON. 305 (1976).

[9] *See* Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 249 (1999).

[10] *See* James D. Cox & Harry L. Munsingner, *Bias in the Boardroom: Psychological Foundations and Legal Implications of Corporate Cohesion*, 48 LAW & CONTEMP. PROBS. 83, 84-85 (1985).

[11] *See* Eugene F. Fama & Michael C. Jensen, *Separation of Ownership and Control*, 26 J.L. & ECON. 301 (1983).

[12] *See* Marleen O'Connor, *The Enron Board: The Perils of Groupthink*, 71 U. CIN. L. REV. 1233 (2002-2003).

[13] Leading corporation law treatises and casebooks make little or no mention of CEOs and other senior officers except for discussion of the sources and scope of their authority. *See, e.g.*, JEFFREY D. BAUMAN ET AL., CORPORATIONS LAW AND POLICY: MATERIALS AND PROBLEMS (5th ed. 2003); JAMES D. COX ET AL., CORPORATIONS (1997); FRANKLIN A. GEVURTZ, CORPORATION LAW (2000); MELVIN ARON EISENBERG, CORPORATIONS AND OTHER BUSINESS ORGANIZATIONS: CASES AND MATERIALS (8th ed. 2000); WILLIAM A. KLEIN ET AL., BUSINESS ASSOCIATIONS: CASES AND MATERIALS ON AGENCY, PARTNERSHIPS, AND CORPORATIONS (5th ed. 2003). Atypical is a brief discussion of the practical role of the CEO in modern corporate practice in ROBERT W. HAMILTON & JONATHAN R. MACEY, CASES AND MATERIALS ON CORPORATIONS INCLUDING PARTNERSHIPS AND LIMITED LIABILITY COMPANIES 701-05 (8th ed. 2003).

While I acknowledge that these hypotheses are contrary to virtually all legal wisdom on the subject,[14] the theoretical construct I present suggests their power. Assuming my hypotheses are correct, the traditional scholarly focus on the board without attention to the CEO and senior management is

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[14] Stephen M. Bainbridge, *Director Primacy in Corporate Takeovers: Preliminary Reflections*, 55 STAN. L. REV. 791, 810 (2002) ("[T]he Delaware courts take the board's distinct role quite seriously, especially with respect to its independent members."); James D. Cox, *Managing and Monitoring Conflicts of Interest: Empowering the Outside Directors with Independent Counsel*, 48 VILL. L. REV. 1077 (2003) ("The important role that independent directors have in monitoring and managing conflicts of interest reflects our societal commitment to the power of the outside director. . . . Today, in the post-Enron era, the outside director continues to be the focus of corporate governance reforms."); Lynne L. Dallas, *The Multiple Roles of Boards of Directors*, 40 SAN DIEGO L. REV. 781, 787 (2003) ("Perhaps the most significant trend in board governance in the United States in the last twenty years has been the increase in the number and proportion of outside directors . . . ."). Dallas proposes a two-tiered board model with a mixed board and outside board that, while this paper does not endorse at the moment, does intuit some of the conclusions I reach. Delaware Chancellor William Chandler recently has expressed his view that courts should not "rely reflexively" on a director's status as inside or independent in according deference or not, but rather should take matters case by case. William B. Chandler III, *On the Instructiveness of Insiders, Independents, and Institutional Investors*, 67 U. CIN. L. REV. 1083 (1999).

The principal area in which legal scholars and, especially, economists, have noticed the increased power of the CEO is in the realm of compensation. Bebchuk et al., *supra* note 5, at 766; Robert A. Lambert et al., *The Structure of Organizational Incentives*, 38 ADMIN. SCI. Q. 438 (1993); Brian G. M. Main et al., *The CEO, The Board of Directors, and Executive Compensation: Economic and Psychological Perspectives*, 4 INDUS. AND CORP. CHANGE 293 (1995); Kevin J. Murphy, *Explaining Executive Compensation: Managerial Power versus the Perceived Cost of Stock Options*, 69 U. CHI. L. REV. 847 (2002); Edward J. Zajac & James D. Westphal, *Accounting for the Explanations of CEO Compensation: Substance and Symbolism*, 40 ADMIN. SCI. Q. 283 (1995). These studies generally focus on market imperfections relating to the failure of outside boards and consulting firms to understand the true cost of options. *See, e.g.*, Murphy, *supra.* They fail to understand the critical importance of structure which, if misaligned, can hamstring even the most sophisticated boards and consultants. *But see* Ann K. Buchholtz et al., *Are Board Members Pawns or Watchdogs?*, 23 GROUP & ORG. MGMT. 6 (1998) (finding correlations between increased CEO strength and increased board strength).

There have been dissenting voices from time to time over the wisdom of independent boards as a general reform solution, some of which acknowledges the role of the CEO in either manipulating or otherwise disempowering independent boards. *See, e.g.*, Stephen M. Bainbridge, *Independent Directors and the ALI Corporate Governance Project*, 61 GEO. WASH. L. REV. 1034 (1993) (questioning the value—at least the universal value—of independent directors); Victor Brudney, *The Independent Director—Heavenly City or Potemkin Village?*, 95 HARV. L. REV. 597 (1982); Jill E. Fisch, *Taking Boards Seriously*, 19 CARDOZO L. REV. 265 (1997); Daniel R. Fischel, *The Corporate Governance Movement*, 35 VAND. L. REV. 1259, 1282 (1982); Roberta S. Karmel, *The Independent Corporate Board: A Means to What End?*, 52 GEO. WASH. L. REV. 535 (1984) (questioning the monitoring model of the board based on outside directors proposed by the ALI); Langevoort, *supra* note 5. The explanations as to the uncertain benefits of independent boards vary. The virtue of the approach I take is its theoretical coherence. I recognize, at the same time, that theoretical coherence may result in oversimplification; qualifications to my theory are presented *infra* notes 111-17 and accompanying text.

misdirected. At the very least, my hypotheses suggest that advocacy of independent boards,[15] which has been the trend over the last thirty years,[16] is simply wrongheaded.[17]

This focus on the board has led corporate law scholars (with several notable exceptions[18]) to ignore the extraordinary increase in CEO power.[19] Focusing on corporate structure leads us to conclude that the increase in CEO power is the result of increasing board independence.[20] At the same time, evidence

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[15] Standard terminology divides directors into three categories: inside directors, who are officers of the company, affiliated directors (or "gray directors"), who have some business relationship with the company (investment bankers and lawyers are typical examples), and independent directors, who have no relationship with the company other than their service as directors. Sanjai Bhagat & Bernard Black, *The Non-Correlation Between Board Independence and Long-Term Firm Performance*, 27 J. CORP. L. 231, 239 (2002). My argument focuses principally on the problem of independent directors, although affiliated directors suffer from problems similar to the ones I shall examine if to a lesser degree.

[16] Bhagat and Black describe the "conventional wisdom" that only independent directors can be effective monitors. Bhagat & Black, *supra* note 15, at 232. The advocacy of this "conventional wisdom" has led to regulatory and quasi-regulatory requirements of increased outside directors, most recently the Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745, which requires outside directors on the audit committee, and the New York Stock Exchange's well-publicized rule revisions which require listed corporations to have a majority of outside directors. New York Stock Exchange, *Corporate Rule Proposals Reflecting Recommendations from the NYSE Report of the Exchange Corporate Accountability and Listing Standards Committee as Approved by the NYSE Board of Directors*, Aug. 1, 2002, § 303, at A1.

[17] Certainly this is the implication of Bhagat and Black's work. Bhagat & Black, *supra* note 15, at 233.

[18] *See* Bebchuk et al., *supra* note 5, at 783-95; Langevoort, *supra* note 5.

[19] Westphal, in an empirical study, concludes that CEOs have developed behavioral patterns that counteract the greater potential board control associated with board independence. *See* James D. Westphal, *Board Games: How CEOs Adapt to Increases in Structural Board Independence From Management*, 43 ADMIN. SCI. Q. 511, 529-31 (1998). Klein, consistent with other studies, finds little relationship between corporate performance and board structure. However, consistent with the argument I present here, she does note that the presence of insiders on finance and investment committees is correlated with superior corporate performance, consistent with the notion that insiders provide valuable information to the board. April Klein, *Firm Performance and Board Committee Structure*, 41 J.L. & ECON. 275 (1998). Robert W. Hamilton argues that in the 1950s much of the work of the board was done by the CEO. Hamilton, *supra* note 1, at 349-50.

To a limited extent, the recently enacted Sarbanes-Oxley Act seems to intuit the importance of the CEO, requiring his certification of the corporation's financial statements and thereby increasing his incentives for integrity and careful monitoring through the device of federal sanctions for his failure. This seems more sensitive to the identity of the real culprits in the corporate scandals that led to the Act's passage, but it doesn't really follow through on the implications of this intuition. Moreover, following traditional reform approaches, it also places great importance on the board, and particularly the importance of an independent audit committee.

[20] Bebchuk, Fried and Walker acknowledge the increase in recent years in the number and power of independent directors. Bebchuk et al., *supra* note 5, at 773. That the level of the CEO's power can be seen as along a continuum should not be surprising. "Organizations are information processors," and the critical variable is the

shows that the increasing independence of boards has, predictably, decreased trust between CEOs and boards.[21]

The wisdom of board independence has come under serious question. Bhagat and Black, in an important empirical study, examine a thirty year trend toward greater board independence during which "the composition of public company boards of directors has changed radically . . . ."[22] This study provides striking evidence that independent boards not only fail to improve corporate performance, they may in fact make it worse.[23] While Bhagat and Black speculate as to the causes of this phenomenon, by their own admission they are unable to fully explain it, and continue to suggest remedies that focus on board reform.

The theory set forth here does explain the phenomenon observed by Bhagat and Black. In Part I of this article, I will explain the significance of my theory to corporate law reform efforts. Parts II and III will explicate the underlying theory. Part IV will demonstrate how my hypotheses explain the direct

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CEO's position in the networks of information flows. *See* Nitin Nohria & James D. Berkley, *The Virtual Organization: Bureaucracy, Technology, and the Implosion of Control*, *in* THE POST-BUREAUCRATIC ORGANIZATION: NEW PERSPECTIVES ON ORGANIZATIONAL CHANGE 108, 118 (Charles Hecksher & Anne Donnellon eds., 1994)

[21] Ranjay Gulati & James D. Westphal, *Cooperative or Controlling? The Effects of CEO-Board Relations and the Content of Interlocks on the Formation of Joint Ventures*, 44 ADMIN. SCI. Q. 473, 477-79 (1999); In one of the relatively few law review articles to challenge the conventional wisdom, Donald C. Langevoort argues that increased board independence decreases trust and interferes with effective communication. Langevoort, *supra* note 5, at 800. Westphal's findings of manipulative CEO behavior certainly justify this lack of trust on the part of the board. Westphal, *Board Games*, *supra* note 19, at 530-31.

[22] Bhagat & Black, *supra* note 15, at 238. They note that in 1970, there appeared to be on average 54% inside directors, 26% outside directors, and 20% independent directors in the sample set studied. By 1991, they report that the median corporation in their sample set of 934 of the largest corporations in the United States had 23% inside directors, 13% outside directors, and 64% independent directors. Finally, they note that by 1997, the mean number of inside directors at Fortune 500 corporations was 2, and that 56% of the S&P 500 firms "had only one or two inside directors." *Id.* at 238. The trend is rather clear.

[23] *Id*. *See also* Anup Agrawal & Charles R. Knoeber, *Firm Performance and Mechanisms to Control Agency Problems Between Managers and Shareholders*, 31 J. FIN. & QUANTITATIVE ANALALYSIS 377 (1996) (for an earlier study suggesting that too many outsiders correlate with poorer corporate performance); Sanjai Bhagat & Bernard Black, *The Uncertain Relationship Between Board Composition and Firm Performance*, 54 BUS. LAW. 921 (1999) (literature survey showing inconclusive evidence of the effect of independent boards); April Klein, *Firm Performance and Board Committee Structure*, 41 J.L. AND ECON. 275 (1998) (concluding that independent board committees don't improve corporate performance). For an earlier survey of studies concluding that different kinds of directors make a difference in given situations, see also Laura Lin, *The Effectiveness of Outside Directors As a Corporate Governance Mechanism: Theories and Evidence*, 90 NW. U. L. REV. 898 (1996).

relationship between increased board independence and CEO power, and Part V will discuss the extent to which managers a level or two below the CEO might also be in a structural position to manipulate both the board and the CEO.

Following this discussion, Part VI will address a second independent variable that might have an important magnifying effect on CEO power: the bureaucratic organization of the corporation itself. While corporate reformers have been advocating independent boards, important changes in corporate structure have taken place. Large public corporations, once rigidly hierarchical, have, at least in some industries (and sometimes within industries), substantially shifted to more horizontal management systems. This horizontal management structure magnifies the strength of the CEO, whether the board is an inside board or an independent one. Because this conclusion is still tentative, however, I reserve this discussion for the end of the article. Part VII will conclude with some possible directions for further research and reform.

I. THE POWER OF THE THEORY

My hypotheses derive from a subgenre of economic sociology and specifically a subgenre of network theory, known as the theory of structural holes.[24] I will reserve a more detailed explanation of structural hole theory for the next section. For now, I will briefly define and illustrate structural holes and suggest why structural hole theory holds such great promise for corporate scholarship, even as it reveals the importance of focusing on internal corporate structures.[25]

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[24] Network analysis is a genre of sociology that, contrary to typical sociological analysis which begins from studies of individuals and classifies them into social structures by grouping their characteristics, instead begins with the structure as the unit of analysis, representing social structures as networks and actors as nodes within those networks, in order to identify the constraints on individual behavior arising from the social structure. BARRY WELLMAN & S.D. BERKOWITZ, SOCIAL STRUCTURES: A NETWORK APPROACH 3, 4 (1988).

[25] Let me make it clear at the outset that the theory I am applying is an adaptation of the essential aspects of structural hole theory. Structural hole theory, as presented by Burt, while an intuitively apparent idea, has enormously complexity and applicability, and Burt ranges from explanations of market behavior to a theory of the firm to a theory of personality. The adaptation of the theory I apply takes the basic defining aspects of structural holes and implicitly combines it with Granovetter's weak ties theory (to which it is intimately related) for the purpose of creating a hybrid theory that allows us to take a broad view of corporate structure and its potential deformities.

To understand structural holes, one must begin with the proposition that people are socially organized into distinct networks. Sometimes networks overlap through common members. Sometimes they are completely distinct, with no ties to each other. When two networks are distinct and lack ties to each other, the gap between them is a structural hole. The structural hole provides an opportunity for a person to establish contact with each of the two networks, bridging the structural hole and giving him or herself informational and control advantages.

Think, for example, of a university's anthropology department and its sociology department. Assume that the departments are relatively small, and that the members of the respective departments know each other reasonably well, at least as colleagues. Each department is a single network. Its members have significant professional and, perhaps, social ties to one another. It is likely, however, given the nature of the two disciplines, that at least several members of each department will know each other well. The two networks overlap through these associations, and while this does not destroy the integrity of each department as a network, it does connect the networks so that no structural holes exist. This connection provides members of each department who are unacquainted with members of the other department with some substantial information (gossip or scholarly) about what is going on in the other department, through colleagues who bridge the networks.

Now consider the same university's physics department and its law school. As with the preceding example, each division of the university forms a network. It is unlikely (with the possible exception of chance acquaintance on university committees or relationships off campus) that any of the members of the physics department and any of the members of the law faculty know each other. The gap between these networks is a structural hole.

There may be no reason for physics professors and law professors to bridge this gap. On the other hand, there might. Assume that women form a relatively small minority of each of the physics and law faculties. Next assume that the university neither provides on-site childcare nor provides child care subsidies. Further assume that most of the men on each faculty leave childcare principally to their wives and therefore don't view it as of particular concern.[26] But some of the women do. However, these women do not form a sufficiently large constituency in either department to compel their respective faculties to act, or to challenge the university's parsimony. A woman who is a member of the law faculty, forced to deal with this problem, can consciously make the effort to become acquainted with at least one woman on the physics faculty. She is now bridging the structural hole. The utility of such a bridge is obvious. Through her contact with the physics professor, the law professor unites the two networks (or in this case sub-networks) of women faculty. By so doing, she is able to gauge the strength of the inchoate demand for childcare and, by joining the networks (particularly if the law professor repeats this effort in every department and school of the university), she may be able to compel the administration to act. This is one value of bridging structural holes.

There is a negative side to structural holes too. Assume that no woman on the university faculty sees this structural hole opportunity. The only bridge among the different departments and schools is the university administration (and for sake of simplicity, let us identify the administration as the university president). If the women in the physics department approach the president and ask for child care relief without themselves bridging the structural hole, the president is in a position to play the faculties against each other to his or her advantage. He or she might, for example, threaten to cut a portion of the law school's budget to pay for on-campus childcare because the physics department, which already has budgetary constraints, is demanding the service. The law school will object to having its budget cut to subsidize the physicists, even if the women law faculty might benefit. The president can then cite the law school's protest to the physics department as a reason to deny child care benefits. As the sole bridge of the structural hole, the president can set the two sides off against each other.

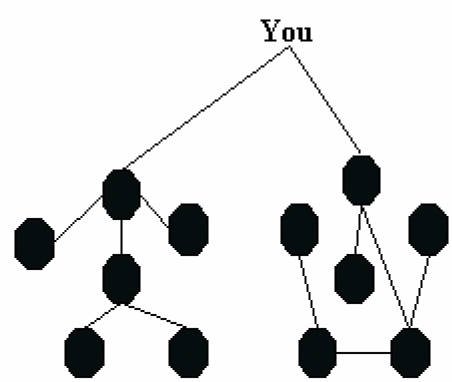
The president can also manipulate the situation by creating a structural hole that remains unfilled—in other words, by intentionally splitting two connected networks. For example, assume that the president sets up a management structure in which department heads and deans report only to

[26] I realize this example is gendered but plead current social realities as a justification.

the provost, and that all university-wide faculty committees, whether ad hoc or formal, can gain audience only with the provost or one of his subordinates. The president delegates authority to the provost to make all decisions that come out of these reports, ensuring that the provost has a good sense of the president's interests. By cutting off reporting from the provost, the president has created a structural hole between herself and the provost that is unfilled and, given her control and the university structure, unfillable. The provost can deny the request and there can be no appeal to the president.

Of course every faculty member knows that such a situation, if enacted in the world of academia, would create an uproar that would make the president's life miserable. I offer this example because it is simple and familiar. In the corporate context, to which I will later turn, such manipulation is much easier, for power is more clearly defined, less democratically wielded, and job termination is always a threat. For the moment, however, the foregoing should clarify the definition of structural holes and provide some insight into their utility. Figure One illustrates a structural hole bridged by you.

Figure 1: Structural Hole



Structural hole theory was developed by Ronald Burt in the 1980s and early 1990s, culminating in *Structural Holes*,[27] its most comprehensive examination. Burt explains competition as a function of social structure by looking at the ways in which competitors can maximize their opportunities by

[27] RONALD STATE BURT, STRUCTURAL HOLES: THE SOCIAL STRUCTURE OF COMPETITION (1992).

manipulating to their advantage the social structures in which they operate. This contrasts with neoclassical economic analysis, which focuses on individual transactions and the wealth maximizing motivations of individuals. Structural hole theory is closely related to transaction cost economics,[28] which explains the origin of organizations in, among other things, the desire to restrain opportunistic behavior arising from the neoclassical goal of diminished transaction costs.[29] But it is richer than these theories because structural hole theory allows us to dispense with the unrealistic essentialized motivations of actors that characterize the competing theories as well as to broaden our perspective beyond the dyadic transaction.[30] Instead, structural hole theory leads us to see competition as a process occurring within preexisting structures,[31] obviating the need for unrealistic assumptions and situating the theory in the complexities of the world in which competition takes place.[32] Structural hole theory treats the

[28] Transaction cost economics, or "the new institutional economics," finds its origin in Ronald Coase's 1937 theory of the firm, Ronald Coase, *The Nature of the Firm*, 4 ECONOMICA 385 (1937), and was developed most thoroughly by Oliver Williamson. OLIVER WILLIAMSON, MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS: A STUDY IN THE ECONOMICS OF INTERNAL ORGANIZATION (1975).

[29] Williamson's theory is considerably more complex than this, describing the origins of organization not only in terms of restraining opportunism but also as a result of conditions of uncertainty, asset specificity, bounded rationality, and the like. *See* WILLIAMSON, *supra* note 28, at 7. The analysis does focus on transaction cost reduction, however, and I focus on opportunism in the text because it is the aspect of Williamson's concern most related to this paper.

Granovetter notes the undersocialized nature of Williamson's theory as well as his over reliance on the power of hierarchy to restrain opportunism. Mark S. Granovetter, *Economic Action and Social Structure: The Problem of Embeddedness*, 91 AM. J. SOCIOLOGY 481, 481-510 (1985).

Structural hole theory also has close relationship to resource dependence theory which is not especially relevant to my analysis. JEFFREY PFEFFER & GERALD R. SALANCIK, The External Control of Organizations (1978) is the ur-text on resource dependence theory.

To be sure, Burt takes great pains to show the consistency of his theory with transaction cost theory and resource dependency theory (and even traces some of his intellectual roots back to Coase) in his development of his theory of the firm. BURT, *supra* note 27, at 238-45. My characterization of the differences in the text that lead me to argue that structural hole theory is an improvement over these theories is my own, not Burt's.

[30] Williamson proclaims his unrelenting reliance on the transaction as the unit of analysis. WILLIAMSON, *supra* note 28, at 1-2.

[31] To put it differently, for all of its sophistication in trying to come to grips with organizational structure and its sources and consequences, transaction cost theory remains mired in the unrealistic assumptions of neoclassical economics.

[32] Burt himself, especially in his argument in Chapter Seven, sometimes seems to lapse into the same motivational assumptions (although he doesn't describe them this way) as Coase and Williamson. Nevertheless, from a purely structural perspective, one can easily read his basic theory as dispensing with these assumptions

process of competition as a function of relations that are visible only by their absence—an absence we might refer to as gaps in the social structure. These gaps—these structural holes—allow actors within a social network the freedom to behave entrepreneurially (or opportunistically). As a general matter, the kinds of social networks most relevant to this discussion are networks of managers within the corporation.

While there are many ways in which an actor in this context can manipulate the social structure, the kind of opportunism most relevant here is that of a manager placing herself in a position where she will maximize the likelihood of receiving information and the opportunity to disseminate it as she desires.[33]

The freedom to behave opportunistically within social networks—including the social networks within corporations—arises because they create circumstances of imperfect competition by placing given actors in advantaged positions (or creating opportunities for them to seize advantaged positions). Further, social networks structure these positions and the relations between other actors in such a way that movement for those who are not in advantaged positions is relatively difficult. (In economic terms, social structure introduces friction into the "market" so that competition is imperfect.) Circumstances of imperfect competition create opportunities for advantage. In practical terms, imperfect competition in this context means that some actors are "stuck" in place in the corporate hierarchy or are positionally situated to be constrained by other actors, while others, who have the ability to identify gaps in the structure, are free to move in and fill the gaps.[34] This is most likely to be the case when a given actor performs the same (or largely the same) function as another actor. As I will later explain, in network terms, such actors are redundant—they have the same contacts—and so only one, if either, will be of use to an actor in an advantaged position and

as he does on his own terms. *See* BURT, *supra* note 27.

[33] *See generally* BURT, *supra* note 27, at ch. 4.

[34] The use of the economic concept of imperfect competition here may be jarring to those who are used to seeing it used only in the context of markets. But competition can occur in other spheres of life as well and it is at least metaphorically, if not literally, useful to adopt the phrase to describe the circumstances under which social behavior within social networks takes place. I ask the reader to be careful, however, because I am using the term (and applying the theory) in the corporate context, which itself is an economic realm and could easily lead readers to think of the competition I describe in economic terms. In my application, the competition is social, not economic (even if in some cases it may have economic consequences).

only one will therefore have the opportunity to move into the advantaged position.

The principal benefits accruing to the advantaged actors—the actors who can see and are free to occupy structural holes—are access to information and the ability to control others. The actor who best understands how to exploit the informational and control advantages of the structural holes (and indeed knows best how to recognize and occupy those structural holes) is the actor who will emerge as the most successful: he is a network entrepreneur. These opportunities are resources existing in every social network and organization and they are waiting to be exploited. Those who can identify and fill the structural holes will do better—whatever the rewards of the network—than those who lack this ability.

I should note that Burt presents his theory as a positive one; that is, a theory of enhancing value that explains how competitors can improve their positions and attain the advantages that go with this improvement. But there is a dark side to structural hole theory as well.[35] Though it is a theory of value, it can also be seen as a theory of manipulation, opportunism, and inefficiency. This article will focus on these aspects of the theory in the context of corporate governance.

This very brief introduction to structural hole theory demonstrates why it is such a powerful analytical tool. Corporate governance scholarship has traditionally centered on what has come to be known as the "agency problem."[36] The question the agency problem presents is how to restrain corporate managers from shirking responsibility or stealing corporate assets. In the bulk of corporate scholarship over the last thirty years, the problem has taken the form of finding ways to reduce agency costs, i.e., the costs that arise from monitoring and preventing shirking and stealing (deadweight economic losses) or, to put it differently, of finding the most efficient ways to restrain shirking and stealing. While agency cost theory has made substantial contributions to our

[35] *See* Carlo Morselli, *Structuring Mr. Nice: Entrepreneurial Opportunities and Brokerage Positioning in the Cannabis Trade*, 35 CRIME, LAW & SOC. CHANGE 203 (2001); Robert Tillman & Michael Indergaard, *Field of Schemes: Health Insurance Fraud in the Small Business Sector*, 46 SOC. PROBS. 572 (1999).

[36] Despite the predominance of neoclassical economic analysis since that time, as I noted earlier, the focus has existed at least since the time of Berle and Means. ADOLF A. BERLE & GARDINER MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY (1933). *See also* Adolf A. Berle, *Corporate Powers as Powers in Trust*, 44 HARV. L. REV. 1049 (1931).

understanding of corporate governance, its flaw is that it takes the traditional analytical approach of the subject as a given—it begins with the received structure of corporate law and treats the internal workings of the corporation largely as a black box.[37] Of course this is a flaw in the traditional approach itself.[38]

Structural hole theory refocuses our inquiry by taking us into the box. Its power derives from several aspects of the sociological approach in which it originates. First, because the theory focuses on structure, it need not resort to the simplified assumption used by agency cost and transaction cost theorists that corporate actors seek only to maximize their wealth.[39] While this assumption does have utility in economic modeling, it places the corporate reformer in a difficult position. If we start with greed as an immutable motivation for behavior in the corporate context,[40] our goal of reforming corporate law is hamstrung by the fact that we need to devise tools to restrain corporate actors' pursuit of their own wealth even to the point of transgressing corporate norms. But history has demonstrated that restraining greed is an enormously difficult task. Even the attempts to align managerial and stockholder interests by encouraging executive compensation in the form of stock options has encouraged greed, which has led to substantial abuse, and is thus a partial cause of much corporate misbehavior.[41]

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[37] This is actually not true of the work of Fama and Jensen themselves, who build the corporate structure as evolving to provide the most efficient solutions to the agency problem. Fama & Jensen, *supra* note 11. *See also* Eugene Fama, *Agency Problems and the Theory of the Firm*, 88 J. POL. ECON. 288 (1980). Bainbridge also provides and exception, looking within corporate hierarchies to evaluate the quality of information flows throughout the corporation. Stephen M. Bainbridge, *Participatory Management Within a Theory of the Firm*, 21 J. CORP. L. 657 (1996).

[38] *See* Lawrence E. Mitchell, *Trust and Team Production in Post-Capitalist Society*, 24 J. CORP. L. 869 (1999) (arguing for the need for corporate governance scholars to expand their study into the internal workings of the corporation itself).

[39] Williamson extends the self-interest model to opportunism. *See* WILLIAMSON, *supra* note 28, at 26-30.

[40] I recognize that the pursuit of maximum self-interest assumed by neoclassicists can extend beyond monetary greed and apply to other preferences as well. In the corporate context, however, it is almost invariably assumed that the issue is money. Thus the reference to greed seems perfectly appropriate and accurate.

[41] *See* LAWRENCE E. MITCHELL, CORPORATE IRRESPONSIBILITY: AMERICA'S NEWEST EXPORT (2001); Bebchuk et al., *supra* note 5; Murphy, *supra* note 14. For an excellent example of the relationship between managerial opportunism and corporate bureaucracy (which nonetheless focuses more on inefficient information production rather than structure *per se*), see Walter Novaes & Luigi Zingales, *Bureaucracy as a Mechanism to Generate Information*, CENTRE FOR ECON. POL'Y RES., June 2003, which argues that the information (managerial performance) creating potential of bureaucracies, coupled with managerial incentives to extract undue rent from the

A focus on structure as creating the conditions for opportunistic behavior allows us not only to consider broader motivations, but also enables us to see the way in which structural freedoms and constraints, in contrast to monitoring and mistrust, can alleviate problems that are the concern of agency theorists and other corporate scholars. In other words, rather than focusing on the restraint of greed, structural hole theory identifies places in the corporate structure that provide room for opportunistic behavior and allows us to concentrate on eliminating these opportunities for corporate actors to behave in self-serving ways. For the same reason, it enhances transaction cost analysis (which begins with the same motivational assumptions) by allowing us to begin with given structures rather than individually modeled behavior that leads to institutional structures. In this way, it reveals the power of position within structures, and enables us to see ways of restructuring hierarchies to reduce the circumstances in which opportunistic behavior can flourish.[42] In addition to these benefits, structural hole theory is well conceived for rigorous empirical testing, as Burt demonstrates. Instead of relying upon reductionist accounts of motivation or attitudinal or psychological self-reporting, all structural hole theory requires is that survey subjects disclose those people with whom they have contacts, as well as the regularity and intensity of those contacts. These results can be verified by independently obtaining the same information from those with whom the subject claims to be in contact. Thus the structure emerges as empirical fact, with relatively little room for distortion.

As a normative matter, structural hole theory can also show how a corporation can both eliminate structural blockages and enhance the efficiency of information flows. It does this by ensuring the proliferation of structural holes within its networks. As I noted earlier, Burt describes this

corporation, lead boards to choose a bureaucratic structure that produces more information about executive performance instead of what perhaps might be a more optimal structure for the maximization of profits. *Id.*

[42] This structural approach bridges the micro approach of transaction cost economics with the macro approach of network theory. BURT, *supra* note 27, at 181. The search for ways to bridge micro and macro models has been a significant project for sociologists. The bridge provided by network theory is its recognition that structure provides the resources and individuals attempt to benefit from the resources structure provides. This is especially noted by social capital theorists. Kenneth A. Frank & Jeffrey Y. Yasumoto, *Linking Action to Social Structure Within a System: Social Capital Within and Between Subgroups*, 104 AM. J. SOC. 642, 645 (1998).

positively, in an efficiency-enhancing way.[43] Efficiency comes from the placement of trustworthy and loyal actors in positions where they can bridge structural holes, facilitating the transfer of information without the fear of manipulation. The theory can also be used positively for self-advancement, as a network entrepreneur sees the opportunity to fill a structural hole within the corporate bureaucracy.

Finally, and most practically, the theory has the power to explain why simple governance reforms such as creating independent audit committees, nominating committees, and compensation committees, or composing boards principally of independent directors, may not be capable of resolving problems of inadequate monitoring. All of the board reforms currently underway will fail unless the structural opportunities for CEOs and other senior managers to control and manipulate information are reduced or eliminated. The failure of corporate law scholars to focus on the special role of the CEO and his subordinates has limited the set of possible solutions to corporate governance problems.[44] The structural approach, however, presents new solutions.

II. THE INTELLECTUAL PROVENANCE OF STRUCTURAL HOLE THEORY

Structural hole theory is a theory of social capital. While social capital is a concept that recently has garnered scholarly

[43] I will address the efficiency—or positive—aspect of structural holes *infra* note 72 and accompanying text. My purpose in this paper is to use the theory in a way that it has not been used, to examine the dark side of structural holes in the manipulation of information within the corporation.

[44] The CEO may not always be the appropriate focus. Wayne Baker, studying a commercial real estate development firm that appears to have been a partnership, explicitly designed to maximize intrafirm networks, but with a designated CEO, concludes that the absence of the CEO would have little or no effect on firm performance. *See* Wayne E. Baker, *The Network Organization in Theory and Practice*, *in* NETWORKS AND ORGANIZATIONS: STRUCTURE, FORM, AND ACTION 397 (Nitin Nohria & Robert G. Eccles, eds., 1992). The reason for his conclusion, however, appears to me to lie both in the partnership nature of the form and the conscious design of the firm to maximize networks (an approach to firm organization that he believes is highly unusual, since networks tend to develop spontaneously rather than consciously and wind up less complete and neat). Moreover, given the partnership nature of the firm, there does not appear to have been a board of directors, and so the essential structural hole I am exploring could not have existed. The likelihood of such a situation developing in a large public corporation, even one that is relatively flat in terms of structure, is not high, so the focus on the CEO in that context seems perfectly appropriate. *See id.*

and public attention,[45] its definition is both elusive and debated. For purposes of this article, social capital, defined in its minimal formulation, is the set of resources available to a person, organization, or community that inheres in its social structure.[46] Social structure includes the webs—or networks—of people and institutions that collectively constitute families, friendships, organizations, communities, and societies.[47] Although all treat social capital as a resource, the particular understanding of how the resource works and where it is found (in addition to whether it is more in the nature of a public good or more in the nature of an individual asset) differs among the various social capital theorists.

One of the earliest approaches to social capital was the work of French sociologist Pierre Bourdieu in the 1960s and 1970s. Bourdieu began from a distinctly anthropological perspective, understanding culture as "a dynamic and creative, but also a structured phenomenon."[48] His theory established a triad of economic, cultural, and social capital, with economic capital the most dominant factor.

James Coleman's theory of social capital is a frank attempt to draw together economics and sociology, originating in his own theories of rational choice.[49] Coleman asked how human capital, which is educational attainment and skills, affected the equality or inequality of persons in society. Coleman theorized that social capital consisted of two parts: first, the social structures themselves, and second, the way they affected the actions of given actors within the structure.[50]

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[45] Largely due, most likely, to Robert Putnam's 2000 book on the subject. ROBERT PUTNAM, BOWLING ALONE (2000). Bowling Alone follows upon Putnam's earlier work on social capital in Italy, ROBERT PUTNAM, MAKING DEMOCRACY WORK (1993).

[46] At this point the functional definition of social capital as a resource seems generally accepted. Frank & Yasumoto, *supra* note 42, at 645. The earliest use of the term, adopting a definition similar to the one in the text (but in a different context) appears to be by Glenn Loury. JAMES S. COLEMAN, FOUNDATIONS OF SOCIAL THEORY 300 (1990). *See* Glenn C. Loury, *A Dynamic Theory of Racial Income Differences*, *in* WOMEN, MINORITIES, AND EMPLOYMENT DISCRIMINATION 153 (Phyllis A. Wallace, ed., 1977); Glenn C. Loury & John David Skrentny, *Passing Strict Scrutiny: Using Social Science to Design Affirmative Action Programs*, 90 GEO. L.J. 835, 841 (2002).

[47] Network theory itself has been recently popularized in DUNCAN E. WATTS, SIX DEGREES: THE SCIENCE OF A CONNECTED AGE (2003) (laying out a new way to understand the way networks grow, work, and how they drive collective behavior).

[48] Tom Schuller et al., *Social Capital: A Review and Critique*, *in* SOCIAL CAPITAL: CRITICAL PERSPECTIVES 1, 3 (Stephen Baron et al., eds., 2000).

[49] *See generally* James S. Coleman, *Social Capital in the Creation of Human Capital*, 94 AM. J. SOC. 95 (1988) for an explication of his functionalist view of human capital at a late stage in his career.

[50] COLEMAN, *supra* note 46, at 302.

Coleman's argument focused on the way in which powerful people remained powerful through their social networks with other powerful people. Coleman also saw social capital itself as a resource that could be manipulated through the creation of social relations with other actors, including trust, obligations of reciprocity, and specific social expectations. Given the common understanding of human capital as the educational attainment and skills of an actor, Coleman believed that social capital and human capital were interrelated.[51] The principal flaw in Coleman's work is the circularity of its conclusion—powerful people tend to remain powerful because they are powerful people, without a clear explanation of how they become powerful in the first place.[52]

Robert Putnam, whose famous early work on social capital derived from his study of regional governments in Italy, noted a distinct difference in the performance of governments in the north and south, leading him to focus on the extent to which civic engagement made a difference in explaining the greater effectiveness of northern governments.[53] The particular variables he examined were associational life, newspaper reading, voter turnout, and voter preferences. He expanded his examination of these variables in his book, *Bowling Alone*, in which he looked at the decline in associations from bowling leagues, coffee time with neighbors, sewing circles, and similar activities, concluding that the level of civic engagement in the United States had seriously declined. He hypothesized that this decline was largely due to a dramatic increase in television watching.[54] The core of social capital, in Putnam's definition, lies in three factors: social networks, social norms, and trust. Unlike Bourdieu and Coleman, who focused on the benefits of social capital to the individual actor, Putnam took a more global view. Thus, he treated social capital as a true public good, essential to the maintenance of civic society, as is foreshadowed by the title of his seminal work on Italy, *Making Democracy Work*.[55] This, of course, is not surprising given Putnam's training as a political scientist. In fact, the different

[51] Schuller, *supra* note 46, at 6.

[52] *See* COLEMAN, *supra* note 46.

[53] *See id*.

[54] It's probably worth noting that criticism of Putnam's empirical base and social capital categories has become something of a cottage industry. It may be that this has pushed him to a more instrumental view of social capital.

[55] *See* COLEMAN, *supra* note 46

professional backgrounds of these three major theorists of social capital help to explain their understanding of the importance of the concept, as illustrated by Bourdieu's interest in culture, Coleman's in rational behavior, and Putnam's in democratic governance.[56]

Structural hole theory grows out of the confluence of social capital theory with economic sociology. Social capital theory and economic sociology—and thus a greater interest in how social structure contributes to private goods—developed along a somewhat parallel historical track. In the mid-1970s, Mark Granovetter, working with the sociological tool of network theory, which seeks to explain the ways in which particular social structures affect relations among people,[57] developed his seminal theory of "the strength of weak ties."[58] The paradox, Granovetter explained, was that network theorists treated close relationships among people as the key variable affecting their behavior, relationships that he described as "strong ties." But it was not these strong ties that were essentially important in the economic realm.[59] Rather, he found, most people surveyed found their jobs not through close friends and family but through more casual acquaintances, relationships he described as "weak ties." The more weak ties a person had, the broader and more far-reaching was her social network, and thus the more likely it was that she could maximize her own opportunities by exploiting those ties in order to advance her career. Granovetter later retested this hypothesis with somewhat mixed results,[60] but the theory itself has become one of the principal building blocks of economic sociology. It should be clear that weak ties are a form of social capital, a resource deriving from the social structure that actors can use to better their positions and which actors can

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[56] As Putnam's work has developed, his focus has shifted from pure participation in associational life to the ways in which such participation develops norms of reciprocity that form the core of social obligation. In other words, Putnam seems to have moved from an understanding of social capital as more like public good to social capital as more like a private resource, albeit necessarily sustained by the social structure.

[57] This is in contrast, for example, to the ways in which the structures of particular institutions might affect behavior.

[58] Mark S. Granovetter, *The Strength of Weak Ties*, 78 AM. J. SOC. 1360 (1973).

[59] Granovetter's particular interest at the time was how people found work. MARK S. GRANOVETTER, GETTING A JOB: A STUDY OF CONTACTS AND CAREERS (1974).

[60] Mark S. Granovetter, *The Strength of Weak Ties: A Network Theory Revisited*, *in* SOCIOLOGICAL THEORY 201 (Randall Collins ed., 1983).

consciously seek to accumulate. As I will discuss, the theory of structural holes begins in part with Granovetter's theory.

Structural hole theory is a theory of social capital because as it develops it takes the two component words of the term quite literally. First, it is "social" in that the exploitive opportunities of an actor derive from the social networks in which he is embedded. Second, it is "capital" in that the actor's particular placement in that network—in the position described as a structural hole—is, like weak ties, a resource that can be used to maximize other resources by allowing the actor to affect the terms of his own relationships with others.

While structural hole theory is a theory of social capital, it is different from the work that I described earlier because of its relentless instrumentality.[61] Moreover, unlike much sociological work, structural hole theory is not simply descriptive, but is also predictive: based on extensive empirical testing, Burt has identified the specific network structures and hierarchies that allow us to predict things like which managers in a given corporation will advance at the fastest rate. The ideal network structure for this purpose varies with the age, gender, and duration of a particular manager's employment.[62]

This predictive aspect of the theory can also help us determine the best structures of governance for public corporations by allowing us to see how given social structures are defective. That is, structure reveals informational and control opportunities which network (in our case, corporate) actors could use either to the advantage or disadvantage of the corporation while serving themselves. The theory further provides insight into how we might alter structures to prevent the proliferation of these *locii* of self-interest or, to the extent they are desirable, increase them. It is for this reason that structural hole theory holds great promise as a tool for focusing

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[61] This isn't terribly surprising since Burt studied with Coleman. Richard Swedberg, *Major Traditions of Economic Sociology*, 17 ANN. REV. SOC. 251, 269 (1991). Swedberg's own theories, based on theories of rational choice, were themselves instrumental. Burt's work, while serious and scholarly, sometimes reads like a sociological version of *How to Succeed in Business Without Really Trying.*

[62] Burt's empirical data were derived from his study of "one of America's largest high-technology firms." BURT, *supra* note 27, at 118. He later used what appears from his description to be the same firm in his refinement of the theory although he reports data from other studies in this article. Ronald S. Burt, *The Contingent Value of Social Capital*, 42 ADMIN. SCI. Q. 339 (1997). He based his study of market competition and structural holes on seventy-seven product markets as classified by the U.S. Department of Commerce. BURT, *supra* note 27, at 85.

the debates over the most effective methods of corporate governance.

Burt's theory of structural holes developed from the groundwork of Granovetter's theory of weak ties.[63] Recall that Granovetter saw the weakness of social ties as a correlate of information flows that enables actors with weak ties to have access to information that they otherwise would not. Burt's departure from Granovetter's theory rests on two aspects of that theory. First is the issue of causation. What is causative of the effectiveness of weak ties, he argues, is not the strength or weakness of the particular ties themselves, but of the structural holes they span[64] (or the opportunity presented by the structural hole for an entrepreneur to place himself in the middle of potential information flows among networks). The second is that Burt finds that the strength or weakness of the ties does not matter—information flows over both. The relevant question for Burt is whether or not those ties are redundant (which, as I will later explain, means whether they efficiently and effectively reach the same people or whether they reach new networks).

Burt criticizes Granovetter's theory by arguing that "the weak tie argument obscures the control benefits of structural holes."[65] The theory of weak ties is about bridges—about the paths along which information flows. The structural hole argument is about "chasms"—the interruptions of those flows.[66] The person who can see the chasm and bridge it is in a position not only to receive information, but to control the information flows himself, regardless of whether the tie is weak or strong.

III. WHAT IS A "STRUCTURAL HOLE"?

With this brief introduction to the development and basic insight of structural hole theory, it is time now to explain

[63] BURT, *supra* note 27, at 26-28.

[64] *Id*. at 26-27.

[65] *Id*. at 28. Burt is not always clear about whether structural holes are spaces in the social structure or intersections of networks that occur within individuals. My best reading is that he means they are both. *Compare id*. at 190, 192 (describing structural holes as relations that intersect). I don't believe that the ambiguity is at all important. Structural holes, it appears, can be both gaps unfilled between or among networks, or the gap once filled. The important point is that the possibility of filling the gap creates the competitive opportunities that are the essence of structural holes.

[66] *Id*. at 28.

some of the technical aspects of the theory.[67] A structural hole is a bridge between nonredundant contacts.[68] *Nonredundancy* is characterized by the presence of two criteria: lack of cohesion and lack of structural equivalence. *Cohesion* refers to the strength of the relationship in question. Strong relationships signal that no structural hole exists. Burt provides examples of cohesive ties as between father and son or husband and wife. If either one of the actors in that relationship is a strong contact of yours, you effectively have access to the other person. Think of a group of close friends who live in the same neighborhood, travel together, and meet socially on a regular basis. A strong tie with one of these friends, in effect, gives you access to the information possessed by the entire network.[69] Leaving aside information that is understood by the group to remain confidential within it, contact with one is contact with all.[70] There is no gap in the network for you to occupy. As a result, you derive no informational benefits (although you might derive social pleasure) from establishing ties to other members of the group. The relationship is characterized by cohesion and is therefore redundant. Figure Two illustrates this idea.

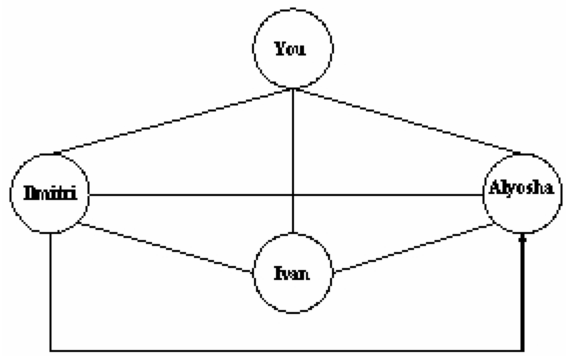
[67] The theory itself is rather complex, although it depends upon one central, fairly simple, insight. The complexity of the theory lies more in its various implications than in the concept itself. I have thus drawn on the centrally important aspects of the theory as being those that are relevant to an initial explication of the problems of corporate governance in an attempt to avoid complicating the story and confusing the reader with details that, at this point, are only of subsidiary importance.

[68] BURT, *supra* note 27, at 17-18.

[69] Limited, although Burt disregards this, by norms of confidentiality and perhaps somewhat tempered by in-group psychology. For a recent application of in-group psychological theory see generally O'Connor, *supra* note 12. One of the gaps in Burt's work, as I read it, is his failure to account for the role of group norms in regulating behavior within networks. However, this appears to be quite intentional and characteristic of the structural approach taken by Burt, because it also provides one of the virtues of the structural approach, in its relentless empiricism based on observable facts (which norms, beliefs, and values are not). Sociologists working in the general area of structural equivalence (of which structural hole theory is an example) have been criticized for failing to account for actors' "beliefs, values, and normative commitments." Mustafa Emirbayer & Jeff Goodwin, *Network Analysis, Culture, and the Problem of Agency*, 99 AM. J. SOC. 1411, 1425 (1994). *See generally* Frank & Yasumoto, *supra* note 42, for a more norms based social capital approach to competition and cooperation within competitive networks.

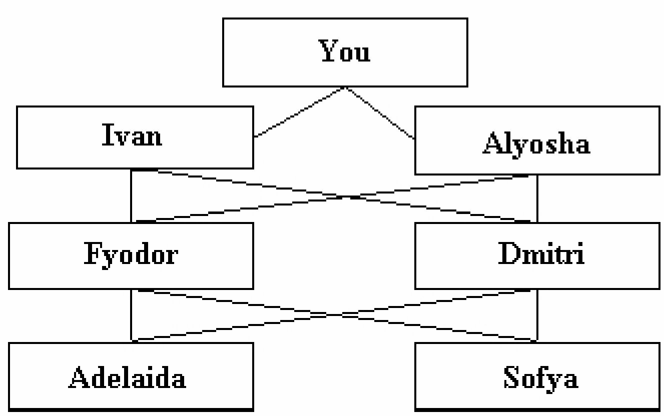
[70] The likelihood of information moving from one member of the group to another is a direct function of the strength of their ties. BURT, *supra* note 27, at 18-19.

Figure 2: Cohesion



Structural equivalence refers to people who have the same contacts. Take the group of friends mentioned earlier. Let us assume you have contacts with Ivan and Alyosha. If Ivan and Alyosha each have contacts with Fyodor and Dmitri, Ivan and Alyosha are structurally equivalent—your connections with Fyodor and Dmitri are indirect, but redundant through Ivan and Alyosha. You can magnify the structural equivalence even further if Fyodor and Dmitri each have contacts with Adelaida and Sofya. Your contacts with Ivan and Alyosha do nothing to increase your network advantages. Each provides you with exactly the same network benefits as your own tie to the other. Figure Three is an illustration of this point.

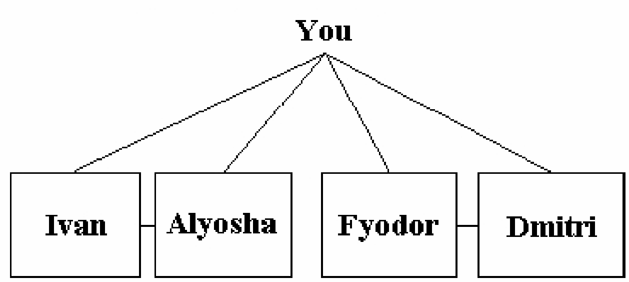
Figure 3: Structural Equivalence



Once we have determined that your contacts are neither cohesive nor redundant, we turn to the question of the efficiency and effectiveness of the network ties provided by your contacts. An *efficient network* is one in which you maximize your nonredundant ties in a particular network (that is, ties that lack coherence and structural equivalence). It does you no good to maintain contact with members of the same network, since this produces precisely the redundancy you are trying to avoid. Maximizing your nonredundant ties maximizes the number of structural holes you get for each contact. In other words, you can maintain contact with the same number of people (that is, the network), at significantly lower cost by focusing your energies on only one primary contact in the network.[71] As is implied by the concept of economic efficiency upon which Burt draws, such an approach allows you to maintain your contacts at the lowest possible cost.

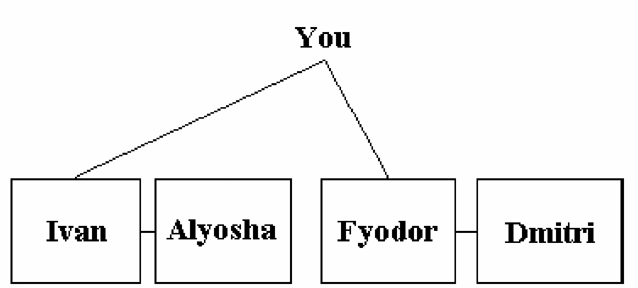
For example, assume that you know Ivan and Alyosha, who also know each other. You also know Fyodor and Dmitri, who know each other but neither of whom know Ivan or Alyosha. You are wasting your time maintaining all four contacts. You're far better off forgetting about Alyosha and Dmitri. Your contact with Ivan gives you access to information from Alyosha, and your contact with Fyodor gives you access to information from Dmitri. By transferring your energies from all four contacts only to Ivan and Fyodor, you have increased the efficiency of your networks by maintaining four contacts for the cost of two. The time saved by dropping your contact with Alyosha and Dmitri can be used to expand your network by making other contacts. Figures Four and Five illustrate an inefficient and efficient network.

Figure 4: Network Inefficiency



[71] There is an additional element necessary to create the efficient network as Burt discusses, and that is to select the right person in each network with whom to make contact. This largely turns on the question of who you think you can most trust in the network to provide you with timely and accurate information. Burt also notes that network efficiencies imply that you should choose as your contact not only the most trustworthy member of the group but the one with whom contact is easiest to maintain and who is most likely to reciprocate personal favors. *Id*. at 20-21.

Figure 5: Network Efficiency



This concept of nonredundancy explains why the existence of structural holes might increase corporate efficiency. The greater the extent to which managers are connected only to primary contacts in a network, the less time they waste by spending it with people who will provide redundant information. In order to see this, simply take the preceding example and imagine that Ivan and Alyosha, and Fyodor and Dmitri, respectively work in different divisions of the corporation. By dropping Alyosha and Dmitri, you get the same informational benefits with less work. To the extent that bureaucracies are information-producing organizations, using structure to achieve this result is a relatively low-cost way of improving the efficiency of this informational function. There is, however, a tradeoff for this increased efficiency, as I will later demonstrate. The corporation that undertakes to create structural holes may do so at its peril.

Network effectiveness is about increasing the total size of your network. The concept mandates that you deploy your resources efficiently by maintaining your primary contact, thus enabling you to use the remainder of your resources to establish and maintain primary contacts in different networks. Doing so, you will maximize the total size of your network by connecting to people who themselves have connections to other networks. In effect, you ideally choose one primary contact, and you leave to this person the job of developing and maintaining the cluster of contacts that form his network.[72] In a sense, you

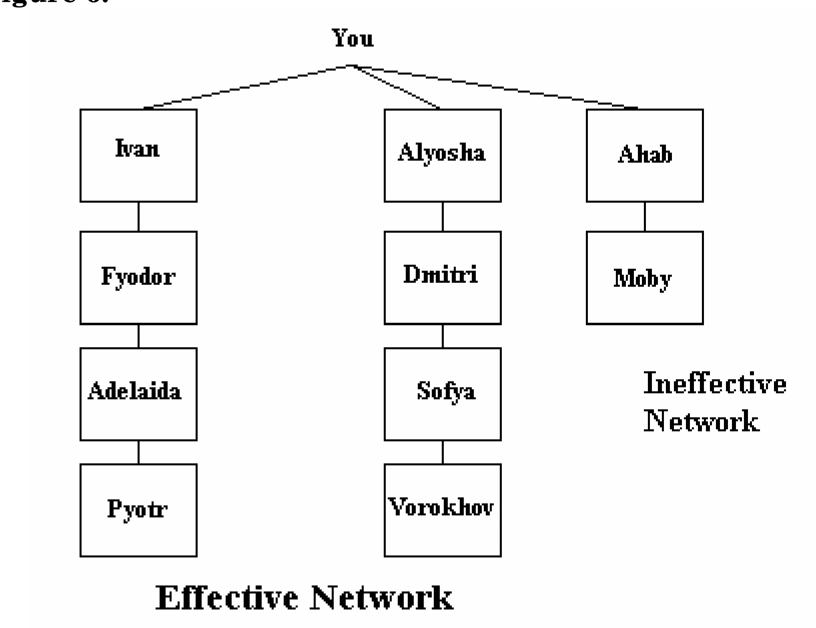
[72] Burt is not entirely clear as to whether you should choose primary contacts who have the largest networks or choose primary contacts and maintain them while they build their networks by including more people (which increases your number of secondary contacts, and thus total contacts). The ambiguity arises from his assertion in the text that the primary contact maintains the network. *Id.* at 21. His diagram shows you maintaining the same number of primary contacts, but with their networks growing, which he also describes as the goal of network effectiveness. *Id.* at 20-23. I believe the second reading is more consistent with his theory and it is the reading I

are using your primary contact to diversify your network portfolio, while at the same time she increases it. Because you are the bridge among various networks, you receive information from one network that might be desirable to members of other networks. You are thus in a position to use that information as you see fit, or to use it (as we will later see) to manipulate the various networks to which you are connected. Network effectiveness contrasts with network efficiency. Network efficiency diminishes the cost of maintaining networks for each contact. Network effectiveness increases the overall size of your network.

Choosing effective contacts means choosing contacts in each network who are the most likely to make contacts with others. If they are not, they are probably not good choices for helping you to establish an effective network. Similarly, you should choose the contact in each network who is likely to be the most trustworthy and loyal to you. It is this combination of ability to build their own networks, trust, and loyalty in your primary contacts that enables you to build an effective network. As an example, assume that you know Ivan and Alyosha, neither of whom knows the other. Ivan and Alyosha become acquainted with Fyodor and Dmitri, respectively. Fyodor and Dmitri respectively become acquainted with Adelaida and Sofya. And Adelaida and Sofya become acquainted, respectively, with Pyotr and Vorokhov. Simply by maintaining your primary contact with Ivan and Alyosha, your network has expanded from two contacts to eight contacts. Assuming they are trustworthy and loyal, Ivan and Alyosha are effective primary contacts. This is an effective network. While Ivan and Alyosha grow and maintain their networks, you are free to seek out other primary contacts. Now assume that you meet Ahab. From your conversation with him, you learn that the only other contact he has is Moby and, given your assessment of his personality, you don't believe he is likely to expand his network beyond Moby. This is reason enough for you not to establish primary contact with him (not to mention your suspicions about his trustworthiness and loyalty). You are far better off using your energy to make a more promising additional primary contact. Figure Six illustrates network effectiveness.

present in the text.

Figure 6:



There are several situations in which network efficiency is not optimal. One, specifically mentioned by Burt, is a dense cluster of resources, like a board of directors and a CEO. The other is friendship networks because, in Burt's felicitous phrasing, "Judging friends on the basis of efficiency is an interpersonal flatulence from which friends will flee."[73] As he says with respect to networks like the board:

> These clusters are so important to the vitality of the rest of the network that it is worth treating each person in them as a primary contact, regardless of redundancy. Saturation [the phrase he uses to describe such networks] minimizes the risk of losing effective contact with the cluster and minimizes the risk of missing an important opportunity anywhere in the cluster.[74]

As I will later discuss, while treating the board as a saturated cluster (a single network in which the actor has ties to each member) may be important to the CEO's success, it has more nefarious implications as well.

Thus far we have principally focused on the informational benefits of structural holes. There is, however, a second benefit of structural hole theory—control.[75] Effectively

[73] *Id*. at 24-25.

[74] *Id*. at 25.

[75] As with the efficiency-increasing properties of structural holes for information flows within organizations, the control benefits of structural holes may

exploiting a structural hole allows you to manipulate various networks to which you are connected (or individual people who are nonredundant contacts) by playing them off against one another in two different ways. The first way is exemplified by a simple economic transaction. Assume that you want to sell your house and you have two bidders. Clearly you can increase the price you will receive if you encourage them to bid against one another.[76] Fostering this type of bidding war ties the control advantage of structural holes to the informational advantage previously discussed.

The second kind of control benefit occurs when one is situated between two players who have conflicting desires. This can occur, for example, when an associate in a law firm is working on major deals with two different partners, both of which heat up simultaneously, leaving each partner to compete for the associate's time. The associate is in a position to play one off the other to his advantage. Robert Merton describes an actor in the associate's position as "a more or less influential bystander"[77] whose function is to make the partners' conflicting demands their problem rather than the associate's problem. (This is similar to the role of a child in a two parent family). Both strategies have implications for the structure of corporate governance.

All of this sounds terribly manipulative, and one might reasonably ask again what using structural hole theory to analyze corporate governance adds to the already rich tool box of neoclassical and behavioral economics. After all, these approaches assume manipulative or opportunistic actors. And the theory resembles one that describes ways in which actors can maximize their wealth by becoming social capital entrepreneurs.

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also increase efficiency depending upon the way they are exploited by the actor who identifies them.

[76] All the better if neither knows the other's bid—this often can get you a higher price than you would otherwise receive because their lack of information may lead one to bid more than is necessary to beat the other. Real estate brokers in hot markets have caught on to this idea by including escalation clauses in their clients' contracts which set up an auction among multiple bidders. Such contracts specify incremental increases in bidding price a potential buyer is willing to offer in a contest to obtain a house and is usually capped at some amount. Such clauses have become *de rigueur* in parts of the Washington, D.C. metropolitan area.

[77] ROBERT K. MERTON, SOCIAL THEORY AND SOCIAL STRUCTURE 431 (1968). The technical term for such a person is a *tertius gaudens* from an Italian proverb meaning "one who benefits." I avoid the use of the term in the text to avoid introducing jargon unnecessary to the paper.

But the theory does add significantly to these other methodologies. First, it eliminates the neoclassical presumption that actors are autonomous and that the dyadic transaction is the appropriate focus of inquiry. Actors are not autonomous—they are embedded in social networks, and for all of its occasional reversion to neoclassicism, structural hole theory advances considerably beyond asocial neoclassical approaches by explaining the ways in which networks are themselves the sources of competition. Gaps in the network facilitate competition by creating opportunities to obtain positional advantages.

In addition, structural hole theory provides a powerful alternative to neoclassical analysis by eliding the need to identify wealth (or anything else for that matter) as a maximand.[78] People behave entrepreneurially for a variety of reasons: for instance, the simple psychological desire to succeed, the fun of the game, and the maximization of wealth, among others. Burt believes that clarifying opportunities is motivation enough in and of itself. That is to say, given two opportunities an actor will take the clearer path.[79] Thus, Burt treats motive and opportunity as equivalents.[80] This may appear to be a cop-out; after all, the manipulative behavior observed and, to some extent, prescribed by, structural hole theory is unpleasant to many of us.[81] Moreover, the opportunities described are frequently, if coincidentally, wealth maximizing opportunities.[82]

[78] In this respect it also advances beyond transaction cost economics which remains mired in neoclassical assumptions about motivations and goals.

[79] BURT, *supra* note 27, at 35.

[80] *Id*. at 35-36.

[81] Burt effectively admits that this stance is a cop-out. "I am begging the question of how opportunity and motivation are connected. I emphasize the causal priority of opportunity. The opposite emphasis is traditional in sociology. . . . Here I emphasize opportunity because I can analyze it in a rigorous way with network concepts and describe a great variety of empirical events." *Id*. at 275 n.13. His dispensation with concerns of motivation (although they do appear in Chapter Seven) isn't especially troubling for my purposes because the point of this project is to develop a purely structural analysis that can identify particular points of weakness or strength within the corporate structure.

Others, however, believe that structural instrumentalists like Burt actually rely upon utility maximization. *See* Emirbayer & Goodwin, *supra* note 69, at 1428.

[82] Some of this may derive from Burt's use of American institutions as his empirical base. This practice embeds his theory in a society which, at least in the economic realm, has come to embody many of the characteristics described by the neoclassical model. *See* Nicole Woolsey Biggart & Gary G. Hamilton, *On the Limits of a Firm-Based Theory to Explain Business Networks: The Western Bias of Neoclassical*

For purposes of this article and its focus on the CEO (who has already demonstrated network entrepreneurship by climbing the corporate ladder), it may be enough to leave the question of motivation open, since control is central to structural hole theory and control is, after all, the job and goal of the CEO.[83] But for those who demand a maximand in order to appreciate a theory, perhaps we can make do for purposes of this discussion with maximization of control as the behavioral motivation. For the broader uses of structural hole theory (perhaps even broader uses within the context of analyzing corporate behavior at lower levels, or at the board level), it is enough to say that—at least in its descriptive and, in my adaptation of it, diagnostic aspects—structural hole theory needs no particular motivational assumption in order to enable us to examine organizational structure. Thus, our goal is to identify, as points of weakness, holes that can be occupied by actors who are then able to manipulate corporate behavior or to control information flows in ways that may be disadvantageous to the corporation. Whether or not corporate actors take advantage of the opportunities provided by structural holes, the important observation is the manner in which structure creates these opportunities. In this way, structural holes can be seen as a source of freedom obtained by opening up networks, where desirable, to either permit a freer flow of information or to destroy the possibility of control monopolies. Whatever the motivation of particular actors might be, the opportunities that are created by network structure can be used for good or ill (or not used at all). Knowing where they are and their potential

Economics, *in* NETWORKS AND ORGANIZATIONS, *supra* note 44, at 471, 488. *See also* GRANOVETTER, *supra* note 59, at 447 (noting that rational or instrumental behavior aims not only at economic goals but also "at sociability, approval, status, and power"). On the other hand, the structural equivalence approach to sociology of which Burt's work is an example has been criticized for conceptualizing actors in "narrowly utility-maximizing and instrumental ways." Emirbayer & Goodwin, *supra* note 69, at 1425. I do not find this especially troubling, despite my personal distaste for neoclassical analysis, because these motivations, while perhaps implicit (especially in economic sociological work) are not necessary aspects of the theory which itself relies solely upon structure. So while narrow instrumentalism might be implicit in a structuralist account, it is tangential and irrelevant to the explanatory power of the theory. For a motivational account analyzing the interrelationship between structure and psychological motivation, see James N. Baron & Jeffrey Pfeffer, *The Social Psychology of Organizations and Inequality*, 57 SOC. PSYCH. Q. 190 (1994).

[83] Harrison C. White, *Agency as Control in Formal Networks*, *in* NETWORKS AND ORGANIZATIONS, *supra* note 44, at 92. ("To manage is to make use of ties. To gain and maintain control requires attending to networks of ties.") The classic work on the subject of the role of the CEO is CHESTER BARNARD, THE FUNCTIONS OF THE EXECUTIVE (1938).

effects allows us greater insight into appropriate organizational design.

IV. THE APPLICATION OF STRUCTURAL HOLE THEORY TO PROBLEMS OF CORPORATE GOVERNANCE

Corporations are webs of social networks. The power of an actor in a social network depends more on his connections between networks than on his position within a given network. Simply put, the corporate actor with the most nonredundant network contacts (who has bridged the greatest number of structural holes) is better positioned to monopolize information, engender competition between networks or other actors (i.e., the house auction), and control the behavior of other actors (i.e., the university president and the law firm associate), which may translate into the ability to determine his own power and profit. These opportunities are available to him because, by taking advantage of structural holes, he effectively becomes the sole vector of a variety of separate networks,[84] a position that gives him substantial autonomy in managing intracorporate relations and, as a consequence, his own position in the corporation.[85]

The basic aspects of structural hole theory and their applicability to the problem of corporate boards should now be clear. Prior to the 1980s, most public corporation boards were comprised of a majority of non-independent directors.[86] The tradition of inside directors (or at least directors with substantial ties to the corporation and corporate management below the level of CEO[87]) began in the early stages of bureaucratic corporate growth and persisted into the 1980s. These directors were, generally, high level executives of the corporation or so-called "gray" directors: the corporation's bankers or lawyers who regularly worked with upper management.[88] Whatever the problems of these inside directors,

[84] This is a bit of an oversimplification, but suffices for purposes of discussion. For a more complex depiction, *see* BURT, *supra* note 27, at 22 fig. 1.4, which illustrates the process of optimizing your structural holes.

[85] *See id*. at 45-49; Burt, *supra* note 62. *See also* Mark S. Granovetter, *The Strength of Weak Ties*, 78 AM. J. SOC. 1360 (1973)

[86] Bhagat & Black, *supra* note 15, at 238.

[87] These are commonly referred to as "affiliated directors" and are typically professionals like lawyers and investment bankers, whose day to day work with the corporation typically involves substantial and sustained contact with executives other than the CEO.

[88] Gray directors are typically classified as a form of outside director. I depart

real or perceived, the very nature of their relationships with the corporation ensured that they had ties to corporate managers below the level of CEO. Put in terms of network theory, they had ties to networks that were independent of the CEO. Thus the number of nonredundant corporate contacts they had, and therefore their access to corporate information, was not dependent solely upon the CEO. These ties to networks below the CEO gave them independent access to corporate information, putting them in a position to verify information provided by the CEO (whether or not they actually took advantage of it by challenging the CEO).

Beginning in the 1980s, the number of inside directors on corporate boards began to diminish as corporate boards moved toward independence. This shift was spurred, in part, by two developments.[89] First, the American Law Institute adopted its Principles of Corporate Governance, which initially advocated independent directors (directors without personal or financial ties to the corporation) in a variety of contexts. Although the ALI took a more moderate position in its final draft,[90] the Principles do envision a "monitoring" board with a substantial number of independent directors, a concept which itself implies substantial directorial independence. Second, the Delaware Supreme Court, in fighting its way through a whirl of takeovers, tried to develop doctrine appropriate to evaluate boards' fulfillment of their fiduciary obligations. The Court noted repeatedly that boards dominated by independent directors were likely to receive more deference than boards with a substantial number of inside directors.[91] As finance came

from this usage because, with respect to the problem I'm discussing, they are situated more like inside directors than independent directors who are true outside directors.

[89] Westphal and Zajac have noted the substantial increase in boards dominated by outside directors. James D. Westphal & Edward J. Zajac, *Defections from the Inner Circle: Social Exchange, Reciprocity, and the Diffusion of Board Independence in U.S. Corporations*, 42 ADMIN. SCI. Q. 161 (1997).

[90] The moderation largely was a result of political pressure from large firm lawyers protecting their perception of their clients' interests.

[91] *See*, *e.g.*, Paramount Communications, Inc. v. Time Inc., 571 A.2d 1140, 1154 (Del. 1989); Mills Acquisition Co. v. MacMillan, Inc., 559 A.2d 1261, 1287 (Del. 1988); Ivanhoe Partners v. Newmont Mining Corporation, 535 A.2d 1334, 1343 (Del. 1987); Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc., 506 A.2d 173, 176 n.3 (Del. 1986); Moran v. Household Int'l, Inc., 500 A.2d 1346, 1356 (Del. 1985). There may also be a sociological dimension to the proliferation of outside boards. Gerald Davis and Henrich Greve, examining the spread of golden parachutes and poison pills among corporations, look to network theory to explain how the adoption of these devices may well be attributable to information flows through interlocking directorates. Gerald F. Davis & Henrich R. Greve, *Corporate Elite Networks and Governance Changes in the 1980s*, 103 AM. J. SOC. 1 (1997). The same mechanism might at least in part have been

to dominate management and the intercorporate transaction became an important tool of continued corporate development, the need for corporations to be free of fiduciary taint increased. Boards became increasingly independent.[92] Finally, the corporate scandals of 2002 led not only to the passage of the Sarbanes-Oxley Act, with its emphasis on directorial independence, but also to New York Stock Exchange reforms requiring listed corporations to have a majority of independent directors. Other business associations joined in advocating largely independent boards as well.[93] With directorial independence, and the absence of corporate insiders other than the CEO and perhaps one other executive on the corporate board, directors began to lose their network ties into the corporate structure. Ties with managers and other corporate insiders were eliminated, and replaced by a single tie into the network, the CEO.[94] As a result, directors became more dependent on the CEO for their information. Directors were not left completely isolated. Executives themselves belong to networks of other executives that tend to produce institutional conformity among corporations.[95] The relatively small number of directors of large American corporations compared to the total number of corporations suggests some degree of director overlap. In addition, a substantial subset of directors are CEOs of their own corporations, which provides them with significant network ties outside of the particular corporations they serve. While this may produce a level of conformity among directors, it does not itself suggest that the majority of independent directors have network ties within a given corporation beyond the CEO and any other insider who happens to sit on the board.

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responsible for the spread of outside boards.

[92] See the survey data in Bhagat & Black, *supra* note 15, at 239.

[93] Other organizations, like the Business Roundtable, have jumped on the bandwagon. BUSINESS ROUNDTABLE, STATEMENT ON CORPORATE GOVERNANCE (1997). The Business Roundtable is composed of leading CEOs. Their support for independent boards should not be surprising once one understands that this is entirely in their self-interest.

[94] *But see* James D. Westphal, *Collaboration in the Boardroom: Behavioral and Performance Consequences of CEO-Board Social Ties*, 42 ACAD. MGMT. J. 7, 16 (1999) (finding empirical evidence that corporations with CEO social ties to board members improve collaboration and advice seeking and that such corporations show improved performance).

[95] *See* Glenn R. Carroll & Albert C. Teo, *On the Social Networks of Managers*, 39 ACAD. MGMT. J. 421 (1996); Marta A. Geletkanycz & Donald C. Hambrick, *The External Ties of Top Executives: Implications for Strategic Choice and Performance*, 42 ADMIN. SCIENCE Q. 654 (1997).

These observations, in light of the insights provided by structural hole theory, suggest two hypotheses:

1. Corporations that have inside boards[96] will have a weak CEO*;* and

2. Corporations that have independent boards will have a strong CEO.

These hypotheses are counterintuitive and contrary to most of the accepted wisdom of corporate scholarship.[97] It has long been an article of faith, as well as accepted by corporate scholarship[98] and in caselaw,[99] that corporations with inside boards have the strongest CEOs.[100] Insiders, dependent for their jobs on the good will of the CEO, are unlikely to oppose him. This argument is fundamentally flawed. It assumes that the work of the board actually takes place at the board level. As a number of studies have demonstrated,[101] this simply is not true. To the extent that board members seek to challenge CEOs, they tend to do so in discussions outside of the board meeting. And, if confrontation with the CEO is to occur, it does so either informally or is choreographed in advance by the dissidents. While I lack evidence to substantiate this point, it follows logically that challenges to the CEO would be posed by *independent* directors, if at all. But the clear implication of network theory is that the independent directors will have received the information to challenge the CEO from their relationships, established on the board, with inside directors whose networks extend deep into the corporate hierarchy. By virtue of these relationships, the independent directors have sources of information independent of the CEO. They need not rely upon the kind or quality of the information the CEO

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[96] By "inside board" I do not mean to suggest that the board is exclusively or, even necessarily mostly, composed of insiders, only that a significant number of insiders other than the CEO sit on the board.

[97] *But see* note 14 and accompanying text, for recent questioning of the desirability of independent boards and attention to CEO power in relation to the board. Although none of these studies provides a direct connection between independent boards and CEO power (although Westphal, *supra* note 19, comes close), they clearly intuit the problem. The hypotheses not only clearly identify the problem but provide an explanation for these intuitions.

[98] *See supra* note 14 and accompanying text.

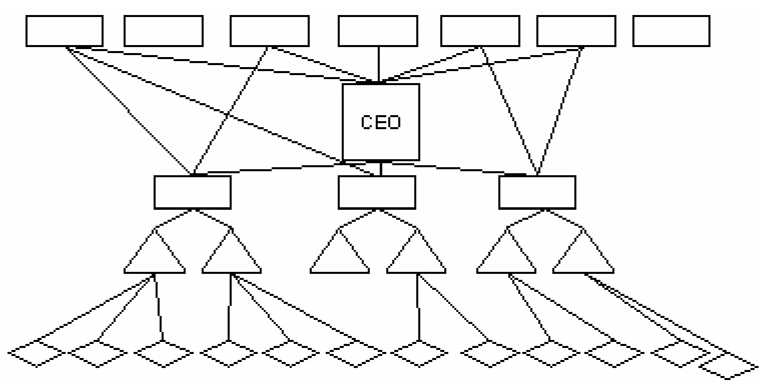
[99] *See* DEBORAH A. DEMOTT & DAVID F. CRAVERS, SHAREHOLDER DERIVATIVE ACTIONS: LAW AND PRACTICE (West 2004) (2003).

[100] But see the work done on the relationship between independent boards and executive compensation cited *supra* note 14.

[101] The classic, if dated, studies are JAY LORSCH & EVELYN MACIVER, PAWNS OR POTENTATES: THE REALITY OF AMERICA'S CORPORATE BOARDS (1989) and MYLES L. MACE, DIRECTORS: MYTH AND REALITY (1971).

presents. Given this greater access, the directors on an inside board, whether inside or independent, will be in a better position to challenge the CEO (even if the challenge is fronted by the independent directors to shield the inside directors from termination or retaliation for perceived disloyalty to the CEO). Hypothesis one is illustrated by Figure Seven.

Figure 7: Corporations that have inside boards will have weak CEOs



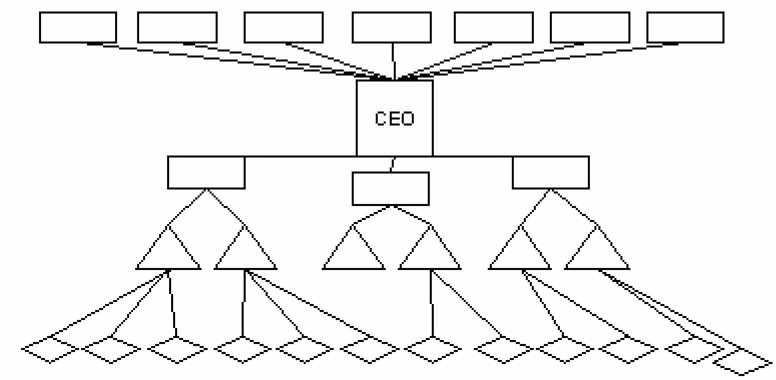
Hypothesis two suggests that in a corporation with an independent board, the CEO will be strong. The reason should by now be obvious. Unlike the corporation with an inside board, containing members with substantial network ties into the corporate hierarchy—the corporation with an independent board has only one structural hole between the subordinate managers and the board. In other words, when the board is completely independent, the nonredundant contacts bridging structural holes between the corporation and the members of the board do not exist. The single structural hole is bridged by the CEO, who, as the only contact between managers and the board, is the board's sole source of information.[102] Unless a

[102] Unless of course the CEO chooses to present insiders at board meetings or facilitate their contact with independent board members. It would, it seems, be irrational for a CEO to do this because in so doing he relinquishes his informational monopoly and the full power of his control position.

Of course auditors may provide a source of financial information to the board independent of the CEO. But the work of auditors is typically done in conjunction with management and, following Sarbanes-Oxley, we can expect the CEO to have an active role in the process of preparing audited financial statements. Moreover, the corporate scandals of 2002 demonstrated that independent auditors have greater incentives to please their employer than to provide truly independent audits. While this is likely to change, it only mitigates the problem at issue—it does not eliminate it.

subordinate manager has independent network ties to one or more of the independent directors, only the CEO is in a position to control and manipulate information flows to the board. This leaves the CEO in an enormously powerful position, with every incentive to present information to the board in a light that is most favorable to him.[103] The board is constrained by the information the CEO chooses to present and how he chooses to present it.[104] Consequently, the CEO in a corporation with an independent board should be strong.[105] The following figure illustrates hypothesis two.

Figure 8: Corporations that have independent boards will have strong CEOs



It should therefore come as no surprise that there is some (albeit disputed) evidence that CEOs with independent boards tend to receive the highest compensation.[106] But the reason may not be, as some suggest, the board's lack of sophistication with respect to option pricing and a consequent

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[103] Langevoort, *supra* note 5, at 812 discusses the CEO's incentive to manipulate information to outside directors. *See also* Westphal, *supra* note 19 (discussing and analyzing CEO ingratiation and persuasion to offset the power of outside directors).

[104] Westphal, *supra* note 19, provides empirical support for what he calls greater CEO ingratiation and persuasion behavior where the corporation has an independent board. Ingratiation and persuasion may not rise to the level of manipulation, but they're not far removed from it.

[105] This helps to explain the superior bargaining position of the CEO in compensation matters observed by Bebchuk et al., *supra* note 5, as well as suggest opportunities for the CEO to engage in what they interestingly describe as "camouflaging" his compensation package. *Id.* at 789.

[106] The empirical evidence is mixed on whether this is accurate. *See supra* note 23 and accompanying text.

tendency to be overly generous with options.[107] Instead, the reason may be that the independent board is reliant upon the CEO for information with respect to his own performance, information that can easily be manipulated or suppressed by the CEO because of his position as the sole source of information.[108] This also may explain Bhagat and Black's evidence that independent boards do not necessarily improve corporate performance and may in fact make it worse.[109] Finally, and perhaps most powerfully, it may account for one of the principal ways in which opportunities for executive misbehavior—and resulting corporate scandals—are created. As the sole bridge between corporate management and the board the CEO is put in an enormously powerful position. He has a monopoly over the information delivered to the body ultimately responsible for the integrity of corporate management and information.[110]

At this juncture, it is important to note some qualifications. Corporations of any size, and especially public corporations, are highly complex. As they face a variety of different challenges, there will be exceptions to the hypotheses. One clear case, presented in *Joy v. North*,[111] is where a CEO has an insider dominated board that he has, by force of personality, largely subjugated to his control. Or, a corporation with an independent board may have directors who themselves possess sufficiently strong personalities as to insist upon verifying the information presented by the CEO.[112] There are also certain

[107] *See* Murphy, *supra* note 14.

[108] Bebchuk, Fried, and Walker recognize this problem, *supra* note 5. *See also* Novaes & Zingales, *supra* note 41 (discussing the relationship between bureaucratic structure and compensation arrangements).

[109] Bhagat & Black, *supra* note 15, at 263.

[110] This does not mean that the CEO is unconstrained. Obviously the CEO will be dependent for his information on the information supplied to him by his subordinates. This can create its own informational problems, as I discuss *infra* Part VI.

[111] 692 F.2d 880 (2d Cir. 1982). This is likely to be a relatively rare situation. Persons—even insiders—who sit on corporate boards tend to be powerful and highly successful in their own right, and while psychological theories, as well as studies of director selection, suggest that these directors are or become friendly to the CEO, the situation in which directors are complete pushovers is unlikely to be frequent.

[112] This may well be increasingly the case, strong personalities or not, in light of the recent corporate scandals in which various boards were accused of failing to pay proper attention to internal corporate transactions, like the conflict of interest transactions approved by the board in the Enron case. WILLIAM C. POWERS, JR., 107TH CONGRESS., REPORT OF INVESTIGATION BY THE SPECIAL INVESTIGATIVE COMMITTEE OF THE BOARD OF DIRECTORS OF ENRON CORP. 1-17 (Feb. 1, 2002) [hereinafter POWERS REPORT].

types of transactions, like board-authorized compensation, for which an inside board may be beneficial to the CEO (particularly if the compensation plan simultaneously benefits the senior managers who sit on the board).[113] Other types of transactions, like takeover situations, may focus the board (at least in part because of potential legal sanctions for failing to fulfill their duties in highly visible transactions), such that they become more demanding of verified information (as, for example, in the employment of investment bankers to give fairness opinions). And a situation such as a corporation in reorganization may result in a grant of extraordinary power to the CEO (or result in a new CEO with such power), notwithstanding board composition or corporate structure. Nonetheless, for ordinary monitoring situations of the type that evidently failed in the recent corporate scandals, the hypotheses hold as a theoretical matter.[114]

Finally, I recognize that in basing the hypotheses on a wholly independent board (except of course for the CEO), I am relying on an ideal type that may not exist in practice. But using the ideal type allows us to clarify the problems an independent board faces with respect to the CEO, and formulate better questions for analysis.

V. EXTENDING THE IMPLICATIONS—SENIOR MANAGERS

It should be apparent that what holds true for the CEO has the potential, under the right circumstances, to hold true for senior managers. For purposes of this paper, I define senior managers as those executives who are the CEO's immediate subordinates and, depending upon the corporation's internal structure, the managers directly below them.

In order for senior managers to seize the opportunities presented by structural holes at the top of the corporate structure, at least one of several conditions must exist. One potential condition is that the CEO, despite his rank, is a poor network player, either because of his inability to recognize structural holes or because he has allowed them to proliferate

[113] The evidence on whether independent or inside boards overcompensate CEOs is disputed. Even in these circumstances, the CEO's ability to control information about his own performance with respect to an independent board may give him an edge.

[114] I know this is the typical law professor's cop-out but I am truly unequipped to do this kind of empirical work. I do hope, in the not too distant future, to find a way to conduct adequate empirical testing of the hypotheses.

at high levels. Another is that one or more senior executives might collude with the CEO in order to control and manipulate information with respect to the board. A third possibility is that the CEO intentionally creates structural holes in order to separate himself from the manipulation of information and control that would then be possible at the senior manager level. A final condition would be that the senior executives are good network players, with efficient and effective networks within the corporate hierarchy, and the ability to identify structural hole opportunities. Several examples will illustrate the existence of these conditions and the resulting possibilities for senior management misconduct.

The poster child of corporate scandals, the Enron fiasco, presents the first example. The facts of the decline and fall of Enron are well known. Enron engaged in a number of off-balance sheet transactions which, contrary to generally accepted accounting principles, it failed to disclose, resulting in highly overstated earnings and highly understated assets. Moreover, some of the transactions engaged in were shams. These transactions provided certain executives (most notably Andrew Fastow, the corporation's chief financial officer, and some of his subordinates), with opportunities for rich rewards. The collapse of Enron resulted in an internal investigation[115] and well-publicized congressional hearings[116] which involved the testimony of a number of the Enron participants.

Most striking in both the reports and the hearings were CEO Jeff Skilling's continuous denials of knowledge of the transactions, their financial structures, and the extent of Fastow's conflicts of interest and profit opportunities. (Some of the transactions took place under the watch of Skilling's predecessor CEO, Kenneth Lay, who refused to testify. The Powers report suggests the extent to which Lay may have lacked knowledge.)[117] Particularly striking was Skilling's congressional testimony, under oath, that he was not aware of the mayhem transpiring beneath him in the managerial ranks.

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[115] POWERS REPORT, *supra* note 112.

[116] *The Collapse of the Enron Corporation: Full Committee Hearings Before the State Comm. on Commerce, Sci., and Transp.*, 107th Cong. Part IV (Feb. 26, 2002) (testimony of Jeffrey Skilling).

[117] The Powers report is critical of the board, which evidently approved certain transactions on the basis of incomplete knowledge. POWERS REPORT, *supra* note 112, at 1-17. This of course is consistent with the notion that boards lacking strong network ties into the corporate hierarchy are more easily manipulated.

The Powers report also suggests that Skilling may have been uninformed at some level.[118]

The common wisdom, I believe, was that Skilling and perhaps Lay were lying.[119] But it may well be that Skilling was telling the truth. How could a chief operating officer (later CEO) be so ignorant of what his immediate subordinates were doing? One answer is that Skilling, a highly accomplished network player, created a structural hole between himself and Fastow, which he intentionally left unbridged. This break established chains of command and reporting systems designed to stop with Fastow. Information would only reach Skilling selectively, if at all. If this was the case, it is a superb example of how a CEO can create a structural hole in order to protect himself from potential liability.

Why would a CEO do this? In Skilling's case, the answer may be because he needed Fastow's manipulations in order to maintain Enron's appearance as a highly valuable and continually growing corporation. That, after all, is what the off-balance sheet transactions were designed to do. The price for Fastow's cooperation may well have been the enormous compensation he received for his role in managing these entities. Assuming Skilling was aware both of Fastow's skill (as he undoubtedly was) and his lack of character, it would have been to Skilling's advantage to allow Fastow to operate as a free agent, while Skilling created plausible deniability through the creation of a structural hole—severing the link between COO (later CEO) and CFO.[120]

The financial fraud of MCI/Worldcom presents another possibility: senior managers colluding with the CEO. This case also presents a nice example of board ignorance as a result of managerial manipulation of information. Worldcom (as it is

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[118] *Id*. at 169-72.

[119] Of course this is not in itself necessarily probative of their lack of knowledge; only that the government has yet to make a case.

[120] This is where Burt's description of structural holes both as chasms and as interlocks creates possibilities for expanding the utility of the theory. The use of structural holes in the context described in the text envisions the creation of a chasm which remains unfilled despite the fact that presumably both Skilling and Fastow perceived the opportunity to fill it. This defensive use of structural holes is not part of Burt's explanation of the theory. It is consistent with the theory I develop here based upon Burt's work.

I also do not mean to suggest that as a moral or ethical matter we ought to accept Skilling's denial of knowledge as a legal defense if indeed this is what happened. If I am right about the structure, however, it could make it difficult for prosecutors to establish a strong case against him.

now known), through chief financial officer Scott Sullivan and several of his subordinates, simply made up numbers that showed higher profits and revenues and lower costs than were actually the case. CEO Bernie Ebbers was convicted in 2005 for his role in the fraud. Yet it remains unclear how much he knew. A jury found that, despite Ebbers' denial of knowledge, he in fact was aware of the fraud and may have participated in it.[121] As in the case of Enron, the clear purpose of the financial fraud was to support and increase the company's stock price despite underlying business conditions that would have in fact damaged the company (or at least its stock price) had they been properly disclosed.

To the extent that Ebbers was involved, Worldcom presents a paradigmatic example of collusion among the CEO and senior managers to take advantage of a structural hole. In contrast to the Enron case in which, on my reading, Skilling intentionally broke the network tie between himself and Fastow, in this case Ebbers and the senior managers involved themselves formed a network. This network stopped at the CEO and allowed the board to remain in the dark.

VI. EXTENDING THE THEORY—THE RELATIONSHIP BETWEEN BOARD STRUCTURE AND INTERNAL CORPORATE STRUCTURE

Thus far my analysis has proceeded as if there were no significant differences among managerial systems. In fact there are two basic paradigms of internal corporate structure. The first is the traditional, hierarchical corporate bureaucracy, the development of which is described thoroughly and compellingly by Alfred Chandler.[122] By this account, American big business grew through the first half of the twentieth century as multi-unit enterprises that, of necessity, employed legions of corporate managers at various levels in huge bureaucracies. Such bureaucracies persisted well into the end of the century.[123]

The second kind of corporate structure is more condensed. Less hierarchical corporations rose in prominence

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[121] Robert Frank et. al., *Executives On Trial: Scandal Scorecard*, WALL ST. J., Oct. 3, 2003, at B1, B4.

[122] *See generally* ALFRED D. CHANDLER, THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS (1977).

[123] *See* DAVID M. GORDON, FAT AND MEAN: THE CORPORATE SQUEEZE OF WORKING AMERICANS AND THE MYTH OF MANAGERIAL "DOWNSIZING" (1996).

as the large bureaucracies began to come apart.[124] These "flatter" corporations are organizations in which layer upon layer of middle management has been stripped out, leaving in its place a CEO, a number of high level executives on a relatively equal level, and several middle level managers above the worker. Raghuram Rajan and Julie Wulf, after surveying relevant information with respect to more than 300 large American corporations over fourteen years, concluded that the number of managers reporting directly to the CEO has increased, and the levels of managers between the CEO and the lowest manager with profit responsibility has decreased. The number of managers reporting directly to the CEO increased by 61% between 1986 and 1999, while the number of positions between the CEO and the lowest manager with profit responsibility decreased by 25%. This is clear evidence that American corporate hierarchies are flattening.[125]

Each organizational type is designed to facilitate the flow of information.[126] Organizational theorists argue that the particular internal structures, or information paths, vary with the circumstances of the corporation. Bureaucratic structure tends to be found in stable industries where such factors as technology, supply, demand, and production are relatively predictable and unvarying. In this situation, the bureaucracy works precisely because it is designed for control, and control is possible and likely efficient because of the predictability of the business environment. Control is ensured by the creation of rigid hierarchies and separated divisions in which information flows up the pyramid to the responsible senior executive. By contrast, horizontal structures work best in industrial environments, where information and technology are rapidly changing, and the need for control is supplanted by the need

[124] This is not to say that there are not a significant number of American corporations that still operate as hierarchical bureaucracies—only that they have become less dominant in the corporate population and tend to be concentrated in certain industries

[125] Raghuram Rajan & Julie Wulf, *The Flattening Firm: Evidence from Panel Data on the Changing Nature of Corporate Hierarchies*, NAT'L BUREAU ECON. RES., Apr. 2003, *available at* http://papers.nber.org/papers/w9633.pdf. Rajan and Wulf are interested primarily in the effects this trend has had on managerial pay as well as the causes of the flattening (which they conclude is due to exogenous pressure in the form of technological and environmental changes.) These insights, while obviously important, are not especially relevant to the central argument of this paper.

[126] Nohria & Berkley, *supra* note 20, at 118 ("Organizations control on the basis of knowledge: They are information-processors, or what could be seen in a metaphorical sense as a kind of human-based computer.")

for flexibility. Such flexibility is best obtained by loosening the bureaucratic hierarchy and allowing information to flow freely through the various intracorporate networks. Building upon structural hole theory as applied to CEO-board relationships, these observations regarding internal corporate structure lead me to formulate two additional, although tentative, hypotheses:

1. Corporations that are structured hierarchically and have independent boards will have a moderately weak CEO; and

2. Corporations that are structured horizontally and have inside boards will have a moderately strong CEO.

Before examining the two hypotheses individually, I propose four expanded hypotheses that result from the conflation of the two theories:

1. Corporations that are structured hierarchically and have inside boards will have a weak CEO;

2. Corporations that are structured hierarchically and have independent boards will have a moderately weak CEO;

3. Corporations that are structured horizontally and have inside boards will have a moderately strong CEO; and

4. Corporations that are structured horizontally and have independent boards will have a strong CEO.

The hypotheses in this broader iteration can also be presented in the form of a matrix:

	Inside	Independent
Hierarchical	Weak	Moderately weak
Horizontal	Moderately strong	Strong

I previously explained the two principal hypotheses without reference to bureaucratic structure. Let me now elaborate the more complex hypothesis. The information flows to independent directors from inside directors are likely to be substantially richer in bureaucratically-structured corporations than in horizontal corporations. In a bureaucratic corporation, almost by definition the CEO will have relatively few contacts in the corporate hierarchy. That is, he will have relatively few subordinates and bridge relatively few structural holes (as many structural holes as he has immediate subordinates with different responsibilities and therefore different networks). Recall that the ideal situation for an actor to exploit his information and control opportunities is to maximize the number of structural holes he bridges, or to maximize the number of his nonredundant network contacts. Bureaucratic efficiency implies a chain of command, narrowing to only a few immediate subordinates below the CEO. Thus the bureaucratic structure provides, at least in an ideal state, few structural hole opportunities—few nonredundant contacts—for the CEO.

Rajan and Wulf's study found that, indeed, the number of subordinates reporting directly to the CEO was significantly smaller in a more bureaucratic era. As recently as 1986, the median CEO in their study group had 4.4 executives reporting directly to him.[127] A web of hierarchy extended below these executives, networks upon networks. This web of networks goes much deeper in a bureaucratic corporation than in a horizontal corporation and it broadens considerably as one proceeds down the hierarchy from the CEO and his handful of subordinates. One implication is that there are a greater number of points within the pyramidal hierarchy at which network entrepreneurs can exploit structural holes that are likely unavailable to the CEO. The opportunities for informational and control advantage are pushed further down the chain of command to lower level managers. These managers, if they are good network entrepreneurs, can exploit these structural hole opportunities with the possible result that they can manipulate or stop information before it reaches the level of the CEO or his immediate subordinates.

While this argument suggests that top level executives who would serve as inside directors also have a limited number of direct reporting contacts in the bureaucratic corporation, the

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[127] Rajan & Wulf, *supra* note 125, at 1.

issue is more complex. The theory does not necessarily imply that the executives' only contacts in the hierarchy are those reporting directly to them (in a way that is probably more characteristic of the CEO), and thus that they face informational constraints similar to the CEO. On the contrary, these mangers are likely to have more subordinates (and thus more network contacts) that reach deeper into the hierarchy than the CEO. Glenn Carroll and Albert Teo found that higher level managers tend on average to have wider social networks than do lower level managers, both within and independent of the corporation.[128] These social networks include other high level managers not directly involved in that particular manager's area of expertise, suggesting more horizontal networks across the corporation that can serve as crucial sources of information.[129] Moreover, Burt's work shows that not only do managers' network sizes increase with rank,[130] but that in establishing their networks, managers typically choose a "strategic partner[]," and that the most effective strategic partner tends to be one of their bosses' boss.[131] The implication is that higher level managers also have networks that go deep into the bureaucratic structure, as lower managers leapfrog the middleman and align themselves with higher level managers.[132] The higher the level of manager, therefore, the more likely they are to have both broad and deep networks. This line of reasoning may also suggest that some second-tier executives

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[128] Carroll & Teo, *supra* note 95.

[129] The specific position of the CEO is not addressed. But it seems likely, given the nature of bureaucratic corporations, that the CEO will be more isolated in the executive suite and less likely to have network ties to lower level managers. Moreover, given the presumed desire of CEO subordinates to succeed the CEO, one should expect these executives to adopt the CEO as their strategic partner (which of course puts the CEO in a position to manipulate them in the manner of the law firm associate I earlier described).

[130] BURT, *supra* note 27, at 125.

[131] *Id*. at 146, 150. It is not at all clear, though, that Burt would agree with my analysis. Although he doesn't address the point directly, he does point out that a manager with a disorganized work force (which *may* correlate with my description of some horizontal corporations) may be more able to exploit his workers to his advantage than the manager of a well-organized work force (which *may* correlate to my description of some bureaucratic corporations). *Id*. at 189.

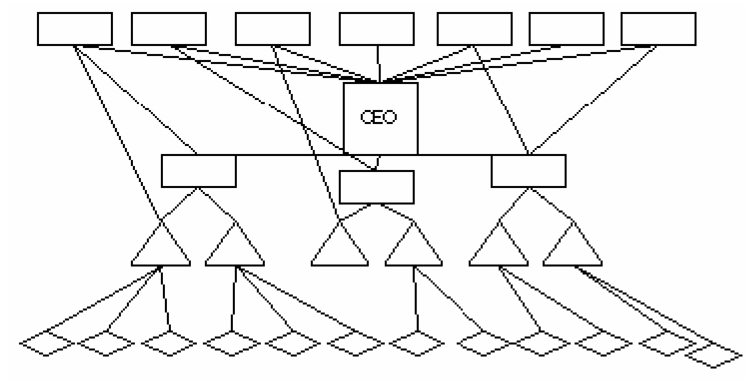
[132] It is, of course, possible that the CEO serves as strategic partner to executives below the level of his immediate subordinates and thus establishes network contacts for him deeper in the corporate structure than I have suggested in the text. But even if there is some depth to CEO contacts in hierarchies, the flattened corporation provides more subordinates of the CEO's subordinates with whom he can make contact, thus suggesting that the bureaucratic or flattened structure of the corporation should be expected to have an effect on the CEO's power independent of board composition.

strategically partner with the CEO, but given the CEO's ultimate responsibility for the corporation and his relatively limited time, it may well be more likely that the CEO remains relatively isolated in the executive suite. If the CEO's subordinates maximize their nonredundant contacts, they can take advantage of the structural hole opportunities to gain greater information and control than is available to the CEO.

All of this suggests that the managers on a level directly below the CEO (the managers reporting directly to the CEO) are likely to have significant nonredundant network contacts that provide them with important information flows. How and what they choose to report to the CEO who, theoretically, is more constrained, is within their control. The fewer the number of executives reporting directly to the CEO, the more limited the CEO's sources of information, and the more control maintained by the senior executives. Thus it would appear that the CEO's position in the bureaucratic corporation is highly dependent upon the extent to which his immediate subordinates refrain from opportunistic use of their informational positions, gained through their multiple networks which provide them with more structural hole opportunities than the CEO. The CEO, in choosing his subordinates, must choose effectively—subordinates who are trustworthy and reliable—in order to maximize his power within the bureaucratic structure and prevent his own informational isolation.

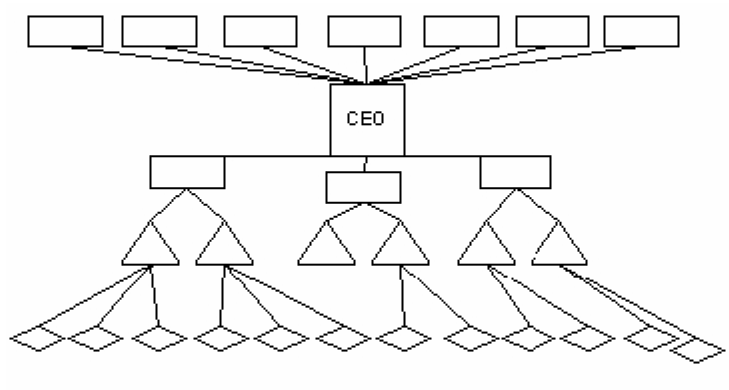
The likely conclusion is that inside directors in a bureaucratic corporation are structurally more wired than the CEO, and have independent relationships (by virtue of their board seats) with independent directors. The insiders' nonredundant contacts—their structural hole opportunities—are more numerous and likely deeper than those of the CEO. Now, the opportunity for critical information to bypass the CEO is structurally apparent. Thus, network theory suggests that the bureaucratic corporation with insiders on the board is likely to have a relatively weak CEO. Figure Nine illustrates this hypothesis.

Figure 9: Corporations that are structured hierarchically and have inside boards will have weak CEOs



The second hypothesis logically follows from the first. Bureaucratic corporations with an independent board are likely to have moderately weak CEOs (CEOs that are stronger than in the bureaucratic/inside board corporation and weaker than CEOs in each configuration of the horizontal corporation). The same structural conditions I discussed above with respect to the hierarchy continue to exist. This time, however, the CEO's subordinates lack direct ties to the independent directors. Information flows through the CEO. The CEO is not in as strong a position of informational control as he is in a horizontal configuration because his immediate subordinates (and therefore network contacts) are still few in number and sufficiently connected within the corporation to maintain their ability to control and manipulate the flow of information to the CEO. But unless they have relationships with at least one independent director beyond the context of the particular corporation (which is possible if, for example, a chief financial officer sits on the board of a corporation on which one of the independent directors also sits), they have no informational bypass route around the CEO. Thus, whatever the quality and completeness of the information the CEO receives, he fills the single structural hole between the board and his subordinates and is in a position to control and manipulate the information received by the board. The structure of the corporation suggests that the quality and quantity of information he receives will vary with the integrity and loyalty of his subordinates, but his position with respect to the board is strong. Figure Ten illustrates the hypothesis.

Figure 10: Corporations that are structured hierarchically and have independent boards will have moderately weak CEOs



Some empirical evidence suggests that this indeed is the case. Ranjay Gulati and James Westphal demonstrated (through the empirical examination of joint venture formation) that "[i]ndependent board control over management may actually produce a negative relationship between the CEO and the board characterized by a lack of mutual understanding and distrust."[133] (This, of course, is consistent with Bhagat and Black's work and the studies cited earlier suggesting that independent boards actually impede corporate performance.[134]) Gulati and Westphal attribute this largely to the dissatisfaction felt by a CEO who believes he is under significant scrutiny by an independent monitoring board. While their conclusion with regard to mistrust seems compelling, their explanation relies upon psychological motivations that are difficult to verify. While the two are not necessarily mutually exclusive, I present a theory that does not rely on speculation, self-reporting, or psychological analysis. The board is right to distrust the CEO because the CEO is in a structural position to block or manipulate the flow of information to the board. This conclusion, as will be clear, has its strongest implications for hypothesis four.

The third hypothesis introduces the horizontal corporation, a structure that has continued to proliferate over the last several decades. The bureaucratic corporation derives

[133] Gulati & Westphal, *supra* note 21, at 477, 498.

[134] *See* Bhagat & Black, *supra* note 15, and *supra* text accompanying notes 15, 17, 23, and 105.

from the traditional, Taylorist-inspired,[135] pyramidal structures, consisting of line workers to legions of middle managers to Janissary corps of junior executives to the chosen few in the executive suite and, ultimately, the CEO. This structure has, in many industries (and to some extent within industries) significantly flattened. Instead of pyramidal hierarchies, we are now more likely to see corporations that have stripped out much of the middle managerial ranks and spread the executive power over a larger horizontal range of senior managers, who report not to the CEO's subordinates, but to the CEO directly. Rajan and Wulf found that the average number of senior managers reporting directly to the CEO had increased by 61%, from 4.4 to 7.2, between 1986 and 1999.[136]

In the horizontal corporation, the managerial levels below the top executives are dramatically reduced and the number of executives reporting directly to the CEO is significantly increased. From the standpoint of structural holes, the consequences are immediately apparent. While the CEO's subordinates may still retain some informational control based upon their networks, two things change. First, those networks are considerably reduced in size. The manager has fewer subordinates, and the manager's subordinates have fewer subordinates. Even if, as a consequence, the manager's network becomes flatter (i.e. managers at the same level will interact in networks),[137] their ability to control information flows to the CEO is considerably diminished. This is because the number of contacts the CEO has into the various networks within the corporation corresponds with the number of executives reporting to him. In other words, he bridges more structural holes than he does in the hierarchical corporation. Unless one assumes that the executives will collude to restrict the information flow to the CEO,[138] the CEO will have

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[135] *See generally* FREDERICK WINSLOW TAYLOR, THE PRINCIPLES OF SCIENTIFIC MANAGEMENT (1911); Nohria & Berkley, *supra* note 20, 108-26. The classic work on the large, multi-divisional bureaucracy is of course ALFRED D. CHANDLER, THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS (1977).

[136] Rajan & Wulf, *supra* note 125, at 1. But see GORDON, *supra* note 123, for an argument that bureaucracies which flatten as the result of significant layoffs in the middle management ranks relatively quickly re-establish their hierarchies through rehirings.

[137] This situation, by the way, has been found by Burt to be most advantageous to managers in their ability to take advantage of structural holes. Burt, *supra* note 62.

[138] This is possible, but unlikely, given the normal ambitions of second-level executives eventually to ascend to a CEO position either in their own or another

materially greater informational opportunities. Moreover, when applying this theory to the ideal model of the horizontal corporation, each of these senior executives performs different functions, and has access to (and reports to the CEO) different types of information. As the number of CEO subordinates multiplies, the diffusion of job descriptions is likely to increase. The result is that the CEO is increasingly able to receive, convey, and control information—not to mention manipulate his subordinates against one another.[139] Thus we should expect that the CEO in the horizontal structure is, counterintuitively, more powerful than the CEO in a bureaucratic organization with either an inside or an independent board. Hypothesis three is illustrated in Figure Eleven.

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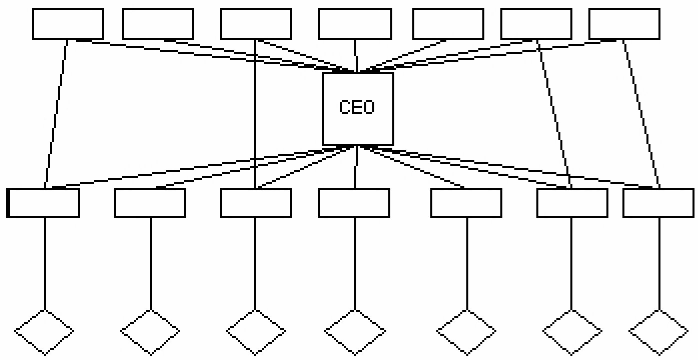
corporation which makes them in large part dependent upon the good will of their own CEO. Raymond T. Sparrowe and Robert C. Liden, combining sociological exchange theory which looks at the quality of relationships, and network theory, which looks at the structure of relationships, suggest that "where the timing and equivalence of returns is indefinite and the interest of the exchange partners is cooperative," the exchange relationship (as between CEO and immediate subordinate) is likely to be cooperative and competition (of the manipulative sort described in the text) is likely to be contrary to group norms. In contrast, structural holes are "characterized by immediacy and equivalence of returns and mutual self-interest"—in other words, competition, which (in my view) is only to be expected given the fact that structural holes are definitionally competitive. Raymond T. Sparrowe & Robert C. Liden, *Process and Structure in Leader-Member Exchange*, 22 ACAD. MGMT. REV. 522, 532 (1997). If this is true, one might reasonably ask whether the CEO-subordinate relationship which, after all, is characterized by structural holes, is just as likely to be competitive and manipulative as the CEO-board relationship, which is also characterized by structural holes. I suspect that the answer is not, because the CEO-subordinate relationship is not itself competitive. That is to say, there is only one CEO, and while subordinates might fight to succeed him (establishing competitive relationships at the subordinate level which further destroys the incentives for them to collude in withholding information from the CEO), they are reliant upon his good will and high opinion (at least as long as the CEO is successful) for their chances to be named successor.

[139] Burt also notes that this kind of structure, in which managers have few or no peers, increases the value of social capital to them in terms of their chances of promotion. This is true for bureaucratic organizations, but in network organizations (or horizontal corporations) it is also valuable to managers with multiple peers. Burt, *supra* note 62. This observation is not especially significant for my argument because in the stylized firm I've created each CEO subordinate can only rise within the firm by becoming CEO. But there is a highly important implication of this analysis which is most relevant to hypothesis four. The structure puts them in the position of monopolist over the kinds of work they do. The CEO is, in this analysis, the ultimate monopolist, since nobody in the corporation does the work of the CEO, and it is the ability to use this monopoly position (which would be constrained by inside directors) that gives him the greatest power.

Figure 11: Corporations that are structured horizontally and have inside boards will have moderately strong CEOs



A qualification is in order. If bureaucratic organizations are built for control, horizontal organizations are built for freedom. Information flows are significantly less constrained in a horizontal organization, as are relationships defined by position. Freedom is the opportunity provided by structural holes. The implication is that in the horizontal organization, managers are freer to establish their own networks across the corporation, and thus skillful network entrepreneurs can achieve a level of informational control that is more widespread than is likely in the more constrained bureaucracy. In such a case, the network entrepreneur could be in a better position to control broader information flows to the CEO and his immediate subordinates, and thus the CEO would be weakened. While I believe that the CEO's greater access into the network structures of the horizontal corporation is likely to give him greater power, this is not certain, and the hypothesis remains tentative.

The key variable now becomes the board. If the board has insiders as well as independent directors, the CEO's position is likely to be weakened because, as in hypothesis one, the presence of insiders on the board gives network contacts to the independents into the corporate networks by virtue of their contacts with the insiders. In light of the CEO's strong structural position in the horizontal corporation (with his own multiple nonredundant contacts into the corporation's networks), the independent directors' ability to circumvent the CEO will be reduced. It will not be entirely eliminated, because opportunistic senior managers hypothetically working in different aspects of the business might take advantage of their board positions to manipulate the independents. The risk of detection by the CEO, however, is increased: the senior managers' corporate responsibilities are more distinct, therefore the CEO's ability to discern the source of information that bypasses him will be improved. Thus, in hypothesis three, we can expect the CEO in the horizontal corporation with an inside board to be stronger than the CEO in a bureaucratic corporation, but not as strong as he might be were the board composed solely of independent directors as in hypothesis four.

My conclusions are tentative with respect to the four restated hypotheses that address both board structure and bureaucratic structure, and require further study. As I noted earlier, corporations are highly varied in their internal organizations despite the existence of distinct and identifiable patterns. It may be that in a particular bureaucracy, CEO control is so tight that defection in the form of information blockage or distortion at lower levels is unlikely. But if true, it is most likely to be true in a corporation that does business in a single location. Burt found that in a corporation with multiple and geographically dispersed business operations, managers whose jobs put them at the "frontiers," i.e., required them to be in contact with managers in other locations, had greater structural hole opportunities than managers whose responsibilities were confined to a single location. Thus the tightly controlled bureaucracy of the Taylorist model may be increasingly rare.

At the same time, as I noted earlier, horizontal corporations are designed to permit freer and less structured information flows. In terms of network theory, the networks are not as constrained by bureaucratic structure. As a result, it may well be that greater structural hole opportunities exist in these corporations because the diffusion of job responsibility implied by the horizontal structure creates internal frontiers which enable even managers working in the same location to identify more numerous structural holes. Since structural holes are opportunities to receive, control, and manipulate information, it may be the case that in the horizontal corporation the CEO will be less well informed than in the bureaucratic corporation. On the other hand, the broader and shallower management structure of the horizontal corporation suggests that the likelihood of detecting informational blockage and manipulation is greater than in the hierarchical structure, with potentially dire consequences for those acting opportunistically to the disadvantage of the corporation or the CEO.

Because of the uncertain affect of the internal corporate structure on information flows, these hypotheses are tentative. For the time being, I suggest that bureaucratic structure be seen as an independent variable that magnifies the effects of the presence of an inside or independent board. While this variable is not likely to have as substantial an explanatory impact as do the simpler hypotheses stated at the outset, it merits additional consideration and empirical research.

VII. MOVING BEYOND THE BOARD IN CORPORATE LAW REFORM

Almost since the advent of the modern corporation, corporate scholars have focused on the board of directors as the body most capable of protecting the corporation and its stockholders from managerial depredation. Beginning in the 1980s, the reform effort increasingly focused on the importance of independent directors as the solution to this monitoring problem. Recent evidence, however, suggests that the resulting changes in corporate boards have not been entirely beneficial. For example, the CEO of a corporation with an independent board has the ability to distort his compensation and the corporation's broader compensation structure in ways that are disadvantageous to the corporation. Structural hole theory provides an explanation for these phenomena, as well as for the recent corporate scandals that occurred beneath the boards' radar screens. Independent boards magnify CEO power. Since independent boards have been the consensus solution after almost a century of attempts at board reform, this traditional focus on the board of directors is misplaced. Instead, governance scholars must begin to study the internal workings of the corporation, and how these networks link to the CEO, senior executives, and the board, if they are to devise effective solutions to problems of corporate governance.

One specific application relates directly to the current state of the law on board monitoring. In the widely discussed opinion in *In re Caremark International,*[140] the Chancellor represents the boards' obligation as the duty to create information flows in both directions (from the board as to corporate policy and from the bureaucracy as to compliance

[140] 698 A.2d 959 (Del. Ch. 1996).

information).[141] My argument suggests that in order to fulfill this duty, it cannot be enough for the board simply to establish lines of reporting. Structural holes, which provide opportunities to block or distort information throughout the hierarchy up to and including the CEO, must be identified in order for the board effectively to monitor the flow and accuracy of corporate information. Monitoring information flows is only effective when one accurately identifies the network nodes that are the corporate actors who bridge structural holes and thus control the flow of information. In the absence of attention to internal structure, monitoring will have limited utility: the more limited the more independent the board.

The point of this paper is not, at this early stage, to prescribe specific corporate reforms. While the theory is powerful, reform must rest upon empirical evidence. Instead, I suggest that certain paths of research must be investigated in order to achieve effective corporate reform. The debate over board function has been one of manager versus monitor, with the latter clearly victorious. Although I do not suggest that the board as an institution is irrelevant, my argument raises the question, starkly, of the board's utility. While others have proposed alternative conceptions of the board,[142] my theory indicates the difficulty in evaluating, much less prescribing, the board's function and composition without an inquiry into the relationship between the board and the internal structure of the corporation. I have presented the theory as a general one, as it would be useful first to study it that way, although individual corporate evaluation may ultimately be necessary. It will likely be found that one size doesn't fit all.

At least as important, my hypotheses suggest that we take a hard look at the role of the CEO and senior managers. In recent years in particular, CEOs of major corporations have developed something of a "rock star" quality, followed by the popular press, lionized in success while derided in defeat. No doubt this has contributed to CEO self-image, if not actual power. But board reform without attention to the role and power of the CEO and the corporation's internal managerial

[141] I have elsewhere argued that the opinion is disingenuous, see Mitchell, *supra* note 38, but it is the articulated state of the law.

[142] *See, e.g.*, Dallas, *supra* note 14 (suggesting a dual board); Fisch, *supra* note 14 (suggesting individually tailored boards).

structure is a fruitless endeavor. Corporate law scholars have, with rare exceptions, ignored this critical aspect of corporate governance. Attention should turn to this subject.