CONTESTED VISIONS:

THE VALUE OF SYSTEMS THEORY FOR CORPORATE LAW

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Despite the dominant role corporations play in our economy, culture, and politics, the nature and purpose of corporations remains hotly contested. This conflict was brought to the fore in the recent Supreme Court opinions in Citizens United *and* Hobby Lobby. *Although the prevailing narrative for the past quarter-century has been that corporations "belong" to shareholders and should pursue "shareholder value," support for this approach, which has been justified as essential for managerial accountability, is eroding. It persists today primarily in the form of the argument that corporations should seek "long-term" shareholder value. Yet, as this Article shows, when shareholder value is interpreted to mean "long-term" shareholder value, it no longer offers the sought-after managerial accountability.*

What can? This Article argues that systems theory offers an answer. Systems theory is a well-developed design and performance measuring methodology routinely applied in fields such as engineering, biology, computer science, and environmental science. It provides an approach to understanding the nature and purpose of corporate entities that is not only consistent with elements of the many otherwise-conflicting visions of the corporation that have been developed, but also with important and otherwise difficult-to-explain features of corporate law and practice. It offers proven methods for measuring corporate performance that recognize the possibility of multiple goals and the importance of sustainability. And it cautions that, by ignoring the lessons of systems theory, shareholder value thinking may have encouraged regulatory and policy interventions into corporate governance that are not only ineffective, but destructive.

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INTRODUCTION

Any attempt to answer the question "what is a corporation?" is an exercise in negotiating contested visions of the nature and purpose of the corporate form. Some experts say the corporation is a grantee of the state and should serve a public purpose (concession theory).[1] Others describe the corporation as a separate legal entity with the ability to hold property and enter contracts in its own name (entity theory).[2] Still others argue the corporation is not "real" but rather is a nexus of privately-negotiated contracts (nexus of contract theory).[3] Or perhaps a corporation should be viewed as an aggregation of natural persons (aggregate theory)[4] or relatedly, an aggregation of shareholder property (property theory)[5] or specific assets (team production)[6]?

The recent twin U.S. Supreme Court cases of *Citizens United v. FEC*[7] and *Burwell v. Hobby Lobby Stores, Inc.*[8] bring these contested visions of the nature and purpose of corporations into sharp focus. In *Citizens United*, Justice Kennedy's opinion for the majority described corporations as "associations of citizens,[9] while Justice Steven's dissent insisted that corporations are not associations of people but legal entities that "have no consciences, no beliefs, no feelings, no thoughts, no desires."[10] Stevens also observed there are multiple "recognized model[s]" of the corporate entity, including the state grantee, nexus of contracts, and team production models.[11] In *Hobby Lobby*, Justice Alito repeatedly described a corporation's shareholders as its "owners,"[12] implying that a corporation is its shareholders' property, while Justice Ginsberg's dissent maintained that

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[1] *See supra* text accompanying note 41.
[2] *See supra* text accompanying notes 34-36.
[3] *See supra* text accompanying notes 39-40.
[4] *See supra* text accompanying notes 36-37.
[5] *See supra* text accompanying notes 52-58.
[6] *See supra* text accompanying notes 42-45.
[7] 558 U.S. 310 (2010).
[8] 134 S.Ct. 2751 (2014)
[9] 558 U.S. at 354
[10] *Id*. at 466
[11] *Id*. at 465 n.72.
[12] 134 S.Ct. at 2767, 2771, 2774, 2775.

corporations were "artificial persons" separate from any individual[13] and further noted that not only shareholders but also workers "sustain the operations of" corporations.[14] In *Citizens United*, Justice Steven's dissent spoke of corporate purpose in terms of "maximiz[ing] shareholder value"[15] and "maximiz[ing] the returns on…shareholders' investments."[16] In *Hobby Lobby*, Justice Alito expressed a different view, noting that "modern corporation law does not require for profit companies to maximize profits at the expense of everything else, and many do not do so."[17]

This judicial disagreement illustrates the clashes perceived to exist among the various "recognized models" of the corporation that have been developed. In particular, Anglo-American corporate scholarship and corporate governance practice have been dominated for most of the past three decades by a "standard" economic account that assumes that shareholders own and ultimately ought to control corporations; that shareholders' principal interest is increasing their wealth; that the interests of other corporate constituencies, like employees and customers, should be protected primarily by contract and regulation; and that the market price of a public company's shares is the principal measure of shareholders' wealth.[18] The result has been widespread embrace of the notion that corporate managers should seek first and foremost to "maximize shareholder value," a philosophy of corporate purpose that might be dubbed shareholder value theory.[19] As the *Citizens United* and *Hobby Lobby* opinions illustrate, however, this consensus seems to be falling apart as both the standard model and shareholder value theory have been subject to escalating criticism.[20] Commentators have pointed out that the standard

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13 *Id*.. at 2794.
14 *Id*.at 2794.
15 558 U.S. 64.
16 *Id.* at 75.
17 573 U.S. at 2771.
18 A classic statement of the standard model can be found in Henry Hansmann & Reinier Kraakman, *The End of History For Corporate Law*, 89 GEO. L.J. 439, 447 (2000–2001)(standard model holds that "ultimate control of the corporation should rest with the shareholder class; the managers of the corporation should be charged with the obligation to manage the corporation in the interests of its shareholders; other corporate constituencies, such as creditors, employees, suppliers, and customers, should have their interests protected by contractual and regulatory means rather than through participation in corporate governance; … and the market value of the publicly traded corporation's shares is the principal measure of the shareholders' interests.") In other work, Hansmann has explored alternative theories of corporate purpose. *See, e.g., The Evolution of Shareholder Voting Rights: Separation of Ownership and Consumption*, 123 Yale L. J. 948 (2014).
19 *See infra* text accompanying notes 46-48 (discussing shareholder value theory).
20 *See generally Statement on Company Law: Summary: Fundamental Rules of Corporate Law*, THE MODERN CORPORATION, https://themoderncorporation.wordpress.com/company-law-memo/ (last

Anglo-American model ignores the significance of corporate legal personhood;[21] that it does not fit with the very limited control granted shareholders under actual corporate law;[22] that the standard model leads to social inefficiency when, as may often be the case, contracts are incomplete and regulation is imperfect;[23] and that stock market prices often fail to capture long-term economic value.[24] Moreover, commentators have associated shareholder value theory with a number of recent corporate scandals and business failures, including the 2008 financial crisis.[25] In this Article, we shed light on and resolve much of the ongoing debate by suggesting a new and more unifying approach to understanding corporations – that of systems thinking.

Systems theory is a design and assessment methodology routinely employed in a wide variety of fields, including computer science, engineering, biology, and environmental science. It can be applied to any process (system) in which multiple elements interact with each other, over time, to achieve certain purposes or functions. We argue that public companies in particular can be viewed as complex systems in which multiple elements (e.g., financial capital, physical capital, and human capital) interact with each other to perform a variety of useful and desirable functions (e.g., providing goods and services, employment opportunities, investor returns, and tax revenues) under uncertain conditions and over time. We articulate a vision of the corporation that allows for a better understanding of the interaction between an artificial legal entity and its human actors/agents; allows room to consider the role of the state, without which legal entity status could not be conferred; offers new strategies and

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visited Feb. 17, 2017) (memorandum signed by nearly 50 legal experts noting that "certain beliefs about corporations and corporate law are widely held and relied upon by business experts, the financial press, and economists who study the firm. Unfortunately, some of these widely held beliefs are mistaken").

21 *See, e.g.*, William T. Allen, *Our Schizophrenic Conception of the Business Corporation*, 14 Cardozo L. Rev. 261, 268-71 (1992); Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 Va. L. Rev. 248, 292 (1999); Jean-Phillipe Robe, *The Legal Structure of the Firm*, 1 Accounting, Economics, and Law (January 31, 2011).

22 *See infra* Part I.C; Blair & Stout, *supra* note 21, at 290-308; Daniel J.H. Greenwood, *Fictional Shareholders: For Whom Are Corporate Managers Trustees, Revisited*, 69 S. Cal. L. Rev. 1021, 1038-43 (1995-96).

23 *See, e.g.*, JOEL BAKAN, THE CORPORATION: THE PATHOLOGICAL PURSUIT OF PROFIT AND POWER (2005); Blair & Stout, *supra* note 21; Einer Elhauge, *Sacrificing Corporate Profits in the Public Interest*, 80 N.Y.U. L. Rev. 733, 776-817 (2005).

24 *See, e.g.*, Lynn A. Stout, *The Mechanisms of Market Inefficiency: An Introduction to the New Finance*, 2003 J. Corp. L. 636; JOHN QUIGGEN, ZOMBIE ECONOMICS: HOW DEAD IDEAS STILL WALK AMONG US (2010).

25 *See* sources cited *infra* notes 70-76 (discussing destructive effects of shareholder value thinking).

methodologies for ensuring managerial accountability; and helps us better understand the relationships between and among stockholders, directors, creditors, employees, and the corporate person itself. Thus we demonstrate how systems theory offers many useful lessons about the nature and purpose of corporations and the best way to assess their performance—and, in the process, helps to integrate many apparently-conflicting elements of the various contesting visions of the firm.[26]

In Part I of the Article, we provide a brief summary of competing theories of the corporation.[27] We pay particularly close attention to the dominant shareholder value theory and provide an overview of its traditional and current justifications. We show how, while shareholder value theory initially was justified by the factual claims that shareholders own corporations and that shareholders are the sole residual claimants of corporations, today these empirical claims increasingly are being called into question. Instead, supporters of shareholder value theory now typically argue that corporations ought to be run to maximize shareholder value because only shareholder value offers the single, quantifiable metric supposedly needed to constrain agency costs and hold corporate directors and officers accountable. Yet this new justification is also being challenged on several grounds, especially the critique that when shareholder value is equated to stock price or current accounting profits, shareholder value thinking encourages short-sighted business decisions. Thus shareholder value thinking has been associated with excessive risk taking, reduced investment and innovation, and diminished long-term business performance.[28] In light of these criticisms, many contemporary shareholder

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[26] More specifically, in this Article we apply systems theory to business firms organized as corporations. Strictly speaking, a "firm" is not the same thing as a "corporation." Robe, *supra* note 21. However, we employ the common practice of using the words as synonyms to describe large firms organized as incorporated legal entities. The corporate form can be thought of as the legal armature or framework upon which many firms are built. Incorporation as a "legal person" allows firms to hold assets and incur liabilities in their own names and to operate in perpetuity. *See generally* Lynn A. Stout, *On the Nature of Corporations*, 2005 U. ILL. L. REV. 253 (2005); Andrew A. Schwartz, *The Perpetual Corporation*, 80 GEO. WASH. L. REV. 764 (2012).

[27] *See infra* Part I.

[28] THE ASPEN INSTITUTE BUSINESS AND SOCIETY PROGRAM, OVERCOMING SHORT-TERMISM: A CALL FOR A MORE RESPONSIBLE APPROACH TO INVESTMENT (2009), https://www.aspeninstitute.org/sites/default/files/content/docs/pubs/overcome_short_state0909_0.pdf; CFA INSTITUTE, *Shareholder Value Maximization: The World's Dumbest Idea?* (October 23, 2014), https://eic:cfainstitute.org/2014/10/23/shareholder-value-maximization-the-dumbest-idea-in-the-world/; THE CONFERENCE BOARD, *Is Short-Term Behavior Jeopardizing the Future Prosperity of Business?* (2015), www.wlrk.com/docs/IsShortTermBehaviorJeopardizingTheFutureProsperityOfBusiness_CEOStrategicImplications.pdf; THE ROOSEVELT INSTITUTE, FINANCIALIZATION PROJECT, *Understanding Short-*

value supporters have "doubled down" and reframed their message and justification: they now speak in terms of maximizing "long-term" value rather than immediate profit or share price appreciation. While reorienting towards long-term value is arguably an improvement over an exclusively short-term focus, especially in light of the possibly perpetual nature of the corporate entity, we show how a shift to a long-term value focus actually reduces shareholder value theory's ability to ensure its stated goal of accountability. We conclude Part I by suggesting that there may be a better approach for measuring corporate performance and achieving true managerial accountability, while honoring the complexity and diversity of the corporate form: systems thinking.

In Part II, we introduce systems thinking and the idea of the corporation as a system.[29] We survey the basic principles of systems theory and consider what they teach about the nature of corporations; their purpose; and how to best measure the performance of a corporate system in order to hold managers accountable. In particular, we show how systems thinking teaches that corporations may serve multiple purposes, and indeed one's view of corporate purpose may depend on one's perspective.[30] Nevertheless, systems theory has developed a variety of methodologies and mathematical techniques that can be used to measure managerial performance (including especially assessing sustainability) so as to determine, if not whether managers are doing the best possible job, at least whether they are doing a better, or a worse one. Thus the systems approach offers well-developed tools and methodologies for promoting managerial accountability.

In Part III,[31] we turn our attention to some practical and theoretical implications of such an approach. We show how systems thinking is embedded in the way managers of many successful corporations talk about what they do, as well as the strategies they choose and the performance

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Termism: Questions and Consequences (2015), http://rooseveltinstityte.org/wp-content/uploads/2015/11/Understanding-Short-Termism.pdf;
William Lazonick, *Profits Without Prosperity*, HARV. BUS. REV. (September 2014), https://hbr.org/2014/09/profits-without-prosperity/ar/1; and Roger Martin, *Yes, Short-Termism Really is a Problem*, HARV. BUS. REV. (October 9, 2015), https://hbr.org/2015/10/yes-short-termism-really-is-a-problem.

29 *See infra* Part II.

30 Systems thinking treats corporate purpose as complex, fluid, and to some degree subjective. This approach can explain important elements of corporate reality that shareholder value thinking cannot explain, just as the theory of relativity (which treats physical reality as complex, fluid, and to some degree subjective) explains important physical phenomenon better than Newtonian physics does. *See Infra* Part II.C (discussing corporate purpose under the systems approach).

31 *See infra* Part III.

assessment methods they employ. We also show how, in comparison to many other models of the corporation, systems theory fits better with state corporate codes, the holdings of corporate cases, and the "internal" law of corporate charters and bylaws. We point out that while public corporations have become more shareholder-centric in recent years, the shift has been driven primarily by federal regulations and other external interventions that bear the hallmarks of rent-seeking and that have been associated with a variety of undesirable outcomes.

We conclude that, especially in light of the close correspondence between systems thinking and traditional corporate law and practice, systems theory offers an intriguing and indeed compelling approach for understanding the nature of corporations, their proper purpose, and the best way to hold their managers accountable. In the process, it offers to integrate and sometimes reconcile the many competing visions of the corporation being debated today.

PART I. CONTESTED VISIONS AND THE ROLE OF SHAREHOLDER VALUE THEORY

A. CONTESTED VISIONS

Scholars, judges, regulators, and practitioners have long debated the questions of what corporations are and what their purpose should be. The literature is replete with different theories or models, each of which attempts to reduce the pattern of legal rights, responsibilities, duties and privileges typically found in corporations into a single readily-understandable description.[32] Thus the corporation has been described as: (1) an entity; (2) an aggregate of people; (3) a web of contracts; (4) a government concession or "franchise government"; (5) a collection of specific investments and (6) the property of its shareholders.[33] Each model offers its own particular vision of how best to describe the corporation, given its semiautonomous, perpetual nature, legal personhood, and the interwoven web of human relationships and interactions that often present in the corporate form.

[32] *See generally*, David Millon, *Theories of the Corporation*, 2 DUKE L. J. 201 (1990); Allen, *supra* note 21; Lynn Stout, *The Economic Nature of the Corporation*, in OXFORD HANDBOOK OF LAW AND ECONOMICS VOLUME II: PRIVATE AND COMMERCIAL LAW, (Francesco Parisi, ed., forthcoming 2017).
[33] *See infra* text accompanying notes 36-60.

The entity theory is perhaps best encapsulated in Chief Justice Marshall's famous statement in the 1819 case of *Trustees of Dartmouth College v. Woodward* that the corporation is "an artificial being, invisible, intangible, and existing only in contemplation of law."[34] In the 1933 case of *Liggett Co. v. Lee,* Justice Louis Brandeis expressed a similar view, describing the corporation as a "Frankenstein monster which States have created by their corporation laws."[35] Entity theory captures certain core characteristics of the corporate form, particularly its status as a legal person entitled to exercise certain rights (e.g., to own property, enter contracts, and incur liabilities) in its own name. Entity theory also is consistent with the corporation's ability to exist into perpetuity. However, entity theory has been critiqued on the grounds that the corporate entity is "not real."[36] It is not tangible. It is mere artifice.

In juxtaposition to entity theory, which treats the corporation as its own legal person, aggregate theory views the corporation as an aggregation of natural persons. Aggregate theory was perhaps at play in Justice Kennedy's description of corporations in *Citizens United* as "associations of citizens."[37] Aggregate theory captures the reality that corporations must act and make decisions through their human agents. However, the aggregate approach raises several challenging questions, such as which human agents/natural persons should we aggregate? Everyone involved in the corporate enterprise? Or perhaps only the board, executives, and shareholders? And if so, today's shareholders, or the company's original shareholders? As this last question suggests, the notion of perpetual corporate life is hard to reconcile with an aggregation theory.[38]

The nexus of contract theory views the corporation as a "nexus" or web of contracts, both explicit and implicit, between and among various parties

[34] 17 U.S.518, 636 (1819).
[35] 288 U.S.517, 568 (1933).
[36] *See* Frank H. Easterbrook & Daniel R. Fischel, *Limited Liability and the Corporation*, 52 U.CHI.L. REV. 89 (1985) ("The corporation is not real. It is no more than a name for a complex set of contracts among managers, workers, and contributors of capital.") *See also* Michael C. Jensen and William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure*, 3 J. FIN. ECON. 305, 310-11 (1976)(describing corporation as "legal fiction.").
[37] 558 U.S. at 354
[38] The Delaware Supreme Court recently upheld a decision to require TransPerfect's founders and 100 percent shareholders to collectively sell their shares in the company, on the theory that their dysfunctional relationship was damaging to the corporation and "its constituencies," *see* Shawe v. Elting, No. 423 (Del., Feb. 13, 2017), at 22, 25, http://www.courts.delaware.gov/Opinions/Download.aspx?id=252550). This holding is inconsistent with any claim that a corporation is comprised only of its current and/or original shareholders.

associated with the corporation, such as the board, the shareholders, creditors, and employees.[39] Like the aggregate theory, the nexus of contracts theory does not recognize the corporation as its own separate and real entity. It emphasizes instead the voluntary nature of most human participation in creating and pursuing corporate endeavors, and acknowledges the generally enabling nature of corporate law (which allows significant latitude to corporate participants to engage in private bargaining and contracting around various default rules). However, the nexus of contracts theory can be critiqued as failing to acknowledge the corporation's legal personhood, and also as failing to emphasize the crucial role played by the state in creating the corporation.[40]

The state concession theory of the corporation and its modern descendant, the political franchise theory,[41] recognizes the role of the state in granting a corporation legal personhood and acknowledges that a corporation's internal governance structures in many ways mirror governance structures of a political state. It also highlights how early corporations were granted corporate personhood by the state for expressly public purposes and not merely as a means for garnering private profits. A main limitation of the political franchise theory is that the model is primarily focused on the relationship between the corporate entity and the governing state, but provides less guidance on which internal governance structures are most desirable for corporations.

The team production model addresses internal governance structure by hypothesizing that, at least in public corporations, the firm is governed by a relatively independent board of directors that serves as a "mediating hierarch" to protect the specific investments not only of shareholders but also employees, creditors, customers, and other important stakeholders whose interests in their relationship with the business cannot be completely protected by explicit contracts or regulation.[42] This protection encourages collective specific investment in "team production" projects (especially

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[39] *See generally* Easterbrook & Fischel *supra* note 36; Melvin A. Eisenberg, *The Conception that the Corporation is a Nexus of Contracts and the Dual Nature of the Firm*, 24 J. CORP. L. 819 (1998).
[40] *See* Henry Hansmann, Reinier H. Kraakman, and Richard Squire, *Law and the Rise of the Firm,* 119 HARV. L. REV. 1335 (2006)(emphasizing the importance of legal personhood in ensuring that shareholders' creditors cannot reach corporate assets, and arguing that private contract alone cannot create legal persons).
[41] *See* David Ciepley, *Beyond Public and Private: Toward a Political Theory of the Corporation*, 107 AM. POL. SCI. REV. 139 (2013) (describing corporate entities as "franchise governments" created and authorized by the state).
[42] *See* Blair & Stout, *supra* note 21.

long term, large scale, uncertain projects) that can generate significant social wealth. The team production model explains many aspects of corporate law and structure, including the wide discretion granted directors under the business judgment rule.[43]. It has been critiqued, however, as applying mainly to public corporations[44] and also as undermining managerial accountability.[45]

While the entity, aggregation, nexus of contract, political franchise, and team production theories each have influential supporters and each contribute to our understanding of the corporate form, in recent years Anglo-American corporate law scholarship and policy discussions have been dominated by yet another theory that might be called the "shareholder value" theory. Given this context, the balance of Part I will focus on the achievements and critiques of shareholder value theory.

B. THE RISE AND EVOLUTION OF SHAREHOLDER VALUE THEORY

For the past quarter-century, the dominant albeit not exclusive narrative of corporate purpose in the Anglo-American world has been that business corporations have but one goal: to maximize shareholder wealth or "shareholder value."[46] It is difficult to overstate just how much shareholder value theory has influenced contemporary corporate governance, especially in the United States.[47] This influence is reflected in law review articles; in the *dicta* of judicial opinions; in policy reports; and in Federal securities regulation.[48]

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43 *See infra* text accompanying notes 182-189.

44 See John C. Coates IV, *Measuring the Domain of Mediating Hierarchy: How Contestable are U.S. Corporations*, 24 J. CORP. L. 837 (1999).

45 See Alan J. Meese, *The Team Production Theory of Corporate Law: A Critical Assessment,* 43 WILLIAM & MARY L. REV. 1629 (2002).

46 Hansmann & Kraakman, *supra* note 18; Stephen Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NORTHWESTERN U. L. REV. 547 (2003).

47 LYNN STOUT, THE SHAREHOLDER VALUE MYTH: HOW PUTTING SHAREHOLDERS FIRST HARMS INVESTORS, CORPORATIONS, AND THE PUBLIC, Ch. 3 (2012); Edward D. Rock, *Adapting to the New Shareholder-Centric Reality*, 161 U. PA. L. REV. 1907 (2013); DARRELL WEST, BROOKINGS INSTITUTION, THE PURPOSE OF THE CORPORATION IN BUSINESS AND LAW SCHOOL CURRICULA 17–18, (2012), www.brookings.edu/~/media/Files/rc/papers/2011/0719_corporation_west.pdf. For a history of shareholder value thinking's rise to dominance, *see* STOUT, *supra* at ch. 3.

48 Thus law professor Jeffrey Gordon has written that "by the end of the 1990s, the triumph of the shareholder value criterion was nearly complete." Jeffrey N. Gordon, *The Rise of Independent Directors in the United States, 1950–2005: Of Shareholder Value and Stock Market Prices,* 59 STAN.

Yet it is only relatively recently that the idea that public corporations exist to maximize shareholder wealth has acquired such power.[49] Why did this occur? In part, shareholder value theory gained traction because it served the purposes of powerful interest groups, including newly-emerging "activist" investors[50] and executives whose compensation, due to 1993 changes in the tax code, increasingly was based on share price.[51] But shareholder value theory has also been embraced because it has been perceived as intellectually justified. In particular, shareholder value theory has been justified by an evolution of three claims: first, that shareholders own corporations; second, that shareholders are the residual claimants in corporations; and third, that shareholder value provides the single quantifiable metric that is essential to constrain agency costs and hold corporate directors and executives accountable.

It is increasingly recognized now that the first two claims are demonstrably incorrect. The notion that shareholders "own" corporations is often associated with Nobel-prize winning economist Milton Friedman's famous 1976 article in the New York Times Magazine, in which he argued that because shareholders own corporations, the only "social responsibility of business is to increase its profits."[52] While this idea that shareholders own

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L. REV. 1465, 1530 (2007). Justice Steven's dissent in *Citizens United* assumed a shareholder value framework, *see infra* text accompanying note 15, and Delaware Chancellor William Chandler opined in *In Re Ebay Domestic Holdings, Inc. v. Newmark* that corporate directors decisions should "ultimately promote shareholder value," 16 A.3d 1, 33 (Del. Ch. 2010). A report from the National Association of Corporate Directors concluded that "[t]he primary objective of the corporation is to conduct business activities with a view to enhancing profit and shareholder gain," NATIONAL ASSOCIATION OF CORPORATE DIRECTORS, REPORT OF THE NACD BLUE RIBBON COMMISSION ON DIRECTOR COMPENSATION: PURPOSES, PRINCIPLES, AND BEST PRACTICES 1 (1995). (Interestingly, and consistent with systems thinking, the report does note that "long-term shareholder gain" [depends] on "fair treatment" of non-shareholder constituents.) At the level of Federal regulation, the U.S. Securities Exchange Commission (SEC) recently decided that public companies should provide enhanced graphic disclosure of how executive pay relates to a corporation's financial performance, and defined financial "performance" in terms of share price appreciation and dividends paid to shareholders (total shareholder return or TSR),17 C.F.R. § 229.402 (c) (2016).

[49] During most of the 20th century and well into the 1980s, corporate directors and executives embraced a vision of corporate purpose called managerial capitalism or simply managerialism. GERALD DAVIS, MANAGED BY THE MARKETS: HOW FINANCE RESHAPED AMERICA 71 (2009). According to the managerialist philosophy, business corporations were important social institutions that ought to serve not only shareholders but also employees, customers, suppliers, communities, and the nation as a whole, while managers were not shareholders' agents but stewards or trustees with fiduciary duties to these institutions. The managerialist philosophy thus arguably included elements of entity theory, state concession theory, and stakeholder and team production theory.

[50] Rock, *supra* note 47.

[51] STOUT, *supra* note 47, at 19–20.

[52] Milton Friedman, *The Social Responsibility of Business is to Increase its Profits*, N. Y. TIMES MAGAZINE, Sept. 13, 1970, at 32 .

corporations retains emotional power among laypersons and many business journalists,[53] legal experts widely recognize it to be empirically incorrect.[54] One of the hallmarks of the corporate form is that corporations are legal persons with rights, including the right to hold property in their own names. This means that, just as a natural person cannot be owned by another, a corporation cannot be owned by its shareholders.[55] What shareholders *do* own are shares. Shares can be viewed as a kind of contract between shareholders and the corporate entity, just as an employment agreement or bond can be viewed as a contract between the corporate entity and an employee or bondholder. The shareholders' contract, moreover, typically gives shareholders only very limited rights. One such right is the right to elect and remove directors. But, as has been recognized since at least the days of Berle and Means,[56] this right carries almost no real influence in the context of a public corporation with dispersed share ownership.[57] Contemporary experts accordingly are often careful to avoid describing corporations as "owned" by shareholders.[58]

What about the second claim: that shareholders are the residual claimants entitled to all profits left over after the business has met its contractual and legal obligations (e.g., interest due creditors, wages due employees, and taxes due governments)?[59] Again, experts increasingly recognize that, for several reasons, shareholders are not the sole residual claimants of corporations—at least not of operating companies.[60] First,

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53 See, e.g., Gretchen Morgenson, *Whole Foods' High Hurdle for Investors*, N.Y.TIMES, Jan. 5, 2015, at B1 (stating without authority that "shareholders own the companies they invest in.")
54 *Statement on Company Law, supra* note 20.
55 *Id.*; Robé, *supra* note 21.
56 ADOLF A. BERLE AND GARDINER MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY (1932).
57 It might be forgivable to describe a corporation with a single individual shareholder as "owned" by that individual, on the theory that, despite formal limitations on shareholder power, as a practical matter a sole shareholder has both the economic interest and the managerial power of a proprietor. This is clearly not the case for shareholders in a public company. See Lucian A. Bebchuk, *The Myth of the Shareholder Franchise*, 93 VA. L. REV. 675 (2007).
58 *See, e.g*., ALAN PALMITER & FRANK PARTNOY, CORPORATIONS: A CONTEMPORARY APPROACH 434 (2d ed. 2014) ("shareholders do not "own" the corporation in the same way the proprietor owns her own business").
59 *See, e.g.,* FRANK H. EASTERBROOK AND DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 36-37 (1991); Eugene F. Fama and Michael C. Jensen, *Organizational Forms and Investment Decisions*, 14 J. FIN. ECON. 101, 102-03 (1985).
60 It may be reasonable to describe shareholders as sole residual claimants when a company is being liquidated, although even in the bankruptcy context Professor LoPucki has shown that courts often require creditors to share in stockholders' losses to some extent. Lynn M LoPucki, *The Myth of the Residual Owner*: *An Empirical Study*, 2004 WASH. U. L. Q. 1341 (2004). However, companies in

corporations, as legal persons, are their own residual claimants. The corporation's profits are the property of the corporate entity and not the property of its shareholders.[61] Second, modern options theory teaches that once a corporation has issued debt, its debtholders also have a residual interest in how the company is run.[62] Third, when important corporate "stakeholders" make specific investments in a corporation's continued operation (for example, when employees acquire skills uniquely valuable to the company as an employer, or customers become dependent on its products), these stakeholders also acquire a residual interest in the company's operations.[63] Fourth, if social norms and government regulation cannot perfectly control corporate behavior—a likely scenario—directors' and executives' managerial decisions can generate external costs and benefits for third parties. These externalities give third parties an interest in how the company is managed.[64]

These flaws in the first two claims traditionally used to defend shareholder value theory have led contemporary commentators to rely ever more heavily on a third justification: that shareholder value is necessary to ensure managerial accountability.[65] According to this third view, the only way to ensure managerial accountability is to hold managers' collective feet to the fire by demanding they maximize a single quantifiable metric. As influential economist Michael Jensen has put it, "telling the manager to maximize current profits, market share, future growth profits, and anything else one pleases will leave the manager with no way to make a reasoned

liquidation are subject to different legal rules than operating companies. STOUT, *supra* note 49, at 39-40.

[61] STOUT, *supra* note 47 at 39-41. *See also Harbor Finance Partners v. Huizenga*, 751 A.2d 879 (Del. Ch. 1999) ("…property of the corporation is not typically thought of as personal property of the stockholders…").

[62] If a corporation issues debt as well as equity, it is just as correct to say that the debtholder has the right to the corporation's profits but has sold a call option to the shareholders, as it is correct to say the shareholders have the right to the profits but have sold a put option to the debtholder. Fischer Black & Myron Scholes, *The Pricing of Options and Corporate Liabilities*, 81 J. POL. ECON. 637 (1973).

[63] Blair & Stout, *supra* note 21, at 1205.

[64] BAKAN, *supra* note 23; EDWARD FREEMAN, STRATEGIC MANAGEMENT: A STAKEHOLDER APPROACH (2010).

[65] One of the central problems of corporate law is the problem of ensuring that directors and executives do not abuse their corporate powers and employ those powers to serve themselves. In the parlance of economics, this is the problem of "agency costs." Jensen & Meckling, *supra* note 36. Whether corporate directors and executives are viewed as agents of the corporation itself, as agents of the corporation's shareholders, or agents of some combination of the two, the basic problem remains the same. How do we keep corporate managers from shirking, stealing and running amok?

decision. In effect it leaves the manager with no objective."[66] Jensen concluded that a "true (single dimensional) score" was essential.[67] According to shareholder value theorists, financial returns to shareholders provide that single metric. For example, law professor Stephen Bainbridge has written that "absent the shareholder wealth maximization norm…the board would lack a determinant metric for assessing options."[68] This, Bainbridge fretted, would allow directors "to pursue their own self-interest… Directors who are responsible to everyone are accountable to no one."[69]

Thus managerial accountability has emerged as the supposed chief advantage of shareholder value theory relative to other competing models of the corporation. Yet even this justification has become subject to critical scrutiny in recent years. In the past decade, a host of research institutes, business leaders, and prominent commentators have protested that when shareholder value is defined in terms of share price or other immediately quantifiable metrics,[70] asking managers to maximize "shareholder value"

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66 Michael C. Jensen, *Value Maximization, Stakeholder Theory and the Corporate Objective Function*, 12 BUS. ETHICS Q. 235, 238 (2002).

67 *Id.* at 235. *See also* Oliver Hart, *An Economist's View of Fiduciary Duty*, 43 U. TORONTO L. J. 299, 303 (1993) (a prescription for management to take account of the interests of multiple corporate constituencies "is essentially vacuous, because it allows management to justify almost any action on the grounds that it benefits some group").

68 Stephen Bainbridge, *A Duty to Shareholder Value*, N. Y. TIMES, Apr. 16, 2015, , http://www.nytimes.com/roomfordebate/2015/04/16/what-are-corporations-obligations-to-shareholders/a-duty-to-shareholder-value. Mark Roe has similarly written that allowing managers to consider non-shareholder interests could "leave managers so much discretion that managers could easily pursue their own agenda, one that might maximize neither shareholder, employee, consumer, nor national wealth, but only their own." Mark J. Roe, *The Shareholder Wealth Maximization Norm and Industrial Organization*, 149 U. PA. L. REV. 2063, 2065 (2001).

69 *Id*.

70 The idea of "shareholder value" raises the obvious problem of how that value is to be measured. One possible candidate is share price. Indeed, based on the theoretical notion of a "fundamental value efficient" stock market that perfectly captures the future economic gains from holding shares, *see generally* Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms Of Market Efficiency*, 70 VA. L. REV. 549 (1984), Daniel Fischel and Frank (now Judge) Easterbrook famously argued in 1981 that directors destroy shareholder value whenever they reject a takeover bid at a premium price. Frank H. Easterbrook & Daniel R. Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161 (1981). By the close of the 20th century, however, the idea that stock market prices always capture fundamental value had been largely abandoned by sophisticated commentators in the face of an enormous and growing empirical and theoretical literature demonstrating this often was not true. See Stout, *supra* note 24. Today, experts typically describe market efficiency in terms only of "informational efficiency," meaning the speed with which prices adjust to new information. *See, e.g.,* Burton G. Malkiel, *"Efficient Market Hypothesis"*, THE NEW PALGRAVE: A DICTIONARY OF ECONOMICS (John Eatwell, Murray Milgate & Peter Newman eds. 1987); see also QUIGGEN, *supra* note 24 (describing the idea of an efficient market as a dead "zombie" idea that survives today only in greatly diminished form.)

generates a host of corporate pathologies, including excessive risk-taking, underinvestment, reduced innovation, increasing disparities between executive and rank-and-file pay, and a general focus on short term results at the expense of long-term performance.[71] An unhealthy managerial focus on immediate results has been accused of driving companies like Motorola[72] and Hewlett-Packard[73] to sacrifice their resilience and long-term performance by restructuring, selling assets, and cutting "expenses" for marketing, R&D, and employee development in order to boost the bottom line. It was suspected of encouraging companies like BP[74] and Volkswagen[75]

Another possibility is to interpret shareholder value not in terms of share price *per se* but in terms of current shareholders' *satisfaction* with that price, as reflected in their willingness to defer to the judgment of the corporation's board. Thus Lucian Bebchuk has argued in several articles that it is desirable to give shareholders greater power over boards, so that directors have greater incentive to keep current shareholders happy. *See, e.g.*, Lucien Ayre Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833 (2005); Lucien Ayre Bebchuk, *The Case for Shareholder Access to the Ballot*, 59 BUS. LAW 43 (2003). This view remains controversial (it has even been described as "radical." *see* David Millon, *Radical Shareholder Primacy*, 10 U. St. Thomas L. J. 1013 (2013)), as many of the shareholders whom Bebchuk would empower are hedge funds and actively-managed mutual funds that typically hold positions for only a year or two. Indeed, although corporations are perpetual entities, the average holding period for U.S. stocks may be as low as four months. STOUT, *supra* note 47, at 66.

71 *See* sources cited *supra* note 28.

72 In 2013, Motorola set a goal of cutting $200 billion in expenses by the end of the year, a figure raised to $300 billion by 2014 by selling its corporate campus. John Pletz, *Motorola Solutions to shrink—again*, CRAIN'S CHI. BUS., Aug. 5, 2014, http://www.chicagobusiness.com/article/20140805/BLOGS11/140809915/motorola-solutions-to-shrink-again. In 2015, Motorola then announced plans to cut 25% of its 2000 Chicago employees as part of an "overall restructuring." *Motorola Mobility Cutting 500 Jobs in Chicago*, NBC CHI. Aug. 13, 2015,, http://www.nbcchicago.com/blogs/inc-well/Motorola-Mobility-Cutting-500-Jobs-in-Chicago-321796502.html.

73 Like Motorola, HP cut 30,000 jobs to reduce expenses, then laid off another 55,000 workers as part of a restructuring, producing a short term increase in share price. Michael Liedtke, *Hewlett-Packard to cut up to 30,000 jobs in effort to shave expenses*, GLOBAL NEWS, Sept. 16, 2015, http://globalnews.ca/news/2223329/hewlett-packard-to-cut-up-to-30000-jobs-in-effort-to-shave-expenses/; Sue Chang, *H-P shares rally after company announces big job cuts*, MARKET PULSE Sept. 16, 2015, , http://www.marketwatch.com/story/h-p-shares-rally-after-company-announces-big-job-cuts-2015-09-16. HP stock is now down 30% despite the layoffs of the past three years, *ibid.* It continues to cut jobs in "an effort to reduce costs and protect the bottom line for shareholders," Richard Milam, *Hewlett-Packard and Others Reduce Labor Costs by Restructuring Workload*, US DAILY REV., Sept. 30, 2015, http://usdailyreview.com/hewlett-packard-and-others-reduce-labor-costs-by-restructuring-workload/.

74 David Brodwin, *The Costs of Corporate Corner-Cutting: Energy disasters are a reminder of why good regulations are so important*, US NEWS, Sept. 5, 2014, , http://www.usnews.com/opinion/economic-intelligence/2014/09/05/bp-and-pacific-gas-and-electric-show-corner-cutting-causes-disaster; John M. Broder, *BP Shortcuts Led to Gulf Oil Spill, Report Says*, THE N. Y. TIMES, Sept. 14, 2011, http://www.nytimes.com/2011/09/15/science/earth/15spill.html; Steve Tobak, *BP's Gulf Oil Spill: The Perils of Cutting Corners*, CBS NEWS, June 1, 2010, , http://www.cbsnews.com/news/bps-gulf-oil-spill-the-perils-of-cutting-corners/.

to cut safety and regulatory corners. It has also been identified as a root cause of the 2008 financial crisis, when it drove banks to make risky mortgage loans and to leverage themselves to the brink of insolvency and beyond.[76]

In response, many supporters of shareholder value have adjusted their stance yet again. They now emphasize that what they mean is "*long-term* shareholder value." For example, in a 2015 opinion piece Steven Bainbridge wrote that "the law requires corporate directors and managers to pursue *long-term, sustainable* shareholder wealth maximization."[77] In the 2009 case of *In Re Citigroup Inc. Shareholder Derivative Litigation*, which arose from the 2008 financial crisis, Delaware Chancellor William B. Chandler opined that "[u]ltimately, the discretion granted directors and managers allows them to maximize shareholder value *in the long term.*"[78] Delaware Supreme Court Chief Justice Leo Strine similarly described shareholder welfare in a recent law review article as served by "that course of action [that] will best advance the interests of stockholders *in the long run."*[79] The balance of Part I examines this argument—that long term shareholder value provides the single quantifiable metric needed to constrain agency costs and hold corporate managers accountable—because it now stands as the principal remaining intellectual foundation for shareholder value theory today.

C. WHY LONG-TERM SHAREHOLDER VALUE CANNOT BE USED TO HOLD MANAGERS ACCOUNTABLE: THE PROBLEM OF UNCERTAINTY

On first inspection, the idea of defining "shareholder value" in terms of the long term seems eminently sensible. Corporations, after all, are

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75 *Volkswagen makes a monumental blunder*, FT VIEW Sept. 21, 2015, , http://www.ft.com/intl/cms/s/0/5828e3c6-6051-11e5-9846-de406ccb37f2.html#axzz3qfZHsOlm.

76 THE FINANCIAL CRISIS INQUIRY COMMISSION, THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES, SECURITIES AND EXCHANGE COMMISSION (2011), https://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf.

77 Stephen Bainbridge, *supra* note 68 (emphasis added).

78 In Re Citigroup Inc. Shareholder Derivative Litigation, 964 A.2d 106, 139 (Del. Ch. 2009).

79 Leo E. Strine, Jr., *The Dangers of Denial: The Need For A Clear-eyed Understanding of the Power and Accountability Structure Established by the Delaware General Corporation Law*, WAKE FOREST L. REV. 761, 764 (2015)(emphasis added). *See also* Millon, *supra* note 70, at 1018 (describing "traditional" shareholder primacy that focuses on long-term performance); Schwartz, *supra* note 26 (describing corporation's purpose as long-run value creation).

perpetual entities, capable of earning profits and paying dividends into an indefinite future.[80] Throughout history they have pursued projects that lasted years, decades, or even centuries. In the Middle Ages, corporate entities constructed monasteries, cathedrals and universities. In the seventeenth century they opened continents for trade. In the eighteenth, nineteenth, and twentieth centuries they built canals, railroads, and electrical grids. Today they are developing self-driving cars and commercial space transport.[81]

Yet once we shift from defining "shareholder value" in terms of stock price or similar short term metrics, to an amorphous concept like long term shareholder value, the claim that shareholder value theory offers a superior way to hold managers accountable begins to collapse. This is because, once we abandon the fundamental-efficient-markets presumption that today's stock price perfectly captures intrinsic value,[82] the corporate entity's perpetual nature raises insoluble barriers to objectively quantifying "long-term value." Over time, a successful business corporation provides shareholders with a stream of financial returns in the form of share appreciation and dividends paid. Shareholder value theory blithely presumes this stream of future returns can be observed, neatly summed up, and discounted to present value, so as to reach a single agreed-upon number.[83] This presumption unrealistically assumes away one of the business world's most endemic challenges: the problem of uncertainty.

The concept of uncertainty is key to understanding why long-term shareholder value is a vague and indeterminate goal that cannot be used to hold managers accountable. Although laypersons often use "risk" and "uncertainty" as synonyms, finance economists view them as different

[80] Schwartz, *supra* note 26 at 773.
[81] *See generally* Lynn A. Stout, *The Corporation as Time Machine: Intergenerational Equity, Intergenerational Efficiency, and the Corporate Form*, 38 SEATTLE U. L. REV. 685, 696-98 (2015).
[82] *See supra* note 70 (discussing decline of fundamental value efficiency idea).
[83] Discounted cash flow (DCF) is an example of this valuation technique. Finance theory teaches that the further into the future a payment is received, the more it should be discounted. On this basis some might argue that it is efficient for managers to focus on short-term results. Yet corporations are perpetuities; short-term strategies that harm long-term results reduce not just one future payment, but an infinite stream of future payments. This makes long-term results more significant. For example, assuming a 5% annual discount rate, a company with annual profits of $1,000 has a present value of $20,000. A corporate investment that doubles future profits to $2,000 annually increases the company's present value to $40,000--a 100% increase in value that is largely attributable to increased profits received five or more years out. Andrew Schwartz provides an extensive discussion of additional reasons why we should apply a lower discount rate to future corporate profits than we would apply to future payments received by an individual. Schwartz, *supra* note 26, at 786-791.

concepts.[84] Risk refers to variation in future outcomes where the nature of the possible outcomes and their statistical probabilities are both fully known. A coin toss is merely risky: although we do not know if the result will be heads or tails, it must be one or the other, and we know with certainty the probability of each is 50 percent. Uncertainty, in contrast, describes situations where either the possible future outcomes, the probabilities of those outcomes, or both, remain to some extent unknown. Whether Apple will thrive without former CEO Steve Jobs, and whether Google will profit from developing self-driving vehicles, are questions involving not only risk but uncertainty.[85]

Investors, analysts, and finance professors can employ a number of comfortably familiar mathematical techniques to value economic ventures that are merely risky. But they have not yet figured out how to deal with uncertainty.[86] Uncertainty allows subjective disagreement. Rational people cannot disagree on the probable results of a coin toss, but they can disagree about whether Apple will thrive or fail without Steve Jobs.[87] Uncertainty and disagreement make the task of valuing an ongoing business venture notoriously difficult and subjective. This is evidenced by the variety of different and competing valuation techniques–book value, discounted cash flow, earnings multiples, etc.–described in finance texts.[88] Each technique, moreover, requires the person doing the valuing to make numerous assumptions. Are earnings better described by EBIT or EBITDA? Will profits increase, decrease, or remain steady? What discount rate should be applied? Uncertainty allows even experts to disagree in their answers. And the further they try to look into the future, the murkier the future becomes.

The reality of uncertainty undermines the claim that demanding corporate directors and executives to maximize long-term shareholder value somehow adds clarity or rigor to the messy business of gauging whether managers are doing a good job. Once we attempt to attach any number other than today's market price to a company's shares, the number becomes subject to disagreement and manipulation. The CEO claims her chosen

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[84] The distinction is often attributed to economist Frank Knight. *See* FRANK F. KNIGHT, RISK, UNCERTAINTY, AND PROFIT (1921).

[85] *See generally* Edward R. Miller, Risk, Uncertainty, and Divergence of Opinion, 32 J. Fin. 1151 (1977).

[86] *See generally* NASSIM N. TALEB, THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE (2d ed., 2010).

[87] *See generally* Miller, *supra* note 85; Lynn A. Stout, *Are Stock Markets Costly Casinos: Disagreement, Market Failure, and Securities Regulation* 81 VA. L. REV. 613 (1995).

[88] SIMON Z. BENNINGA & ODED SARIG, CORPORATE FINANCE: A VALUATION APPROACH (1997).

business strategy will maximize shareholder value "in the long run;" the activist hedge fund manager argues his proposed restructuring will better "unlock shareholder value." There is no way to prove who is correct. Both claims are unfalsifiable until the future arrives.

This means that, far from supplying an objective metric for holding corporate managers accountable, *"long-term shareholder value" may provide no observable metric at all*. The concept simply cannot perform the function that supposedly justifies it as a theory of corporate purpose. It cannot provide a way to objectively assess managerial performance. Which raises the question: what is left of the case for shareholder value theory?

A diehard defender of shareholder value as the corporate maximand might reply that, whatever its weaknesses, long-term shareholder value remains the best possible corporate objective because it is better to use an imperfect tool than no tool at all.[89] This argument presupposes that shareholder value theory is, in fact, the only tool available to monitor corporate performance and hold managers accountable. In the next section we challenge this presupposition. We argue that an alternative tool for assessing corporate performance—one that honors the complexities of corporations and board decisionmaking, *and* allows for better managerial accountability and monitoring—is indeed available. That alternative is systems thinking.

PART II. THE SYSTEMS ALTERNATIVE

A. WHAT IS SYSTEMS THEORY?

Systems theory is a design and performance assessment methodology routinely used in many fields, including engineering, biology, computer science, and (significantly) management science.[90] Some readers may

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[89] It is worth noting that, as a matter of logic, this is incorrect. It is better to use no tool to remedy a headache, than to apply the chainsaw that might be the only tool at hand.

[90] *See, e.g.*, F. CAPRA & P. L. LUISI, THE SYSTEMS VIEW OF LIFE: A UNIFYING VISION (2014); DRAPER L. KAUFFMANN, JR., SYSTEMS ONE: AN INTRODUCTION TO SYSTEMS THINKING 1 (1981); J. GHARAJEDAGHI, SYSTEMS THINKING: MANAGING TO CHAOS AND COMPLEXITY (1999); D. K. HITCHENS, ADVANCED SYSTEMS THINKING (2003); DONELLA H. MEADOWS, THINKING IN SYSTEMS: A PRIMER (Diana Wright ed., 2008). *See also* Lynn M. LoPucki, *Systems Approach to Law*, 80 CORNELL L. REV. 479 (1997) (applying systems analysis to legal systems).

nevertheless find the term esoteric, in part because experts in each of these areas often apply systems thinking without explicating its general principles, and also tend to employ their own unique vocabulary.[91] For example, systems theory goes by the name of cybernetics in controls engineering; systems analysis in computer programming; medicine in human biology; and operations analysis in management research. Moreover, few texts describe basic principles outside of some highly specialized context (e.g., safety engineering or evolutionary biology).[92] Nevertheless, whatever the field, certain basic principles are employed to design, assess, and improve the performance of any system.

What, then, is a "system"? A system has been defined as any set of distinct but interconnected elements or parts that operate as a unified whole to serve a function or purpose.[93] Consider, for example, the humble coffee machine. Its different parts—filter, water reservoir, heating element, coffee pot—are distinct, but operate together for the purpose of brewing coffee. The human body also is a system. Its elements include lungs, circulatory system, musculature, skeletal frame, etc. Each is distinct, but the elements interact with each other to function as a unified organism. In contrast, pebbles randomly scattered along the street do not constitute a system. They are not interconnected, nor do they form a cohesive whole that serves a particular function or purpose.[94]

Systems accordingly have certain core characteristics: (1) they consist of distinct elements;[95] (2) these elements are coordinated and interconnected; and (3) the elements operate as a unified whole to serve a given function or purpose. In addition, a fourth core characteristic of systems implicit in the literature, and of critical importance for our discussion, is (4) systems perform their function or purpose *over time*. The coffee machine, it is

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[91] KAUFFMANN, *supra* note 90, at 1 (systems theory "has revolutionized many fields of science and has had an enormous impact on all our lives, even though most people have never heard of it.")
[92] An exception can be found in an accessible guide written by biochemist Donella Meadows, MEADOWS, *supra* note 90. Meadows was a MacArthur Foundation genius award recipient and lead author of the bestseller Limits to Growth. DONELLA MEADOWS ET AL., THE LIMITS TO GROWTH (1972). Another useful introductory text is KAUFFMANN, *supra* note 90.
[93] MEADOWS, *supra* note 90, at 11. *See also* KAUFFMANN, supra note 90, at 1 ("A system is a collection of parts which interact with each other to function as a whole").
[94] Following Meadow's convention, we will generally use the word "function" to refer to nonhuman, evolved systems and the word "purpose" to refer to designed systems. As Meadows notes, and as is arguably the case with corporations, "many systems have both human and nonhuman elements." MEADOWS, *supra* note 90, at 15.
[95] Elements can be tangible or intangible. MEADOWS, *supra* note 90 at 13. For example, a senior executive's knowledge and experience may be an important element of a corporate system.

hoped, will brew coffee not only today, but tomorrow.[96]

Systems take many forms. Some systems, such as the coffee machine, are designed. Other systems, like organisms, evolve. Still other systems are hybrids that are both designed and evolved. Examples of hybrid systems include "artificial life" computer programs[97] and (as we explore in greater detail below) many business corporations.[98]

For, while systems theory currently is not a staple of contemporary corporate law and governance discussions, we believe it is especially well-suited to the tasks of designing, assessing, and improving the performance of business firms, especially those structured as corporations. Just as a coffee machine can be viewed as a system, so too can a company. Business corporations consist of separate yet interconnected elements, including human capital (employees, executives, directors), financial capital (funds raised from operations and from equity and debt investors), and physical capital (plant and equipment, inventory). Each element is distinct and serves a distinct purpose. For example, directors and officers supply managerial expertise; employees supply labor; the physical plant produces goods for sale; and financial capital purchases the labor and raw materials needed to produce more goods. These elements do not exist in isolation vis-à-vis each other. They are interconnected, influencing each other in ways that allow them to operate as a unified whole, separate and apart from their individual selves. This unified whole performs several useful functions: generating goods and services, investment returns, and tax revenues. Finally, it performs these functions over time. Indeed, an incorporated entity in theory can operate in perpetuity.[99]

Accordingly, thinking of a company as a system can help us better understand the nature of corporations, their purpose, and the best way to measure and improve their performance. We explore how below. We start by identifying some basic principles of systems theory and examining what

96 Meadows offers the following approach for differentiating between systems and things that are (in Meadows' words) "a bunch of stuff": First, determine whether one can identify the parts. If yes, then determine whether the parts affect each other. Third, determine whether "the parts together produce an effect that is different from the effect of each part on its own." We would add a fourth step; consider whether the effect produced persists "over time…in a variety of circumstances." *Id.* at 12,15.
97 CHRISTOPHER G. LANGTON, ARTIFICIAL LIFE: AN OVERVIEW (1995).
98 *See infra* Part II.B (discussing hybrid nature of corporations).
99 *See, e.g.,* DEL. CODE ANN. tit. 8, § 102(b)(5) (giving perpetual existence to a corporation); N.Y. BUS. CORP. § 402(a)(9) (McKinney 2013) (the certificate of incorporation shall include "[t]he duration of the corporation if other than perpetual").

those principles teach about the nature of firms. We then consider what systems theory tells us about the question of corporate purpose. Finally, we discuss what can be learned from systems theory about ways to measure and improve corporate performance and to hold corporate managers accountable.

B. SYSTEMS THEORY AND THE NATURE OF THE CORPORATION

Perhaps the first and most fundamental principle in systems theory is that *systems are more than the sum of their parts*. The individual pieces of a coffee machine, left lying about, do nothing. It is only when these pieces are connected and fitted together properly, and interact with and affect each other, that the machine can brew coffee.

This principle applies straightforwardly to business corporations. The individual elements that comprise the corporation—physical assets, intellectual capital, financial resources, labor—perform quite differently when disconnected and disaggregated from each other, than when they are coordinated with each other through the corporate entity. A pile of money, sitting alone, does nothing. It is only when investors' money is combined and coordinated with intellectual capital, physical capital, and human capital, that the money can generate additional wealth for investors (along with goods, services, employment opportunities, and innovations).[100] The firm, like the coffee machine and other systems, operates as an integrated whole to perform functions that its individual parts cannot perform in isolation.[101]

A second fundamental principle of systems thinking is that systems are fractal, in the sense that it is useful to think of systems as comprised of subsystems, which in turn are comprised of other subsystems, and so on, *ad infinitum*.[102] Conversely a system typically can also be described as a subsystem of another larger system. Thus a human being is comprised of organs, which are comprised of cells, which are comprised of protein

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[100] This is why corporate production often presents what economists call a "team production" scenario. Blair & Stout, *supra* note 21.

[101] *See* MEADOWS, *supra* note 90, at 12 ("there is an integrity or wholeness about a system and an active set of mechanisms to maintain that integrity. Systems can change, adapt, respond to events, seek goals, mend injuries, and attend to their own survival in lifelike ways, although they may contain or consist of nonliving things. Systems can be self-organizing, and often are self-repairing over at least some range of disruptions. They are resilient, and many of them are evolutionary.")

[102] KAUFFMANN, *supra* note 90, at 2.

molecules, etc. At the same time, an individual can be viewed as part of a family, which is part of a community, which is part of a nation, and so forth. To keep the amount of information needed to make decisions within manageable bounds,[103] systems thinkers typically order systems into hierarchies. Any system can be broken down into component subsystems, or viewed as a subsystem of a larger system. A corollary is that it is essential when applying the systems approach to identify which level of hierarchy is most suitable for analyzing the problem at hand.[104]

Again, this lesson applies to corporations. A corporation can be viewed as comprised of a number of different subsystems, such as its managerial team; its production process and facilities; its marketing team; and its financial operations. Each subsystem is comprised of elements that interact with each other to perform some subpurpose (raising financing, manufacturing products, generating sales). Conversely, a corporation can be viewed as part of a larger system (e.g., a corporate conglomerate, or a nation's economy). For present purposes—that is, for analyzing the nature, purpose, and best way of monitoring the performance of business corporations—we treat the corporate entity as the system of interest and the appropriate level of analysis.[105]

A third general principle of systems theory that flows from the first and second principles is that the overall health and continued functioning of a system depends on the continued health and functioning of each of its essential subsystems. Each subsystem must work for the whole system to work properly, and changes in the elements or relationships of a subsystem can affect the system as a whole. If a coffee machine's heating element breaks, for example, the coffee machine can no longer brew coffee.

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[103] As Meadows explains it, although the boundaries between systems are not real, it is acceptable to simplify analysis this way because "relationships within [systems] are denser and stronger than relationships between [systems]" and "[w]hen hierarchies break down, they usually split along their subsystem boundaries. Much can be learned by taking apart systems…and studying them separately." MEADOWS, *supra* note 90, at 83.

[104] *Id*., at 84 ("if you have a liver disease, for example, a doctor usually can treat it without paying much attention to your heart or your tonsils (to stay on the same hierarchical level) … or the DNA in the nuclei of the liver cells (to move down several levels)").

[105] An unwillingness to confine analysis to a manageable level may have contributed to the decline of interest in "structural functionalism" in sociology. Structural functionalism, associated with theorists like Talcott Parsons and Robert K. Merton, attempted to apply systems thinking to understanding entire societies. LOPUCKI, *supra* note 90 at 483-85. It thus fell into what Meadows has described as the "trap" of "making [systems] boundaries too large… result[ing] in enormously complicated analyses, which produce piles of information that may only serve to obscure the answers to the questions at hand." MEADOWS, *supra* note 90, at 98.

Corporations similarly depend on all their subsystems to function. If equity or debt investors refuse to supply funds; if employees stop manning the production facilities; if executives mismanage; the entire corporation may soon cease to function. As we discuss in greater detail in Part II.D, this insight from systems thinking has important implications for how we should go about the business of measuring corporate performance.[106]

Finally, a fourth important lesson from systems theory is that, to fulfill its purpose or function, a system must survive. Recall that a basic characteristic of systems is that they perform purposes or functions over time. The time period necessary to fulfill the system's purpose or function may be quite short (consider the fruit fly or the hand grenade). But it may also be quite long. This is especially likely to be true in the case of business firms organized as perpetual corporate entities. For example, the Hudson Bay Company has been operating continuously since 1670;[107] General Electric (a corporate adolescent by comparison) was founded in 1892.[108] When systems must operate over long periods of time to perform their functions or purposes, system survivability—or, to use a more common label, sustainability—becomes a desideratum.

Systems thinkers accordingly devote considerable attention to questions of sustainability. This focus is apparent in the systems literature, which identifies multiple strategies to improve the odds a system will survive long enough to achieve its intended purpose. Because sustainability may be a particularly desirable attribute for perpetual entities like corporations, we conclude this section by exploring some common sustainability strategies in greater detail.

One straightforward sustainability mechanism found in many systems is redundancy—that is, devoting more resources to some purpose than necessary under current conditions. Redundancy is often seen, for example, in engineering, where it is common practice to employ backup systems, or make structures stronger than they need to be. Redundancy is inefficient in a narrow sense, as redundant resources seem "wasted" as long as conditions remain stable. In an uncertain world, however, conditions may change, and redundant resources prove essential for the system's survival. This explains

[106] *See infra* Part II.D.
[107] *Our History*, HUDSON BAY COMPANY, https://www2.hbc.com/hbc/history/ (last visited Jan. 18, 2016).
[108] *Our Company History*, GENERAL ELECTRIC, https://www.ge.com/about-us/history/1878-1904 (last visited Jan. 18, 2016).

why redundancy is often seen in organisms. (If efficiency were all evolution cared about, people would not become overweight, or have two kidneys.)[109]

A second sustainability mechanism found in many systems is homeostasis—that is, information and control feedback loops that allow the system to adjust to disturbances in its external environment, and stay within the parameters necessary for continued functioning.[110] For example, the dihedral ("V"-shaped) wings of aircraft provide homeostasis. When a wing dips in flight, it tends to rebound. Organisms similarly use feedback loops to achieve homeostasis; hunger is a feedback mechanism that prompts an organism to eat when running short on calories. Systems theorists have something of an obsession with feedback loops, which can be stabilizing or destabilizing ("runaway" feedback loops), and may have limits or breakdown points.[111] (Dihedral wings alone are unlikely to save an aircraft turned upside down.)

Finally, a third sustainability mechanism found in some systems is the capacity for self-organization—the ability for the system itself to change ("to learn, diversify, complexify, evolve")[112] in response to shifts in the external environment that might otherwise overwhelm the system's feedback loops, and threaten the system's survival. For example, birds are warm-blooded, but many species do not rely only on homeostasis to avoid freezing; they have also evolved the ability to fly south for winter.

Business firms can, and often do, exhibit redundancy, homeostasis, and self-organization. For example, it is common for corporations to employ redundancy by maintaining an "equity cushion" (holding more assets than necessary to meet liabilities). Financial controls that document rising

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109 Put differently, redundancy appears inefficient in a static analysis that presumes conditions cannot change. A dynamic analysis that acknowledges uncertainty and the possibility of change makes redundancy look more efficient. Moreover, although it might be argued that in perfectly competitive markets companies might find it difficult to invest in redundancy just as they might find it difficult to invest in innovation, *see* WILLIAM J. BAUMOL & ALAN S. BLINDER, ECONOMICS: PRINCIPLES AND POLICY 607 (4th ed. 1988) (discussing argument that perfect competition can make innovation difficult), economists recognize that many business firms operate in markets that are not perfectly competitive, *id.* at 611 ("Most productive activity in the United States, as in any advanced industrial society, can be found between the two theoretical poles [of] perfect competition and pure monopoly").

110 *See* KAUFFMANN, *supra* note 90, at 4-12.

111 MEADOWS, *supra* note 90, at 40 ("Every balancing feedback loop has its breakdown point, where other loops pulled the stock away from its goal more strongly than it can pull back"); *see also* KAUFFMANN, *supra* note 90, at 13 ("there are limits to the amount and kind of change which any active system can deal with").

112 MEADOWS, *supra* note 90, at 79.

inventories or declining sales figures are homeostatic information feedback loops that alert companies when they must reduce production to remain profitable. Finally, firms can self-organize by merging, moving to other jurisdictions, or amending bylaws and charters to evolve new governance structures (e.g., adopting a classified board or a dual class share structure) in response to changes in the regulatory or market environment.[113] In effect, their legal form "evolves."

Companies that embrace these sorts of sustainability mechanisms exhibit resilience: the ability to recover and continue functioning after encountering a destabilizing and potentially destructive force.[114] Citibank, BP, and JPMorgan were each able to recover after unforeseen destabilizing events—the subprime mortgage crisis, Gulf oil spill, and "London whale" fiasco, respectively.[115] Enron and Lehman Brothers proved too fragile for the shocks they encountered. We discuss the implications of resiliency for corporate performance in greater detail in Part II.D.

In sum, at least four basic principles from systems theory apply to corporate entities if we think of them as systems: (1) the whole of the corporate system is more than the sum of its parts; (2) the corporate system can be viewed as composed of subsystems and also as part of a larger system, making it essential to choose the appropriate level of analysis in decisionmaking; (3) the health of the corporate system depends on the

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113 *See infra* text accompanying note 193-195 (discussing how the corporate sector is self-organizing in response to the rise of shareholder value theory by adopting internal governance rules that insulate corporate entities from shareholder demands, e.g. share classes); Lynn A. Stout, *On the Rise of Shareholder Primacy, Signs of its Fall, and the Return of Managerialism (In the Closet)* 36 SEATTLE U. L. REV. 1169 (2013) (discussing how public companies are reorganizing in response to appearance and empowerment of activist investors).. Self-organization allows systems to change, evolve, and sometimes to create whole new structures, responding in diverse and complex ways to meet the changing needs of their environments and constituents. Innovation, entrepreneurship, and intrapreneurship are all examples of firm self-organization. *See* Tamara C. Belinfanti, *Contemplating the Gap-Filling Role of Social Intrapreneurship*, 94 OREGON L. REV. 67 (2015).

114 MEADOWS, *supra* note 90 at 78 ("Systems need to be managed not only for productivity or stability, they also need to be managed for resilience—the ability to recover from perturbation, the ability to restore or repair themselves").

115 Jonathan Berr, *$7B Penalty Doesn't End Citigroup's Legal Woes* (July 14, 2014, 1:49 PM), http://www.cbsnews.com/news/citigroups-7-billion-penalty-doesnt-end-banks-legal-woes/; Miyoko Sakshita, *Four Years After Gulf Oil Spill, BP is Recovering Faster Than Environment*, HUFFINGTONPOST (Mar. 26, 2014, 4:50 PM), http://www.huffingtonpost.com/miyoko-sakashita/gulf-oil-spill_b_5036370.html; Mary Bottari, *JP Morgan Gets an Award for London Whale Fiasco, Will Schneiderman Harpoon the Corruption?*, THE CENTER FOR MEDIA AND DEMOCRACY (Mar. 26, 2013, 7:34 AM), http://www.prwatch.org/news/2013/03/12033/jp-morgan-gets-award-london-whale-fiasco-will-schneiderman-harpoon-corruption (JPMorgan Chase employee accepted a "best crisis management" award by an investor relations magazine).

health of each of its critical subsystems; and (4) to perform over time, the corporate system must be sustainable.

C. SYSTEMS THEORY AND THE QUESTION OF CORPORATE PURPOSE

As we have described, systems theory offers a variety of insights to benefit our understanding of the nature of corporate entities. But some of the most valuable lessons systems thinking offers corporate law scholarship lies in what it teaches about how we might think about corporate purpose. As discussed in Part I, for most of the past three decades, experts in the Anglo-American world have embraced the notion that business corporations have but one goal: to maximize shareholder value.[116] Systems thinking, in contrast, offers a very different perspective—one that offers support for some of the competing models of the corporation surveyed in Part I.A. For systems theory teaches, first and foremost, that systems not only can but typically do serve *more than one* purpose.

Consider again the coffee machine. One purpose of a coffee machine is, obviously, to brew coffee. But anyone designing a coffee machine is likely to have other goals in mind as well. In addition to being able to brew coffee, the coffee machine also should be energy efficient; have a beautiful design; not be too expensive; and not occupy too much counter space. Finally but fundamentally, the machine should be durable. (As Meadows puts it, "[a]n important function of almost every system is to ensure its own perpetuation.")[117]

Multiple purposes are the rule, not the exception, in systems. Indeed, it is hard to think of any designed system whose designer would not have had more than one goal in mind. This naturally raises the question: if even a simple coffee machine has multiple purposes, is it not reasonable to believe that a system as complex as a corporation also might serve more than one purpose?

Corporations provide investment returns to shareholders. They also make interest payments to debtholders; pay salaries to employees; provide revenues to suppliers; pay taxes to governments; provide goods and services

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116 *See supra* Part I.A.
117 MEADOWS, *supra* note 90 at 15.

to consumers; and make technological breakthroughs that benefit future generations. These are all legitimate and beneficial outcomes of corporate activity.[118] There is no logical reason (apart from the accountability argument discussed in Part I.C) to choose only one beneficial outcome as important, and demote all others.[119] Systems theory accordingly challenges shareholder value theory's fundamental assumption of a singular, uniform corporate goal, and instead supports the view that corporate purpose need not be homogenous.[120]

At the same time, it inevitably raises the question: how, then, should we determine a corporate entity's purpose? One obvious way to think about the purposes of a designed system is in terms of the intentions of the person or persons who designed it. The coffee machine, for example might be designed to brew coffee quickly and efficiently while looking attractive and occupying minimal counter space. The intentions of the coffee machine's designer delineate its purposes.

Who "designs" corporations? Perhaps most fundamentally, corporate entities are designed and created by the states whose laws make incorporation possible.[121] In this sense systems thinking reinforces the concession/state franchise model of the corporation.[122] Beyond the state, however, one might also say the corporation is designed by the entrepreneur who drafts and files the corporate charter (often with the aid of lawyers who help select the charter's terms).[123] In addition, one could say the corporation is designed by the individuals who serve as its board of directors and executive team. Finally, creating a business corporation usually requires investment capital, which comes from equity and debt investors. To the

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118 Moreover, to ensure the company will continue to provide these benefits, durability or sustainability may itself be a desirable goal for some corporate entities. We explore this possibility in greater detail *infra* text accompanying note 138–40.

119 Systems theory accordingly lends credibility to alternative models of corporate purpose, like stakeholder models or team production models that allow for the possibility that corporations might serve multiple constituencies. *See, e.g*., Blair & Stout, *supra* note 21 (team production model); Edward R. Freeman, *Stockholders and Stakeholders: A New Perspective on Corporate Governance*, 25 CAL. MGMT. REV. 88 (1993)(stakeholder model).

120 *See* EASTERBROOK & FISCHEL, *supra* note 59. *See generally* Michael Klausner, The Contractarian Theory of Corporate Law: A Generation Later, 31 J. Corp. L. 779 (2006).

121 *See* Ciepley, *supra* note 41 (describing corporate entities as "franchise governments" designed by the state); Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE. L.J.387 (2000) (describing how corporate entities need state law to exist and cannot be formed by private contracting).

122 *See supra* text accompanying note 41.

123 *See* John C. Coates IV, *Explaining Variation in Takeover Defenses: Blame the Lawyers,* 89 CAL. L. REV. 1301 (2001) (describing the role played by lawyers in setting the terms of corporate charters).

extent the corporation is organized to appeal to potential creditors and shareholders, both debt and equity investors might be said to participate in its design. It should be apparent at this point that the shareholder class is only one, and not necessarily the most important, of the many different groups that "design" a corporation and participate in it on a voluntary basis; each of which has its own objectives in mind.[124] The systems approach consequently echoes many elements of the nexus of contracts model of the firm.[125]

But inquiring into designers' intentions may not be the end of the inquiry into a designed system's purpose. A third lesson of systems thinking is that even a designed system may surprise us by exhibiting behaviors and performing functions that were not intended or anticipated by its designers; automobiles are designed for transportation, but also prove unfortunately effective at causing injury. Moreover, if a designed system has self-organizing features, its functions may change as it evolves. Even in designed systems, "[s]ystem purposes need not be human purposes and are not necessarily those intended by any single actor within the system."[126] When we observe a system, we may find the functions it actually performs to be quite different from what its designers intended.[127]

This insight is consonant with the entity approach to thinking about

124 A shareholder value theorist might argue shareholders play the major role because companies need to raise funds by selling equity. But as forms of team production, companies also need to attract funds from creditors, human capital from executives, employees, etc. Blair & Stout, *supra* note 21.

125 *See supra* text accompanying notes 39-40. Because corporations have many designers, their intended purpose may vary depending on the intentions of the particular designer in question. As a normative matter, when the objectives of different designers clash, which designer's goals should prevail? Like most corporate governance scholarship, this Article adopts the public policy approach of focusing on overall social welfare. *See* Hansmann & Kraakman, *supra* note 18, at 444-49 (suggesting that "all thoughtful people" believe corporations ought to be run in the interests of society as a whole). From this perspective it makes little sense to define corporate purpose only in terms of the intentions of the entrepreneurs who start companies, or the executives who run them, or the equity and debt investors who finance them. Our concern is with social welfare writ large. This perspective suggests that the corporate designers whose goals matter most may be the political states whose laws create and regulate corporate entities. Elsewhere, one of the authors has argued that a social welfare analysis of corporate purpose should also take into account the welfare of future generations. Stout, *supra* note 81 at 84-85

126 MEADOWS, *supra* note 90 at 15.

127 This is not always a bad thing. Systems can surprise us in good ways. For example, Cynthia Estlund has argued that large corporations, by bringing together employees from a wide range of backgrounds, break down racial, ethnic, and religious barriers and promote greater social integration. CYNTHIA ESTLUND, WORKING TOGETHER: HOW WORKPLACE BONDS STRENGTHEN A DIVERSE DEMOCRACY (2003).

corporations.[128] It also has interesting implications for identifying the functions of corporations, which are hybrid systems with both designed and self-evolved characteristics.[129] It recommends that we look at what corporations *do*, not only at what academics, judges, or executives say they do or ought to do. The rhetoric of shareholder value peppers the contemporary scholarly literature, and can also be found in policy reports and the *dicta* of some judicial opinions.[130] Yet business corporations continue to pursue strategies that seem clearly inconsistent with maximizing accounting profits or share price: rejecting premium takeover bids, adopting poison pills and dual class share structures, resisting activist shareholders' demands.[131] Some defenders of shareholder value try to resolve the tension between shareholder value theory and corporate behavior by speculating that such strategies must maximize shareholder wealth in the (conveniently unobservable) "long run."[132] Others acknowledge the gap between theory and practice by asserting that managers are running amok, and corporate law must be reformed to constrain them.[133] Systems theory does not directly answer the question of whether the gap between shareholder value theory and actual corporate behavior is a good thing or bad thing. It does, however, caution us to pay close attention to the difference.

Finally, systems theory teaches that what we observe about a system's apparent purpose will depend on our level of analysis—what level in the system hierarchy are we looking at? Systems are made up of subsystems, and subsystems have subpurposes that can be at odds with the system's overall purpose. The purpose of the human circulatory system is to move blood; the purpose of the human skin is to contain the other organs of the body. If the skin is breached and the circulatory system continues to move blood, you might bleed to death. It is important not to focus only on

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[128] *See supra* text accompanying notes 34-36. Recall Justice Brandeis' description of the corporation as a "Frankenstein monster," *id*.
[129] *See* STOUT, *supra* note 47, at 23-24.
[130] *See supra* text accompanying notes 47-48.
[131] *See infra*, text accompanying notes 191-199.
[132] Millon, *supra* note 70, at 1013. *See, e.g.,* Steven Greenhouse, *How Costco Became the Anti-Wal-Mart*, N. Y. TIMES, July 17, 2005 (Costco's CEO states "On Wall Street, they're in the business of making money between now and next Thursday . . . we can't take that view. We want to build a company that will still be here 50 and 60 years from now."); James B. Stewart, *Amazon Says Long Term and Means It*, NEW YORK TIMES (Sep. 16, 2011) (Amazon CEO issued a manifesto stating "It's all about the long term," explaining why Amazon is spending profits on long-term growth and customer support).
[133] *See* Bebchuk, *The Case for Increasing Shareholder Power* and Bebchuk, *The Case for Shareholder Access to the Ballot*, *supra* note 72; Lucien Arye Bebchuk, *The Myth that Insulating Boards Serves Long-Term Value*, 113 COLUMBIA L. REV. 1637 (2013).

promoting the purpose of a single subsystem, if we care about the functioning of the system as a whole.[134] When a single subsystem's goals dominate, overall system function can suffer.

Thus a fourth and, we believe, critical lesson that systems thinking offers on corporate purpose is that the overall purpose or goal of the corporate system should not be subordinated to the goals of one of its subsystems. This observation cautions against placing exclusive emphasis on the goals of shareholders, as shareholder value theory recommends.[135] Issuing equity shares allows corporations to obtain financial capital at certain points in time (although debt and retained profits often are more important sources of funding).[136] Shareholders may perform other useful functions as well, including serving as a check on agency costs. It is important to remember, however, that *the share ownership system is only part of the larger corporate system*. There are other corporate subsystems that matter, including the subsystems that produce the goods and services the corporation sells, the subsystems that market these goods and services to customers, the subsystems that manage the corporation's employees, and so forth. The goals of the shareownership system and the goals of the company's current shareholders—many of whom expect to hold their shares for only a short period of time—are not necessarily the goals of the corporate entity as a whole. And for the systems thinker, "[k]eeping sub-purposes and overall system purposes in harmony is an essential function of successful systems."[137]

In exploring systems theory's implications, we do not claim to offer a definitive answer to the difficult question of corporate purpose. Indeed, one of the primary insights of systems thinking is that the purpose and functions of a system can be the "least obvious part of the system,"[138] especially to outsider observers who pay attention to only a few events or to "rhetoric or stated goals."[139] Different corporations can have different sets of purposes, and perceptions of purpose can vary depending on the perspective of the

134 MEADOWS, *supra* note 90 at 84-85.
135 *See supra* Part II.B.
136 JEFFREY D. BAUMAN & RUSSELL B. STEVENSON, JR., CORPORATIONS LAW AND POLICY 30–31 (8th ed., 2007).
137 MEADOWS, *supra* note 90, at 16.
138 *Id*. at 16–17.
139 *Id.* See *infra* text accompanying notes 161-163 (describing advantages insiders enjoy in assessing corporate performance).

participant in the system and on the level of analysis.[140] In other words, systems theory treats system purpose as complex, fluid, and to some degree dependent on the observer's perspective. In this regard it resembles relativity theory, which treats physical reality as complex, fluid, and dependent on the observer's perspective. The analogy may be instructive. For just as in physics it is sometimes necessary to take relativity theory into account to avoid costly mistakes,[141] it can be necessary to use systems theory to avoid costly mistakes about corporate purpose.

Systems theory accordingly carries several obvious and important implications for contemporary corporate governance scholarship. First, shareholder value theory demands corporations pursue a single, uniform objective. Systems thinking embraces the possibility of multiple objectives. Second, shareholder value theory presumes the desires of the corporation's current shareholders should determine what corporations are designed to do.[142] Systems theory acknowledges that corporate purpose can be viewed from different perspectives, including the desires of the state whose laws made incorporation possible in the first place. Third, shareholder value theory conflicts with much observed corporate behavior. Systems thinking explains why companies often eschew opportunities to "maximize" current profits or share price. Finally, shareholder value theory focuses obsessively on promoting the goals of the shareholding subsystem, while ignoring the goals of the corporate system as a whole. As we explore in greater detail in Part III, systems theory explains why this approach—which in recent decades has encouraged numerous federal regulatory interventions into traditional state corporate law—has proven not only ineffective, but very possibly destructive.[143]

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140 *See* EASTERBROOK & FISCHEL, *supra* note 59, at 35-36 ("An approach that emphasizes the contractual nature of a corporation removes from the field of interesting questions one that has plagued many writers: what is the goal of the corporation? Is it profit, and for whom? Social welfare more broadly defined? Is there anything wrong with corporate charity? Should corporations try to maximize profit over the long run or the short run? Our response to such questions is: who cares?... The role of corporate law here, as elsewhere, is to adopt a background term that prevails unless varied by contract").

141 For example, the global positioning system (GPS) must take account of the theory of relativity because atomic clocks on satellites in orbit experience time more slowly relative to clocks on the surface of the earth. Neil Ashby, *Relativity and the Global Positioning System*, PHYSICS TODAY, May 2002, 41. https://www.uam.es/personal_pdi/ciencias/jcuevas/Teaching/GPS_relativity.pdf

142 It also assumes that equity investors' sole interest is in making as much money as possible, without regard for ethics or for impact on stakeholders and third parties. This is a questionable assumption in many cases. Andrew A. Schwartz, *Corporate Legacy*, 5 HARV. BUS. L. REV. 237 (2015); STOUT, *supra* note 47, at Ch. 8.

143 *See infra* Part II.C.

D. SYSTEMS THEORY AND THE PROBLEM OF MEASURING CORPORATE PERFORMANCE

In Part I, we discussed the competing models of the corporate form and the rise of shareholder value theory as the dominant Anglo-American narrative. We then showed how intellectual justifications for shareholder value theory have shifted over the decades. Today, the theory is grounded primarily on the idea that shareholder value provides a single, quantifiable metric that can be used to hold directors and executives accountable. As we also showed in Part I, however, when shareholder value is gauged only by short-term financial metrics, it can produce pathological results, and when it is interpreted to mean long-term shareholder value, it no longer offers that desired accountability. What, then, can?

Systems thinking may offer a more promising solution to the problem of measuring corporate performance. This idea may seem counterintuitive, for systems theory acknowledges that corporate purpose need not be monolithic and that different companies may have different purposes. Yet as we will show, this fundamentally contractarian approach does not equate to a move toward chaos. Rather, it is a move toward reality, and an embrace of the utility of the corporate form. Uncertainty makes it impossible to measure a company's future performance perfectly. However, systems thinking allows us to gauge current performance and sustainability reasonably well, without risking the damage that can follow from emphasizing share price or accounting profits to the exclusion of all other corporate concerns.

Let us return to the concept of multiple purposes. Modern shareholder value theory teaches that companies should "maximize" one particular purpose (shareholder returns) to the exclusion of others. Yet business firms provide a wide range of social benefits: useful goods and services, employment opportunities, tax revenues, and technological innovations, along with investment returns not only to shareholders but also to bondholders and other creditors. There are many possible different mixes of benefits any particular company might produce, and no obvious policy reason (beyond broader social welfare concerns)[144] to prefer one mix over another. Moreover, systems theory underscores how a business corporation can have many "designers" whose contributions can be essential to the enterprise's success, including the company's founders; its directors,

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[144] For example, in times of high unemployment we might want companies to focus on providing jobs; in times of slow growth, to emphasize investment and research. During World War Two, corporate resources were redirected to providing military goods and services.

executives, employees, shareholders and lenders; and the state whose law makes incorporation possible.[145] Each has unique goals and interests. Systems thinking accordingly supports a contractarian approach that treats corporate purpose as flexible, multifaceted, and driven by the purposes of those who create and participate in the enterprise.

It also strongly cautions outside observers, like courts and government agencies, to exercise restraint in drawing conclusions about whether or not a particular company is performing well. One cannot simply assume what goal or business strategy is "best" for any particular company. The company's purpose depends to some extent on the observer: shareholders might think the company should pay more dividends; creditors might think the company should build more equity to reduce risk; executives might think the company should invest more in developing new products; the state might think the business should pay more taxes. When different groups hold different views of company purpose, there is room for subjective disagreement about how well the company is being managed. Systems thinking accepts this disagreement, counseling against a rigid, "top-down" strategy that attempts to impose a single objective on all business corporations. Like the nexus of contract approach, it rejects central planning in favor of diversity and self-organization.

As we discuss in Part III.B, below, this approach is remarkably consistent with traditional state corporate law, which allows corporations to be formed for any lawful purpose and which protects director discretion to set corporate goals through the business judgment rule.[146] As we also explore, it is inconsistent with many recent federal interventions.[147] Yet it raises a question: if outside regulators like courts and agencies are not well-positioned to gauge whether companies are performing well, then who or what can hold managers accountable?

In part, the answer lies in recognizing that like many systems, companies have homeostatic feedback loops that provide managers with information and incentive to keep the firm and its essential subsystems operating within the parameters necessary to ensure continued functioning.[148] To survive, a business firm must be able to please customers

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145 *See supra* text accompanying notes 121-124 (discussing who designs companies).
146 *See infra* text accompanying notes 182.
147 *See infra* Part III.C.
148 Firm survival is likely to be an objective for many of those who manage firms, including directors (who presumably want to keep their positions), Blair & Stout, *supra* note 21, at 315.

well enough to keep sales stable or growing; satisfy employees enough to keep turnover within reasonable bounds; satisfy debt and equity investors enough to raise financing at a reasonable cost when needed; satisfy talented executives enough to retain them; and satisfy taxing authorities and regulators enough to avoid costly sanctions. And, of course, it must make sufficient profits to do all these things and stay in business.

For it seems reasonable to believe perpetuation—the ability to successfully perform desired functions on an ongoing basis—is likely to be an important, if not necessarily exclusive, objective for business firms incorporated as perpetual entities.[149] A corollary is that those who create, manage, and participate in companies view resilience (a firm's ability to survive and continue functioning in the face of change) as an important, if often implicit, firm goal.[150] Sometimes it is an explicit goal. Even diehard defenders of shareholder value theory concede banks should be not only profitable, but stable and sound.[151]

So, where does this leave us? How would a systems thinker address the problem of measuring firm performance?

First, it is important to recognize that companies typically generate a wealth of potentially useful feedback information: sales trends, employee

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and executives and employees (who may have invested significantly in firm-specific human capital, *id*. at 276 n.61; EASTERBROOK & FISCHEL, *supra* note 59, at 37).

149 At some point, risk of failure may be acceptable if it helps the system achieve other desirable goals. For example, an engineer might want to design a reliable car, but recognize that if the car has too many backup systems it might become unaffordable. Moreover, because the future is uncertain, it may be impossible to anticipate all the shocks the system could encounter. (Even the most reliable car might fail if struck by an asteroid.) Thus, while survival is a likely corporate objective, it is probably not the only objective.

150 Thus systems theory teaches that a manager concerned about firm survival should look to see whether the company has sustainability strategies in place (e.g., redundancy, homeostasis, self-organization, *see supra* text accompanying notes 109-117) and assess whether they are sufficient to ensure firm survival in the face of likely future events. This might involve identifying sustainability mechanisms; establishing their limits or constraints (the points at which they might be overwhelmed and cease to protect the system's functioning); and attempting to identify the sorts of future shocks the system might encounter.

151 *See, e.g,*, Lucian A. Bebchuk and Holger Spamann, *Regulating Bankers' Pay*, 98 GEO. L. J. 247 (2009)(arguing that corporate governance "reforms" that empower shareholders cannot prevent excessive bank risk-taking). Systems thinking is implicit in the work of financial authorities like the Financial Stability Oversight Council (FSOC), which seeks to ensure that financial institutions remain stable and sound. It is standard practice for these authorities to refer to the banking sector as "the financial system" and to use "stress testing" (scenario analysis, *see infra* note 155) to assess the sustainability of large financial companies. MARIO QUAGLIARELLO, STRESS TESTING THE BANKING SYSTEM: METHODOLOGIES AND APPLICATIONS (2009).

turnover, investment expenditures, borrowing costs, inventory changes, and customer satisfaction surveys, along with accounting profits and (for public companies) stock price. As we explore below, system theory offers a suite of methodologies and techniques for using such data to assess and improve a company's progress towards multiple goals. The process goes by different labels depending on the field in which it is applied (e.g., system analysis in computer science, operations analysis in engineering, finance, and management). Whatever the field, systems thinkers tend to assess performance in ways that are similar, and that can be easily adapted to the problem of assessing a company's overall performance.

Second, when perpetuation is an important system goal, systems theorists pay close attention to what they call "constraints:" the limits beyond which the system's sustainability mechanisms can no longer protect the system.[152] Typically this involves identifying the parameters that the system and its essential subsystems must stay within to function. For example, a coffee machine's heating element must receive a certain minimum amount of electrical current but not excessive voltage; its reservoir system must be supplied with a certain amount of water, but not too much; it must be subject to the normal force of gravity, but not ten *g*'s of gravitational force. This approach is quite different from selecting a single variable and attempting to "maximize" it.[153] Yet it can be straightforwardly applied to companies. Just like other systems, firms must operate within constraints to survive: to remain functioning, the typical company must retain a certain number of employees, must invest a certain amount in marketing and developing new products, and must provide returns to debt and equity investors sufficient to keep them happy without disgorging so much cash that it cannot pay its employees or develop new products. Sustainability requires that the company stay within these constraints, even if the external environment changes.[154]

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152 *See supra* text accompanying notes 109-117 (discussing sustainability mechanisms).

153 Among other things, it requires systems thinkers to recognize and address the critical elements of time and uncertainty. They have developed a number of techniques to do this. Time graphs, for example, extrapolate system behavior over time given certain assumptions about initial conditions. MEADOWS, *supra* note 90 at 20. Another common methodology often used by engineers, military analysts, and financial regulators is scenario analysis, which models the likely effects of alternative future events on the system with the goal of identifying circumstances that might cause the system to fail. JEROME BRACKEN & GARTH P. MCCORMICK, RESEARCH ANALYSIS CORPORATION, SELECTED APPLICATIONS OF NONLINEAR PROGRAMMING 16-19 (1968).

154 As this discussion suggests, systems thinking is congruent with the managerial principle of "satisficing" developed by Nobel-prize winning economist Herbert Simon. *See* Herbert A. Simon, *Rationality as Process and as Product of Thought*, 68 AM. ECON. REV. 1 (1978).

Third, systems thinkers have devised a wide range of analytical and mathematical techniques to try to identify ways to improve system performance while keeping the system within its constraints.[155] This process is sometimes called "optimization," a phrase that accepts the possibility of multiple objectives in a way that "maximization" cannot.[156] For example, nonlinear programming is a staple of systems analysis that acknowledges the importance of protecting resilience by keeping the system within relevant constraints. The use of multiobjective functions is also common.[157] Such techniques can be combined with scenario analysis, queuing theory, stochastic analysis, network analysis, time graphs, and other arcana of operational research to identify ways to measure and improve a company's ability to achieve its intended objectives while preserving sustainability.[158] And in fact, corporate managers routinely apply these techniques when making decisions about financing, manufacturing, and supply chain management.[159]

Understanding how systems theorists measure and improve the performance of complex systems with multiple objectives (machines, production processes, software programs) accordingly offers at least two insights into how to go about measuring overall corporate performance. First and perhaps most obviously, systems thinking counsels against focusing on any single metric. Raising next quarter's profits by cutting valuable employees or eliminating customer support can lead to long-term disaster. Profits are not so much an *objective* as a *constraint* the firm must meet to stay in business. In this sense, systems theory incorporates elements of shareholder value theory by recognizing profitability as an essential

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155 *See generally* Cornell Engineering Operations Research and Information Engineering, *"What is Operations Research?*," https://orie.cornell.edu/about/whatis.cfm; SYSTEM THEORY: MODELING, ANALYSIS, AND CONTROL (Theodore E. Djaferis & Irvin C. Schick, eds., 2000).

156 *See, e.g.*, V. Bhaskar et al., *Applications of Multiobjective Optimization in Chemical Engineering*, 16 REVIEWS IN CHEMICAL ENGINEERING 1 (2011).

157 *Id*. A typical example of a multiobjective function might be a weighted average of desired goals. For example, corporate managers might be asked to optimize a weighted average of profits, revenue growth, consumer satisfaction, and R&D spending. It is important to bear in mind that optimization typically takes place within constraints—that is, within the limits identified as necessary to keep the system functioning. Trying to increase the weighted average through strategies that threaten the system's long-term survival is to be avoided. Moreover, the weights assigned to the different objectives are, to at least some extent, subjective.

158 *See* Princeton University Operations Research and Financial Engineering, Academics Overview, http://orfe.princeton.edu/academics (describing operational research methods).

159 *See, e.g.,* Operations Research: *The Science of Better*, www.scienceofbetter.org (describing management uses). Similarly, financial regulators use "stress testing" to assess the stability and sustainability of large financial companies. *See also* QUAGLIARELLO, *supra* note 151 (discussing bank regulators' use of operations research techniques in bank stress testing).

constraint to be considered in corporate decisionmaking. In contrast to shareholder value theory, however, the systems approach does not focus on profits alone, and does not direct managers to try to maximize them. Indeed, as we demonstrated in Part I.C it makes no sense to talk about "maximizing" such a number when the corporation is intended to operate into an indefinite future, and the sum of its profits over time is unobservable.[160] Metrics like profits, employee turnover, customer satisfaction surveys, supplier costs, research budgets, and so forth are not *ends in themselves*. Rather, they are *sources of information* about whether the company is healthy and resilient, and likely to continue to generate multiple benefits into the future. It is to this goal, first and foremost, we may wish to hold managers "accountable."

A second important lesson from systems thinking is that, given multiple purposes and the complexity inherent in systems analysis, courts and regulators will rarely be well-positioned to judge whether a company is performing well or poorly. It is those involved in the business, such as customers, employees, investors, and executives, who are in the far better position to make such an assessment, and whose behavior is likely to provide the most useful feedback.[161] This observation provides additional support for a contractarian approach to corporate governance and state corporate law's business judgement doctrine.[162] It also suggests that it will be difficult for academics, lawmakers, or corporate governance advisors to identify reforms that can reliably improve the performance of all companies. Attempts to impose generic silver-bullet solutions are more likely to result in what Roberta Romano has pithily described as "quack corporate governance" that does more harm than good.[163]

In Part III.C we explore how recent federal regulatory interventions into state corporate law may be inflicting just such harm: reducing the numbers of public companies, decreasing corporate life expectancy, and eroding the returns from holding public equity.[164] These interventions, many of which were designed to encourage managers of public companies to focus more on

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160 *See supra* Part I.C (discussing unobservability of "long term shareholder value").

161 The temptation for outside observers to claim significant and perhaps superior ability to judge corporate performance may explain why some lawmakers and corporate governance advisors have embraced shareholder value thinking despite its obvious limitations. STOUT, *supra* note 47, at 19.

162 *See supra* text accompanying notes 39-41 (contractarianism) and *infra* text accompanying notes 181-188 (discussing business judgment rule).

163 Roberta Romano, *The Sarbanes Oxley Act and the Making of Quack Corporate Governance*, 114 Yale L. J. 1521 (2005).

164 *See supra* text accompanying notes 216-218.

increasing shareholder returns, fall into what systems guru Donella Meadows has called the "systems trap" of misidentifying the system's desired purpose or goal.[165] Supposed reforms driven by shareholder value thinking privilege the goals of the corporation's shareholding subsystem over the goals of other important subsystems and the company as a whole. In doing so, they may threaten the public corporation's health and sustainability.

Systems theory counsels that to remain resilient, companies must maintain harmony between overarching system goals and subsystem goals. There is danger in focusing too much on improving one subsystem's performance at the expense of another's. Maximizing a coffee machine's output leads to system failure if it causes the machine to overheat and break down, while maximizing the machine's energy efficiency by turning off the heating element leads to system failure in the form of cold, weak coffee. Similarly, maximizing a company's current profits by cutting research and development expenditures can eventually cause the firm to fail for lack of new products, just as maximizing R&D expenditures at the expense of profitability can lead to a different kind of failure. Systems theory treats the health and functioning of a system's essential subsystems' elements as *incommensurables*. Constraints must be respected if the system is to survive.

At the same time, it should be acknowledged that systems techniques rarely allow us to gauge whether a company is being run perfectly. Embracing multiple objectives can give managers "wriggle room" to claim they are performing well overall, even when some performance measure like quarterly profits is in decline. Their wriggle room is limited, however. Whatever mix of functions we believe a company should perform, it can only perform those functions while it survives. When relevant metrics stray too far outside the parameters necessary for corporate sustainability—when profits become losses—it becomes apparent that something is amiss. Accordingly, while a systems approach does not necessarily allow observers to determine whether a company is performing at its best, it does often allow them to gauge whether managers are doing a better job or a

165 MEADOWS, *supra* note 90 at 138-41 ("if the goal is defined badly, if it doesn't measure what it's supposed to measure, if it doesn't reflect the real welfare of the system, then the system can't possibly produce a desirable result. Systems, like the three wishes in the traditional fairy tale, have a terrible tendency to produce exactly and only what you ask them to produce. Be careful … If the desired system state is national security, and that is defined as the amount of money spent on the military, the system will produce military spending …").

worse one. It thus offers a better methodology for promoting managerial accountability than the subjective, unobservable criterion of "long-term shareholder value." The strategy is hardly perfect. But when it comes to assessing performance, the illusory perfection of shareholder value may be the enemy of the good of thriving, socially-beneficial corporations.

PART III. SYSTEMS THINKING IN CORPORATE PRACTICE AND CORPORATE LAW

A. SYSTEMS THINKING IN CORPORATE MANAGEMENT

We have argued in this Article that systems theory provides an intriguing alternative approach to thinking about the nature and purpose of corporate entities, an approach that integrates elements of many of the competing models of the corporation that have been proposed. Systems thinking also offers methods for measuring corporate performance—methods with arguably more rigor, and greater potential for truly holding managers accountable, than the much-lauded but essentially subjective mirage of "long-term shareholder value." Because systems theory views corporations from a fundamentally different perspective than shareholder value theory (or any of the other theories of the corporation), space constraints prevent us from exploring more than a few of its implications here. Further work is more than worthwhile, however. For the systems approach fits comfortably with, and indeed explains, key aspects of corporate practice and corporate law that are in obvious tension with conventional shareholder value thinking.

This tension can easily be heard, for example, in the way founders, directors and executives of successful corporations talk about their business objectives. Given the intellectual dominance of the standard model, it is hardly surprising to find managers of public companies sometimes referencing shareholder value (especially "long-term shareholder value") as a corporate goal. Yet when companies publish statements describing their purpose or mission, they typically describe it far more broadly, often in terms of providing quality goods or services, or serving multiple corporate stakeholders.[166] (The Johnson & Johnson credo begins "We believe our first responsibility is to the doctors, nurses, and patients, to mothers and fathers and all others who use our products and services…")[167] A survey of corporate directors similarly found that a majority viewed themselves as having obligations not only to shareholders but also to employees, customers, and the larger society.[168] This embrace of multiple objectives is far more consistent with the systems approach, than with shareholder value thinking.

Moreover, even executives who publicly espouse shareholder value as their ultimate objective—and notably, many do not[169]—still emphasize that the best way to achieve that objective is not to focus directly on trying to "maximize" profits or share price, but instead to pay close attention to the company's sales trends, employee morale, customer satisfaction, supply chain, and reinvestment initiatives. In line with systems thinking, they intuitively recognize that the best strategy for enhancing future performance in the face of uncertainty is to ensure that each of the company's essential subsystems remains healthy and resilient. This philosophy was captured in a 2009 *Financial Times* interview with iconic CEO Jack Welch, a leading champion of the shareholder value theory of corporate purpose. According to Welch, "on the face of it, shareholder value was the dumbest idea in the world. Shareholder value is a result, not a strategy...Your main constituencies are your employees, your customers, and your products."[170] A 2012 article in the Harvard Business Review similarly noted:

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166 *See* Graham Kenny, *Your Company's Purpose is Not Its Vision, Mission, or Values*, HARV. BUS. REV., Sept. 3, 2014, https://hbr.org/2014/09/your-companys-purpose-is-not-its-vision-mission-or-values (describing various corporate purpose statements).

167 JOHNSON & JOHNSON credo, www.jnj.com/sites/default/files/pdf/jnj_ourcredo. Management guru Peter Drucker famously held that the purpose of business is to create and keep a customer. PETER DRUCKER, THE PRACTICE OF MANAGEMENT 37 (1954).

168 JAY LORSCH & ELIZABETH MACIVER, PAWNS OR POTENTATES: THE REALITY OF AMERICAN CORPORATE Boards 39-43 (1989).

169 *See, e.g.*, BUSINESS IS ABOUT MORE THAN MAKING MONEY, DIRECTORS & BOARDS ANNUAL REPORT 6, 8 (2015) (quoting Jim Senegal, founder and former chief executive of Costco, that "business was about more than making money. Business had a responsibility. Business had a social contract to the communities where they did business"); Geoff Colvin, *Indra Nooyi's Pepsi Challenge*, FORTUNE (May 29, 2012)(PepsiCo CEO Indra Nooyi publicly embraced shifting away from products that promote the obesity because it is "the right thing" to do); Kerry A. Dolan, *Starbucks' Howard Schultz Wants to Redefine the Role of Business and Society*, FORBES, Oct. 17, 2012 (quoting Starbucks CEO Howard Schultz that "it is no longer enough to serve customers, employees, and shareholders. As corporate citizens of the world, it is our responsibility —our duty—to serve the communities where we do business").

170 Francensco Guerrera, *Welch Slams the Obsession With Shareholder Value as a "Dumb Idea*," FIN. TIMES 1, March 13, 2009.

> There's a growing body of evidence…that the companies that are most successful at maximizing shareholder value over time are those that aim toward goals other than maximizing shareholder value. Employees and customers often know more about and have more of a long-term commitment to a company than shareholders do.[171]

In accord with this philosophy, we see systems thinking reflected not only in what successful managers say, but also what they do. For example, it is commonplace for companies to employ operations analysts to internally assess corporate performance using system theory tools like network analysis, queuing theory, scenario analysis, multiobjective functions, and nonlinear computer programs for optimizing within constraints.[172] These techniques are also taught to students studying management science, a systems-oriented discipline commonly taught at many undergraduate and graduate business schools.[173]

B. SYSTEMS THINKING IN CORPORATE LAW

The consonance between the principles of systems thinking, and the ways successful corporate managers talk about and do their jobs, provides compelling evidence of the relevance of systems thinking to business corporations. Still more evidence can be seen in the striking way the systems approach fits with traditional state corporate law.

Corporate law typically is found in three places; corporate codes; case law; and the "internal" law of corporate articles and bylaws. *None of the three meshes well with shareholder value thinking*. Starting with state corporate codes, these notably do not require corporations to pursue shareholder value. To the contrary, it is standard practice for states to allow corporations to be formed to do anything that is legal.[174] The Delaware General Corporate Law provides, for example, that "[a] corporation may be incorporated or organized under this chapter to conduct or promote any

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171 Justin Fox & Jay W. Lorsch, *What Good Are Shareholders?,* HARV. BUS. REV., July–Aug. 2012.

172 *See, e.g*., COLLEGEGRAD, *Operations Research Analysts: Career, Salary and Education Information*, https://collegegrad.com/careers/operations-research-analysts (describing growing corporate demand for operations research analysts).

173 *See, e.g.*, Harvard Business School, *Doctoral Programs: Management*, www.hbs.edu/doctoral/areas-of-study/management/pages/default.aspx; MIT Sloan School of Management, *Master of Science in Management Studies*, http://mitsloan.mit.edu/msms .

174 STOUT, *supra* note 47, at 28.

lawful business or purpose[s]."[175] This enabling language implicitly contradicts the notion that corporations must adopt shareholder wealth maximization (or anything else) as their singular goal. Instead, it seems to reflect a contractarian perspective that presumes that, absent external costs to third parties, social welfare is best served by granting those who form enterprises the freedom to structure their affairs as they wish and to pursue the goals they desire.[176]

Indeed, the majority of states go even further than Delaware, and explicitly reject shareholder value theory in their codes by providing that directors may serve the interests not only of shareholders but other constituencies like employees, customers, suppliers, and the community as a whole.[177] Moreover, state codes also allow corporations to customize their articles and by-laws by adopting governance rules that modify or restrict shareholders' default rights, for example by staggering director elections or issuing shares with limited voting rights.[178] This statutory embrace of complexity, diversity, self-organization, and multiple and varied purposes, is far more consistent with the systems approach than the idea of a single "standard" model.

Turning to case law, some opinions at first glance seem to provide support for shareholder value theory. Closer inspection reveals, however, the support is more apparent than real. As shareholder value thinking has gained intellectual dominance, we occasionally see judicial opinions offhandedly suggest that managers ought to be maximizing "long-term shareholder value."[179] Yet we also see opinions suggesting the opposite: recall Justice Alito's 2014 opinion for the majority in *Burwell v. Hobby Lobby Stores, Inc.*, declaring that "modern corporate law does not require for-profit corporations to pursue profit at the expense of everything else,

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175 DEL. CODE. ANN. tit. 8, § 101(b) (2015).

176 The language might reflect a state purpose of promoting social welfare by reducing the transactions costs associated with mutually voluntary exchanges between and among stockholders, creditors, managers, employees, and so forth, on the theory that, as a general rule, social welfare is improved by lawful exchange. EASTERBROOK & FISCHEL, *supra* note 59, at 6-7. *See* Robert B. Thompson, *Anti-Primacy: Sharing Power in American Corporations*, 71 BUS. LAWYER 381, 384 (2016) (positing that "[c]orporate law's purpose is to provide a structure for private ordering within which the broad group of participants can contract for exchange and have available a government structure to fill gaps").

177 Guhan Subramanian, *The Influence of Antitakeover Statutes on Incorporation Choice: Evidence on the "Race" Debate and Antitakeover Overreaching*, 150 U. PA. L. REV. 1795, 1827 (2004) (by 2004, 31 states had "other constituency" statutes).

178 *See, e.g.,* DEL. CODE. ANN. tit. 8, §§ 102 (b), 228 (2015).

179 *See, e.g., supra* text accompanying notes 48, 78.

and many do not do so."[180] It is critical to note, however, that both types of statements appear only in *dicta* (as lawyers put it, "mere" *dicta*). If we refuse to be distracted by *dicta* and focus on holdings, we see that courts give corporate managers remarkable freedom to choose company objectives under the fundamental corporate law doctrine known as the business judgment rule.[181]

The business judgment rule holds that, as long as directors are not tainted by conflicts of interest and make reasonable efforts to be informed, judges will not second-guess a board's decision about what is best for the company—even when the board embraces strategies that foreseeably reduce profits or share price. For example, in the 2011 case of *Air Products and Chemicals, Inc. v. Air Gas, Inc.,* Delaware Chancellor William B. Chandler invoked the business judgment rule to uphold a board decision to reject a merger offer at a premium price, noting that the board was "not under any *per se* duty to maximize shareholder value in the short term, even in the context of a takeover."[182]

Air Products v. Air Gas illustrates how, when push comes to shove, courts routinely refuse to impose on boards any duty to maximize profits or share price. The very few cases cited in support of such a supposed duty—typically *Dodge v. Ford Motor Co*.[183] and *Revlon, Inc. v. MacAndrews & Forbes Holdings*, Inc.[184]—are inapposite. The first deals not with the duties of independent directors, but the duties of a majority shareholder towards minority shareholders.[185] The second concerns a public company board's voluntary decision to "go private" through a merger in which public shareholders would be forced out in favor of a new, controlling shareholder.[186] (In this unusual situation, public shareholders need heightened protection because directors have incentive to sacrifice their interests by approving a sale at an unfairly low price in order to serve the

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180 573 U.S. 2751, 2771 (2014).
181 Elhauge, *supra* note 21; STOUT, *supra* note 47, at 29-31. *See* Lyman Johnson & Robert Ricca, *The Dwindling of Revlon*, 71 WASH. LEE. L. REV. 167, 170 (2014)("[there is] broad language in Delaware decisions suggesting [a] duty to maximize shareholder value in the no-deal context, but as of yet there is no clear-cut holding on this basic issue").
182 No. 5249CC (Del. Ch., Feb. 15, 2011) at 92, citing *Paramount Communications, Inc. v. Time, Inc.*, 571 A.2d 173 (Del. 1990).
183 170 N.W. 668 (Mich. 1919). *See generally* Lynn A. Stout, *Why We Should Stop Teaching Dodge v. Ford*, 3 VA. L. & BUS. REV. 163 (2008).
184 506 A.2d 173 (Del. 1986).
185 *Id*. The same is true of a modern case sometimes cited in support of shareholder value theory, *eBay Domestic Holdings v. Newmark*, 16 A.3d 1 (2010).
186 Johnson & Ricca, *supra* note 181.

new, controlling shareholder.)[187] Neither case applies to independent directors of public companies planning to stay public, for whom the business judgment rule prevails.[188]

Finally, let us consider the internal law of corporate charters and bylaws. Here, the conflict between shareholder value theory and corporate law reality becomes still more evident. As noted, state corporate codes are enabling on the subject of purpose. Anything lawful is permitted. This means corporations have the option to *choose* to limit themselves to a single purpose: a charter could easily specify that a corporation's purpose was maximizing shareholder value. Yet the overwhelming majority of charters describe the corporation's purpose in the same flexible terms as corporate codes, as "anything lawful."[189]

This is telling. If a shareholder value maximand were such a superior business strategy, and so important to attract equity investors, we should expect to see companies trumpet shareholder value as their purpose in their charters, both at formation and when going public. They do not.[190]

Indeed, corporations are taking advantage of the enabling nature of state codes to evolve in the *opposite* direction. As we explore in greater detail below, the rise of "activist" hedge funds and the seeping of shareholder value thinking into federal securities and tax rules have put pressure on public companies to embrace profits and share price as their only goal.[191] Many are responding by going public with staggered boards and classified share structures that deliberately insulate managers from such demands.[192] (Snap Inc., which sells the app Snapchat, recently filed documents revealing

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[187] STOUT, *supra* note 47, at 30. Notably, public company boards have no obligation to put the corporation into "Revlon mode." *See* Thompson, *supra* note 176, at 7 (noting that directors of target companies can "turn off or on" *Revlon* duties, and that "shareholder primacy at the option of directors hardly seems to qualify for the name").

[188] Outside the public company context, both the business judgment rule and the question of corporate purpose are much less likely to be contested; there is seldom a reason for a controlling shareholder to challenge the decisions of the board that shareholder controls.

[189] STOUT, *supra* note 47, at 28.

[190] Although it is impossible to prove a negative, the authors have never seen such a charter nor any source citing to such a charter.

[191] *See supra* text accompanying notes 199-208.

[192] *See* Richard J. Sandler & Joseph A. Hall, *Corporate Governance Practices in IPOs,* CORPORATE GOVERNANCE ADVISER, July/August 2014 (summarizing studies showing that, that despite growing pressure on public companies to avoid these practices, 70% of the large public IPOs examined involved corporations that had staggered boards; more than 90% retained plurality voting for uncontested director elections; and the percentage of companies going public with dual or multi-class share structures rose from 8% in 2007-08, to 28% in 2011-13).

a plan to go public by offering common shares with no voting rights at all.)[193] More are refusing to go public in the first place: the number of publicly-listed companies in the U.S. has declined nearly 50% over the past decade, from about 8,000 to about 4,000, with most of the decrease due to new companies choosing not to list.[194] Systems thinking, which emphasizes the importance of observing and acknowledging the system's behavior, suggests these trends are significant. As we explore further below, they may indicate that the external pressures currently driving public companies to focus increasingly on observable metrics like current profits and share price are often dysfunctional, and the corporate sector is using the flexibility provided by traditional state corporate law to self-organize in response.

C. ON THE RISKS OF IGNORING SYSTEMS

We have shown that systems theory offers a coherent alternative approach for understanding corporate purpose and performance. We have also shown that systems thinking fits more comfortably with traditional corporate law, common business practices, and many elements of competing corporate models, than shareholder value theory does. These observations raise an important question. Could policy interventions driven by the dominant vision of shareholder value thinking—interventions that often ignore, or even contradict, the lessons of systems theory—do more harm than good?

The question is not merely academic. As a number of recent law review articles have observed, over the past three decades the Anglo-American corporate landscape has shifted significantly.[195] Public companies today face increasing pressure to become more "shareholder-centric," and to focus on raising share price or reported earnings per share in the near future through strategies like leveraging; repurchasing shares; selling off assets; or cutting

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193 Steven Davidoff, *Snap's Plan is Most Unfriendly to Outsiders*, N.Y. TIMES, Feb. 3, 2017, at B1 ("Snap Inc. is aiming to adopt the most shareholder-unfriendly governance in an initial public offering, ever").

194 GERALD F. DAVIS, THE VANISHING AMERICAN CORPORATION: NAVIGATING THE HAZARDS OF A NEW ECONOMY 15-17 and Figure 1.4 (2016)(number of domestic companies listed on U.S. exchanges declined from more than 8000 in 1996 to just over 4000 in 2012); Bob Bryan, *There are Nowhere Near as Many Public Companies in the U.S. as There Should Be*, BUS. INSIDER, July 5, 2015, www.businessinsider.com/us-has-too-few-publicly-listed-companies-2015-6 (citing study concluding that U.S. listings were declining while listings elsewhere were increasing, and that more than half of the "listing gap" was attributable to new companies declining to list).

195 *See, e.g.*, DAVIS, *supra* note 194 at 53-79; Rock, *supra* note 47; Lynn A. Stout, *The Toxic Side Effects of Shareholder Primacy*, 161 U. PA. L. REV. 2003 (2013); *see also* Thompson, *supra* note 176, at 384 (noting "increased space for power to be exercised by shareholders").

accounting expenses for payroll, customer support, and research and development.[196] Importantly, this pressure has not come from traditional state corporate law, which still grants corporations the flexibility to pursue any lawful purpose and to adopt different governance structures, and still protects director discretion under the business judgment rule.[197] Nor has the pressure come from inside corporations themselves—that is, from boards of directors, or the demands of the employees, customers, creditors, or the initial equity investors who contract directly with corporate entities by seeking employment with them, buying their products, lending money to them, or buying their shares in the primary market.[198]

Instead, the trend has been driven largely by external forces. These include innumerable federal regulatory initiatives, especially changes in tax rules, securities law, and Department of Labor regulations.[199] To give only a few examples, with the passage of the Employee Retirement Income Security Act (ERISA) in 1974,[200] federal rules encouraged the growth of institutional investors (tax-favored pension and mutual funds) which now collectively control nearly half of all shares traded on U.S. exchanges.[201] Other federal interventions around the same time dramatically reduced the transactions costs associated with trading stock, with the unintended consequence that many institutions now typically hold shares for 24 months or less.[202] These new, relatively short-term institutional investors gained power when the SEC amended its proxy rules in 1992 to encourage them to

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196 *See supra* note 28 (publications by experts and research foundations expressing concerns over such short-term strategies).
197 *See supra* text accompanying notes 175-182.
198 Equity investors who purchase shares in the primary market contract directly with corporate entities and can be an important source of capital for them. In contrast, investors who purchase shares in the secondary market do not provide capital or any other direct benefit to companies. Statement of Company Law, *supra* note 20.
199 Rock, *supra* note 47 at 1922; Stout, *supra* note 195 at 2008-10; Thompson, *supra* note 176 at 384 (shift has not come from "changes in Delaware law but from market changes in makeup of the shareholder population and a nudge from federal regulations").
200 29 U.S.C.A. § 1001 (1974).
201 From 1990 through 2010, the value of public equities held by U.S. retirement and mutual funds increased from about $1.1 trillion to more than $9.8 trillion, while household sector holdings increased only from about $2 trillion to $8.5 trillion. STATISTICAL ABSTRACT OF THE UNITED STATES, Table 1201, "Equities, Corporate Bonds, and Treasury Securities—Holdings and Net Purchases by Type of Investor," http://www2.census.gov/library/publications/2011/compendia/statab/131ed/tables/12s120 1.
202 The elimination of fixed brokerage commissions in 1975 dramatically reduced trading costs and holding periods, which now average months instead of years. *See* Stout, *supra* note 79 at 618 (elimination of fixed brokerage commissions and transaction taxes); STOUT, supra note 47, at 66 (average holding period on NYSE has fallen from eight years in 1960, to an implied average of four months in 2010).

play a more active role in corporate governance, including mounting proxy contests to challenge directors.[203] 1993 saw another critical change when Congress amended the tax code to require public companies to tie executive pay to "objective performance metrics," driving companies to compensate executives in ways that encouraged a laser-like focus on measures like share price appreciation or total shareholder return (TSR).[204] Then the SEC in 2003 furthered the shift to a shareholder-centric model by adopting rules requiring exchange-listed companies to have a majority of independent directors on their boards (independent directors are more responsive to shareholder demands than "inside" directors who are also employees)[205] and requiring mutual funds to publicly disclose how they vote shares held in their portfolios.[206] This last rule change spurred the growth of the remarkably powerful—and remarkably unaccountable—"proxy advisory" service known as Institutional Shareholder Services (ISS),[207] which has added substantially to the pressure public companies feel to pursue shareholder value as their dominant objective.[208]

There is theoretical reason to question whether policy interventions springing from such sources are always, or even often, wise or efficient. State corporate law is mostly common law or derived from common law principles; as a number of scholars have noted, the common law tends to evolve to favor efficient rules.[209] In contrast, federal legislation and administrative rulemaking are notoriously vulnerable to interest group lobbying and rent-seeking.[210] Moreover, state corporate law is contractarian. It permits individuals forming corporations to choose from among a variety of possible governance patterns (single versus multiple classes of shares, unitary versus classified board structures, and so forth). It also grants shareholders, bondholders, executives, and employees alike the freedom to decline to do business with corporations that adopt inefficient or exploitive governance rules, thus encouraging incorporators to adopt rules that serve

[203] Stout, *supra* note 195 at 2009.
[204] *Id.*
[205] *Id.*
[206] *Id.*
[207] Lynn A. Stout, *Why Should ISS be the New Master of the Corporate Governance Universe?* DOWJONES CORPORATE GOVERNANCE, Guest Column 14-15, Jan. 4, 2006.
[208] Tamara Belinfanti, *The Proxy Advisory and Corporate Governance Industry: The Case for Increased Oversight and Control*, 14 STAN. J. L. BUS. & FIN. 384 (2009). Meanwhile, the ideology of shareholder value has been taught to a generation of graduates from the nation's leading business schools, law schools, and economics departments. West, *supra* note 47.
[209] DAVID A. BARNES & LYNN A. STOUT, CASES AND MATERIALS ON LAW AND ECONOMICS 285 -308 (1992)
[210] *Id.* at 476-487.

all corporate participants.[211] In contrast, federal regulation tends toward a rigid, "one-size-fits-all" approach that threatens the resilience of companies by limiting their ability to self-organize in response to changes in the market environment,[212] and that insulates incorporators from the competitive pressures that otherwise might encourage them to select efficient rules. Finally, a major consequence of federal regulatory interventions has been to empower private institutions whose interests, there is reason to suspect, are not aligned with the survival and functioning of the corporation as a system. For example, activist hedge funds can profit from buying shares in the secondary market, pushing for changes in corporate charters and by-laws[213] or in federal regulation[214] (thus "changing the rules in the middle of the game," possibly at the expense of other players like employees or bondholders), and selling soon after. The powerful proxy advisory service ISS is notoriously even less accountable.[215]

All this is theory, of course. But several empirical observations give further reason to question whether the federally-driven push to make public corporations more shareholder-focused has overshot the mark, privileging the goals of the shareholding subsystem to the exclusion and at the expense of the corporate system as a whole. In particular, the standard model predicts that the shift should have produced more and stronger public corporations that provide higher returns to equity investors. This prediction has not been realized. To the contrary, as noted earlier, over the past decade

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211 EASTERBROOK & FISCHEL, *supra* note 59 at 4-7.

212 *See also* MEADOWS, *supra* note 90, at 76-79, 80 (system resilience and capacity to self-organize are often sacrificed for purposes of short term productivity or efficiency; self-organization "requires freedom and experimentation, and a certain amount of disorder").

213 For example, in recent years activist shareholder pressure has led hundreds of large public companies to "declassify" their board structures, making it easier for activists to remove incumbent directors. Daniel M. Gallagher & Joseph A. Grundfest, *Did Harvard Violate Federal Securities Law? The Campaign against Classified Boards of Directors* 3 (2014), http://papers.ssrn.com/sol3/papers.cfm? abstract_id= 2536586. These activist campaigns have been led by shareholders who purchased in the secondary market. In contrast to the hostility to classified boards seen among secondary market investors, equity investors in the primary market have continued to show a notable willingness to purchase shares of companies with classified board structures. *Id.* at 2-3 (more than 70% of companies going public from 2007 to 2013 had classified boards).

214 In 2010, the SEC unsuccessfully sought to adopt a "proxy access" rule that would allow activist shareholders to use corporate resources to mount proxy contests in director elections. SIDLEY CORPORATE GOVERNANCE REPORT, PROXY ACCESS MOMENTUM IN 2016, 3 (2016). Although the SEC's rule was vacated by the U.S. Court of Appeals for the District of Columbia, an SEC amendment to Exchange Act Rule 14a-8(i)(8) allowing shareholders to bring proposals seeking proxy access became effective, and has since been used by institutional investors to obtain proxy access in approximately 40% of the companies in the S&P 500. *Id.* at 1, 3.

215 Belinfanti, *supra* note 208, at 407-08.

the number of public companies listed on U.S. exchanges has been cut in half.[216] Corporate life expectancy has declined even further: where in the 1960s the average Fortune 500 company could expect to remain on that list for 60 years or more, today the figure is 15 years.[217] Optimists might dismiss such numbers as evidence of "creative destruction." But if the destruction were creative, we should see increased returns from holding stock in these fewer, more short-lived companies. This has not happened. Although some activist investors have earned above-market returns, the shift toward more shareholder-centric corporations has not benefited long-term, diversified investors. Indeed, average returns from holding public equity may have declined.[218] There is reason to question whether the embrace of shareholder value theory has created greater shareholder value.

Given such trends, it is unsurprising to hear a growing chorus of voices question the wisdom of requiring companies to privilege immediate shareholder returns over other possible corporate goals and objectives.[219] Yet many governance experts and business leaders continue to presume that maximizing "long-term" shareholder value is the only proper objective of the corporation, primarily because they see no attractive alternative for holding managers accountable.[220] System theory provides that alternative. In the process, it supports and explains important elements of corporate practice, corporate law, and competing models of the corporation.

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216 *See supra* text accompanying note 181 (number of U.S. public companies has declined from about 8,000 to about 4,000); *see generally* DAVIS, *supra* note 194. Meanwhile, the number of private companies has been increasing, Stout, *supra* note 195 at 2020-21. These trends suggest that at the level of the corporate sector as a whole, the system seems to be self-organizing by shifting from public companies to private ones. It can be argued that this is a second-best solution that deprives average investors of the opportunity to participate in the wealth generation made possible by the corporate form, unless they invest through layers of expensive intermediaries like mutual funds, hedge funds, and private equity funds.

217 Stout, *supra* note 195, at 2021. *See also* RICHARD N. FOSTER & SARAH KAPLAN, CREATIVE DESTRUCTION (2001) www.mckinsey.com/functions/strategy-and-corporate-finance/our-insights/creative-destruction
(companies on the original S&P Index were on list for 65 years; by 1998, average tenure on list was 10 years).

218 ROGER MARTIN, FIXING THE GAME: BUBBLES, CRASHES, AND WHAT CAPITALISM CAN LEARN FROM THE NFL 63 (2011); James Montier, *GMO White Paper: The World's Dumbest Idea*, Dec. 2014, https://www.gmo.com/docs/default-source/research-and-commentary/strategies/asset-allocation/the-world's-dumbest-idea.pdf

219 *See* sources cited *supra* note 28.

220 *See supra* text accompanying notes 65-79.

CONCLUSION

Despite the dominant role corporations play in our economy, culture, and politics, the nature and purpose of corporations remains hotly contested. This conflict was brought to the fore in the recent Supreme Court opinions in *Citizens United* and *Hobby Lobby*. Although the dominant narrative for the past quarter-century has been that corporations belong to shareholders and should pursue shareholder value, support for this approach, which has been justified as assuring managerial accountability, is eroding. It persists today primarily in the form of the argument that corporations should seek "long-term" shareholder value. Yet, as this Article has shown, when shareholder value is interpreted to mean "long-term" shareholder value, it no longer offers that desired managerial accountability.

What can? Systems theory offers an answer. It provides an approach to understanding the nature and purpose of corporate entities that is not only consistent with elements of many otherwise-conflicting visions of the firm, but also with important features of corporate law and practice. It offers proven methods for measuring corporate performance that recognize the possibility of multiple goals and the importance of sustainability. And it cautions that, by ignoring the lessons of systems theory, shareholder value thinking may have encouraged regulatory and policy interventions into corporate governance that are not only ineffective, but destructive.

In exploring the lessons of systems thinking, and particularly why it might not always (or even often) be desirable to demand that managers "maximize shareholder value," we do not mean to suggest that shareholder returns and managerial accountability are unimportant corporate objectives. The shareholding system is an important subsystem of any public corporation; to thrive, public companies must offer returns that attract and keep equity investors. Moreover, shareholder governance rights, and compensation practices that pay attention to accounting profits and other financial metrics, can help police against managerial shirking and self-dealing. Finally, there may be particular businesses or industries in which a singular focus on short-term financial results is more appropriate.[221]

But systems theory warns against *always* defining and measuring a corporate enterprise solely in terms of shareholder-centric goals and

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[221] For example, a greater focus on shareholder returns may be more appropriate in investment companies, where shareholders are also the customers.

metrics, as this allows the goals of the shareholding subsystem to eclipse the goals of the corporate system as a whole. For the most part, states have managed to resist the pressure to change their laws to support shareholder value theory. However, it has stealthily crept into federal law, especially tax code rules that tie executive pay to objective performance metrics, and SEC rules that empower short-term investors and measure corporate performance by shareholder near-term returns. Activist investors have used the rhetoric of shareholder value as a cudgel to browbeat boards into selling assets, repurchasing shares, and cutting payroll and research and development to achieve short term share price increases. Finally, shareholder value theory has been taught as gospel to a generation of policymakers and business leaders. Over the past quarter-century, these developments have significantly influenced business behavior, especially in publicly-listed companies. They have been accompanied by declining corporate numbers, decreasing corporate life expectancy, and reduced shareholder returns.

Corporations are perpetual entities designed to operate into an uncertain future. They are comprised of elements and subsystems, each of which has an individual purpose that may at times come into conflict with the overarching purpose of the corporation. Systems thinking accepts, rather than dismisses, these realities. It honors the corporation as its own separate legal entity, while recognizing the state's part in its creation. It respects the important roles played by shareholders and other stakeholders, while also explaining the board's function in mediating among these interests to keep the system in check. It acknowledges that the corporate system exists as part of a larger system, which we can broadly call community or society. Finally, it reveals how the quest to find a single quantifiable metric to ensure managerial accountability is a quixotic venture that offers at most an illusion of objectivity and certainty. Systems theory provides an alternative that offers both greater managerial accountability and fewer destructive consequences.