BCE and The Shareholder Primacy Paradox:

A Theory at War with Itself

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Abstract:
This paper explores the interrelationships among corporate culture, capital structure, firm performance, and fiduciary duties. Chaos theory, nonlinear dynamics, complex systems theory, and socio-cultural studies of firms' organizational ecosystems, and enabling infrastructure suggest that the BCE rule is: (i) a superior fiduciary principle to shareholder primacy; and (ii) more likely to enhance firm value in proportion to the importance of intangible assets in its production process. The existence of “epistatic costs” rooted in the non-linear negative feedback effects of perverse agency theory-driven cost cutting is hypothesized. A theoretical model is developed to empirically test for the existence of epistatic costs and optimal levels of organizational tension or “slack.” Broader implications of the model for fiduciary rules, financing decisions, and the current posture of Canadian securities regulation in the takeover context are explored.
For Anne, Maureen, Julia, and my parents, who have given me everything.

With additional thanks to my thesis supervisor Professor Edward Iacobucci, Professor Jutta Brunnee, and the many others who made studying at the Faculty of Law such an exceptionally rewarding experience.
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I. Introduction and Overview

(a) Between Scylla and Charybdis: Shareholder Primacy, Stakeholder Theory, and the Crisis in Canadian Corporate Governance

Under Canadian law, a director’s fiduciary duty is formally codified in s. 122(1)(a) of the Canada Business Corporations Act (“CBCA”), which provides that directors shall “act honestly and in good faith with a view to the best interests of the corporation.” The statute confers a broad discretion on directorial action but provides no further guidance to the courts in determining whether this fiduciary duty has been properly discharged. This has led to growing confusion in the takeover context, where directors of Ontario corporations must now navigate between the conflicting norms underlying securities regulation and corporate law. Although lacking the force of law, National Policy 62-202 (“NP 62-202”) has generally been interpreted by the Ontario Securities Commission (“OSC”) to limit the ambit of the business judgment rule and directorial discretion with respect to defensive tactics in unsolicited takeover bids in favour of shareholder primacy. While the OSC believes that unrestricted auctions produce the best results, this policy is in direct conflict with the Supreme Court of Canada’s controlling decisions with respect to the exercise of a directors’ fiduciary duty, which seem to reject shareholder primacy. In BCE v. 1976 Debentureholders [2008]1 (“BCE”) the Court re-affirmed its earlier ruling in Peoples Department Stores v. Wise [2004]2 (“Peoples”), holding that while directors may consider the interests of many stakeholders in the corporation they with do not owe a fiduciary duty to any single constituency within the corporation, including shareholders; the fiduciary duty of managers (used interchangeably herein with directors) is owed to the corporation itself and no particular stakeholder:

“The fiduciary duty of the directors to the corporation is a broad and contextual concept. It is not confined to short-term profit or share value. Where the corporation is an ongoing concern, it looks to the long term interests of the corporation...[I]n considering what is the best interest of the corporation, directors may look to the interests of, inter alia, shareholders, employees, creditors, consumers, governments and the environment to inform their decisions. Courts should give appropriate deference to the business judgment of directors who take into account these...interests, as reflected in the business judgment rule.”3

Much of the controversy and criticism surrounding the BCE decision has been directing at its ambiguity with respect to the scope and proper discharge of directorial obligations.

2 Peoples Department Stores Inc. (Trustee of) v. Wise, [2004] 3 S.C.R. 461
3 BCE, supra note 1 at paras. 38, 40.
While repeated references to the interests and fair treatment of many constituencies make it clear that no special priority or duty attaches to the claims of shareholders, BCE provided no further clarification than Peoples with respect to the priority or weight attached to the claims of competing stakeholders in any particular case.

“[In Peoples] this Court found that although directors must consider the best interests of the corporation, it may also be appropriate, but not mandatory (emphasis in original), to consider the impact of corporate decision-making on shareholders or particular groups of stakeholders…”

“There is no principle that one set of interests – for example the interests of shareholders should prevail over another set of interests. Everything depends on the particular situation faced by the directors and whether, having regard to that situation they exercised business judgment in a responsible way.”

Similar ambiguity would appear to surround the test set forth in BCE for evaluating the proper discharge of directors’ fiduciary duties, in which the court will review:

“[Whether] in all circumstances, the directors acted in the best interests of the corporation, having regard to all relevant considerations, including but not confined to, the need to treat affected stakeholders in a fair manner, commensurate with the corporation’s duties as a good corporate citizen.”

By raising fundamental questions regarding the proper scope and application of shareholder primacy as a legal norm, the BCE decision has precipitated a crisis in Canadian corporate governance. Practitioners have criticized the decision for its: (i) failure to articulate more precise rules, tests, or principles to guide the exercise of directors’ fiduciary duty “in favour of a nebulous duty to treat all shareholders fairly, commensurate with ‘the corporation’s duties’ as a responsible citizen”; (ii) “highly deferential approach to director decision-making [which] reflects an insensitivity to the ‘omnipresent spectre of conflict’ of which Delaware courts have been acutely aware in their analysis of directors’ duties in the change of control context”; and (iii) failure to provide any “meaningful tool” to resolve potential conflicts between different corporate constituencies (Lupa 2011). Similar criticisms have been echoed by academic commentators: (i) “…the Court did not provide adequate guidance regarding what is required of officers and directors under the standard

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4 Ibid. at para. 39.
5 Ibid. at para. 84.
6 Ibid. at para. 82.
8 Supra, note 7.
it has set”; and (ii) “[t]he Supreme Court appears to expect corporate directors and judges 
*ex post facto*, to function as an Enlightened Breed of Philosopher Kings ardently and 
faithfully pursuing some elusive Aristotelian mean”.

The critique of *BCE* echoes similar charges that have been leveled more generally 
against communitarian norms of fiduciary obligation, which are not entirely without 
foundation. Although framed in the context of maximizing social welfare, stakeholder 
theories ultimately rely on managerial action for achieving laudable ethical goals that are 
perhaps best left in the political arena. Because corporate managers arguably lack the 
necessary expertise (omniscience?) and legitimacy to act as moral agents, there are good 
reasons to be skeptical of top-down command and control decisions from the executive 
suite concerning the production of social goods. With the possible exception of team 
production theory – to which this paper lends new and complementary theoretical and 
empirical support – theoretical alternatives to shareholder primacy seem disconnected 
from the business context and concerns of actual firms.

(b) *BCE and The Worst Rule for Governance – Except for All the Others*

Although economic considerations dominate corporate law, it does not necessarily 
follow that such considerations are best served by shareholder primacy. As will hopefully 
become apparent from the arguments presented in this paper, shareholder primacy is a 
theory – or perhaps more accurately – an ideology at war with itself. Shareholder primacists 
Sundaram and Inkpen issue an intriguing challenge:

“If managing on behalf of ‘stakeholders’ is…the desired goal, proponents of such a 
view must go beyond critiques of the shareholder view to offer a robust alternative 
theory that is compatible with the naturally occurring incentives, impulses, and 
imperatives of market- and property-rights based economies in democratic-capitalist

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10 VanDuzer, J.A.. BCE v. 1976 Debentureholders: The Supreme Court’s Hits and Misses in its Most Important Corporate 

p.256 quoted in supra, note 9


13 Iacobucci, Edward and George Triantis. *Economic and Legal Boundaries of Firms*. American Law and Economics 
societies. If such a theory is developed and can be empirically supported, we would be the first to welcome it”.

This paper respectfully responds.

Notwithstanding the preponderance of cogent and thoughtful commentary to the contrary, this paper argues that **BCE** was correctly decided, but remains incomplete. As pointed out by at least one critic, “the content of the [decision’s] fiduciary duty would have been illuminated if the Court had provided a policy-based rationale for its pluralist vision”. Accordingly, this paper seeks to provide such a rationale to address the legitimate concerns expressed by **BCE**’s critics, and to redeem the decision’s subtle virtue: preventing the greater harm that would be inflicted by any attempt to formulate a more precise rule or principle of universal application. **BCE** reveals a golden rule for corporate governance: there is no golden rule for corporate governance. This proposition is not intuitively obvious and defies many theoretical assumptions and methodologies deployed in mainstream theories of the firm and corporate finance. However, as explained more fully herein, the proposition is well-grounded in complexity theory and an extensive body of evidence gathered in psychosocial studies of organizational behavior and corporate culture that have gone unnoticed in the corporate governance literature. It also reveals the fundamental tension between two diverging approaches to social theory: “[i] a functionalist perspective emphasizing the predictable impacts of purposive, intentional forms of social organization, and [ii] phenomenological perspectives emphasizing the] emergent and epiphenomenal nature of organizations.”

(c) Moving Beyond Shareholder Primacy: Towards a New Theory of the Modern Firm

Traditionally, the law and economics perspective on corporate governance has been grounded in the functionalist approach to social science. While sociologists, social anthropologists, and social psychologists point to culture and ideology as defining features of social life, these are ignored in economic “science,” which remains captive to the mid-nineteenth century *weltanschauung* of Newtonian physics. While economics waits for its
own Luther or Heisenberg, this paper at least hopes to contribute to the project of constructing a more balanced and nuanced perspective on the objective social reality of the corporation as an organic entity. No reasonable person would regard nation states as “mere legal fictions,” nor conceptions of “national interest” as incoherent, yet analogous views generally go unchallenged when applied to corporations and abstractions of their “best interests.” In response, this paper presents a hopefully salutary critique of the positivist approach embodied in contractarian- and agency-driven models of corporate governance.

“Nexus of contracts” and agency theories regard the firm as a “black box” of deterministic input-output relations, and assert the existence of an objective production function amenable to rational optimization and simplistic rules of profit maximization. For all their “mathematical pyrotechnics” (Beinhocker’s artful description), such theories are of limited explanatory and predictive value when applied to the modern firm. Contractarian and agency theories are quite useful in describing and prescribing modalities of governance and control for physical asset-intensive production of industrial era commodities, which rely on tangible asset inputs and are rationally amenable to cost-leadership strategies,18 Taylorian management, and the application of linear programming techniques popularized in mid-twentieth century management science, such as the simplex algorithm.19 However, the same theories, strategies, and techniques grow increasingly irrelevant in a globalized economy characterized by dynamic and accelerating change, yet continue to provide the intellectual foundations for Anglo-American-Canadian models of corporate governance. When unquestioningly applied in the context of modern Western production and value-creation processes, these theories may do more to destroy than enhance shareholder value, revealing a fundamental flaw of the shareholder primacy rule.

Modern firms are like contestants in the Red Queen race in Through the Looking Glass20 (Carroll 1949) that must run faster and faster just to stay in the same place. The “Red Queen Effect” informs many of the theories of organizational ecology and complex adaptive systems theory reviewed and drawn upon in this paper. This effect was first posited by evolutionary biologist Leigh van Valen, who proposed that: continuing development is needed for an evolutionary system just to maintain its fitness relative to the systems it is co-evolving with.21 Modern firms in a globalized economy must continually

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re-invent themselves merely in order to survive; they increasingly depend on *intangible asset* inputs for continuous innovation and production of high value-added, non-commodity, differentiated goods.

(d) A Complexity Perspective on Fiduciary Duty and the “Best Interests of the Corporation”: Point Attractors, Strange Attractors, Intangible Assets, and “Epistatic Costs”

Intangible assets have been described as “organizational capital”; they subsume corporate culture and team production theory’s vision of the firm as a “nexus of firm-specific investments” (Blair and Stout, 1999); they are idiosyncratic, non-tradeable, imperfectly imitable, and causally ambiguous; they give rise to the performance ambiguity underlying the separate governance hierarchies of markets, bureaucracies, and clans and they are incommensurable with the basic tools of corporate governance: property rights, explicit contracting, financial disclosure and monitoring based on generally accepted accounting principles and theory. As will become apparent from this paper’s review of complexity theory, these intangible assets are highly fragile and vulnerable to hitherto unhypothesized “epistatic costs” – rooted in nonlinear negative feedback effects in complex adaptive systems – that destroy shareholder value.

As developed and argued more fully herein, the choice of optimal governance rules and structures is highly contingent upon the nature of a firm’s production inputs and its susceptibility to epistatic costs. As described and developed more fully herein, complexity theory replaces the Newtonian, deterministic, machine-like model of the firm with an organic conception of self-organization and nonlinear emergence. From a complexity perspective, directors’ duties defined as a single rule of shareholder wealth maximization operates as a less efficacious “strange attractor,” with negative impacts on a firm’s “fitness landscape,” than duties owed to “the company as a whole.” Complexity theory also provides guidelines to facilitate the emergence of a vital zone of Schumpeterian creative destruction between stasis and chaos.

III. The Case for Shareholder Primacy

(a) Contractarian Arguments

Conceiving the firm as a nexus of contracts between its internal and external participants, contractarians argue that non-shareholder constituents (employees, management, and creditors) are in a position to protect their interests by negotiating explicit contracts.\(^{27}\)\(^{28}\)\(^{29}\) By contrast, shareholders do not enjoy the same contractual safeguards.\(^{30}\) As residual claimants, shareholders can only rely on an implicit contract to receive dividends – at sole discretion of the board of directors – and are thus the sole bearers of residual risk in the firm.\(^{31}\)\(^{32}\) Accordingly, it is argued that the firm should be managed with a view to maximizing this shareholder value, since shareholders’ interests are aligned with the long-term value of the firm. For this reason, control rights should be allocated to shareholders to promote managerial accountability through a shareholder-elected board of directors.

(b) Agency Arguments

Agency theorists posit the existence of a principal-agent relationship between shareholder principals and managerial agents. In this view, justifications for shareholder primacy are self-evident: the firm belongs to the shareholders, who are conceived of as its owners. Agency “costs” arising from the separation of ownership and control associated with the widely dispersed ownership of large public corporations erodes shareholder wealth. Accordingly, reductions in agency costs become a primary mechanism for maximizing shareholder wealth and enhancing overall economic efficiency.

(b) Pragmatic Arguments


A central tenet of the efficient capital markets hypothesis is that the stock price is the single best estimate of a firm’s long-term value. Accordingly, shareholder wealth maximization is attractive as a fiduciary rule by virtue of its superior measurability, objectivity, and certainty when judged against alternative rules. It is a coherent and enforceable rule that makes it easy for directors to monitor corporate performance, and enables courts to review managerial conduct with some rationality.

(c) Jurisprudential Arguments

Considerable evidence points to the historical dominance of shareholder primacy in Anglo-American corporate law. At common law, the traditional approach to analyzing fiduciary duty has strongly tended to equate the “best interests of the corporation” with the best interests of shareholders, regarded as owners. As argued by Jonathan Macey, the American Law Institute’s (“ALI”) Principles of Corporate Governance (“Principles”) provide additional doctrinal support for this view.

(i) **Hutton v. West Cork Railway Company**\(^{35}\) ("Hutton")

Early and influential authority was provided in *Hutton*, which concerned compensating certain paid officials of the company for their loss of employment in a winding-up, although they had no legal claim for compensation. In his often-cited judgment, Bowen LJ stated:

“As soon as a question is raised by a dissentient shareholder…sympathy must be cut adrift, and we have to consider what the law is…[Directors] can only spend money which is not theirs but the company’s, if they are spending it for purposes that are reasonably incidental to carrying on the business of the company. That is the general doctrine. *Bona fides* cannot be the sole test, otherwise you might have a lunatic conducting the affairs of the company and paying away its money with both hands in a manner perfectly *bona fide* yet perfectly irrational…it is for the directors to judge, provided it is a matter which is reasonably incidental to the carrying on of the business of the company… The law does not say that there are to be no cakes and ale, but there are to be no cakes and ale except such as are required for the benefit of the company."\(^{36}\)

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\(^{34}\) *Principles of Corporate Governance* (1994), s. 2.01, quoted in Macey, Jonathan R. *A Close Read of an Excellent Commentary on Ford v. Dodge* (2008) at p. 178. Yale Law School, Faculty Scholarship Series.

\(^{35}\) *Hutton v. West Cork Railway Company* (1883), 23 Ch. D. 654.

ii.  *Dodge v. Ford Motor Company*\(^{37}\) ("Dodge")

*Dodge* concerned a suit brought by two minority shareholders (the Dodge brothers) controlling ten percent of the company’s stock to compel the declaration of a dividend of not less than 75 percent of the company’s accumulated cash surplus. The suit was filed after Henry Ford, who controlled the board, said that no more special dividends would be declared at present and so that profits could be put back into the company to build blast furnaces and other plant in which to produce iron and other products for use in the manufacture of cars, increase employment, and sell a larger number of cars at a lower price per car. Ford’s counsel argued that:

> “Although a manufacturing corporation cannot engage in humanitarian works as its principal business, the fact that it is organized for a profit does not prevent the existence of implied powers to carry on with humanitarian motives such charitable works as are incidental to the main business of the corporation.”\(^{38}\)

In its decision for the plaintiffs, the Michigan Supreme Court appears to provide the most direct and explicit endorsement shareholder primacy in the legal record to date:

> “A business corporation is organized and carried on primarily for the profit of stockholders. The powers of the directors are to be employed for that end. The discretion of directors is to be exercised in the choice of means to attain that end and does not extend to change in the end itself, to the reduction of profits or to the non-distribution of profits among stockholders in order to devote them to other purposes.”\(^{39}\)

iii.  *Parke v. Daily News Ltd.*\(^{40}\) ("Parke")

*Parke* strongly identified the interests of the corporation with the interests of shareholders. After negotiating the sale of two unprofitable newspapers, the directors of Daily News Ltd ("DN") decided that after deducting expenses associated with the sale, the net proceeds of the sale price should be used exclusively for the benefit of staff and pensioners of the newspaper. The plaintiff shareholder of DN sought: (i) a declaration that corporate resolutions passed to the preceding effect were *ultra vires* and illegal; and (ii) to enjoin DN’s proposed disposition of the sale proceeds. In deciding for the plaintiff, Plowman J stated:

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\(^{38}\) Ibid. as quoted without citations in supra note 8 at pp. 263-266

\(^{39}\) Ibid.

\(^{40}\) *Parke v. Daily News Ltd.*, [1962] 1 Ch. 927
“The view that directors, in having regard to the question what is in the best interests of their company, are entitled to take into the interests of the employees, irrespective of any consequential benefit to the company, is one which may be widely held…But no authority to support that proposition as a proposition of law was cited to me; I know of none and none was cited to me…. [In my judgment, therefore, the defendants were prompted by motives which, however laudable, and however enlightened from the point of view of industrial relations, were such as the law does not recognise as a sufficient justification. Stripped of all its side issues, the essence of the matter is this, that the directors of the company are proposing that a very large part of its funds should be given to its former employees in order to benefit those employees rather than the company, and that is an application of the company’s funds which, as I understand it, the law will not allow.”

iv. Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.42 (“Revlon”) Revlon can be cited for its apparently strong endorsement of shareholder primacy. Revlon’s directors were engaged in defensive tactics to thwart a hostile takeover bid by Pantry Pride Inc. by negotiating a sale to Forstmann Little & Co. (“FLC”) at a lower price. These tactics included the granting of a lock-up option on key Revlon assets (“crown jewels”), a no-shop clause in the purchase agreement granting exclusivity in dealings to FLC, and a large “break up fee” payable to FLC if the proposed transaction was not consummated. The Delaware Supreme Court held that in certain circumstances, “obtaining the highest price for the benefit of the stockholders should [be] the central theme guiding director action.”43 The Court held that once the break-up of Revlon was inevitable, the board’s duty:

“changed from the preservation of Revlon as a corporate entity to the maximization of the company’s value at a sale for the stockholders’ benefit… [a]t this point, the directors’ role changed from defenders of the corporate enterprise to auctioneers charged with getting the best price for the stockholders at a sale of the company.”

v. ALI Principles of Corporate Governance

41 Ibid. quoted without citations in supra note 8 at pp. 275-276.
43 Ibid. at 182.
44 Ibid. at 182.
As noted by Macey\textsuperscript{45}, section 2.01 of the Principles – “a significant, if not controlling, source of doctrinal authority” – states that “a corporation should have as its objective the conduct of business activities with a view to enhancing corporate profit and shareholder gain.”\textsuperscript{46} Macey attaches particular significance to the fact that: “…the ALI expressly emphasizes shareholder wealth, and specifically excludes labor interests as something that should be maximized…”\textsuperscript{47}

\textsuperscript{45} Supra, note 34.
\textsuperscript{46} Supra, note 34.
\textsuperscript{47} Supra, note 34.
Going Off the Law and Economics Reservation: In Search of New Insights into the Modern Firm

a. Models, Metaphors, and Reality

What then is truth? A movable host of metaphors, metonymies, and anthropomorphisms: in short, a sum of human relations which have been poetically and rhetorically intensified, transferred, and embellished, and which, after long usage, seem to a people to be fixed, canonical, and binding. Truths are illusions which we have forgotten are illusions; they are metaphors that have become worn out and have been drained of sensuous force, coins which have lost their embossing and are now considered as metal and no longer as coins...The drive towards the formation of metaphors is the fundamental human drive, which one cannot for a single instance dispense with in thought for then one would thereby dispense with man himself – Friedrich Nietzsche

i. The Metaphor Debate

As the currently reigning “Queen of the Social Sciences,” economics has “crowded out” and perhaps even de-legitimated many alternative and potentially fruitful modes of inquiry into social phenomena and human behavior. Complexity theory, whose principles originated in the physical and natural sciences, has attracted the attention of investigators in many areas of the behavioral and social sciences. However, a significant obstacle to its broader acceptance and application outside of the “hard” sciences is the charge – frequently echoed in the literature – that complexity principles are only metaphors or analogies that cannot be transferred to the human realm, including the econosphere. The great irony, of course, is that economics is itself metaphorical. In reality, there is no Walrasian Auctioneer, there are no supply or demand curves, and there is no homo economicus – these are all metaphorical constructions. For that matter, string theory in physics isn’t about actual strings. As described more fully below, it can and has been argued that metaphor provides the foundation for the social sciences, the natural and physical sciences, language and cognition itself.

ii. Metaphors and Cognition: The Virtues of Imprecision

“It is not so much that metaphors are cognition, rather cognition is metaphorical.” Klamer and Leonard describe metaphor as the indispensible process through which human beings capture the meaning of the world through concepts. In

49 Supra note 19, p.23
their view, language itself is irreducibly metaphorical. From this perspective, the ‘literal’ and ‘figurative’ are not distinct species but bounds of a metaphorical continuum.”

Metaphors “have a cognitive and not merely emotive or decorative function...[they] allows us to comprehend in ways that a literal reading cannot. In some instances a metaphor is the only way to know, as when we explore natural or social phenomena that are fundamentally unknown.”

The juxtaposition of apparently unrelated elements in a metaphor draw our attention to possible relationships between them not previously considered. In this regard, Klamer and Leonard provide the example of “human capital” spawning a burgeoning literature. In this context, we can appreciate Schon’s observation that “a metaphor is not just a piece of language but a process of thought.”

For Klamer and Leonard, scientific metaphors are best understood as propositional invitations to further inquiry. They do not settle the analytical and ontological validity of their proposed linkages between theory and real world phenomena – ultimately mediated by iterative model building and empirical testing – but invite interpretation. “It is the open-endedness and lack of explicitness that make metaphor so useful to scientific inquiry.”

“A formal symbolic language can never be a substitute for thought, because the application of a symbolic method to any empirical matter presupposes very careful analysis of the subject matter... that the essentials have been grasped and properly expressed in language. In other words, it presupposes that the work of clarification has already been done...some necessary overtones of meaning are lost when a word is precisely and uniquely symbolized. The vagueness of living languages in comparison to the precision of mathematics is the price they pay for their applicability to the world and their capacity for growth.”

iii. Clashing Theories or Metaphors?

Klamer and Leonard draw important distinctions between pedagogical, heuristic, and constitutive metaphors. These distinctions reveal the “metaphor debate” – at least with respect to truth claims posited by neoclassical economics and complexity theory – to be a schism. The debate reflects both a lack of common understanding of

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50 Supra note 19, p. 26
51 Supra note 19, p. 26
52 Schon, Donald A. The Invention and Evolution of Ideas. London: Social Science Paperbacks (1967), quoted in supra, p. 30
what metaphor means, and a plateau of argument between foundational assumptions rooted in different metaphorical understandings of the world.

Pedagogical metaphors are designed to visualize or illustrate an extant proposition, relationship, or thing. For example, a mathematical relationship can be described as conic section. Such metaphors are more helpful in spreading understanding of scientific ideas than the progress of science per se.

Heuristic metaphors are the “pre-analytic cognitive acts” referred to by Schumpeter; they are designed to catalyze thought, to stimulate further inquiry. Human capital is a heuristic metaphor, and as an example serves to “[reinforce] the connection between metaphor and thought and thought in science...[M]etaphor is an essential tool for thinking about the unknown, but it also serves to stimulate novel approaches to the unknown. Metaphor is cognitive here because its respective subjects interact to create new meaning.” In a scientific context, a metaphor becomes heuristic when it “stimulates the construction of an analogical system.” More specifically: “[t]he mere coinage of a metaphor [such as human capital] doesn’t make science. Science proceeds by taking a fertile metaphor and relentlessly articulating the nature of its subsidiary domains, properties of that terrain, and testing the connections between [these domains].”

In economics, heuristic metaphors are developed into models, which in this view are “nothing more or less than explicitly...formally articulated [analogies].”

“Creating an economic model...constitutes reasoning by analogy, as Milton Friedman argued when he suggested that economists reason ‘as if’...’As if’ reasoning defines rational choice as analogous to, for example, a constrained maximization technique. No literal meaning is intended. Friedman is clear: Economists are not supposed to lose sight of the analogy’s essential if useful fiction. In Black’s terms, ‘there is a willing suspension of ontological disbelief’ which may account for the ironic ‘winking and nudging’ that accompanies sophisticated economics. Individual agents don’t actually make decisions by employing the techniques of Lagrange and Hamilton to solve systems of equations; it is useful, however, to see them this way. The argument is meant to be fictitious, as it is when cognitive psychologists argue as if brains were computers. To take either analogy as literal misses the point.

55 Supra, note 19, p. 33.
56 Supra, note 19, p. 35.
57 Supra, note 19, p. 35.
58 Supra, note 19, p. 35.
The problem, of course, is that analogies become more elaborate—things in themselves—and eclipse their founding metaphors. Model builders may lose sight of their construct’s metaphoricity. Indeed, most economists think of their work as making truth statements about the world...Alertness to metaphor reminds us not only that our models are fictions, but that ‘as if’ reasoning—the characteristic mode of economic discourse—is altogether incompatible with a positivist account of economic practice.”

**Constitutive metaphors** resemble the Kantian noumenal categories through which we apprehend the phenomenal world; they are root metaphors which contain the “conceptual schema through which we interpret that which is either unknown or unknowable.” As argued by Schon, constitutive metaphors are both a “product” (understood as a perspective or way of looking at things) and a “process” (that explains how new perspectives come into being; they are “central to the task of accounting for the world: how we think about things, make sense of reality, and set the problem[s] we later try to solve.”

Constitutive metaphors are implicit, often unarticulated and unstated; they provide the litmus tests we apply in determining what does or does not make sense, including pedagogical and heuristic metaphors. In many ways, constitutive metaphors are integral to who we are and cannot be easily changed or discarded.

Economics and complexity theory have different underlying root metaphors, or hypotheses of the world, that manifest themselves in what we can now see as the so-called metaphor debate. Economics deploys a mechanistic world hypothesis in which the economy resembles “a machine with a price mechanism, equilibrium, and elasticities. Nature can be seen as a frictionless clockworks, with the social realm isomorphically identical, owing perhaps to some deus ex machina as an invisible hand.” In contrast, complexity theory posits an organic root metaphor in which the economy is seen “as a living thing, complete with closed circular flows...[and] living things evolve, an important metaphorical implication... that may be at odds with a competing notion of invariance” – the *ceteris paribus* upon which general equilibrium theory is based.

As Klamer and Leonard argue:

“If your constitutive metaphor sees the world as a clockworks and suggests that people don’t think but calculate, then thinking about thinking makes little sense...If the world is a frictionless clockworks, then equilibrium prevails everywhere...To conceive of economics

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59 Supra, note 19, p. 35.
61 Supra, note 19, p.39.
62 Schon, op. cit. note 23 supra, quoted in supra note 19, p. 40.
63 Supra note 19, p. 43.
64 Supra note 19, p. 43.
as a discursive practice based on a handful of metaphors would be subversive for such a worldview because it threatens to emphasize rhetorical tools at the expense of fact and logic, a mechanistic world’s means of inquiry.”

(iv) Metaphor and Methodology: Choosing the Right Tools for Social Inquiry

The choice of constitutive metaphor also necessitates a choice between the diverging goals and methodologies of fundamentally different types of social science inquiry, each dictated by and valid within its own worldview. Von Wright distinguished between the Galilean and Aristotelean traditions in the philosophy of science:

“While the former is occupied by causal explanation, the latter is concerned with understanding and teleological explanation. Causal explanations, according to the first tradition, conform more or less to the positivistic covering law model, causally conceived: they cite general law-like regularities and ‘mechanical’ causes. Understanding, in turn, uses a technique which in the context of human action, can be explicated in terms of the Aristotelean practical syllogism which refers not to causes but to explanations, i.e. the intentions and beliefs of actors.

…[W]hile the covering law model is well-suited for the natural sciences, it is not appropriate for the social sciences…Natural events do have (Humean) causes, unlike human actions with which social sciences are concerned. This is why human action (and why anything manifesting it) should not be causally explained but understood in terms of the reasons of the actors. Whereas general (Humean) laws can be found in the natural world, they do not obtain in the human world. Understanding is not dependent on reference to causes and general laws…[in other words] Natural events are not meaningful in themselves and should be causally explained, whereas phenomena involving human action do have a meaning, and this makes them – exclusively or together with causal explanation amenable to understanding or interpretation.”

As Maki points out, “the explanatory approach – the Natural Science Ideal – would seem to be inappropriate if economics, by reason of its subject matter, is not a natural but a human science.” Maki argues that we cannot properly understand the human action reflected in economic phenomena without integrating the results of the explanatory approach into a wider interpretive understanding:

“‘Objective’ data (that is, the data that are produced as a result of the application of objective measuring techniques) achieve their maximum intelligibility not when, as is the goal of the natural sciences, they have been subsumed under (supposedly) universally binding and timeless ‘covering laws’

65 Supra note 19, p. 42.
67 Supra, note 37, p. 42.
(whose putative purpose is that of ‘explanation’ and ‘prediction’) but when – only when – as in history or psychotherapy, they have been interrelated and woven into a narrative account…[T]he most primordial of all forms of understanding is indeed storytelling…So, rather than being predictable, a conclusion must be acceptable.” 68

The interpretive economist Dan Lavoie casts further doubt on the tools of social inquiry and ontological criteria used in orthodox economics. As quoted by Maki, Lavoie argues:

“The whole purpose of the theoretical social sciences (including economics and accounting research) is to equip people with the capacity better to distinguish between acceptable and unacceptable historical narratives…What we find ourselves doing in the social sciences is not so much testing of ex ante predictions as ex post explanation of principles. The only ‘test’ that any theory can receive is in the form of a qualitative judgment of the plausibility of the sequence of events that has been strung together by the narrative.” 69

This paper is skeptical of the theoretical arguments and analytical tools – grounded in the machine metaphor of neoclassical economics – used to support of shareholder primacy and agency theory. It is argued that complexity theory – grounded in a more apt organic metaphor – provides a more useful perspective and toolkit for understanding organizations. Readers are invited to consider their own constitutive metaphors while testing the relative plausibility of the pedagogical metaphors, heuristic metaphors, and evidence presented a greater length herein.

68 Supra, note 37, p. 45.
69 Supra, note 37, p.46.
b. The Shortcomings of Traditional Approaches to Understanding the Modern Firm

Man is by nature a social animal; an individual who is unsocial naturally and not accidentally is either beneath our notice or more than human. Society is something that precedes the individual. Anyone who either cannot lead the common life or is so self-sufficient as not to need to, and therefore does not partake of society, is either a beast or a god. " – Aristotle, Politics

Mirowski has argued that, “[i]n economics, the façade of the repudiation of philosophical preconceptions is propped up by the widespread conviction that modern economics has successfully adopted the character and attributes of a science.”

Economics has attempted to conform to the methodologies of “hard science” by: externalizing or hypostasizing the subjective, historical, cultural, and psychological influences on preference formation and choice; and, adopting a Newtonian stance of hypothesis non fingo with respect to the phenomena under investigation. However, economics faces an insurmountable problem that does not trouble the physical scientist: “people talk back but atoms are silent.”

Accordingly, we should question: (i) how well-suited the basic tools of economic inquiry – linear optimization and equilibrium analysis – are to informing our understanding of human action; (ii) what is lost in the reductionist translation of human behavior into formal quantitative models aimed at objective causal explanations; and (iii) whether alternative methodologies can be usefully deployed to enhance our understanding of economic phenomena.

(i) The Basic Tools of Economics Are Inadequate to the Task of Socio-Cultural Analysis

McKelvey reviews an extensive literature on the distortions created the tractability requirements of formal mathematical modeling in classical physics, and carried over into social science by neoclassical economics – the problem of “math moulding.” This problem arises from three “heroic” simplifying assumptions: (i) the homogenous behaviour in the units of observation (economic agents); (ii) the autonomy or independence of agents; and (iii) the assumption of equilibrium, which applied to physical phenomena under the 1st Law of Thermodynamics, and was uncritically aped and applied in the mechanistic conception of social phenomena still held by traditional economics. McKelvey argues that such assumptions are “demonstrably antithetical to a

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71 Mirowski, Phillip quoted in Lavoie, supra note 37, p. 76
correct understanding, modeling, and theorizing of human behaviour.” In this regard, McKelvey draws heavily on the earlier work of D.W. Read tracing the classical physics roots of mathematical modeling in the social sciences generally and highlighting “just how much social phenomena have to be warped to fit the tractability constraints [of calculus]... the focus on universality, stability, equilibrium, external forces, determinism, and global dynamics at the expense of individual dynamics (emphasis added).”

Read’s insights, as quoted by, McKelvey are highly relevant to the complexity approach to modeling and understanding the human action reflected in economic phenomena advocated in this paper and are worthy of repeating here at length:

“[1] In linking ‘empirically defined relationships with mathematically defined relationships...[and] the symbolic with the empirical domain...a number of deep issues arise...the ability of human systems to change and modify themselves according to goals that change through time [vs.]....the common assumption of relative stability of the structure of [theoretical] models used to express formal properties of systems...A major challenge facing effective mathematical modeling [of human systems]... {is to develop models that can take into account this capacity for self-modification (emphasis added) according to internally constructed and defined goals.}’

[2] ‘In part the difficulty is conceptual and stems from reifying the society as an entity that responds to forces acting upon it, much as a physical object responds in its movements to forces acting upon it. For the physical object, the effects of forces on motion are well-known and...can...be examined through [appropriate mathematical modeling]...It is far from evident that a similar framework applies to whole societies.’

[3] Perhaps because culture (emphasis added)...is not directly observable...and perhaps because the things observable are the direct result of individual behaviour, there has been much emphasis on purported “laws” of behaviour as the foundation for explanatory arguments...To the extent that there are laws affecting human behaviour, they must be due to properties of the mind that are consequences of selection acting on genetic information... “laws” of behaviour are inevitably of a different character than laws of physics [which are] fundamental to the universe itself; behavioural “laws” such as “rational decision making” are only true to the extent to which there has been [evolutionary selection] for a mind that processes and acts upon information in this manner...Without virtually isomorphic mapping from genetic information to properties of the mind, searching for universal laws of behaviour...is a chimera.’”

(ii) Lost in Translation: The Casualties of Methodological Individualism

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73 Supra, note 43, p.13.
75 Supra, note 43, p.13.
As noted by Madison, “economists show...a penchant for explaining social ‘wholes’ in Robinson Crusoe terms – as if somehow this strange, pitiful character epitomized the essence of mankind and embodied in himself alone the essence of society, as if the ‘economic’ were to be found in a society consisting of only one member (that is, a society which is a non-society).”

This is, of course, because methodological individualism is instrumentally convenient for economists. The unit of observation and positive analysis is the individual, viewed as an asocial, ahistorical, automaton. This methodological approach is problematic if, as Madison argues, “[t]he true object of economics is human reality, human interactions, transactions, market processes [in which case]...humans are not objects, but subjects, purposive beings – which is to say they are not properly understood if they are understood merely objectively.”

The main casualty of methodological individualism is our own understanding of the roles that social institutions and the “unarticulated knowledge embedded in social practices” play in economic practices. Such institutions and practices prescribe certain forms of conduct while prohibiting others. Methodological individualism not only ignores such institutions and practices but treats them as “natural phenomena...externally given conditions of human action – whose origin may not be investigated and whose existence is taken for granted. And nobody asks questions about their meaning (emphasis in original)...while institutions are by no means ignored, most economists do not know what to do with them. They play with them like children playing with ancient coins about whose value and history they know nothing. Institutions belong to the realm of culture (emphasis added), not that of nature. They are immersed in history. Although we can observe their operations, our observations cannot disclose to them what meaning their objects have to those enmeshed in them.”

(iii) Escaping the Methodological Prison: The Untapped Potential of Complexity Theory

As a putative “science,” neoclassical economics adopts as its premise a mechanistic world view that methodologically demands positive explanation in terms of Humean causes. However, understanding of plausible reasons for social action and human behavior is the goal – and properly so – of almost all other social sciences. Among others, history, anthropology, sociology and psychology but – unlike economics – remain open to new tools of social inquiry. Complexity theory is such a tool.

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77 Madison, G.B. “Getting Beyond Objectivism,” in Lavoie, supra note 37, p. 39.
78 Madison, G.B. in Lavoie, supra note 37, p. 37.
79 Madison, G.B. in Lavoie, supra note 37, p. 38.
80 Lachmann, Ludwig M. “Austrian Economics: A Hermeneutic Approach,” in Lavoie, supra, note 37, p. 137
The central claim of complexity theory is that simple aggregation of individual behaviours is unlikely to provide useful insights into societal behaviour. From a complexity perspective, social institutions, practices, and norms are spontaneous, emergent, self-generating epiphenomena in all social systems. The economic importance of such intangibles was noted by Hayek in the following remarkable quote, which also presciently hints at the central mechanism upon which complexity theory’s claim that the whole is greater than the sum of the parts is based, that of emergence:

“We undeservedly flatter ourselves if we represent human civilization as entirely the product of conscious reason or as the product of human design, or when we assume that it is necessary in our power deliberately to recreate or to maintain what we have built without knowing what we were doing. Though our civilization is the result of a cumulation of individual knowledge, it is not by the explicit or conscious combination of all this knowledge in any particular brain, but by its embodiment in symbols which we use without understanding them, in habits and institutions, tools and concepts, that man in society is constantly able to profit from a body of knowledge neither he nor any other man completely possesses. Many of the greatest things man has achieved are the result not of consciously directed thought, and still less the product of a deliberately co-ordinated effort of many individuals, but of a process in which the individual plays a part but he can never understand (emphasis added).”

Mainstream economics currently occupies a methodological prison that it has built for itself. From these confines, it offers a distorted view of social reality and is unable ability to generate insights into unobservable, intangible, fragile, and causally ambiguous epiphenomena that play a crucial role in determining the productive capacity of societies and individual organizations alike. This current practice of economics – based on simple linear models that ignore mutual causation between co-evolving firms and agents within them – cannot explain order creation. It is in this central regard that the insights of complexity theory have the potential to significantly enhance our understanding of the modern firm.

c. Chaos and Complexity Theory

i. Complex Adaptive Systems: An Overview

As succinctly described by Eidelsen, the underlying principles of complex adaptive systems are well summarized in the term itself.82

“[1] Complex conveys the non-linear nature of the world...[in which] small events can have dramatic consequences...and large events can have no impact at all...

81 Supra, note 79 at 52.
Adaptive reflects [a] focus on change and evolution that characterize individuals, groups, and societies. Equilibrium states...are viewed as transient because they are repeatedly disrupted by internal phenomena...and external influences. Periods of disorder and instability...are natural and necessary stages...towards greater self-organization...[the search for optimal fitness...includes frequent detours and shifting terrain as other individuals or groups struggle to adapt to the same landscape...

System emphasizes interconnections...As a result of dynamical interconnections among component parts of a system...collective behavior emerges...[that cannot be predicted by understanding the] individual elements separately...[actions] frequently have unintended consequences as they work their way through a network of intermediaries, each of which contributes its own fingerprint to the message it transmits. Simple cause and effect relationships evaporate, leaving instead patterns and regularities to decipher.”

As an important caveat, it should be noted that human systems are far more complex and difficult to analyze than natural systems. However, both natural and human systems share important common features. Accordingly, and as more fully described argued below, an organic conception of the firm qua social system allows it to be viewed and fruitfully analyzed as a complex adaptive system, with significant implications for corporate governance and fiduciary rules.

ii. Firms Possess the Key Features and Manifest the Behavioral Properties of Complex Adaptive Systems

Decentralized Control, Self-Organization and Nonlinear Dynamics

In nature, schools of fish, flocks of birds, herds of animals, ant and bee colonies all display features of coordinated, collective action without the imposition of any central control. This element of decentralized control co-exists alongside formal hierarchical structures of control within firms. Within firms, informal networks of employees develop interaction structures that do not rely on central control. Such interactions are governed by continuously evolving social conventions and norms that coordinate and regulate behavior without central control – such phenomena are reflected the everyday meaning of such terms as “corporate culture.” Eidelson’s review of the literature points to mathematical models indicating that “dynamical instabilities in [such] interaction patterns often produce spontaneous adaptive realignments among the members without the intervention of a central planner.”

83 Supra, note 52, pp. 62-63.
84 Supra, note 52, p.44.
Ilya Prigogine was awarded the 1977 Nobel Prize in Chemistry for his contributions to our understanding of far-from-equilibrium thermodynamics. Under such conditions, disordered systems naturally progress towards highly organized, interdependent, and differentiated states. From the standpoint of classical physics, this violated the First Law of Thermodynamics, which held that natural systems evolve towards higher degrees of entropy or randomness. Under far-from-equilibrium conditions, interactions between systems components produce emergent macrostructures referred to as order parameters or dissipative structures.\(^8\)

Fluid mechanics illustrates the role of the Benard process in the emergence of dissipative structures. In this particular case, coherent convection flows are created under and in response to conditions of requisite or “critical” complexity. If water is just warm, its heat will dissipate without any hydrodynamic motion and the water will remain in a steady state. However, when water is heated above a first critical value (T\(_1\)), it organizes itself into cylindrical rolls of flow which serve to dissipate the higher levels of energy now in the system. If the temperature is raised further, the cylinders become wobbly and unstable. Above a second critical value (T\(_2\)) the flow becomes wild and turbulent; order creation is replaced by chaos.\(^6\)

These processes are also relevant to biological and social processes. Biological selection produces increasing complexity and environmental adaptation. From the standpoint of complexity theory, biological organisms are emergent dissipative structures. In Eidelson’s review of the literature, order parameters have been used to explain the emergence of language, national character, ritual, form of government, public opinion, social climate and corporate identity.\(^7\)

The nonlinear effect of positive feedback is another important characteristic of complex adaptive systems. While conventional economic theory focuses on the role of negative feedback in maintaining equilibrium, positive feedback is a force that can pull systems – physical and economic – far from equilibrium through the operation of “snowball” or “bandwagon” effects. Classic examples of positive feedback loops shaping or skewing the direction of industries include the QWERTY typewriter and ultimate dominance of the VHS standard instead of Beta for video cassette recording devices. In neither of these cases did the ultimate “winner” possess the superior technology, and the final outcomes are incommensurable with economic prediction.

\(^6\) *Supra*, note 17.  
\(^7\) *Supra*, note 52, p. 48.
since they were fundamentally unpredictable outcomes of dynamic processes characterized by “sensitive dependence on initial conditions.” This latter phenomenon is widely referred to as the butterfly effect which captures very real possibility that the flapping of a butterfly’s wings in New York can – with passage of time – can result in a tornado in Japan.

The concept of self-organization provides the first causal proposition and mechanism to support this paper’s arguments and empirical model: (1) firm-specific corporate culture, informal institutions, and social practices are order parameters arising from nonlinear dynamic interactions between employees and employers in a firm.

*Connectivity*

“Complexity arises from the inter-relationship, interaction and inter-connectivity of elements with a system and between a system and its environment.” Connectivity implies that any decision or action by any member of a firm will have far-reaching direct and indirect effects on other individuals within the firm and through networks of connectedness. As discussed at greater length later in this paper, connectivity is manifested in Kauffman’s concept of epistatic interactions, through which the contribution of any single individual to system performance both depends on and influences the contributions of other individuals in the same system.

Mitleton-Kelly, suggests that connectivity, and the quality of interactions fostered by connectivity (degrees of common adherence to social norms of trust and reciprocity between interacting agents) can have an important influence on a firm’s “fitness” (which this paper interprets as both productive capacity and adaptive capabilities):

“In a social context, each individual belongs to many groups and different contexts and his/her contribution in each context depends partly on other individuals within the group and the way they relate to the individual in question. An example is when a new member joins a team. The contribution that individual will…make may depend on the other members of the team and on the space they provide for such a contribution, as much as to the skills, knowledge, expertise, etc. brought by the new member.

In human systems, connectivity between individuals or groups is not a constant or uniform relationship, but varies over time, and with the diversity, density, intensity, and quality of interactions (emphasis added) between human agents. Connectivity may also be formal, informal,

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designed or undersigned, implicit with tacit connections or explicit with formal connections. Furthermore, it is the degree of connectivity, which determines the network of relationships and the transfer of information and knowledge.”

Thietart and Forgues’ literature review suggests that elements of strategy formation depend on the processes of emergence. They point to research indicating that “the strategy formation process generally involves a lot of dynamic interactions...separation between formal and informal [brainstorming]...is difficult to make.” Both “structured and unstructured” processes are complementary and co-exist within firms. “In the latter, decisions originate from organizational ‘garbage cans’ in which problems are generated from inside and outside the organization and solutions are the outcome of an apparent random process between actors.”

The preceding insight points to causal propositions for mechanisms that are important for the arguments presented in this paper and explicated in its empirical model, that: (2) a firm’s productive capacity depends on the quality of interactions between its members that contribute to creation and sharing of information (knowledge); (3) the formation of informal, implicit, and tacit connections (relationships) is voluntary and not subject to formal control; (4) both the quality and quantity of voluntary connective ties (cooperation) within a firm are influenced both positively and negatively by trust, which is determined in turn by whether or not (5) degrees of adherence or non-adherence to personal, organizational, and societal norms of fairness and reciprocity.

Co-Evolution

Co-evolution is a product of the connectivity between organisms in an ecosystem, or firms in an industry or economy. Adaptation by any single firm to economic or market factors changes the competitive landscape itself, stimulating adaptive responses by other firms, in an iterative process resulting in a constantly deforming landscape.

A firm’s ability to successfully adapt to rapid external changes in its operating environment – complexity – has become more important in the current globalized and knowledge-driven economy. Kauffman’s concept of “fitness landscapes” is discussed at greater length in this paper’s later description of Kauffman’s NK model, which analyzes adaptation and co-evolution in the context of the epistatic interactions between

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different elements of a system. For the present purposes, it can be described in the metaphor of an agent moving through a landscape of peaks and valleys of constantly changing heights and depths, with the tallest peak representing the highest possible level of fitness. Conceiving of the agent as a firm and the landscape as its industry, the iterative competitive actions and reactions between it and other firms give rise to the constantly shifting landscape.

The fitness landscape describes how such firms (conceived as systems) evolve through the twin processes of variation and selection. As stated by Eidelson:

“[E]volution typically proceeds with small adaptive steps gradually leading to higher ground, occasionally the transitions take the system to somewhat lower regions. If these latter locations are too low, the system risks elimination. But without some non-adaptive excursions...it is likely to get “stuck” on a local fitness maximum and...never attain the more desirable global maximum...evolution would cease because there would be no direct path to increased fitness (accessible by incremental excursions).

[This] demonstrates how a complex adaptive system can sometimes benefit from errors or random behaviors (i.e. non-incremental moves: think of jumps vs. incremental steps taken in a walk) if such actions inadvertently displace the agent from a local peak, thereby increasing the likelihood that an agent will reach the landscape’s global maximum...[B]y nurturing small failures, a system can make large failures less probable...[I]n deed errors are often renamed innovations when they lead to a better problem solution or more adaptive path.

Co-evolution and fitness landscapes provide a sixth causal proposition for additional mechanisms important for this paper’s arguments and empirical model: (6) innovation requires some degree of operating “slack.” In order to achieve an optimal balance between the firm’s efforts between harvesting existing assets and planting the seeds for new assets – in Eidelson’s terminology, exploitation vs. exploration – the firm must set aside a certain amount of human capital and effort as “seed corn.” This includes but is not limited to formal research and development activities, which do not exist in many firms that nevertheless face adaptive pressures. It must also include some tolerance for time spent “at the water cooler” and other informal activities that may not directly contribute to the firm’s “bottom line” but should not be regarded strictly as manifestations of “shirking” leading to agency costs. Rather, such activities may, and often do, enhance intra-firm connectivity, and the exchange of information and ideas. In addition, innovation requires the voluntary motivation and attention of employees – perhaps the scarcest, most intangible, most fragile, and most valuable source of any firms – which

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92 Supra, note 52, p. 57.
93 Bounded rationality theorists such as Herbert Simon have tried to draw greater “attention” to the problem of the allocation of attention: the attentional deployment of agents is generally disregarded or taken for granted in standard economic theory. See generally: Berger, Lawrence A. “Self-Interpretation, attention, and language,” in Lavoie, supra, note 37, pp. 265.
depend on subjective employee perceptions that the normative constraints of fairness and reciprocity in causal proposition (5) are satisfied.

*Phase Transitions*

Complex systems can undergo abrupt, discontinuous, and dramatic transformations from one qualitative state to another. An example in physical systems would changes between solid, liquid, and gaseous states for a given element or substance. Such transformations occur in responses to changes in some control parameter, in the preceding example temperature, but more generally the T parameter described earlier with respect to self-organization and dissipative structures.

Eidelson’s review of the literature cites research suggesting that phase transition paradigm has been applied in the social sciences to help explain: (i) how successive stages in history seem to alternate between periods of high stability and predictability and sharply contrasting intervals of instability and extreme sensitivity to small events; (ii) business relocation and infrastructure investment decisions; and (iii) an increasing gap between consumption requirements and income as a control parameter (T) leading to the sudden adoption of a “criminal lifestyle.”

*Cusp Catastrophe*

Catastrophe theory describes how a continuous function can become suddenly discontinuous. The “straw that broke the camel’s back” captures the essence of the phenomena which catastrophe theory seeks to explain. In the physical world, avalanches are examples of such catastrophes.

Eidelson’s review of the literature describes cusp catastrophe in terms of the interaction between control parameters that determine whether the system experiences gradual or discontinuous change: asymmetry and bifurcation controls. It may be useful to think of the asymmetry control can be thought of as analogous to this paper’s control parameter T that moves the system towards phase transitions, and the bifurcation control as somewhat analogous to the threshold or critical value T* at which a phase transition occurs. In essence, as long as the value of the bifurcation control remains low, T can be smoothly increased without destabilizing the system. Above the bifurcation

\[ \text{Supra, note 52, pp. 51-52.} \]

\[ \text{Supra, note 52, pp. 53-54.} \]
threshold $T^*$ however, the system abruptly destabilizes and goes from on stable state to another – qualitatively different state.

Eidelson cites a variety of literature indicating that this 2-variable model of cusp catastrophe “has broad explanatory value for when an individual’s disposition to act in a certain way conflicts with social pressure against doing so.” As a model of attitude change, attitudes are distributed bi-modally if an issue is important to a group (for example, whether a firm’s treatment of its employees is fair or unfair) but normally distributed when the issue is less important. Eidelson cites research suggesting that individual attitudes to less important issues vary smoothly with changes in the asymmetry control (information about the topic). However, if the issue is perceived as important, changes in the asymmetry control above the bifurcation threshold $T^*$ produce “a dramatic, nonlinear shift in the individual’s attitude.” The model has also been applied to organizational change. Despite the model’s qualitative nature, its empirical predictions in various studies have been superior to linear models.”

Phase transitions and cusp catastrophe theory provide a seventh causal proposition and mechanism important for this paper’s arguments and empirical model: (7) increases in a control parameter $T$ that is a suitable proxy for adaptive tension on employee perceptions of fairness or unfairness above a bifurcation value $T^*$ will rapidly destabilize the dissipative socio-cultural structures that are based on trust, promote positive motivation, attention, and voluntary unobservable actions that collectively contribute to firm performance. Diagram 1* below graphically describes the conceptual application of cusp catastrophe principles to this paper’s subject matter.

**Hysteresis**

Hysteresis describes the phenomenon that the precise value of a bifurcation point depends on the direction of change an asymmetry variable. The bifurcation point at which water undergoes the phase transition to a gas is at a higher value of $T$ than water vapor condenses into liquid. Eidelson cites cusp catastrophe research suggesting that a similar hysteresis effect operates in human attitude formation: people (mainstream economists?) tend to cling onto opinions even when confronted with considerable negative information on the issue. However, once the change attitude occurs it is more difficult to reverse, i.e. if the original bifurcation point was $T^*$, the new bifurcation will be set at $(T^* + \chi)$. This proposition has been empirically validated in studies of workplace accidents and stress-related illnesses triggered by changes in a firm-induced

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97 Supra, note 64.
98 Supra, note 64.
stressor: even after employers realize the folly of their ways, accidents and illnesses remain high despite mitigation efforts. In other words, systems have histories. In the behavioral economics context, the “status quo effect” and loss aversion may have the same underlying psychological cause as hysteresis.99

Hysteresis, together with phase transitions and cusp catastrophe theory provide an eighth causal proposition and mechanism important for this paper’s arguments and empirical model: (8) the impact of asymmetry value T (firm tension) on firm performance will graphically resemble an inverted U-shaped curve, with the peak representing the bifurcation point of cusp catastrophe and the ensuing performance decay curve, moderated to some extent by the hysteresis effect and the heterogeneous beliefs of employees with respect to idiosyncratic expectations and standards of fair treatment. Not all employees will change their beliefs (defect) from voluntary cooperative, reciprocal interactions simultaneously but breach of T* will set in motion nonlinear dynamic feedback effects that will destroy trust and reciprocity – and accumulated “intangible assets” (described herein). The history of the system will re-set T* at a higher point for trust to be restored, implying that intangible assets are more rapidly destroyed than rebuilt.

**Edge of Chaos**

Complexity theory holds that nonlinear dynamic systems naturally evolve to a state of “self-organized criticality” at the “edge of chaos.” The concept is well illustrated by the common example of the sand pile: the height of the pile will steadily increase but above a certain height (analogous to the first critical value of T1 discussed earlier) it reaches a critical state, in which the addition of any additional grain will cause the pile to collapse to a lower height with gentler sloping sides. The collapse will occur at different heights anywhere between T1 and the second critical value T2, when the experiment is repeated under identical conditions. However the critical state will continue to be defined by the same values of T1 and T2. As Eidelson explains, this is because:

“Once the pile is poised at the critical state, any analysis individual grains of sand ceases to be useful. At that point, the pile of sand must be viewed as a whole (emphasis added) because even grains at considerable distances are connected through an elaborate network.”100

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100 Supra, note 52, pp.54-55.
Eidelson cites examples in the literature of edge of chaos has been applied to economic and historical phenomena: (i) in world history, specific events may create a critical state in which conflicts and social unrest spread rapidly – the “Arab Spring” is a recent example that comes to this author’s mind; (ii) economic aggregates can be in critical states which may explain production avalanches in response to small increases in demand treated as exogenous shocks. He also cites studies suggesting that complex systems in critical states have maximum adaptability to changes in the external environment, and maximum effectiveness with respect to information exchange.\(^{101}\)

Edge of Chaos provide an ninth causal proposition and mechanism important for this paper’s arguments and empirical model: (9) Peak firm performance will occur between values of T1 and T2, and will be reflected in an inverted U-shaped curve reflected improved performance resulting from enhanced adaptive and information exchange capabilities until the system destabilizes – like the pile of sand – above a critical value T* that can fall anywhere between T1 and T2.

**Integrating “American” vs. “European” Perspectives on Complexity\(^{102}\)**

American researchers, in the tradition of the Santa Fe Institute, conceive of “optimal disorder” as an optimal balance between opposing forces of stability and control (reflected a in a suitable control parameter T) and forces of disorder (autonomy and complexity). Within this school, attention is focused on: (i) positive feedback effects as instigating mutual causal interaction; (ii) sensitive dependence on initial conditions (the butterfly effect); and (iii) the edge of chaos as the region of emergent complexity.\(^{103}\)

European researchers believe the same forces of order and disorder are entangled with each other; they oscillate between order and disorder. From this perspective, it may be appropriate for either force to transiently englobe the other at any given time in an environmentally-drive process of ongoing inversion and reversion. In the tradition of Prigogine, the European school’s attention is focused on: (i) phase transitions resulting from external force-based instigation effects – conceived as adaptive tension T; and (ii) the region of emergent complexity between the critical threshold values of T1 and T2.

\(^{101}\) Supra, note 68.
The insights of both schools are complementary, and are made use of in the arguments and empirical model developed in this paper. The European school suggests that some initial critical value of adaptive tension $T_1$ must be externally placed on a system order to overcome the “threshold gating” required to push the system away from equilibrium (stasis) and undergo a phase transition into the zone of emergent or critical complexity. This makes good sense in the context of human systems: agents don’t interact and react without some reason. For different reasons, both schools posit the existence of optimal complexity – and firm fitness – as falling at a value of $T^*$ between the two critical values of $T_1$ and $T_2$ defining the zone of critical complexity. The American school frames the benefits of complexity in terms of connectivity, which enhance firm fitness through patterns of voluntary cooperation and information exchange that facilitate adaptive learning and evolution. This paper marshals a variety of evidence to suggest that such voluntary interactions will not occur if the prerequisites conditions of trust and reciprocity are absent or breached.

(iii) Implications of Complexity Theory for Understanding the Modern Firm

The neo-classical economic theory of the firm is based on the optimization of deterministic linear relationships to a unique equilibrium solution. Negative feedback effects are assumed to constrain divergence from a single efficient outcome. Much of the real world, however, is characterized by nonlinear relationships which determine both the internal dynamics of natural and social systems, as well as the interaction of such systems – which include firms – and their external environment. Nonlinear systems generally cannot be solved. Furthermore, due to “Butterfly Effect” the basic methodology of economists in seeking to understand the whole as the sum of smaller parts which obey deterministic rules seems unrealistic. Although the physical sciences have advanced sufficiently to embrace Einstein’s notion of relativity and Heisenberg’s uncertainty principle, the social sciences – including economics – seem locked in an archaic Newtonian conception of social systems as machines.

Much of current organizational and corporate governance theory is premised upon the preceding narrow and flawed conception of the firm. Classical management theories believe order comes from the rational thoughts and actions of owner managers. Tightly centralized control and direction is viewed as the only alternative to the dissolution of the firm into the kind of purely random entropic disorder natural scientists associate with thermal equilibrium and the Second Law of Thermodynamics. However, when seen through the lens of nonlinear complex systems theory, “disorder” can also be seen as a generative process responsible for the emergence of stable
macroscopic “dissipative structures” arising from the nonlinear interactions of microscopic elements in complex systems.

In a globalized information age, innovation, adaptability, and flexibility are the keys to a firm’s survival and success. Ironically, however, these processes do not result from top down “command and control” exerted by omniscient or “visionary” CEOs through bureaucratic hierarchies, nor from the oversight of boards of directors applying simplistic fiduciary rules of value maximization for shareholders. Rather, these processes describe the generative nature of complexity and entanglement between a firm’s intra- and extra-systemic interactions which give rise to far from equilibrium “emergence phenomena” at the “edge of chaos.” Carefully studying the chaotic dynamics in the superficially disorderly behavior of many complex systems – between critical thresholds – reveals order creation generated by complexity, and makes it possible to conceptualize the study of complexity as the science of order creation science subsuming many disparate natural and social evolutionary processes.104

Finally, this paper’s review complexity theory should undermine our confidence in profit maximization as a managerial tool. The theory exposes major flaws associated with this rule:

(1) Its methodology is derived from an unrealistic constitutive machine metaphor borrowed from classical physics – there is no analogue to equilibrium in dynamic nonlinear systems.

(2) Even if perfect knowledge could be obtained, profit maximization is predictively impossible due to the phenomena of epistatic interactions and sensitive dependence on initial conditions. If the firm is a potentially chaotic system at the edge of chaos, simple cause and effect relationships no longer apply: as in the example of the extra grain of sand on the sand pile, the impacts of any single action are unpredictable in their impact or magnitude.

(3) At the edge of chaos managerial artifacts such as profit maximization create basins of attraction – attractors – which bound a feasible envelope in which complex behaviors can occur. Both the European and American schools of complexity theorists agree that peak system fitness depends on some optimal level of disorder in a system. From either perspective, optimal disorder permits adaptive learning to cope with external change, allowing firms to satisfy Ashby’s Law of Requisite

Variety – that a system’s internal complexity must match the complexity of its external environment. Stated differently, “only variety destroys variety.” The problem, from a complexity perspective with the rule of profit maximization is that it confines the firm’s adaptive responses to a smaller feasible envelope of actions that is invariant with external change.

(4) For reasons contained in (2) above, attempts to impose top-down solutions through hierarchical control stifle creativity at levels “closer to the front” line. Furthermore, such control can become dysfunctional as rigid adherence to a single rule can fatally impair the adaptive learning and evolution necessary for survival in a dynamic economy. Dynamic interaction with the firm’s external environment and feedback effects should drive continuous reformulation of strategic and operating schemata. “[T]he existence of formal programs can be ‘very costly when it protracts and orientation that has proved to be dysfunctional that has proved to be dysfunctional’… [the search for order through excessive rationalism can be disruptive.” Accordingly, adherence to a rule of profit maximization may actually destroy shareholder value, since it inhibits necessary evolutionary adaptations to maintain firm fitness. Thietart and Forgues’ review of the literature intriguingly suggests that many firms rely on formal “top down” tools of planning and control to create the “illusion of managing.” Since managers intuitively know that many of the problems they deal with are unsolvable, they make “ritualistic” use of managerial artifacts to create the appearance of certainty and avoid contradicting their “raison d’être.” Such formalistic approaches are psychologically based in cognitive dissonance theory. If the rule of profit maximization is merely one of these artifacts, then we have a delicious irony: adherence to profit maximization in the cause of shareholder primacy, as justified by agency theory, may actually increase agency costs. Due to its dysfunctional impact on adaptive learning and successful evolution, this paper outlines a theoretical case for why the rule of profit maximization may be a far larger source of agency costs than managerial “shirking.”

(iv) Relevance and Applicability to Corporate Governance:

Under conditions of subcritical complexity, systems are strictly deterministic and allow for the exact and unique predictions of general equilibrium theory in neo-classical microeconomics and the rational application of maximizing shareholder value as the bedrock principle of fiduciary duty. At the opposite extreme of fundamental complexity, the rules and bits of information required to describe the system are no less

complex than the system itself; the application of conventional deterministic rules and principles are inadequate to the task of coping with the random and stochastic nature of fundamental complexity characterizing the firm’s external environment (market forces best described by “random walk” processes).

As explained in greater detail herein, optimal corporate governance rules and structures are thus contingent upon firm-specific complexity and organizational tension. Such rules and structures should be focused on strategies and principles to maximize a firm’s “fitness” – rather than shareholder value – by facilitating and maintaining conditions of “critical complexity.” This is a zone of potentially creative destruction “at the edge of chaos” where adaptive tension can be modulated between $T_1$ and $T_2$, and greater degrees of freedom provided, to foster the emergence of novel dissipative structures that can enhance the firm’s ability to cope with its external environment. Corporate culture can also be instrumental in maintaining optimal adaptive tension and providing the degrees of freedom to catalyze the emergence of potentially valuable dissipative structures. Rather than optimization of a non-existent production function for innovative, high value-added production, the task of management and corporate governance under conditions of complexity is more realistically and usefully conceptualized in terms of “hedges, bets, and sure things.”

Viewed in the context of nonlinear dynamics and complexity theory, the BCE decision provides a fiduciary rule with the degrees of freedom and flexibility missing from simplistic shareholder value maximization. Pre-BCE notions of fiduciary duty are of limited and possibly disastrous applicability under conditions of critical complexity, for reasons described more fully in the model presented in this paper.

Perhaps most importantly, the BCE decision acts as a useful counterweight to the pervasive and pernicious effects of shareholder value and agency “theory” – or, as argued in this paper, “ideology” – on limiting the willingness of board of directors to take full advantage of the business judgment rule. Current social, institutional and political pressures have so limited practical recourse to the wise flexibility the rule provides that it has cannot be considered the source of operating “slack” and flexible adaptation that modern firms need to thrive in a world characterized by accelerating change and complexity.

d. Intangible Assets

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In the resource based view of the firm (“RBV”), resource endowments are heterogeneously distributed across firms and this explains differences in performance between firms. In this context, particular importance is attached to a firm’s endowment of “intangible resources,” which are difficult to acquire, develop, replicate, accumulate, or be imitated by competitors due their ambiguous causal relationship with firm output. The principle of causal ambiguity denies the existence of a determinate “mapping” between intangible inputs and outputs that is the prerequisite for application of optimization methodologies notionally directed at profit maximization. Intangible resources or assets are idiosyncratic, path-dependent, and firm-specific. They are emergent phenomena that require investment and develop slowly over time as organizational learning from conditions of uncertainty and social complexity. They are not subject to property rights, and therefore comprise a class of market externalities that are non-transferable, non-tradeable, and difficult to measure or record on balance sheets. Tangible assets such as financial capital or investments in property, plant, and equipment for scale economies are not sustainable sources of competitive advantage. By contrast, due to their scarcity and inimitability, intangible assets are an important source of sustainable competitive advantage and generate significant rents.

Intangible assets are relatively unimportant in the production of commoditized goods and services, but are critical in the production of higher value-added – more complex – outputs. For such goods, the creation of value is embedded in networks of interpersonal relationships (Granovetter 1985, Swedberg 1997). Many economic advantages accrue from: (i) cooperative and constructive social interaction networks; and (ii) common understandings and cultural factors like trust, reciprocity, and shared values and concerns. As summarized by Dornhofer, Schumpeter described the transformation of social capital into economic activity via two processes: (i) “combination,” i.e. the identification or recognition of new information as important or valuable, and (ii) “exchange,” which is fundamentally based on trust. Trust and

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108 Supra, note 24.
109 Supra, note 25.
110 Supra, note 22.
113 Dornhofer et al, <insert citation>
learning are the most important elements in the creation of social capital and also in the transformation of social capital into organizational competitive advantage. The development of social capital is an evolutionary emergence phenomenon that cannot be created through top-down command and control. “We still know very little about the actual process by which social capital is produced and accumulated...in all cases the actors have to be bound together in an organization and provided with certainty [i.e. trust] that makes it possible to benefit from the social capital of others.”

Organizational Capital

Organizational capital is comprised of corporate culture and other valuable and intangible forms of social capital. It is difficult to imitate and difficult to measure since it is not possible for an individual to watch and describe what elements of a culture add value to an organization. In broad terms, organizational capital refers to the combination of explicit and implicit formal and informal knowledge which structures and shapes the organizational activity of firms. It consists of: (i) implicit and informal knowledge expressed as culture; (ii) explicit and formal rules expressed as structure; and (iii) organizational learning, both formal and informal, as well as tacit or explicit.

While human capital is the most important source of competitive advantage in the modern firm,

“[i]t is the path dependent, socially complex, and causally ambiguous properties of knowledge and relationship dynamics [intangible assets] embedded in the human capital, rather than the capital itself, that creates a firm’s sustained advantage...[t]his view emphasizes human cognition, knowledge, and relationship processes...[c]ompared to financial capital, scale economies, or patents, the invisible asset of an effectively deployed human resources system is critical for enhancing and renewing a firm’s capabilities.”

Corporate culture can be understood as this invisible asset:

“for better or worse, corporate culture has a major impact on a company’s ability to carry out objectives and plans...[t]his invisible, intangible asset critical to enhancing and renewing a firm’s capabilities in the face of dynamic changes in the environment...it is more valuable than financial capital or scale economies.”

116 Supra, Note 113 (Dornhofer quoting Maskell (2000).
117 Supra, Note 22.
118 Supra, Note 22.
119 Supra, note 22.
V. A Race to the Bare Bottom: Emperors Without Clothes?

a. Contractarians

It is an unrealistic and demonstrably false assumption that non-shareholder participants in the firm are in an adequate position to negotiate for contractual protection of their claims. Only in a very narrow view of contracting are shareholders the sole residual claimants in firms.\textsuperscript{120} Strictly speaking, shareholders are only the firm’s residual claimants in bankruptcy; in a going concern, employees who have made irreversible firm-specific human capital investments,\textsuperscript{121} creditors, and the extended network of supply chain and customer interdependencies all bear residual risk.\textsuperscript{122} Furthermore, modern options theory reveals that combinations of options produce the same payoffs as owning the stock itself. In this context, it makes as much sense to view debt holders as “owning” the right to the corporation’s cash flow after selling a call option to the shareholders, as it does to regard stockholders as owning the shares and a put option purchased from the debt holders; both equity and debt holders bear residual risk in the firm.\textsuperscript{123} The contractarian vision of complete contracting for non-shareholders simply does not comport with the realities of: (i) bounded rationality; (ii) the Hobson’s Choice of “take it or leave it” contracting in situations of unequal bargaining power, i.e. most employment relationships; (iii) potentially opportunistic breaches of implicit contracts with employees;\textsuperscript{124} (iv) firm-specific capital asset specificity; (v) asymmetric information; and (vi) the impossibility of explicitly contracting for intangible assets, to which property rights are incapable of attaching, and therefore fall outside the contractarian market-based model.

Upon closer examination, the argument that shareholders as residual claimants have the incentive to maximize profits becomes problematic. Unlike employees, shareholders in public companies have a put option to the market which places a floor on their downside and allows them to exit. In contrast to the potentially unlimited career risk assumed by employees, shareholders assume no personal liability for the firm’s mismanagement. In reality, shareholders’ incentive is to maximize the net present value not of the firm, but of their shareholdings. Since shareholders vary

\textsuperscript{121} \textit{Supra}, Note 23.
\textsuperscript{124} Shleifer, Andrei and Lawrence Summers. “Breach of Trust in Hostile Takeovers,” in Auerbach, Alan J. \textit{Corporate Takeovers: Causes and Consequences} (Ch. 2, pp. 33-68) [1988].
widely in their individual risk preferences, diversification, and investment time
horizons, it is impossible to specify any single rule for “maximizing shareholder
wealth.”

b. Agency Theorists

To paraphrase the Bard, there are more things in heaven and earth than are
dreamt of in agency theorists’ philosophy. Agency theory makes no meaningful
distinction between the behaviour of human beings and Pavlov’s dogs: in the absence
of strict external monitoring and neo-Pavlovian “incentives” (an economic euphemism
for “punishments and rewards”) managerial “shirking” is inevitable. Without offering
any empirical support, Jensen, Meckling, and other agency theorists ask us to accept as
self-evident a particularly narrow, simplistic, and pessimistic set of assumptions
regarding human nature – enshrined in neo-classical economics – which may over-
emphasize self-interest and extrinsic motivation, and under-emphasize socio-cultural
group influence and intrinsic motivation. Such an impoverished perspective exists in
dangerous if splendid isolation from other disciplinary perspectives informed by a
broader and more realistic set of influences on human behaviour, which this paper
attempts to incorporate. As once pithily suggested by Harvard economist James
Duesenberry: “[i]f economics is all about how people make choices; sociology is all
about why they don’t have any choice to make.” Even Adam Smith discounted the
significance of market forces as the primum mobile of human behaviour: winning
honour and respect in the eyes of one’s peers was a far more powerful motivation than
the mere pursuit of material gain. In The Theory of Moral Sentiments, Smith agreed with
Plato and Zeno, respectively, on the powerful force exerted by the “love of honour and
the dread of shame”, and the desire for “the respect and esteem of those we live
with.” It is difficult not to be amused by several empirical studies suggesting that the
self-interest model deployed in economics may only tautologically describe and predict
the behaviour of economists themselves, i.e. exposure to economic training may induce
patterns of selfish behaviour ex post that were not observed ex ante such training or
among non-economists.

126 “There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy.” William Shakespeare, Hamlet, Act 1, Scene 5, 166-167.
128 Quotes from unpaginated online version of Adam Smith, The Theory of Moral Sentiments, at http://socserv.mcmaster.ca/~econ/ugcm/3ll3/smith/moral.7
As a legal matter, shareholders are not owners of the corporation, but of a limited financial claim against the corporation known as common stock. They have no title to any of the corporation’s assets, which belong to the corporation. Corporate managers are agents of the corporation itself and accountable not to shareholders, but to the board of directors in whom responsibility for corporate management is statutorily vested, and further delegated to management as consistent with corporate law. Thus, the application of the principal-agent model between shareholders and corporate managers is both inaccurate and inappropriate. Under the law of agency, agents are accountable to their principals but no such obligation or relationship exists between managers of a corporation and its shareholders.

More troublesome are the theoretical issues associated with the proper identification and classification of agency “costs” in the context of intangible assets and epistasis. As discussed more fully in the description of this paper’s proposed model, epistasis describes the nonlinear interactions between the constituent elements of complex adaptive systems in evolutionary biology. Essentially, changing any one element in a biological or ecological system triggers far-reaching nonlinear “epistatic effects” in the entire system which cannot be predicted. In the context of the internal and external ecologies of organizations conceived of as co-evolving complex adaptive systems, the long-term impacts of purposive managerial actions are indeterminate (as argued herein, the most that governance can hope to do is to make the right judgment calls on “hedges, bets and sure things” in the hopes of modulating organizational tension between the value destroying extremes of stasis and chaos).

The modern firm operating in the globalized economy must increasingly rely on knowledge workers to create value.

"Knowledge workers are both independent and interdependent. Work is increasingly self-directed and self-generated. As knowledge becomes more specialized and work tasks more complex, managers can’t tell workers what to do, instead experts ‘in the middle’ are expected to work collaboratively with others to define and solve problems…[t]he measurement of the contributions of knowledge workers is increasingly difficult…[t]he need for customized solutions to business problems requires independent teams of experts who do not know at the outset the results of the integration of knowledge. Because such teams often don’t even know what relevant problems or questions they need to address, it is difficult to know how much time it should take them…[i]f higher level managers cannot detect who made what contribution, then allocating rewards [and monitoring] becomes increasingly difficult.”130

130 (Jones <insert citation>).
This is a crucial point, since it makes clear that it is very difficult to monitor agency costs in production processes relying upon knowledge workers to produce highly complex outputs over long time-spans of discretion and autonomy (for example, in universities). Such loosely coupled systems – described as webs or networks – have no centre: work is self-generated and self-monitored. In such environments, the shortcomings of agency theory and textbook microeconomic concepts based on commodity production (such as the marginal product of labour) become painfully obvious.

Accordingly, many agency “costs” are better conceptualized as investments in the intangible assets associated with organizational capital. Since intangible assets do not appear as capital assets on a corporate balance sheet, their destruction through misconceived attempts at reducing agency costs goes unnoticed in conventional microeconomic analysis, and unmeasured in generally accepted accounting practices (“GAAP”). This paper hypothesizes the existence of “epistatic costs” generated by the negative feedback effects from the hidden destruction of intangible assets generated by blind cost-cutting that are perversely regarded as efficiency-enhancing by agency theorists. A further negative feedback effect associated with the destruction of intangible assets is an increase in organizational tension above optimal levels, with the potential to push the firm into the disintegration and dramatic destruction of shareholder value associated with chaos. This can result from an unsustainable focus on short-term revenues, profitability, over-leverage, risky projects, and “theoretically sound” reductions in retained earnings through high dividend payouts aimed at curtailing managerial discretion. This paper posits the existence of an optimal level of organizational tension or slack, which will vary with the importance of intangible assets in the production of a firm’s final output. These effects and relationships are described in Figure 1.

c. Pragmatists and the Rest

For all the claims of objectivity, certainty, and clarity made for shareholder primacy, it is not clear what maximizing shareholder value means or what it prescribes that directors should do.¹³¹ First, what strategies should count as enhancing shareholder value? Stock buybacks, headcount reductions, asset sales, and other strategies unrelated to top line growth may or may not withstand serious scrutiny since it is possible to increase shareholder value without increasing the economic value of the firm by simply taking wealth from other stakeholders. Second, what is the appropriate

¹³¹ Supra, Note 12.
time horizon for profit maximization? Third, a single-minded focus on the stock price can lead to myopic short-termism in managerial decision-making. Fourth, as described earlier, shareholders differ widely in their investment objectives. Finally, maximizing the value of one subset of claims against the firm (those of shareholders) may reduce the sum total of all shareholder and non-shareholder claims against the firm.

“The presence of implicit contracts makes it impossible to identify the entire economic value created by the firm. As a result, stock price changes are not a reliable arbiter of social welfare changes even when financial markets are perfectly efficient...[w]e fail to see why advocating the maximization of the entire economic value is labeled merely a value judgment, while advocating the maximization of shareholder wealth is rarely labeled so.”\textsuperscript{132}

d. Jurisprudential Arguments: A Closer Analysis of Case Law and Statute

Upon more careful reading – and re-reading – of leading historical as well as more recent case law and statutory authorities, arguments in favor of shareholder primacy become more difficult to sustain. As argued more fully below, neither historical nor modern corporate law adheres as closely to the norm of shareholder primacy as its proponents argue. In fact, the most of the case law – including the very authorities cited by shareholder primacists – can be interpreted as providing considerable discretion and deference to the good faith business judgment of directors in making decisions that would appear to sacrifice shareholder interests, particularly when viewed through the patently unrealistic lens of the ALI Principles.\textsuperscript{133} Beyond the common law, U.S., U.K and Canadian legislatures have given broad statutory authority for managers to consider the interests of non-shareholder constituencies or otherwise make decisions inconsistent with shareholder primacy norms to protect other stakeholders. To the contention that shareholder primacy is the law, a less polite author might echo Mr. Bumble’s response in Oliver Twist\textsuperscript{134} to the contention that the law supposed his wife was under his direction.

i. Hutton\textsuperscript{135}

Interpreted literally, Hutton can only be cited as definitive support for the non-controversial proposition that a lunatic may not pay away corporate funds “in a manner perfectly bona fide yet perfectly irrational.”\textsuperscript{136} All Hutton states is that bona fides alone may not justify good faith actions taken in the best interests of the corporation unless they are

\textsuperscript{132} Mahoney and Mahoney (1993) quoted in supra, note 122.
\textsuperscript{133} Supra, note 34.
\textsuperscript{134} Dickens, Charles. Oliver Twist, New York: Dodd, Mead & , 1941.
\textsuperscript{135} Supra note 7.
\textsuperscript{136} Ibid. as quoted without citations in supra note 8 at pp. 271.
“reasonably incidental to the carrying on of the business of the company.” This is hardly an argument for shareholder primacy, since it is easy to imagine many circumstances in which actions that may appear detrimental to the interests of shareholders can easily satisfy Hutton test of “reasonably incidental to, and within the reasonable scope of carrying on, the business of the company,” many of which are expressly contemplated and approved in Bowen LJ’s decision, which arguably provides stronger support for stakeholder theory – and this paper’s thesis – than shareholder primacy. Despite (or perhaps due to) Bowen LJ’s lack of formal training in economics, the learned judge seems to possess a considerably more sophisticated and nuanced view of “agency costs” than Jensen, Meckling, and other agency theorists. To wit:

“It seems to me you cannot say the company has only got the power to spend the money which it is bound to pay according to law, otherwise the wheels of business would stop...Most businesses require liberal dealings. The test there again is not whether it is bona fide, but whether, as well as being done bona fide, it is done within the ordinary scope of the company’s business and whether it is reasonably incidental to the carrying on of the company’s business for the company’s benefit. Take this sort of instance. A railway company, or the directors of the company, might send down all the porters at a railway station to have tea in the country at the expense of the company. Why should they not? It is for the directors to judge, provided it is a matter which is reasonably incidental to the carrying on of the business of the company, and a company which always treated its employees with Draconian severity, and never allowed them a single inch more than the strict letter of the bond, would soon find itself deserted...Hampson v. Price’s Candle Co. ... held that the company might lawfully expend a week’s wages as gratuities for their servants; because that sort of liberal dealing with servants eases the friction between masters and servants, and is in the end, a benefit to the company.”

Beyond the fact that the content of the decision itself would seem to undermine shareholder primacy, it should be ignored for another reason: it does not deal with a going concern. The case concerned gratuitous payments in the narrow context of a winding up, where discussions of the company’s longer term best interest are entirely moot; it can be distinguished and safely ignored on this ground alone.

Significantly, the decision seems to foreshadow the ease with the business judgment rule has been used in subsequent case law to give directors’ virtually unfettered discretion to favour any particular constituency if it is even remotely linked to the goal of profit

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137 Ibid.
138 Ibid.
139 Ibid. at 271-272.
maximization over any time frame, including the BCE decision itself. As will become apparent in various cases reviewed in this section, judicial deference will be generally be given to any argument consistent with this goal under the business judgment rule. As quoted by Lupa, Professor Iacobucci has noted that: “[b]usiness judgment deference gives corporate decision-makers wide discretion to make decisions that may in fact advance the advance the interests of one group of stakeholders over another regardless of the precise formulation of the fiduciary duty.”

ii. Dodge

Though widely regarded as the most explicit judicial endorsement of shareholder primacy in any jurisdiction, there is less to Dodge than meets the eye. Viewed in its proper context, the decision stands for little more than the rather obvious proposition that a business corporation is not a charitable organization. The context of the case is important: Henry Ford didn’t lift a finger to rebut the Dodge Brothers contention that he planned to continue the corporation “as a semi-eleemosynary institution and not a business institution.” Instead of stating his case in the context of the corporation’s best interests, which clearly include a loyal and dedicated workforce, perhaps out of ego, Ford said that his ambition was “to employ more men to spread the benefits of this industrial system to the greatest possible number, to help them build up their lives and their homes. To do this, we are putting the greatest share of our profits back in the business.”

Ford’s counsel cited various cases to support the position that:

“Although a manufacturing corporation cannot engage in humanitarian works as its principal business, the fact that it is organized for profit does not prevent the existence of implied powers to carry on with humanitarian motives such charitable works as are incidental to the main business of the corporation...”

140 The only exceptions existing under Delaware law in the limited number takeover contexts capable of implicating the Revlon duties and enhanced judicial scrutiny of the Unocal test, both analyzed herein. Infra notes 39 and 44.
142 Supra note 10 at p. 265.
143 Ibid.
144 Ibid.
As even Macey notes, had Ford simply testified to this effect during the trial, the Michigan Supreme Court would have decided in his favour.\textsuperscript{145} Instead, by taking the extreme position that he had no need to justify these acts since they were within the lawful powers of a board of directors, Ford gave an otherwise forgiving legal system no choice but to deny his claim. It is for this reason that the case is regarded as an outlier, and rightly so. The decision in no way diminished the board’s wide discretion to look beyond the immediate interests of its stockholders in furtherance of the best interests of the corporation. For example, the Court denied key claims made the Dodge Brothers on the grounds of shareholder primacy: (i) the Court refused enjoin the construction of Ford Motor Company’s new smelting and manufacturing facilities; and (ii) the Court allowed Ford to reduce the price of new vehicles from $440 to $360, even though this would immediately depress the value of Ford shares and returns to its shareholders. Furthermore, by explicitly recognizing “that plans must often be made for a long future, for expanded competition, for a continuing as well as immediately profitable venture”\textsuperscript{146} the Court left intact the Board’s broad discretion to immunize almost any scheme from further judicial scrutiny by complying with the mere legal formality of stating that it is in furtherance of the best interests of the corporation.

At this point, it might be asked how shareholders in corporations that are not being managed as “semi-eleemosynary” institutions by hubristic controlling shareholders – i.e. average shareholders – benefit from the Dodge decision? If Dodge’s supposed endorsement of shareholder primacy boils down to no more than procedurally requiring a ritualistic and rote incantation by the board that a particular corporate action, in this case non-payment of the special dividends, is in furtherance of the long-term prosperity and profitability of the company, what substantive work is the rule of shareholder primacy actually doing to protect shareholders?

iii. Parke

\textit{Parke} dealt with voluntary payments to former employees in connection with the cessation or sale of a company prior to its winding up out of profits or surplus otherwise available for dividend. Read carefully, the language of the decision only bars such payments in the absence of “\textit{any} consequential benefit”\textsuperscript{147} (emphasis added) to the company. The plaintiff was a shareholder of Daily News Ltd., which was the parent of the divested subsidiaries. It is worth noting that payments were not denied by virtue of any absolute or \textit{a priori} claims attached to shareholder primacy. The decisive factor in the

\textsuperscript{145} \textit{Supra}, note 34, p.182.
\textsuperscript{146} \textit{Supra} note 9 at 684
\textsuperscript{147} \textit{Supra} note 8 at 274.
decision appears was that the payments were “actuated by motives of generosity towards employees, by philanthropy…[by] the desire to treat the employees generously, beyond all entitlement.” On its face, *Parke* stands for shareholder primacy, but like *Dodge* its significance is diluted by the relatively egregious nature of charitable acts that are required to offend shareholder primacy – in this case the distribution of the entire net proceeds of the sale of two subsidiaries to employees to the complete exclusion of shareholders. Arguably, the decision does little actual “work” for shareholders in the greyer zone of most circumstances that involve conflicts between corporate stakeholders.

*Parke* was subsequently reversed by statute. Interestingly, Section 719(2) of the U.K. *Companies Act 1985* expressly permits such payments even when they are not in the best interests of the company. Since fiduciary duties are owed to the company, any claim for shareholder primacy depends on identifying the interests of the company with the interests of shareholders. Accordingly, this statutory revision is nothing less than disastrous for shareholder primacy in the context of “end game” payments to former employees – it doesn’t have a leg to stand on. The reversal would appear to both ratify and codify the insignificance of shareholder primacy as a rule hinted at in earlier decisions.

The statutory reversal may also suggest that *Parke* was incorrectly decided. Indeed, Plowman J’s dismissal of the Daily News board’s determination – “however laudable, and however enlightened from the point of view of industrial relations” – that the payments were in the best interests of the company as mere ex post facto justification is difficult to reconcile with well-settled judicial deference in matters of business judgment: the fair treatment of former employees of the divested subsidiaries could easily serve the best interests of the corporation by increasing the loyalty and commitment of employees in the much larger and continuing Daily News parent organization. Significantly for the legal analysis at the conclusion of this section, the court seems to have improperly engaged in the substantive review of a business decision, thereby undermining explicit or implicit undertakings between the company and its former employees.

iv. *Shlensky v. Wrigley*150 (“*Shlensky*”)

In *Shlensky*, the plaintiff sued the directors of the Chicago Cubs for refusing to install lights for night games, which he argued diminished attendance and the value of the company. The plaintiff further argued that the board acquiesced to the whim of its 80 percent controlling shareholder, Philip C. Wrigley, who believed “that baseball [was] a

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149 *Supra* note 8 at 276.
150 *Shlensky v. Wrigley*, 237 N.E. 2d 776
‘daytime sport’ and the installation of lights and night baseball games would have deteriorating effect on the surrounding neighbourhood.”  

The plaintiff’s claim was rejected in the Delaware Court’s ruling that directors were not obliged to pursue short-term profits, even though these might increase shareholder value by boosting the stock price. Instead, directors had broad discretion to base corporate decisions on their assessment of the long-term interests of the corporation and its shareholders. The Court was unwilling to substitute its own judgment for that of the board that deterioration of the neighbourhood would reduce long-term profits to the detriment of shareholder value over the long-term, stating that:

“[W]e do not mean to say that we have decided that the decision of the directors was a correct one. That is beyond our judgment and ability. We are merely saying that the decision is one properly before the board…whose motives showed no fraud, illegality or conflict of interest in their making of that decision…”

_Shlensky_ is difficult to reconcile with any norm other than director primacy. The case also serves as further illustration that a board’s determination that any particular decision is in the best interests of the corporation, even if only nominally framed in the argot of long-term shareholder value, can be immunized by mechanical compliance with the _de minimis_ requirements of relatively few legal formalities, even if the effect is to depress shareholder returns. Almost “anything goes” under the application of these principles. Accordingly, _Shlensky_ raises the same question as the preceding cases reviewed in this paper: what actual “work” does mere lip service to the norm of shareholder primacy do for shareholders? More fundamentally, what concrete benefits do shareholders derive with any certainty from the fiduciary duty of directors being owed to the best interests of the corporation? In response to both questions, the analysis and conclusions at the end of this section will argue: none.

v. U.S. Takeover Cases:

a. _Unocal v. Mesa Petroleum_¹⁵³ ("_Unocal"")

_Superficially, Unocal_ appears to support the norm of shareholder primacy by making it more difficult for directors to oppose a hostile takeover bid. On a deeper level, however, _Unocal_ explicitly endorses an “entity” conception of the corporation – echoed in _BCE_ – that

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¹⁵¹ Ibid. at p. 778.
¹⁵² Ibid. at p. 780.
¹⁵³ _Unocal v. Mesa Petroleum Corp._ 493 A. 2d 946 (Del. 1985)
is antithetical to the “property” conception upon which ownership arguments for shareholder primacy are fundamentally based.

The facts of the case involved the Unocal board’s opposition to a hostile takeover bid by Mesa for the company that it believed to be detrimental to the best interests of Unocal. The key issue before the Court was whether the inherent conflict of interest of directors in the change of control context – which could result in their termination – prevented the board from engaging in defensive tactics to thwart the bid. In view of the “omnipresent specter that a board might be acting in its own interests, rather then those of the corporation and its shareholders,” the Delaware Court imposed a higher level of scrutiny than the business judgment standard to evaluate directorial conduct. Specifically, the Court held that in such circumstances, directors must demonstrate that their actions were precipitated by their belief that a threat to the corporation as an entity existed and that the defensive tactics undertaken were reasonable in relation to the perceived threat. In discharging this obligation, directors were expressly required to consider the impact of a takeover bid on the corporate enterprise, which included considering the impact on “creditors, customers, employees, and perhaps even the community generally.”

b. Revlon

The can be no doubt that Revlon distanced itself from the communitarian perspective hinted at in Unocal, and even further curtailed the post-Unocal discretion of directors to oppose hostile bids by imposing the so-called “Revlon duty” to maximize shareholder value by holding an auction once the sale of a company is “inevitable.” However, it is noteworthy that this duty is only triggered in a very narrow range of “end game” scenarios. As Rotman argues, this “shift” in directors’ duties from the best interests of the corporation to maximizing shareholder value is inconsistent with shareholder primacy since “absent such extraordinary circumstances, it suggests directors would not be obliged to maximize shareholder value.”

c. Paramount Communications v. Time (“Time”)

154 Supra note 38 at 954.
155 Ibid.
156 Ibid. at 955-956.
157 Ibid. at 955.
158 Supra note 14.
159 Supra note 14 at 173.
161 Paramount Communications Inc. v. Time Inc. 571 A. 2d 1140 (Del. Sup. Ct. 1990)
The Delaware Supreme Court’s subsequent decision in *Time*: (i) blunted the effectiveness of *Revlon* as a weapon for advocates of shareholder primacy; (ii) provided further endorsement for the social entity conception of the corporation; and (iii) allowed directors to consider impact of their decisions on corporate culture – a vital category of the valuable intangible corporate assets which a central focus of this paper – in their evaluation of the best interests of the corporation.\(^{162}\)

The facts of *Time* involved a hostile bid by Paramount Communications (“Paramount”) for Time, Inc. (“Time”) after Time had already approved a merger with Warner Communications Inc. (“Warner”). Even though Paramount’s bid offered higher price to shareholders than the Warner transaction, the Delaware Supreme Court held that Time’s board was not required to put the unsolicited offer to a shareholder vote. The Court’s holding powerfully endorsed director primacy, upholding the principle that boards are charged with the power to determine long-term corporate strategy, regardless of the fact that might be likely to accept another alternative. The responsibility for such decisions is vested in the board and shareholders are free to elect another board if they disagree with its decisions. In rejecting Paramount’s contention that Time’s board acted unreasonably by preventing shareholders from accepting the tender offer, the Court stated:

“[T]he contention stems, we believe, from a fundamental misunderstanding of where the power of corporate governance lies. Delaware law confers the management of the corporate enterprise to the stockholders’ duly elected board representatives. The fiduciary duty to manage a corporate enterprise includes the selection of a time frame for the achievement of corporate goals. That duty may not be delegated to stockholders. Directors are not obliged to abandon a deliberately conceived corporate plan for short-term shareholder profit unless there is clearly no basis to sustain the corporate strategy.”\(^{163}\)

Furthermore, *Time* clarified the limited “end game” circumstances in which the *Revlon* duty to seek the best value reasonably available to shareholders to when: (i) “a corporation initiates an active bidding process to sell itself or the effect a business reorganization involving a clear break up of the company;”\(^{164}\) and (ii) “in response to a bidder’s offer, a

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\(^{162}\) In should be noted that *Paramount Communications Inc. v. QVC Network Inc.* 637 A. 2d 34 (Del. 1993) (“QVC”), affirmed and clarified the import of *Time. QVC* specified in greater detail the circumstances giving rise to the duty to seek the best value reasonably available to shareholders, and the content of *Unocal*’s enhanced judicial scrutiny test in the change of control context. In essence, the QVC Court held that: (i) a break up of the corporate entity was not essential to give rise to *Revlon* duties where there is a sale of control; and (ii) in a merger of equals context with no new *ex post* control block, there was no change in control that would trigger *Revlon* duties or enhanced scrutiny.

\(^{163}\) Supra note 40 at 1154.

\(^{164}\) *Ibid.* at 1140.
target abandons its long-term strategy and seeks an alternative strategy involving a break up of the company.”\textsuperscript{165}

In addition, the Court seemed to accept the objective reality of the interests of Time itself as an \textit{entity}. The Court accepted as entirely legitimate the “[g]reat importance attached by the board to the distinct ‘Time culture’ (emphasis added) of journalistic integrity that had slowly built up over time.”\textsuperscript{166} The interdisciplinary case for the critical importance of corporate culture as an intangible asset – judicially supported in \textit{Time} – to the sustained prosperity and viability of the corporate enterprise is made at length in this paper, and rests on a similar “entity” conception of the corporation. Elsewhere, Professor Iacobucci makes the logically coherent case that “to speak of the legal fiction that is a corporation as having a ‘best interests’ is nonsensical [since a] legal fiction does not have welfare gains or losses that we care about.”\textsuperscript{167} Nevertheless, the decisions in \textit{Time} and \textit{Unocal} appear to be inconsistent with this scholarly view.

d. \textit{Unitrin v. American General Corp.}\textsuperscript{168} (“\textit{Unitrin”}"

In \textit{Unitrin}, the Delaware Supreme Court later affirmed core elements of \textit{Time} which supported director primacy and undermine shareholder primacy. In \textit{Unitrin}, the Court upheld the appropriateness of defensive tactics as a proportionate and legitimate response to the possibility that shareholders might accept an offer below the board’s good faith assessment of long-term value. The \textit{Unitrin} Court specifically cited \textit{Time} as authority for two key propositions as bases for its decision: (i) that “the risk that shareholders might mistakenly accept an underpriced offer because they disbelieve management’ s representations of intrinsic value” amounted to “substantive coercion;”\textsuperscript{169} and (ii) that the “inadequate value” of an offer is “a legally cognizable threat.”\textsuperscript{170}

e. \textit{Air Products and Chemicals v. Airgas}\textsuperscript{171} (“\textit{Air Products”}"

Shareholder primacists can take no comfort from the Delaware Court’s recent re-affirmation of its holding in \textit{Time} and subsequent line of “just say no” jurisprudence in the \textit{Air Products} case. In \textit{Air Products}, target Airgas was able to reject a hostile bid from

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{165} Ibid. at 1154.
\item \textsuperscript{166} Ibid. at 1148.
\item \textsuperscript{168} \textit{Unitrin v. American General Corp.} 651 A. 2d 1361 (Del. Sup. Ct. 1995)
\item \textsuperscript{169} Supra note 41 at 18.
\item \textsuperscript{170} Ibid.
\item \textsuperscript{171} \textit{Air Products & Chemicals v. Airgas} Civil Action No. 5249-CC (Del. Ch. 2011)
\end{itemize}
\end{footnotesize}
acquiror Air Products without soliciting alternative suitors or conducting an auction by relying the defensive measures of a staggered board, poison pill, and just saying no. The Court’s decision reconfirmed that under current Delaware law, “the power to defeat an inadequate hostile tender ultimately rests with the board of directors.”172 Furthermore, Air Products stated that precedent barred the Court from substituting its own business judgment for the board’s and reconfirmed its earlier rulings that a board can’t be forced to abandon its long-term corporate strategy by a hostile tender offer.173

vi. Canadian Takeover Cases:


   *Teck* involved the attempted takeover of Afton Mines, company founded by Millar, by Teck. Through open market purchases, Teck acquired a controlling position in Afton but had not yet elected any directors to the Afton board. Teck offered to buy the remaining shares at a premium to the price being offered by Canex for 30 percent of Afton in a negotiated transaction with the Millar group, which believed a deal with Canex – a more seasoned and respected industry player – was in the best interests of Afton, despite the higher price offered by Teck. Teck sought a shareholders meeting to block the deal with Canex. Without holding a shareholders meeting Afton signed the deal with Canex, after which Teck filed suit.

   Teck’s suit relied on a holding in the earlier English case of *Hogg v. Cramphorn*175 (“Hogg”) that directors had violated their fiduciary duties by issuing shares to thwart a hostile takeover they considered disadvantageous to the company. The British Columbia Supreme Court declined to follow *Hogg* and expressly upheld directorial discretion to consider the interests of non-shareholder constituencies in corporate decisions, Berger J stating:

   “A classical theory that once was unchallengeable must yield to the facts of modern life. In fact, of course, it has. If today the directors of a company were to consider the interests of its employees no one would argue that in so doing they were not acting *bona fide* in the best interests of the company itself. Similarly, if the directors were to consider the consequences to the community of any policy that the company intended to pursue, and were deflected in their commitment to

172 Supra note 42 at 5.
173 Ibid.
174 *Teck Corp. Ltd. v. Millar* (1973) 33 D.L.R. (3d) 288
that policy as a result, it could not be said they had not considered *bona fide* the interests of the shareholders.

I appreciate that it would be a breach of their duty for directors to disregard entirely the interests of a company’s shareholders in order to confer a benefit on its employees: [Parke]. But if they observe a decent respect for other interests lying beyond those of the company’s shareholders in the strict sense, that will not, in my view, leave directors open to the charge that they have failed in their fiduciary duty to the company.”

Although the preceding quotation has been dismissed as *obiter dicta* by shareholder primacists, it marked *Teck* as a watershed decision. *Teck* tipped the direction the future direction of Canadian jurisprudence away from the “property” conception of the corporation and its attendant norm of shareholder primacy and toward an “entity” conception of the firm and broader stakeholder-oriented norms of fiduciary duty.

**b. CW Shareholdings Inc. v. WIC Western International Communications Ltd.**

In *Canwest*, the Ontario Court of Appeal appeared to endorse a *Revlon*-type duty consistent with shareholder primacy by holding that in a takeover context, directors had a duty “to act in the best interests of shareholders as whole and to take active steps to maximize shareholder value by conducting and auction.” However, the decision contained an important qualification which ultimately neutralized its future significance: “retaining independent legal and financial advisors, and the establishment of independent or special directors are *also* (emphasis added) possible responses to potential conflicts of interest.” In other words, the central issue for the Court wasn’t maximizing shareholder value but preventing conflicts of interest in directorial decision-making in the change of control context. In this view, shareholder value is a mere byproduct rather than fundamental objective of an auction process.

**c. Pente Investment Management Ltd. v. Schneider Corp.**

(“Pente”)

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176 Supra note 59 quoted in supra note 8 at 469.
178 Supra note 61 at 769.
179 Ibid.
Pente explicitly states that “Revlon is not the law in Ontario,”\textsuperscript{181} and rejects Unocal’s enhanced judicial scrutiny test: “[t]he real question is whether the directors of the target company took steps to avoid a conflict of interest. If so, the rationale for shifting the burden of proof to the directors may not exist.”\textsuperscript{182} Furthermore, Pente makes clear that conflicts of interest in director decisions can be accomplished in a variety ways that don’t necessarily require an auction or attach any particular priority to maximizing shareholder value:

“In Ontario, an auction need not be held every time there is a change in control of a company. An auction is merely one way to prevent the conflicts of interest that may arise when there is a change of control by requiring that directors act in a neutral manner toward a number of bidders.”\textsuperscript{183}

“It must be recognized that the directors are not the agents of the shareholders. The directors have absolute power to manage the affairs of even if their decisions contravene the express wishes of the majority shareholder: [Teck].”\textsuperscript{184}

“If a board of directors has acted on the advice of a committee composed of persons having no conflicts of interest, and that committee has acted independently, in good faith, and made an informed recommendation as to the best available transaction for the shareholders in the circumstances, the business judgment rule applies.”\textsuperscript{185}

d. Peoples Department Stores Inc. (Trustee) v. Wise

Relying on Berger J’s judgment in Teck,\textsuperscript{186} the Supreme Court of Canada’s decision in Peoples\textsuperscript{187} stands for two key propositions: (i) directors fiduciary duties are owed to corporation as a whole; and (ii) the best interests of the corporation do not simply coincide with the best interests of its shareholders. Although a lengthy and complex decision, the key rules contained in Peoples can be discerned in few quotes:

“At all times, directors and officers owe their fiduciary obligation to the corporation…[t] interests of the corporation are not to be confused with the interests of creditors or those of any other stakeholders.”\textsuperscript{188}

\textsuperscript{181} Supra note 60 quoted in note 8 at 505.
\textsuperscript{182} Ibid. at 501.
\textsuperscript{183} Ibid. at 505.
\textsuperscript{184} Ibid. at 499.
\textsuperscript{185} Ibid. at 501.
\textsuperscript{186} Supra note 63.
\textsuperscript{187} Supra note 2.
\textsuperscript{188} Supra note 2 at 482-483.
“[I]t is clear that the phrase ‘best interests of the corporation’ should be read not simply as ‘the best interests of the shareholders.’ From an economic perspective, the ‘best interests of the corporation means the maximization of the value of the corporation. However, the courts have long recognized that various other factors may be relevant in determining what directors should consider in soundly managing with a view to the best interests of the corporation…We accept as an accurate statement of law that in determining whether they are acting with a view to the best interests of the corporation it may be legitimate, given all the circumstances of a given case, for the board of directors to consider, inter alia, the interests of shareholders, employees, suppliers, creditors, consumers, governments and the environment.”\textsuperscript{189}

As such, 	extit{Peoples} seems entirely consistent with the broad discretion granted to directorial decision-making and judicial deference in matters of business judgment running through the long and entire line of U.K., U.S. and Canadian case law reviewed in this section of this paper. Although later distancing itself from this position in 	extit{Revlon}, it remains noteworthy that even the Delaware Court in 	extit{Unocal} accepted the legal proposition that directors could consider a broad range of stakeholders in evaluating the best interests of the corporation, including “creditors, customers, employees, and perhaps even the community generally.”\textsuperscript{190} Accordingly, the controversy generated by 	extit{Peoples} and magnified by its subsequent affirmation in its progeny, 	extit{BCE}, is puzzling and invites further analysis this section’s conclusion.

vii. Statutory Authorities and Trends

It should not be forgotten that the business corporation is, and has always been, a creature of the state. Accordingly, it should hardly shock the conscience that limited liability and unlimited life may come with a few legislative strings attached. Examining the legislative history of the Canada Business Corporation Act ("CBCA"),\textsuperscript{191} and more recent legislative trends in the U.K. and U.S., legislative opinion in common law jurisdictions would appear to run against a rule of shareholder primacy.

\textit{a. Dickerson Committee Report}

\begin{flushleft}
\textsuperscript{189} Supra note 2 at 481.
\textsuperscript{190} Supra note 43.
\textsuperscript{191} \textit{Canada Business Corporations Act}, R.S.C. 1985, c. C-4. [CBCA]
\end{flushleft}
The legislative intent of the express language of s.122(a) the CBCA,\(^{192}\) which sets forth the obligation for directors and officers “to act in the best interests of the corporation” is deliberately ambiguous and purposefully flexible. The section’s wording was adopted on the recommendations of the Dickerson Committee Report (1971).\(^{193}\) As noted by Waitzer and Jaswal, the Dickerson Committee (“Committee”):

“specifically declined to offer guidance as to how the words ‘in the best interests of the corporation’ should be interpreted. Instead, the Committee left this task to the courts, expressing the view that its formulation would allow the courts to escape from the constraints of the ‘anachronistic’ view...[of] the English courts...[that] viewed the best interests of the company as that of its shareholders (emphasis added).”\(^{194}\)

b. U.K. Companies Act 2006. s. 172

Section 172 of the U.K. Companies Act 2006 both entitles and obliges directors to regard non-shareholder interests in corporate decisions. The language of the Act so diametrically opposed to shareholder primacy, that it is worth quoting in its entirety:

“s. 172 Duty to promote the success of the company

(1) A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole, and in doing so have regard (amongst other matters) to—
(a) the likely consequences of any decision in the long term,
(b) the interests of the company’s employees,
(c) the need to foster the company’s business relationships with suppliers, customers and others,
(d) the impact of the company’s operations on the community and the environment,
(e) the desirability of the company maintaining a reputation for high standards of business conduct, and
(f) the need to act fairly as between members of the company.
(2) Where or to the extent that the purposes of the company consist of or include purposes other than the benefit of its members, subsection (1) has effect as if the

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\(^{192}\) Supra note 76 s. 122(1)(a) [CBCA].


\(^{194}\) Ibid.
reference to promoting the success of the company for the benefit of its members were to achieving those purposes.

(3) The duty imposed by this section has effect subject to any enactment or rule of law requiring directors, in certain circumstances, to consider or act in the interests of creditors of the company.”

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\(c.\) U.S. Constituency Statutes

According to Keay\[196\], 40 American states have now enacted constituency statutes that allow directors of public corporations to consider a broad set of non-shareholder interests in corporate decisions. As Keay notes, “[these] statutes have been introduced so as to ensure that the harshest application of the shareholder value principle does not prevail.”\[197\] In general terms, constituency statutes either require or permit directors to consider the interests of many corporate non-shareholder constituencies, employees, suppliers, customers, creditors and communities. Delaware remains the most popular and influential jurisdiction of incorporation for U.S. corporations. However, the widespread adoption and apparent popularity of constituency statutes is hard to reconcile with shareholder primacy.

\(\text{viii. Analysis and Conclusions: “The Best Interests of the Corporation” – a Legal “Peppercorn”?} \)

It is argued that the common law and statutory authorities reviewed in this paper are entirely consistent with Peoples and BCE. Given the longstanding malleability, unpredictability, and limited accountability for corporate decision-making under the aegis of the business judgment rule, the sheer vehemence with which practitioners and academics have criticized the supposed “uncertainty” created by BCE is a mystery. As already hinted at in this paper’s review of the case law, if judicial deference in matters of business judgment substantively undermines the protection provided by the fiduciary obligation of directors to act in the best interests of the corporation, what is the purpose of such a rule? What work does it actually do and what is its real importance? The putative norm of shareholder primacy is a mere parasite on the concept of the best interests of the corporation, which this paper argues serves an altogether different purpose that does not involve the protection of any particular stakeholder interests.

\[195\] Companies Act 2006, c.46, Part 10, Ch. 2, s.172


\[197\] Ibid. at p. 9.
This paper argues that the larger body of case law concerning fiduciary duty reflects an implicit understanding that the requirement to act in the best interests of the corporation—duly *incanted*, executed, and memorialized in accordance with the proper *rituals* prescribed by corporate law relating to such matters as quorum, resolution, and voting—is of no greater or lesser significance than the mere “peppercorn” of consideration required to making a contract legally binding. Both are purely matters of form intended to signify acts that shall be given *legal* respect, no different than the formalities required for marriage. Judicial deference to the business judgments that underlie corporate decisions is directly analogous to the unwillingness of courts to inquire into the adequacy of consideration as a substantive test for the legal formation of a contract. This paper argues that the purpose of the best interests “peppercorn” isn’t to protect any particular stakeholder group—including shareholders—but to prevent second-guessing by the courts of corporate decisions that comply with certain formalities. It is for this reason that *Parke* was bad law and properly reversed by statute. Substantive inquiry into the best interests of the corporation both misconstrues and undermines the actual purpose of the rule, *which is to provide greater certainty in the company’s implicit and explicit contracting with its entire universe of internal and external stakeholders*. The value of compliance with the merely declaratory formalities that a decision is being made in accordance with the best interests requirement is to provide an unambiguous and objective test for validity and enforceability; the actual merits of the decision should be irrelevant. As becomes apparent in any careful review of the case law, since almost anything can satisfy the best interests requirement, there must be a deeper rationale for a requirement that would otherwise do no *work* and border on nonsensical.

If the best interests requirement is a mere legal peppercorn, and isn’t designed to serve any particular constituency but has a different rationale altogether, it is respectfully submitted that arguments for shareholder primacy are opportunistic, self-serving, and have no conceptual legs to stand on. As explored more fully in this paper’s final conclusions, the vehemence of the attacks directed at the *BCE* decision may have less to do with law and commercial practice, than the apprehension of *BCE* as an evolutionary “tipping point” or “critical juncture” posing a clear and present danger to the long-term credibility and viability of shareholder primacy as narrative, ideology, and belief system. For Canadian shareholder primacists, *BCE* has become their Battle of Waterloo.

Shareholder primacy is the fashion of the day, but this paper has described its flaws. Given strong institutional, social, and political pressures on directors to adhere to shareholder primacy, directors may be deterred from applying the rule in cases where it is necessary to rebalance interest in for reasons of adaptive change. For this reason, the rule may not—as a practical matter—provide the necessary “slack” and operating flexibility that firms require to evolve and thrive in the current era of rapid change and complexity.
In this regard, BCE may represent a salutary intervention of the courts as a necessary counterweight to the pervasive and pernicious influence of shareholder value “theory.”

VI. Towards an Integrated Perspective on the Modern Firm and Corporate Governance: An Interdisciplinary Synthesis

a. The Problem of Epistatic Costs

The concept of epistasis was first developed in Kauffman’s NK model of complex systems as a model of biological evolution, but it can be applied to complex systems in general.\footnote{Kauffman, S. The Origins of Order: Self-Organization and Selection in Evolution. Oxford University Press, 1993.}\footnote{Frenken, Koen. Modelling the Organisation of Innovative Activity Using the NK-Model. Paper prepared for the Nelson-And-Winter Conference, Aalborg, 12-16 June, 2001.} Considering the firm as a complex system, the basic flaw in the static equilibrium analysis deployed by economists is that optimization analysis is made impossible by the effects of non-linear dependencies between individual choice variables.

“[D]ependencies between a system’s elements imply that the performance of elements can only be fully understood when one analyzes the system as a whole. To find the working of elements at the system level poses a ‘problem of complexity.’ The number of possible combinations between different variations of elements is an exponential function of the number of elements. Therefore, the difficulty of finding a good design is of a higher magnitude than finding a good design element. The combinatorial complexity of systems stems from the dependencies between its constituting elements. The dependence between elements in a system is called ‘epistatic relations.’ An epistatic relation from one element to another element implies that when an element mutates, the mutation affects both the functioning of the one element itself and the functioning of the elements that it epistatically affects. Epistatic relations imply mutations in one element can affect the functioning of many other elements.”\footnote{Kauffman, S. The Origins of Order: Self-Organization and Selection in Evolution. Oxford University Press, 1993.}

When one considers the number of elements – internal and external – that can affect a firm’s profits, the goal of profit maximization is chimerical: it cannot be rationally implemented or operationalized, nor is it justiciable. Put another way, evolution is smarter than we can ever be. By the same token, the epistatic costs arising from blind cost-cutting aimed at reducing agency costs or other equally misguided managerial strategies aimed at short-term improvements in profits can be more pernicious than we can imagine. Epistatic costs reflect the destruction of
intangible assets, especially trust. “Without loyalty to any goals or a stake in organizational outcomes (e.g. the desire for promotion or secure employment)...cooperation is made more difficult [and] there is also a threat of unproductive competition and key people leaving projects in the lurch in search of better opportunities.”

b. A Brief Note on the Psychosocial Aspects of Employment Contracts

Shleifer and Summers have drawn attention to the importance of the implicit terms of employment contracts. They argue that many takeovers are simply designed to expropriate employee wealth by breaching the implicit terms of employment contracts. Agency theory defends such breaches and “restructuring” under the convenient rationale of “maximizing shareholder value” and invokes the contractarian argument that employees must accept the benefit of their bargain. However, the contractarian analysis of the contracting process – upon which agency theory and shareholder primacy rely – is based on an arid and formalistic perspective that pays no economic attention to the implicit terms of contracts. The economic significance of implicit contracts must be included in any critical assessment of shareholder primacy advanced to justify their breach.

The implicit terms reflect both the employer’s and employee’s unarticulated and mutually unknown expectations. As noted by Rousseau, an employee’s expectations with respect to such implicit terms are informed by: (i) his or her personal psychological beliefs about promises, made, accepted and relied on; (ii) the normative contract shared with other employees and derived from firm-specific corporate culture (e.g. lifetime employment at IBM); and (iii) broader, more universalistic societal norms and expectations respect to trust, reciprocity, and other obligations.

At the beginning of the employment relationship, the employee has no idea whether his or her expectations are congruent with those of the employer. Accordingly, acceptance of the contract is a both an act of faith and ongoing interpretation by the employee. Since most people realize up front that there may be some zone of disagreement over implicit contractual terms, employee’s expectations must leave room for accommodation within a preconceived “zone of acceptance” around the expected bundle of explicit and implicit terms – the employee does expects some but not all of his implicit terms to be honored. However, changes in contractual terms are by definition a zero sum game. Therefore, any adverse changes in the expected bundle of explicit or implicit terms are perceived as losses.

200 Supra, note 130.
201 Supra, note 124.
203 Supra, note 202 at p. 149 citing Herbert Simon for this insight.
Employee loss mitigation strategies are reductions in voluntary efforts (including employee investments in organizational capital), “working to rule,” or exit, all of which destroy organizational capital and thereby adversely effect firm performance.

Rousseau’s review of the literature suggests that most companies that have gone through “downsizing” – usually after debt-financed mergers – do not cut costs significantly once higher levels of overtime expense are considered. Furthermore, less than one third of such companies report experienced expected gains in profits or stock price. Finally, downsizing “survivors are typically less loyal and less willing to provide service to customers and support for fellow employees.”204 These findings provide support for the theoretical and empirical arguments presented in this paper that breaches of implicit terms – such as trust, “fair dealing,” reciprocity, and others – destroy intangible assets, with negative repercussions for firm performance.

The intuition behind these arguments and this paper’s empirical is graphically described in attitude change model in Diagram 1* below based on the 2-variable cusp catastrophe models described in the first section of this paper. The model assumes that an employee has a bi-modal distribution of attitudes regarding whether or not he or she is receiving “fair” treatment by his employer, where “unfairness” is the bifurcation control and an unspecified proxy variable for adaptive tension T (later tested as annual sales per employee in this paper’s empirical model).

204 Supra, note 202 at p. 212.
The point \( K^* \) represents the employee’s *ab initio* expected psychological contract, conceived as a bundle of explicit and implicit terms, with associated levels of require effort \( E_2 \), which builds in the employee’s guess as to what additional effort not explicitly contracted for (e.g. working late, overtime, travel, sales quotas, number of articles to publish, billable hours, etc.). This bundle of expected but tolerable unfairness (\( U_2 \)) and effort (\( E_2 \)) and corresponds to an expected level of effort-inducing tension greater than \( T_1 \), representing the minimum level of tension required to motivate effort greater than the contractually mandated “work to rule” baseline of \( E_1 \) – which may be unobservable and go unrewarded. This level of tension can be increased to produce a relatively smooth and continuous increase in effort until \( T^* \), which triggers a phase transition from in perceived fairness from “fair dealing” to “unfair dealing” by breaching the bifurcation
threshold value of U3. After crossing the bifurcation threshold, the individual’s response will undergo a catastrophe collapse (dampened somewhat by the hysteresis-induced “status quo”-type effect) and reduce effort to the work to rule baseline. If T exceeds T2, the employee will exit the firm, with possibly negative nonlinear impacts on the firm. This conceptual model predicts an inverted U-shaped curve and forms a conceptually integral part of this paper’s empirical model.

The explanatory power of these paired asymmetry and bifurcation variables – an increasing level of tension and zone of acceptance psychologically perceived as fair – are explored further in this paper’s empirical, with methodology and rationale elaborated in greater detail below relating tension to complexity through the mechanisms of voluntary investments and disinvestments or destruction of tangible assets, i.e. developing internal and external relationships that may be valuable for the firm, exchanging information, cooperating and supporting other employee. Such investments are always costly to employees since they divert attention from observable, measurable, and contractually mandatory actions. In this context, cooperation and mutual support that does not directly benefit the employee – and could place him or her at some risk – is an altruistic act that cannot be explained in terms of rational maximization. Instead, it points to the power of corporate culture as a source of work motivation and psychic reward that act as non-coercive, self-motivated sources of adaptive tension through mechanisms of social pressures and payoffs. This simple chart provides an interesting suggestion: it may be in a firm’s economic best interests to expand the zone of acceptance by investing in corporate culture, even though such investments may not satisfy a shareholder primacy test. Thanks to the BCE decision, this author can only hope that managers will use the full powers under business judgment rule to undertake make such decisions, and ignore the currently taken for granted consensus surrounding shareholder value theory.

c. A Theory of Optimal Organizational Tension or “Slack”: A Proposed Model

Figure 1 describes a basic summary of the insights and arguments developed in this paper – and detailed at significant length in the first section of this paper’s overview of complexity theory -- generates the hypotheses empirically tested herein. The solid line in the first diagram represents agency costs. As agency costs are putatively reduced through such mechanisms as payout ratios, cost-cutting, and leverage, organizational tension (T) increases. What go unrecognized in conventional analyses are the epistatic costs associated with the destruction of intangible assets that accompany reductions in agency costs. EC(II) represents the low epistatic
costs associated with low complexity industry I(l) that relies on tangible assets to produce low value-added commodities in processes that are minimally dependent on intangible asset inputs. Such industries can support higher levels of organizational tension (analogous to being able to run an engine at higher RPMs). In systems theory, the larger the variety of challenges or perturbations in its surrounding environment to which a system must respond, the larger the number of potential actions the system needs to be able to take in order to compensate. In other words, the internal complexity of system should match the complexity of its environment. This is known as the law of requisite variety or complexity. Accordingly, greater internal complexity -- higher levels of intangible assets -- are required in high complexity industry I(h). Therefore, a higher level of epistatic costs EC(Ih) is associated with this industry since more intangible assets are placed at risk by higher levels of organization tension.

The second diagram in Figure 1 attempts to combine this paper’s hypotheses concerning epistatic costs with the very useful insights of McKelvey and Beinhocker in an integrated conceptual framework to analyze impacts on firm value. Taking mid-complexity industry I(m) as the sample, tension should be greater than T1 to move beyond stasis (e.g. to stimulate innovation) but remain below T2 to avoid disintegrating into chaos.

As described in diagram 3 of Figure 1, complexity theory suggests system fitness F – and therefore firm value – should be optimized at the peak of the solid-shaded triangle in the third diagram, which represents the conceptual peak of Schumpeterian “creative destruction” within a zone at “the edge of chaos” at a point characterized by equal contributions to organizational change from slow, incremental, evolutionary change on the left (represented by the vertical stripes) and rapid, radical change, on the right (represented by the horizontal stripes).
Figure 2 summarizes many of the different theoretical perspectives drawn upon in this paper within a single integrated framework describing the choice of governance and control mechanisms. Ouchi suggested that “performance ambiguity” controls the choice of governance
mechanisms between markets, bureaucracies and clans. This paper suggests that performance ambiguity is contingent upon the nature of production: it varies directly with the importance of intangible assets as production inputs, which are posited herein as the underlying variable driving the cost and efficient choice of governance mechanism.

Moving from right to left across the X-axis, production inputs are increasingly intangible and production outputs are decreasingly commoditized (increasingly complex). The cost curves C1, C2, and C3 represent the costs associated with each of three types of governance mechanisms: (i) market; (ii) command and control; and (iii) participatory/cooperative. C1 represents the expected costs of cheating which rise with increasing asymmetries of information associated with market exchange. C2 represents the higher costs associated with more “hands on” supervision, investments in organizational capital, “in-house” cheating (now in the form of agency costs) and – ultimately – the very same bounded rationality of command and control that resulted in de facto and de jure demise of communist systems around the world. The crossover point between C1 and C2 represents the point at which it becomes more cost effective to switch from market-based to command and control governance mechanisms. The intuition underlying the switch is that as goods become less commoditized, “if you need something done right, you need to do it yourself.” However, at a certain point (where C2 crosses C3) command and control becomes ineffective as a governance mechanism because managers no longer know what the workers are doing nor able provide them with any useful direction. Expansion of the firm’s product capabilities beyond the crossover of C2 and C3 requires extensive investment in organizational capital (better accounted for as capital expenditures than costs) and requires a fundamental change in corporate culture and higher cost, autonomous, self-directed and self-directed workers. Knowledge workers – like artistes – must be coddled and therefore come at a price. The curve C3 represents the higher direct and indirect costs associated with the higher organizational slack (lower organizational tension) and investment in organizational capital, trust, and other intangible assets necessary foster self-directed work – conceptualized here as the highest cost production technique. Because intangible assets are less important in the production of commodity goods, smaller negative feedback effects of lower organizational slack (higher organizational tension) in the form of tighter management cost controls or Taylorian management are associated with less complex products. The opposite is true when production relies heavily on intangible assets. Optimal leverage should vary inversely with intangible assets for the same reason: the higher fixed charge coverage and volatility associated with higher leverage places intangible assets at risk. Since investments in intangible assets by workers increase with the complexity of output, the non-monetizable nature of such investments demand a larger equity base.

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205 Supra, note 26.
Figure 2: Relationship Between Different Governance Models

As a whole, Figure 1 suggests that up to a certain point a firm’s financial and operating performance value should increase with organizational tension T up to an inflection point of peak fitness, after which such indicia of fitness should decline. In accordance with this analytical framework, diagram 4 of Figure 1 conceptually summarizes the exploratory analyses undertaken herein of relationships between organizational tension T and firm profitability, firm value, and firm growth, respectively.

In summary, the following choice variables for the X-axis are hypothesized to increase organizational tension (candidate proxies for T):

\[
X_1 = T = \text{Arc Elasticity of Employee Headcount to Revenues Fiscal Year ("FY") 2005 – Present}
\]
X2 = T' = Latest 12 Months ("L12M") Sales Per Employee

With initially positive and subsequently negative impacts on firm profitability modeled as:

Y1 = Earnings Before Interest Taxes Depreciation and Amortization as a Percentage of L12M Sales ("EBITDA Margin")

Y2 = Operating Income as a Percentage of L12M Sales ("Operating Margin")

Y3 = L12M EBITDA Per Employee

Y4 = L12 M Free Cash Flow Per Employee

And, initially positive and subsequently negative impacts on firm value modeled as:

Y5 = Equity Market Capitalization Per Employee

And, initially positive and subsequently negative impacts on firm growth modeled as:

Y6 = Trailing 5 Year Average Annual Sales Growth

d. Methodology

This paper’s study analyzed a sample of 23 publicly-traded management consulting and professional services companies with annual revenues greater than $100 million and less $1 billion annually (see Appendix A). These companies were chosen because they have intangible asset-intensive production processes; they do not produce any physical product; they have minimal physical and financial assets; and key their assets walk in and out of the office each day. These firms and relied exclusively on high-value-added “knowledge workers” for their outputs, who must collaborate, cooperate and have a reasonable expectation of return on their firm-specific investments in organizational capital. It was hypothesized that such that the long-term prosperity and profitability of such companies would depend on the intangible asset and social capital investments of their employees to a far greater extent than companies involved in the production of physical products. Smaller companies were excluded for reasons of limited market liquidity, and larger more well-known companies that could leverage other intangible assets such as well-established brand names and larger bases of legacy clientele, i.e. “franchises,” were excluded on the assumption of having more fungible pools of employees. In essence, the financial and operating performance of sample companies
should be more sensitive to the willingness of employees to make implicit contracts and trust-based asset-specific investments in such firms. All financial and operating statistics were sourced from Bloomberg L.P. The dataset was “scrubbed” to remove as outliers all data points greater than two standard deviations from the sample mean for any measure.

The first proxy for organizational tension \( X_1 = T \) tested in this study was the arc elasticity of employee headcount to changes in revenue. This statistic was created to mirror the well-known concept of elasticity of demand in microeconomics, based on the following intuition: the more sensitive a firm’s employee headcount is to changes in revenues – i.e. the more “trigger happy” management is to hiring and firing in response to the external vicissitudes of demand for its services – the greater the organizational tension. By the logic of Figure 1, increasing this tension up to a critical threshold will improve performance, but beyond an inflection point it becomes too high, and employees will have less incentive to engage in the types of behaviors and activities that will result in longer term payoffs. For example, if the cycle for winning a new client or creating a new line of business is two years in length, but the firing schedule is every 12 months, business development, client service and revenues should all suffer. Ideally, these cycles should be “in synch,” with a safety cushion of “slack” in the employee’s favor. As discussed earlier in this paper, since knowledge workers engaged in the creation of long-term value often don’t know what relevant problems or questions they will encounter in any particular project undertaken for their employers, it is crucial that reasonable flexibility is afforded in the time span of discretion the are given to address them. *Ceteris paribus,* as revenue elasticity of headcount increases (values of \( T > 1 \)) so does the risk of pushing the firm into chaos with destructive effects on corporate performance. [As a technical note, instead of using the percentage change in headcount for a given percentage change in revenues, this study used another measure that was more accurate for measuring the average elasticity along the arc of a demand curve (in this case over 5 years) rather than elasticity relative to the points at both ends of the curve of known as arc elasticity, and defined (substituting sales and employee headcount as proxies for price \( P \) and quantity \( Q \) respectively) as: \( \frac{(P_1 + P_2)}{(Q_1 + Q_2)} \times \frac{\Delta Q}{\Delta P} \).]

A second proxy for organizational tension \( X_2 = T' \) is sales per employee. Regarded by many financial analysts of human capital-intensive firms as a measure of management effectiveness (marking a “lean, mean, low agency cost machine”). To a certain extent this is true, but the same logic of complexity theory just described above for \( T \) argues that beyond an optimal level, organizational tension leads to behaviors marking the onset of chaos and destruction of shareholder value; \( T' \) transmogrifies into the ulcer-inducing and back-
stabbing sales quotas which are the subject matter of David Mamet’s classic dark comedy, *Glengarry Glenn Ross*.\(^{206}\)

Because the sample firms in this study have negligible physical or financial assets, conventional measures of profitability – such as return on equity (“ROE”) or return on assets – are inappropriate. Accordingly, this study looked at pre-tax measures of returns such as EBITDA and Operating Income as a percentage of sales and per employee less susceptible to firm-specific tax, accounting and reporting decisions than net income. Free cash flow was also examined as a superior after-tax measure of true economic returns than net income.

The logic underlying the choice of equity market capitalization per employee and five year trailing average annual sales growth as dependent variables of organizational tension is straightforward.

e. Preliminary Empirical Findings

This study’s preliminary findings are based on separate univariate polynomial regressions for X1 and X2 respectively.

1. Influence of X1 = Organizational Tension T = Revenue Elasticity of Employee Headcount on Firm Growth

This measure of only becomes apparent over longer periods of time, it should have a greater impact over longer term measures of corporate performance. As illustrated in Figure 3, this appears to be true: trailing 5 year average annual sales growth is an increasing and subsequently decreasing non-linear function of T:

2. Influence of X2 = Organizational Tension T’ = L12M Sales Per Employee on Firm Profitability

Since X2 = T’ (revenues per employee) is a more immediately visible measure of organizational tension than T – indeed workers in many professional service occupations such as law firms are required to track their “billable hours” in increments as small as 10 minutes \(^{207}\) – the influence of organizational tension T’ should manifest itself in shorter term measures of corporate performance. As illustrated in Figures 4, 5, and 6, this would appear to be the case with regard to a firm’s L12M Operating Margin, EBITDA per employee, and Free Cash Flow per employee, respectively:

\[
y = -25.381x^2 + 41.055x - 2.8539 \\
R^2 = 0.3877
\]
Figure 4: L12M Operating Margin vs. Organizational Tension $T'$

Current Operating Margin vs. Organizational Tension ($T'$)

\[ y = -3E^{-15}x^3 + 2E^{-09}x^2 - 0.0004x + 34.964 \]

\[ R^2 = 0.2771 \]

Data Source: Bloomberg LP
Figure 5: L12M EBITDA Per Employee vs. Organizational Tension $T'$$

![Graph showing the relationship between L12M EBITDA Per Employee and Organizational Tension $T'$ with the equation $y = -8E \times 12x^3 + 6E \times 06x^2 + 1.1076x + 75019$, and $R^2 = 0.5212$. The data source is Bloomberg LP.](image-url)
Figure 6: Free Cash Flow Per Employee vs. Organizational T’

Free Cash Flow Per Employee vs. Organizational Tension T’

3. Influence of X2 = Organizational Tension T’ = L12M Sales Per Employee on Firm Value

Since financial markets also focus on shorter-term measures of corporate performance, in addition to the fact that sales per employee is a measure commonly (if misguidedly) deployed by equity analysts assess corporate performance, T’ should and in fact does influence in the manner consistent with the hypotheses developed in this paper:
The results are highly preliminary, only descriptive, and require much further statistical testing and analysis—this study is a work in progress. Conventional techniques of linear multiple regression are not suitable for the relationships under examination. More definitive results involving nonlinear multivariate regressions against X1 and X2 simultaneously will be undertaken with the existing sample of 23 companies, in addition to possible analyses involving other proxies for organizational tension T, and data from other industries. As hypothesized in this paper, indicia of firm fitness will be more sensitive to T in proportion to the importance of intangible assets in their production process, which require a larger equity base.

Even with the preceding caveats, these tentative findings are intriguing and beg further analysis. First, they appear more consistent with the hypotheses presented in this paper—which predict a non-linear relationship with an inflection point—than mainstream agency theory, which would predict a monotonically increasing linear relationship between the variables under examination. Furthermore, these companies were found to have little or...
no debt, which is also consistent with this paper’s hypothesis that leverage should vary inversely with the importance of intangible assets in a firm’s production process. Subject to further validation, this paper’s results would seem to: (i) respond to Sundaram and Inkpen’s challenge set forth in the introduction of the paper: to offer “a robust alternative theory that is compatible with the naturally occurring incentives, impulses, and imperatives of market- and property-rights based economies in democratic-capitalist societies…and can be empirically supported” (Sundaram and Inkpen 2004(b); and (ii) provide a policy rationale for the much criticized ambiguity in Supreme Court of Canada’s BCE decision.
VII. Conclusion: Shareholder Primacy is A Theory at War With Itself

a. Shareholder Primacy is Theory at War with Itself

This paper provides new theoretical and possible empirical support for the earlier claims of team production theory that a rule of shareholder primacy can inefficiently discourage non-shareholder stakeholders in the firm from making the type of firm-specific investments in organizational capital described at length in this paper that rational investors would actually want to encourage ex ante. The intellectual foundations of shareholder primacy rest heavily on agency theory. However, agency theory relies on conceptual gaps in GAAP that misclassify such investments as costs and conventions of financial reporting that account for the destruction of assets which do not appear on the balance sheet as reduction of costs which have been improperly recorded on the income statement, and thereby an increase in reported profits. This is a sham that ultimately works against the very goal of profit maximization that shareholder primacy purports to advance.

The theoretical and empirical underpinnings of agency core assumptions of managerial shirking are remarkably shallow. As noted by Sen, in quoting Johansen:

“Economic theory…tends to suggest that people are honest only the extent that they have economic incentives for being so…[this assumption] is far from being obviously true and…needs confrontation with observed realities…[n]o society would be viable without some norms and rules of conduct. Such norms and rules are necessary for viability exactly in fields where strictly economic incentives are absent and cannot be created.”208

Sen’s further comments are consistent with the central ideas developed at length in this paper, and constitute a devastating critique of agency theory’s core assumptions:

“It is certainly costly and may be impossible to devise a system of supervision with rewards and punishments such that everyone has the incentive to exert himself. Every economic system has, therefore, tended to rely on the existence of attitudes towards work which supersedes the calculation of net gain from each unit of exertion…These questions are connected, of course, with ethics, since moral reasoning influences one’s actions, but in a broader sense, these are matters of culture (emphasis added), of which morality is one part…The purely

(emphasis in original) economic man is indeed close to being a social moron. Economic theory has been much preoccupied with this rational fool…”

b. Implications for the Harmonization of Canadian Securities Regulation and Corporate Law in the Takeover Context

In essence, National Policy 62-202 – Takeover Bids – Defensive Tactics\(^\text{210}\) -- which emphasizes shareholder primacy in the change of control context -- contradicts and overrides Canadian mainstream common law and statutory authority on the fiduciary duty of directors to act in the best interests of their good faith assessment of best interests of the corporation. Even this paper’s “peppercorn” theory of best interests aims to preserve the independence of directorial conduct and shield it from second guessing by both courts and administrative tribunals. It is hopefully apparent from the legal, theoretical, and empirical arguments developed at length in this paper that blind adherence to shareholder primacy can actually destroy shareholder value. As analyzed herein, even the Delaware courts have very narrowly circumscribed the cases in which “the pill must go” to extreme “end game” situations that involve abandoning the company’s long-term corporate strategies. Recent decisions taken by the O.S.C. in *Baffinland*\(^{211}\) and British Columbia Securities Commission in *Lions Gate*\(^{212}\) to defer to the short-term wishes of possibly uninformed seem simplistic and may be contrary to maximizing long term value for shareholders, who are free to elect new boards if they are unhappy with their decisions. The best way to reduce the confusion caused by the conflicting principles of Canadian corporate law and securities regulation would be for Canadian securities regulators to simply vacate the field. However, if securities regulators’ public policy jurisdiction prevents them from adopting such a salutary course of action, they should at least adopt a more nuanced and flexible position that recognizes the wisdom of Canadian corporate law in focusing on removing directorial conflicts of interest instead of maximizing shareholder value as primary policy objective in the takeover context discussed earlier in this paper, which objective could be achieved through other means than an auction and preserve both directorial independence and shareholder interests in maximizing long-term value.

c. The Golden Rule for Corporate Governance: There is No Golden Rule

Despite its possibly epigrammatic qualities, the title of this final section of the paper owes less to Oscar Wilde than to Ronald Dworkin. The law cannot be reduced to a set of rules, but must also include principles. Rules are all or nothing in their application, while

\(^{209}\) *Sen* supra note 87 at pp. 333-336.
\(^{211}\) *In Re Baffinland Iron Mines Corp.* (2010), 33. O.S.C. Bull. 11385
\(^{212}\) *Icahn Partners LP v. Lions Gate Entertainment Corp.* (2010), BCSECCOM 233.
principles have an element of weight that varies with context. This paper argues that maximizing shareholder value is a useful principle, but that shareholder primacists are wrong to insist on treating it as a rule, both as a matter of law and policy.

This paper provides a rationale for the Supreme Court of Canada’s purposeful ambiguity with respect the assessment of directors duties and accountability that is well-grounded in complexity theory and, it is argued a more nuanced and realistic entity-based conception of the firm than advanced by shareholder primacists. Furthermore, it is more consistent with traditional approaches to legal reasoning, which is infused with principles that operate as strange attractors to counterbalance to possibly constricting effects of rules, which operate as point attractors. As noted by Waitzer and Jaswal in quoting Cass Sunstein, “…judges (by choice or default) often eschew clarity and favor ambiguity in the law to achieve desired outcomes.”

Also:

“…it is obvious to any serious observer that corporate managers are highly attentive to the interests of various constituencies beyond those of current shareholders and are constantly weighing competing interests. In this context, recognizing the limitations of legal norms, corporate law has been structured to provide ‘managerial discretion to respond to social and moral sanctions.’ This approach has become particularly relevant in world characterized by connectedness and complexity (emphasis added).”

“…Until recently, such notions rarely caused legal confusion. Indeed, ambiguity in statutory data allowed for constructive tension (emphasis added) and responsiveness in judicial interpretation in egregious cases…In practice, the day to day conduct of effective managers reflects and implicit view of corporate obligations to a variety of stakeholders as being more immediate, if not more important, to the enterprise than its obligations to shareholders…The difficulty has arisen in the face of systemic behavior that challenges the incumbency of management and rewards the immediate realization of shareholder value, often to the detriment of other constituents. As is generally the case, market forces (including the short-term focus of incentive structures, the opportunity for deception arising from financial innovation, the limited attention span of politicians, and the overwhelming urge to manage public expectations) trumped legal theory.”

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215 Supra note 80 at 440.
216 Supra note 80 at 469-70.
The preceding quote is not only consonant with the views and evidence presented in this paper, but reveals the political and ideological struggle – which goes beyond legal theory and reasoning – underlying the BCE debate. If winners write history, they also write the law, and the stakes in this contest are very high. For over thirty years, agency theory and shareholder primacy have asserted the end of history with little intellectual pushback. At least in Canada, but quite possibly in other common law jurisdictions, this paper’s review of both common law and statutory development suggests that we are at a critical evolutionary juncture in corporate law. The plain language of BCE adopts many of the teachings of team production theory, and other stakeholder-oriented theories of fiduciary duty. As Dobbin and Jung point out, corporations, executive compensation schemes, investment banks, private equity firms, institutional investors and growing financialization of the economy, have conformed to, reflect, are driven by, and have large vested interests in the continued application of shareholder value theory.\textsuperscript{217} This why, as noted earlier in this paper, BCE has become the Battle of Waterloo for Canadian shareholder primacists.

Learned commentators, Waitzer and Jaswal seem to realize that we are at just such a critical juncture, pitting market forces against – at least as argued – the central principles of the law of corporate fiduciary duty; they lament that “[a] such a juncture, a legal construct which professes to balance multiple interests breaks down insofar as it provides neither coherence, consistency, nor organizational focus.”\textsuperscript{218} Based on the legal, economic, and organizational theories reviewed in this paper, and its preliminary empirical findings, this author would agree: BCE posits the worst possible rule for corporate governance, except for all the others.


\textsuperscript{218} Supra note 80 at 470.
### VIII. Appendix A: Selected Comparable Small Cap Management Consulting and Professional Services Companies

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<th>Name</th>
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<th>Market Cap @ 5/7/12 ($)</th>
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