

CORPORATE CYBORG

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I. The new corporation.

II. The developing corporate cyborg metaphor.

III. Protecting the developing corporate cyborg from itself: Crafting stronger fiduciary duties and waste doctrine.

IV. Conclusion

Walking down the street in 2009, we are surrounded by information technology. Fifteen years ago, few of us could have imagined the extent of this social transformation. Smartphones are pressed to the ears of many pedestrians, and laptops are hidden inside briefcases and bookbags. Our lives have been dramatically changed by this technology revolution. So too have the lives of corporations.

Existing paradigms in corporate law do not adequately consider the dramatic organizational impact of technology on corporate operations and on corporate law. This article proposes a new legal metaphor that better conceptualizes today’s information technology-dependent corporation: today’s corporation is a cyborg in process of its development. Part machine and part human in nature, it is both an internal producer of and a product of its sometimes imperfect information flows. Externally, by contrast, it strives to appear increasingly human to build trust and identity in the minds of shareholders and consumers.

This article argues that the new cyborg corporation dictates refocusing corporate law around an evolutionary paradigm and on better protecting corporations against mismanagement by officers and directors. The current focus of corporate law on minimal default rules and extraordinary transactions is not suited to guiding management of entities with extensive information assets. Section I discusses the need for legal scholars to examine the new assets, worker and management reality, and risks and failures of today’s technology-dependant corporation. Section II introduces the new metaphor of the developing corporate cyborg, an entity that is part machine and part human. Applying theoretical perspectives from developmental psychology and political science instead of the traditional corporate law approach of economic theory, Section II presents the corporation as an inherently evolutionary entity that is shaped by multiple layers of developmental context. This section also compares the developing corporate cyborg metaphor to dominant corporate

law metaphors, particularly the idea of the corporation as a nexus of contracts. Section III identifies the deficiencies in corporate law that the developing corporate cyborg paradigm highlights: weak fiduciary duties that inadequately address omissions and failures, and a weak doctrine of corporate waste. Section IV concludes.

I. The new corporation

Corporate law scholars have long considered the role of information transfers and information control in business relationships and corporate governance.¹ What has not been adequately explored in corporate law scholarship is the legal impact of the explosion of information assets and systems on corporate governance.

a. New assets with problematic social implications

Information is the new corporate currency.² Corporate assets have progressively shifted toward intangibles over tangibles.³ Since Time Magazine named “The Computer” as its person of the year in 1983,⁴ corporations’ reliance on information systems has increased dramatically, alongside the capabilities of those systems.

Information technology in corporate environments was comparatively limited before the 1980’s. Models produced by companies such as the Dek⁵ and Honeywell⁶ gained popularity, but their costs and maintenance made them relatively inaccessible to a portion of the business audience. The rise of widespread business use of computers partially mirrored the widespread adoption of personal computing. In 1983, there were only about 2 million personal computers in the United States.⁷ By 1990, 10,500 large general-purpose and scientific computer systems had been installed in the United States, over 146,000 medium systems, nearly 2,800,000 small systems and

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¹ For example, Ayres and Gertner (1989) have argued persuasively that many default rules for contractual relations serve as information-forcing “penalty defaults....”

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[http://www.pwc.com/extweb/insights.nsf/docid/0E50FD887E3DC70F852574DB005DE509/\\$File/Safeguarding_the_new_currency.pdf](http://www.pwc.com/extweb/insights.nsf/docid/0E50FD887E3DC70F852574DB005DE509/$File/Safeguarding_the_new_currency.pdf)

³and accounting practices have struggled to keep up.

http://www.nytimes.com/2007/09/09/business/09frame.html?_r=1&oref=slogin When Balance Sheets Collide With the New Economy DENISE CARUSO

Published: September 9, 2007

⁴ <http://www.time.com/time/covers/0,16641,19830103,00.html>

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⁷ [Collier's Encyclopedia. Vol. 7, 1992: 114, 129.] replace

approximately 54 million personal computers were installed.⁸ By 2008, PC shipments reached 80.6 million for the third quarter alone,⁹ and nearly every business had implemented a computer system to handle many operations.¹⁰

This integration of information technology into corporate operations during the last two decades has encouraged companies to centralize sensitive corporate information.¹¹ Trade secret information,¹² financial information,¹³ business partner and customer information all became centralized in companies' internal computer systems. Further, as the internet became a regular part of consumer economic behaviors, a new economic environment emerged. The defining characteristic of this new commercial environment has been widespread corporate collection, aggregation, and leveraging of personally identifiable consumer data.¹⁴ Corporate entities began to see commercial opportunities in the wealth of readily-available personally identifiable consumer data. Companies began to place a premium on consumer information databases and to change the way consumer data was valued in corporate acquisitions.¹⁵ They also began to data horde; they started to collect as much information as possible about their customers in order to target products more effectively and to generate secondary streams of revenue through licensing their databases of consumer information.¹⁶ To complicate matters, aggregated consumer information exists in an uncertain legal context: it is simultaneously a corporate asset and still connected to a consumer.¹⁷ As state level data breach notification statutes demonstrate,¹⁸ regardless of whether one believes a

⁸ International Data Corporation, as reported in "Computers". "Computers". Collier's Encyclopedia. Vol. 7, 1992: 114, 129.

⁹ http://www.channelregister.co.uk/2008/07/18/q2_pc_market/ ;
<http://www.gartner.com/it/page.jsp?id=777613>

¹⁰ The Americans. 2003: 1969.

¹¹ For example, most law firms use document management systems to centralize work product. For a discussion of document management software, (Kennedy and Gelagin 2003) This use of information technology serves to facilitate knowledge management, the sharing of institutional intellectual resources such as form contracts, and control over access to certain information.

¹² For a discussion of the risks that trade secret information faces from technology, see, e.g.,

¹³ The Gramm-Leach-Bliley specifically considers the implications of financial information being stored in corporate databases. See, e.g., ...

¹⁴ Consumers increasingly venture online to engage in information-sensitive activities, such as checking bank balances or transmitting credit card information in connection with purchases,(Fox 2000). Many consumers now view the purchasing of goods through the internet as a routine part of life. (More Businesses Are Buying Over the Internet 2004) In the course of this routine, they leave a trail of information behind them. For a discussion of the consequences of technological adoption and the values embodied therein, see, for example, (Rogers n.d.) (discussing the consequences of innovations, examining the value implications of different innovations, and arguing that technologies need to be critically evaluated from utilitarian and moral perspectives before being adopted).

¹⁵ (Winn and Wrathall 2000).

¹⁶ H.R. Rep. No. 106-74, pt. 3, at 106-07 (1999). As a result of the explosion of information available via electronic services such as the Internet, as well as the expansion of financial institutions through affiliations and other means as they seek to provide more and better products to consumers, the privacy of data about personal financial information has become an increasingly significant concern of consumers.

¹⁷ For a discussion of competing paradigms in conceptualizing consumer information see, e.g.,

¹⁸ State level data breach notification statutes require a holder of personally identifiable consumer information who suffers a breach to notify the consumers whose information was impacted. For a discussion of state level data breach statutes, see, e.g.,

consumer property interest exists in collected data,¹⁹ corporate possession of consumer information does not sever its relationship to the individual.

Progressively, these new databases of both corporate proprietary information and personally identifiable consumer information became networked with each other and the outside world.²⁰ This external accessibility fueled the development of a different workplace structure for many workers.

b. New worker reality and management through technology

In their 1998 article, Professors Lemley and McGowan, hint at a key characteristic of today's corporate form that is a negative externality of employees' increasing reliance on technology – path dependency driven by a company's technology systems.²¹ This path dependency and reliance on computer systems has continued and escalated since 1998. As explained succinctly in a recent Wired News blog post, "...the recent recession of western economy has given birth to a whole breed of calculating managers eagerly engaging in a tacit conspiracy with pigheaded IS missionaries. Management control is their belief, outsourcing of IT their sedative, standardization via megalomaniac ERP implementations their preferred tool and continuous improvement their wildest dream. In these organizations, IT has become an instrument of control instead of a permanent motor of innovation."²²

Corporate reliance on technology has become a double-edged sword for employees.²³ Familiarity with computers is now considered by most people to

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²⁰ (Barabasi 2002).

²¹ "...On the cost side, the absence of efficient data reproduction and storage technology such as copiers or computers may simply have prompted ...a sort of technology-driven path dependence..." Mark A. Lemley [FN1] David McGowan, Legal Implications of Network Economic Effects, ___ California L. Rev. ___ (1998)

²² http://blog.wired.com/sterling/2007/04/acm_ubiquity_da.html

²³ Both industry pundits and the U.S. Department of Commerce assert that, in fact, the "new economy" is not a myth and that a fundamental change driven by information technology has occurred in companies. Lee Price & George McKittrick, *The New Economy Endures Despite Reduced IT Investment*, in DIGITAL ECON. 2002 (U.S. Department of Commerce 2002), <http://www.esa.doc.gov/DigitalEconomy2002.cfm> At least one report from the Department of Commerce from December 2002 corroborates this statement: it states that, despite the heavy recession in the information technology industry, information technology producing industries still contributed disproportionately to the U.S. economy and continued to grow at double digit rates. David Henry & Donald Dalton, *Information Technology Industries in the New Economy*, in DIGITAL ECON. 2002 (U.S. Department of Commerce 2002), <http://www.esa.doc.gov/DigitalEconomy2002.cfm> . The information technology industry is credited with twenty-nine percent of the U.S. economy's real growth, and twenty-six percent of such growth in 2000.¹⁰⁸ Despite the information technology job cuts in 2001, technology related jobs nevertheless accounted for approximately eight percent of all jobs nationwide and as much as thirty-two percent of all jobs in some areas of the country.¹⁰⁹ Information technology investment in 2002 exceeded levels prior to 2000, and businesses increased employment in information technology services in order to capitalize on investments in information technology made in 2001. During 2001, as employment dropped by 1.4 % in the total private sector, employment gained 0.5 % in telecom services and 1.4 % in computer

be an essential element of economic success in the future economy.²⁴ Workers in the United States hold generally positive views about the role of information technology in their workplace, with studies finding that 80% of workers sampled believing that information technology has improved their capacity to do their job.²⁵ Similarly, 73% of workers say these technologies have improved their information and idea sharing with coworkers²⁶ and 58% assert they have more flexibility in work hours due to technology.²⁷ By contrast, however, some workers feel constricted by work-connected technology during non-work hours; 22% of respondents stated they are expected to read and respond to work-related emails, even when they away from work. Among respondents who owned a Blackberry and PDA, 48% say they are required to read and respond to email when away from work.²⁸ When these “always-on” work hours are coupled with the expectation that, according to some estimates, nearly 75% of the US workforce will be mobile by 2011,²⁹ the human capital of the corporation is becoming progressively more disconnected from the company’s physical offices. The cement holding a company together is its information technology system.

Simultaneously with the dynamics described above, corporations are becoming interested in generating institutional knowledge that is separated from the humans who work in the company. This disembodiment of information from the employees and its re-embodiment within the corporation happens primarily

software and services. See Lee Price & George McKittrick, *The New Economy Endures Despite Reduced IT Investment*, in DIGITAL ECON. 2002 (U.S. Dept. of Comm. 2002), at <http://www.esa.doc.gov/DigitalEconomy2002.cfm> U.S. businesses are expanding the importance and role of information technology in their operations. Id. Similarly, seven of the ten fastest growing occupations are projected to be in the information technology industry. Sandra B. Cooke, *Jobs in the New Economy*, in DIGITAL ECON. 2002 (U.S. Department of Commerce 2002), <http://www.esa.doc.gov/DigitalEconomy2002.cfm>. Meanwhile, Silicon Valley has begun to recover from the technology bust of 2000-2001. Jim Hopkins, *Hints of Recovery in Silicon Valley*, USA TODAY, Dec. 10, 2002, http://www.usatoday.com/tech/news/2002-12-10-valley_x.htm. Studies indicate, however, that increasing numbers of workers are not able to acquire access to the technological resources needed to ensure productivity in a progressively digitized world economy. The impact of information and communications technologies on jobs is not yet known and no outcome is inevitable. Technology-driven changes in organizational structures, employment relations, worker autonomy, and work organization will not automatically result in higher job quality. Jill Rubery & Damian Grimshaw, *ICT's and Employment: The Problem of Job Quality*, 140 INT'L LAB. REV. 2 (2001). In 2000, 800,000 technology jobs went unfilled because of a dearth of qualified workers, resulting in an opportunity cost, by some estimates, of \$4 billion per year. Although numbers from 2000 may reflect inflated employment resulting from the technology “bubble,” the shortage of skilled technology workers is expected once again to become a problem as the information technology industry continues to grow. See Microsoft Corporation, *Valuing Diversity* (Nov. 15, 2000), <http://www.microsoft.com/issues.essays/11-15diversity.asp> (last visited Jan. 1, 2004)

²⁴ See e.g. EDUCATIONAL SERVICES & ECONOMIC DEVELOPMENT DIVISION INSTRUCTIONAL RESOURCES AND TECHNOLOGY UNIT, CHANCELLOR’S OFFICE, CALIFORNIA COMMUNITY COLLEGES, TECHNOLOGY II STRATEGIC PLAN, , 2000-2005 (2000). See also, James Surowiecki, *The New Economy Was a Myth, Right? Wrong.*, 10 WIRED 89 (Jul. 2002), at http://www.wired.com/wired/archive/10.07/wired_index.html.

²⁵ http://www.pewinternet.org/pdfs/PIP_Networked_Workers_FINAL.pdf

²⁶ http://www.pewinternet.org/pdfs/PIP_Networked_Workers_FINAL.pdf

²⁷ http://www.pewinternet.org/pdfs/PIP_Networked_Workers_FINAL.pdf

²⁸ http://www.pewinternet.org/pdfs/PIP_Networked_Workers_FINAL.pdf

²⁹ <http://www.idc.com/getdoc.jsp?pid=23571113&containerId=prUS21037208>

through “knowledge management” technologies, such as wikis,³⁰ internal databases, websites and discussion boards. Similarly, corporations are increasing spending on corporate intelligence spending and employee monitoring,³¹ in some instances in a manner that triggers legal repercussions.³² This trend toward disembodiment of information from the employees parallels an increased reliance on outsourcing data processing to cut costs.³³ Although law scholars argue that employers’ and employees’ information sharing incentives are not aligned,³⁴ the contractors who perform outsourced services are operating with even less aligned interests. They are frequently based outside the United States and operate under different legal and ethical business regimes; their incentives and loyalties are different from those of employees within an organization in the U.S..³⁵

The combination of new types of assets and a new worker and management reality have introduced new types of risks and failures into the daily operations of business.

c. New risks and failures

New risks faced by businesses due to technology in their operations primarily relate to information security and management. A portion of these new risks result from to the nature of sensitive digital information itself and risks inherent in the medium of the internet,. However, another portion of these risks is self-inflicted by business. These include choice of technology products and the condition of corporate information security practices generally.

Corporations are struggling to learn how to manage information assets; poor information management is widespread among U.S. corporations³⁶ and approaches a level that even violates fiduciary duties.³⁷ Omissions in

³⁰ wiki

³¹ <http://www.gartner.com/it/page.jsp?id=636310>

³² HP spying cites

³³ For a discussion of outsourcing, see, e.g.,

³⁴ Kobayashi and Ribstein argue “Employees and employers have competing interests in disclosing and preventing disclosure of information. For example, firms may want to share information with their employees about customers, trade practices and technology that helps the employees do their jobs. This raises the concern that employees will reap private advantage by selling or otherwise transferring this information to third parties during or following their employment. This concern could reduce firms’ willingness to share such information with employees, and can suppress incentives to develop information or inventions...At the same time, excessive protection of the employers’ information could reduce employees’ mobility and the flow of valuable information in society. Employers, in turn, need information about employees in order to evaluate them for hiring and to monitor them while they are employed. Employees have an incentive to disclose because employers’ information costs affect the cost of employment and ultimately jobs and compensation. But employees also may have an interest in keeping some information private to protect their personal space or to hide shirking or other bad acts that are detrimental to the firm...” Bruce Kobayashi, Larry Ribstein, PRIVACY AND FIRMS Questions Concerning the Extent to which Privacy should be Governed and what the Rules should Be, ___ Denver U. L. Rev. 526 (2002)

³⁵ Outsourcing problems

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³⁷ Under Caremark/Stone

management of information assets, in particular, threaten the availability, integrity and confidentiality of corporate assets. They also have viral ramifications for constituencies outside the company.

i. The risks of information assets

Many companies at present do not yet recognize that weak information control causes losses: it diminishes the value of corporate assets and usurps resources. Confidentiality, integrity, and availability of corporate assets are all negatively impacted by corporate information vulnerability and information crime. Information assets present unique risks: the impact of information risk is inherently transitive.³⁸ This transitivity means that risk follows the information itself, and the security of the whole system depends on the lowest common denominator – the security of the least secure trusted party. Companies suffer economic harms and reputational damage as a consequence of not only their own suboptimal security practices, but also because of their business partners' inadequate security practices.³⁹ Therefore, a company's information security is only as good as the information security of its least secure business partner.⁴⁰ Stated another way, each time a company shares data, it takes a dependency on another company. Companies are also not immune to costs imposed by criminals abusing consumer information. For example, it is estimated by the Federal Trade Commission that U.S. corporations lost approximately \$48 billion to identity theft alone between September 2002 and September 2003.⁴¹

The internet also exacerbates risk for companies due to the interconnection it creates. Because a company's internet-mediated databases frequently operate in the context of a highly-centralized corporate technology environment, a large "attack surface" for information theft is created. Preexisting centralization of computer systems make attacks on key information targets easier: access into the system at any one of multiple points may provide an attacker an avenue to compromise the target databases. In other words, the ease of sharing databases inadvertently resulted in the ease of attacking them through the internet.

Corporate machines can become compromised and used for sending spam or committing denial of service attacks⁴² on others. Nearly 9 out of 10 email messages delivered to large enterprises in November 2007 were spam,⁴³ and in

³⁸ A security system is only as good as its weakest point. (McGraw and Viega n.d.).

³⁹ For example, companies outsourcing decisions could expose corporate information to unnecessary additional risks. Most zombie machines are now found outside the U.S. In the second quarter of 2008, Turkey became the country with most zombie computers (11% of the global total), followed by Brazil (8.4%) and Russia (7.4%). The United States is now in ninth place with 4.3% of the total. <http://blogs.zdnet.com/ITFacts/?p=14827>

⁴⁰ If a company shares sensitive corporate information with a business partner and that partner experiences a data leakage, the negative effects to the shared data are similar to those that would have occurred if the original company had been breached itself.

⁴¹ . (MailFrontier n.d.); (FTC Releases Survey of Identity Theft in U.S. 27.3 Million Victims in Past 5 Years, Billions in Losses for Businesses and Consumers 2003).

⁴² For a discussion of denial of service attacks see, e.g.,

⁴³ <http://blogs.zdnet.com/ITFacts/?p=13640>

2008, 74% of all email received was spam.⁴⁴ Much of this spam comes from compromised zombie machines, a portion of which are corporate machines.

Similarly, when a business chooses to rely on a particular technology product in their operations, the flaws of that product become an additional risk for the business. For example, business use of Web-based mail is expected to jump to 20% by 2012.⁴⁵ By choosing to rely on web based email, companies further rely on the internet and outside providers for storage as well as conveyance of their information.

Certain corporate assets, such as databases of customer information and preferences, are valuable only because of their confidentiality.⁴⁶ Similarly, corporate proprietary information protected solely by trade secret law could, in effect, lose all its value in an information crime incident because the information's status as a trade secret is entirely contingent upon its confidentiality.⁴⁷ Ignoring or mismanaging information security can quickly become more expensive than investing in it. One data breach could greatly diminish the value of such an intangible asset.⁴⁸ For example, the damage that a corporate insider can generate in one episode of information theft has been, in at least one instance, approximated to be between \$50 million to \$100 million.⁴⁹

The integrity of corporate systems is in jeopardy as a consequence of suboptimal security. By some estimates, corporations sustained more than \$1.5 trillion in losses in 2000 due to security breaches, such as computer viruses.⁵⁰ In 2007, the average cost of a data breach rose to \$6.3 million from \$4.8 million in 2006.⁵¹ Corporate integrity is further affected by a parallel diminution in brand value and corporate goodwill. A company considered to

⁴⁴ <http://blogs.zdnet.com/ITFacts/?p=14827>

⁴⁵ http://www.usatoday.com/tech/products/software/2008-02-12-google-apps_N.htm?csp=15

⁴⁶ For example, Axiom Corporation derives revenue principally from selling aggregated information. If this information is stolen and becomes available cheaply on the information black market, it is highly unlikely that Axiom will be able to maintain the value of this intangible asset at previous levels.

⁴⁷ It can be argued that any data leakage is demonstrative of inadequate measures to keep the information secret, thereby putting it outside the scope of trade secret protection of most states' trade secret statutes. Trade secret statutes vary state by state, but most define a "trade secret" as information that an entity has used due care in protecting from disclosure. If it can be demonstrated that information security practices of an entity were suboptimal during any point in the lifetime of the information, it can frequently be successfully argued that the information in question is no longer a trade secret. (Soma, Black and Smith 1996).

⁴⁸ (Wright n.d.). In the tax context, entities frequently argue that they should be allowed to amortize the value of their customer lists. *Charles Schwab Corp. v. Comm'r*, 2004 U.S. Tax Ct. LEXIS 10 (T.C. Mar. 9, 2004).

⁴⁹ In the biggest incidence of identity theft known to date, a help desk worker at Teledata Communications, Inc., which provides credit reports on consumers to lenders, is estimated to have stolen 30,000 consumers' credit reports which he shared with around 20 compatriots who leveraged the data to cause significant financial damage to the consumers in question. He was paid approximately \$30 per credit report, or a total of \$900,000. (Neumeister 2004); (Reuters 2004).

⁵⁰ At least 81,000 viruses are known to be in existence today, poised to generate even more staggering losses. (Epatko n.d.). For example, the Blaster worm losses alone are approaching \$10 million. (Federal Bureau of Investigation n.d.).

⁵¹ (Claburn 2007).

be vulnerable generally suffers bad press and a corresponding decrease in the value of its investments in brand identity building. A brand can become damaged in the minds of business partners and consumers if it is associated with lax information security.⁵² Finally, some integrity losses are related to opportunity costs. Occasionally, certain types of vulnerabilities, such as name-your-own-price vulnerabilities,⁵³ deprive a company of revenue which it would have otherwise received.

Availability of other corporate assets also becomes limited as a consequence of security issues. An attacker may also usurp availability of a company's technological resources during an attempt to remotely compromise a network. Such resources include, among other things, bandwidth and the work hours allocated to the attack by the people responding to the incident. Incident response employee time does not end when the attack ends; numerous hours are subsequently logged performing forensic examinations, writing incident reports, and fulfilling other recordkeeping obligations. Finally, if a security incident results in a consumer data privacy violation, availability of capital is further diminished because of the subsequent need to cover fines, court costs, attorneys' fees, settlement costs, the bureaucratic costs of setting up compliance mechanisms required by consent decrees, settlement agreements, and court decisions.⁵⁴

ii. Information risk mismanagement and the *Caremark/Stone* standard

Many companies are struggling with implementing information security throughout their organizations. In an annual survey of over 7,000 respondents who comprised CEOs, CFOs, CIOs, CSOs, vice presidents and directors of IT and information security from 119 countries, at least three of ten respondents could not answer basic questions about the information security practices of their organizations. For example, 35% did not know the number of security incidents in the last year; 44% did not know what types of security incidents presented the greatest threats to the company's most sensitive information, assets and operations; 42% could not identify the source of security incidents - whether the attack was most likely to have originated from employees (either current or former), customers, partners or suppliers, hackers or others.⁵⁵ Rampant data breaches of millions of records in 2008 further demonstrate a lack of corporate priority on safe information handling.⁵⁶

H.L.A. Hart might term this dynamic of information security neglect a problem of "internalization".⁵⁷ to the extent companies are in compliance with legal rules regarding information control, they do so in a perfunctory manner.

⁵² One of the newest brandbuilding techniques is for each entity to make its own corporate cyborg/avatar to provide a friendly face to internet visitors. (Vhost Sitepal n.d.).

⁵³ (McWilliams 2002).

⁵⁴ Costs of identity theft to consumers have continued to escalate on a per incident basis...

⁵⁵ <http://www.pwc.com/extweb/insights.nsf/docid/20ABAEAA10B38510852574DB0078B1B0>

⁵⁶ See, e.g., Privacy Rights Clearinghouse

⁵⁷ For a discussion of H.L.A. Hart and internalization see, e.g., H.L.A. Hart, *The Concept of Law* (___).

According to PriceWaterhouseCoopers, few companies have a well-rounded view of their compliance activities: “business and IT executives may not have a full picture of compliance lapses...Fewer than half of all respondents say their organization audits and monitors user compliance with security policies (43%)”⁵⁸ and “only 44% conduct compliance testing.”⁵⁹

Part of the challenge these corporations face exists in building security into a legacy environment unfamiliar with information security principles. Omissions in technology management can harm as much as commissions, and viral unintended problems harm not only the company but its partners, customers and the public at large. Frequently, proponents of stronger security face internal corporate tensions with regard to setting of corporate priorities and investment levels.⁶⁰ In part because of these tensions in risk management planning, certain types of information security mistakes are recurring. The five most common information security errors visible today in corporate information security risk management include the following: a lack of planning overall,⁶¹ nonresponsiveness to external reports of breaches,⁶² letting criminals in,⁶³ theft by rogue employees⁶⁴ and a failure to update existing security.⁶⁵

Because of the implications of weak information security for the integrity of corporate financial reporting processes in particular, it can be argued that the

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[http://www.pwc.com/extweb/insights.nsf/docid/OE50FD887E3DC70F852574DB005DE509/\\$File/Safeguarding the new currency.pdf](http://www.pwc.com/extweb/insights.nsf/docid/OE50FD887E3DC70F852574DB005DE509/$File/Safeguarding%20the%20new%20currency.pdf), p.10

⁵⁹ Id.

⁶⁰ (Fichera and Wenninger 2004).

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⁶² For example, in one study of the banking industry in the United States, an industry currently plagued with instability and holds in excess of \$7.17 trillion in loans, 36% of customer emails went unanswered. http://www.talisma.com/tal_news/press_release.aspx?id=1448 96% did not offer live chat as a communication channel, and 94% of banks did not offer a website with a dynamic, flexible knowledge base allowing customers to have the most updated account information.

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⁶⁵ For example, TJX Companies recently experienced a large data breach due to a failure to update security. TJX, the company that suffered the breach was not the only impacted business entity. Banks who had issued the compromised credit card numbers found themselves reissuing those cards and blaming TJX for these costs. Not surprisingly, TJX found itself a defendant in several class action suits as a consequence of its data breach. Litigants pursuing TJX for damages included not only consumers, but also a group of banking associations from Massachusetts, Connecticut and Maine that included over 300 banks whose customers were implicated in the breach. In April 2007, these associations sued TJX, seeking to recover the “dramatic costs” that they absorbed to protect their cardholders from identity theft risks resulting from the TJX breach. (Massachusetts, Connecticut Bankers Associations and the Maine Association of Community Banks and Individual Banks File Class Action Lawsuit Against TJX Companies Inc. 2007) (Gaudin, Banks Hit T.J Maxx Owner With Class-Action Lawsuit 2007). The banks argued that as corporate data breaches such as the TJX breach become more frequent and larger in scale, banks cannot continue to absorb the downstream costs of other companies’ information security mistakes. (Gaudin, Banks Hit T.J Maxx Owner With Class-Action Lawsuit 2007) As the TJX suits demonstrate, data breaches never occur in a corporate vacuum.

levels of information security mismanagement among U.S. companies today approach the levels that trigger a breach of fiduciary duty under the *Caremark/Stone* standard under Delaware law. *In re Caremark Int'l Inc. Deriv. Litig*⁶⁶. held that corporate directors' "liability to the corporation for a loss may be said to arise from an unconsidered failure of the board to act in circumstances in which due attention would, arguably, have prevented the loss,"⁶⁷ if they were guilty of "such an utter failure to attempt to assure a reasonable information and reporting system exists" as would establish a lack of good faith.⁶⁸ The Delaware Supreme Court endorsed and elaborated this standard in *Stone v. Ritter*,⁶⁹ and recently, a Delaware bankruptcy court has also extended the Caremark duty to corporate officers.⁷⁰ Thus, in Delaware directors and officers may be liable for their mere omissions if either the directors utterly fail to implement a reporting and information system knowing that they should have done so, or, having implemented such a system, they consciously failed to monitor or oversee its operations.⁷¹ The extent of neglect by directors and officers overseeing corporate information security practices is approaching this point of liability articulated in *Caremark/ Stone*.

Particularly the directors of entities which are subject to the Sarbanes-Oxley Act,⁷² Gramm-Leach Bliley Act,⁷³ Health Insurance Portability and Accountability Act⁷⁴ or the Children's Online Privacy Protection Act,⁷⁵ each of which stipulates minimum standards for information security, would be hard-pressed to allege that they were unaware of the importance of information security and preserving the integrity of corporate information. Yet, companies subject to these statutes are found to have serious information security inadequacies regularly.⁷⁶ Similarly, as identity theft reaches its highest rates to date⁷⁷ and data breach notifications under relevant state law become more frequent,⁷⁸ a director is likely to have read about or received a data breach notification, presumably triggering recognition of the importance of information security for a company. When most consumers have more security on their home networks than major corporations maintain on their

⁶⁶ _____ In *Caremark*, shareholders brought action against the directors of the corporation ...

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⁷⁰ *Miller v. McDonald (In re World Health Alternatives, Inc.)* --- B.R. ----, Adv. No. 07-51350, 2008 WL 1002035, at *1 (Bankr. D. Del. Apr. 9, 2008)

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University of Pennsylvania Journal of Business and Employment Law

WRONGFUL OMISSIONS BY CORPORATE DIRECTORS: STONE V. RITTER AND ADAPTING THE WRONGFUL OMISSIONS BY CORPORATE DIRECTORS: STONE V. RITTER AND ADAPTING THE PROCESS MODEL OF THE DELAWARE BUSINESS JUDGMENT RULE

Summer 2008

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⁷⁶ Examples of data mismanagemtn

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systems containing sensitive information,⁷⁹ a deficit in considering the importance of information risk and technology management exists within such companies. These deficits increasingly result in Federal Trade Commission consent decrees and class action litigation. Despite these detrimental outcomes, studies demonstrate that information security is not adequately considered within business entities.

Businesses go to extreme lengths to collect and protect proprietary information in some cases, but ignore information security in others. Nondisclosure agreements with employees are a business norm,⁸⁰ and trade secret litigation is seen as an essential defensive tool in protecting corporate information assets.⁸¹ Meanwhile, however, on the occasions when consumers notify corporations about undisputable information security breaches in progress, these warnings sometimes go unheeded by companies. What accounts for this seeming contradiction in corporate information security behaviors? First, path dependencies of the mechanical internal workings of the corporation itself and, second, the current inadequacies of corporate law. The paradigm of the corporation as a developing cyborg presents a conceptual tool to highlight some of these deficiencies.

II. The developing corporate cyborg metaphor

The business environment within our society has been dramatically altered by the integration of information technology into corporate governance and operations during the last two decades.⁸² Current corporate legal theory does not adequately acknowledge this fundamental change in corporate identity, nor does it offer a paradigm which facilitates practical legal applications. Specifically, a clear divide exists between internal and external corporate identity construction. Internally, a corporation conceptualizes itself as a machine – a series of overlapping information networks, both human and technological. Externally, a corporation seeks to be and is increasingly perceived by regulators and consumers as a single person. This dualism in identity construction carries with it legal consequences for both traditional areas of regulatory concern in corporate law, as well as consequences for addressing the current consumer protection crisis of identity theft

a. Mechanical interior with a human face

Corporations today are evolving into “cyborgs”. On the one hand, companies are struggling with growing into heavily technology driven structures of information management,⁸³ but on the other, they view the external projection

⁷⁹ See TJX

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⁸² For example, most law firms use document management systems to centralize work product. For a discussion of document management software, (Kennedy and Gelagin 2003) This use of information technology serves to facilitate knowledge management, the sharing of institutional intellectual resources such as form contracts, and control over access to certain information.

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of human characteristics of foremost business importance. Businesses have become progressively more technology-centric and, consequently, organized in large part around their unifying computer systems. This centralization arose because businesses sought to solve communication problems among various parts of the company, and overcoming these communication obstacles across machines became a corporate priority for many organizations.⁸⁴ The goal was, therefore, to allow all parts of the organization to effectively interact with each other and communicate internal data.⁸⁵ Business communications progressively shifted from real space to virtual space,⁸⁶ and entirely new technology-contingent information businesses have arisen, such as eBay and Google.⁸⁷ Even the most traditional of companies began to experiment with internet sales through company websites. Increasing computerization and automation of businesses generated enterprise-wide computing and management ripe for data hoarding and leveraging.

Meanwhile, corporations have gone to great lengths to externally humanize themselves. They engage in philanthropy⁸⁸ and advertise in ways that are intended to create interpersonal connection between the brand and the customer. Recently, these advertising outreach efforts have extended to social networking websites such as Facebook. Business enterprises have pages, friends, and send and receive messages. In 2008, approximately \$1.6 billion was spent on US online social network advertisements.⁸⁹ If content creation can be used to judge impact, these personification efforts appear to be working – hundreds of user generated “fan” pages to companies, products and corporate officers and corporate characters have been created.⁹⁰

b. Developing in context

Corporate law theory has been dominated by paradigms from law and economics. The discussion centers on wealth maximization⁹¹ by self interested rational actors,⁹² maximizing efficiency⁹³ and concern over rent-seeking behaviors⁹⁴ and opportunism⁹⁵ by directors.⁹⁶ Though informative, these law

⁸⁴These attempts to centralize built in high dependencies between systems. (Labs 2006).

⁸⁵ In the context of manufacturing, this meant connecting up “islands of automation” into a single communication network.

⁸⁶ (Frauenheim 2003).

⁸⁷ (Sandeem 2003). As a consequence of this transformation, numerous state corporate statutes have been amended to allow for email notice, virtual shareholder meetings, and internet proxy voting. (Derrick and Faught 2003); (Pozen 2003).

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⁸⁹ http://www.businessweek.com/technology/content/feb2008/tc20080303_000743_page_2.htm

⁹⁰ See, e.g., Clippy support group, eTrade baby fan page

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and economics paradigms inadequately capture the fluidity and social dynamics driving corporate behavior today. As such, this section introduces a relational approach⁹⁷ rooted in insights from developmental psychology and political science. The focus is not on maximizing efficiency and short-term profit, but rather on building commercial and social trust, standards of reasonable corporate conduct, and sustainable⁹⁸ corporate development for long-term stability and commercial success. This section argues that corporate law should fundamentally alter its direction: in addition to default rules aimed at protecting shareholder wealth, the role of corporate law should be to guide the development of the entity itself.⁹⁹

Two evolutionary paradigms should be layered on to the previous description of the corporate cyborg. The first is the idea that corporate development always occurs in a particular social context that shapes the trajectory of that evolution.¹⁰⁰ This insight arises from the work of Lev Vygotsky and Urie Bronfenbrenner in developmental psychology. The second, borrowing a concept from Benedict Anderson,¹⁰¹ is that a corporation is increasingly a constructed group identity or “imagined community” whose stakeholders vary across entities and time.

i. The zone of proximal corporate development

The works of Lev Vygotsky and Urie Bronfenbrenner provide important insights into the dialectical nature of development and identity. For these theorists, an individual interacts with and within a particular social context to generate development in an emergent manner. Applying these ideas to the corporate context, the outcome is a socially embedded process of corporate growth and development.

Lev Vygotsky, the founder of contextualist developmental theory, introduced the importance of analyzing development in cultural context.¹⁰² The smallest unit of analysis for Vygotsky is the individual in a particular social context; by definition, this unit is an inherently variable construction across milieus and people.¹⁰³ For Vygotsky, learning and development occurs on the person-society border through an individual interacting inside the “zone of proximal development”.¹⁰⁴ The zone of proximal development refers to the gap between the actual developmental level of a child at the time and the higher level of the child’s potential development with help from adults or more advanced peers.¹⁰⁵

⁹⁶ Critiques of existing work similarly tend to follow these lines of argument. Although behavioral economists consider some nonpecuniary value, deeming corporate altruism possible, for example, ... team production model

⁹⁷ Connection to relational contract

⁹⁸ When I speak of sustainability, I mean that the corporations acts in ways that increase its own longevity, rather than in ways that are self-destructive in the long term.

⁹⁹ Guardian ad litem parallel

¹⁰⁰ Compare/agree with Linda Trevino

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¹⁰² See LEV VYGOTSKY, THOUGHT AND LANGUAGE (1934).

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

Help in development comes not only from humans in the environment, but also from self-help using cultural tools such as computers.¹⁰⁶ For Vygotsky, humans master themselves from the outside through psychological and technical tools, which allow individuals to achieve more in the context. Tools also vary from culture to culture and social contexts. There is no endpoint to development, and universal behaviors are rare.¹⁰⁷ Thus, children are developmentally malleable but only within constraints of biology and environment. In other words, the focus of assessment using a Vygotskian developmental paradigm is less on the static notion of who the person currently is and more on the dynamic question of who the person can become, depending on context and tools. Much like a child, a corporation is a developmentally malleable entity, within constraints of its assets and environment. As the corporation interacts with its environment, it develops through these interactions.

An elaboration on this idea that evolving contexts shape development can be found in the work of Urie Bronfenbrenner. Bronfenbrenner presents an ecological model that illustrates the importance of reviewing dynamics involved in multiple levels of social context when analyzing development.¹⁰⁸ Specifically, he identifies four levels of analysis – (1) macrosystem; (2) mesosystem; (3) exosystem; and (4) microsystem.¹⁰⁹ Macrosystem level analysis requires examination at the level of culture as a whole, along with belief systems and ideologies underlying cultural rules and norms.¹¹⁰ In other words, the analysis focuses on the mechanisms of social governance and the worldview prevalent in civil society. Mesosystem level analysis focuses attention on interpersonal dynamics and the dynamics between the individual and secondary settings, such as work.¹¹¹ Exosystem level analysis contemplates the interactions outside of the primary sphere of analysis but which, nevertheless, affect or are affected by what happens in the primary setting.¹¹² On the microsystem level, individuals and their psychological development in a particular context is the primary level of analysis.¹¹³ The individual interacts within and across all four levels and consequently develops.

When applied to corporations, these theoretical lenses encourage us to consider the corporate cyborg in developmental context. Different regulatory

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ See URIE BRONFENBRENNER, *THE ECOLOGY OF HUMAN DEVELOPMENT: EXPERIMENTS BY NATURE AND DESIGN* (1979). SEE ALSO, URIE BRONFENBRENNER, *INFLUENCING HUMAN DEVELOPMENT* (1973); URIE BRONFENBRENNER, *TWO WORLDS OF CHILDHOOD* (1973); URIE BRONFENBRENNER, *TWO WORLDS OF CHILDHOOD - US AND USSR* (1975); URIE BRONFENBRENNER, *INFLUENCES ON HUMAN DEVELOPMENT*. (1975); URIE BRONFENBRENNER, *ON MAKING HUMAN BEINGS HUMAN* (1981); R. MYERS, URIE BRONFENBRENNER, *THE TWELVE WHO SURVIVE: STRENGTHENING PROGRAMMES OF EARLY CHILDHOOD DEVELOPMENT IN THE THIRD WORLD* (1992).

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

prescriptions arise when positive corporate development is conceptualized not simply as occurring inside a corporate entity but, rather, at the intersection of the corporation and society inside a zone of proximal corporate development. On the microsystem level, different corporations have different assets and internal structures and culture, as determined by management. Officers are a key part of the microsystem level. Unlike directors or shareholders, they maintain constant involvement in day to day corporate process. They are in the strongest position to understand the microsystem level dynamics of the company and best capable of making alterations internally on a relatively quick basis.

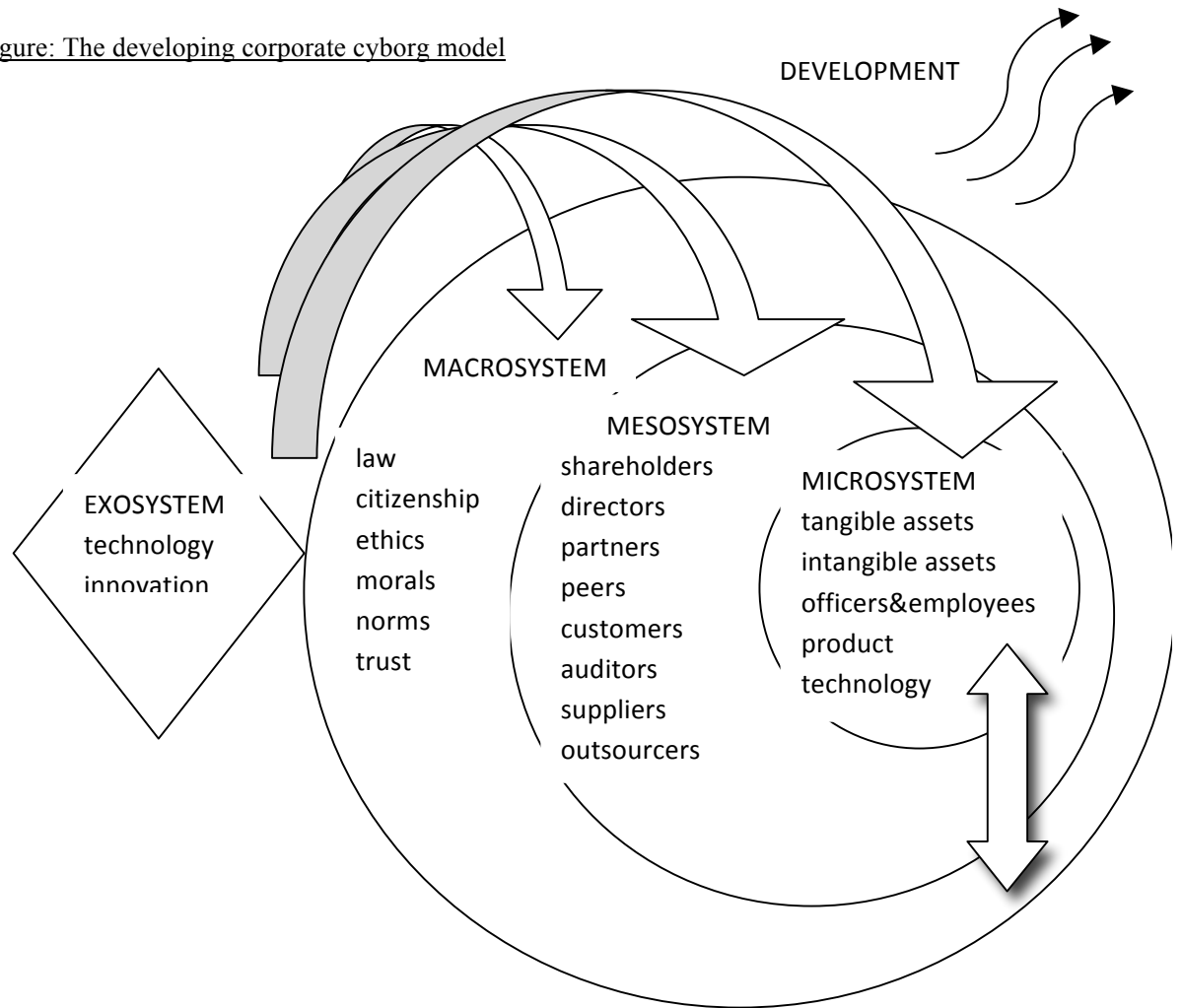
As a consequence of differences on the microsystem level, companies will interact differently with the world around them on the mesosystem level – peer entities, customers, and their own shareholders and directors.¹¹⁴ Development occurs at the intersection of these levels. Further, the successful development of each corporation impacts the successful development of others through interactions on mesosystem level.

The macrosystem level includes various social forces pushing on the company – law, norms, ethics, morality, citizenship obligations, commercial trust. Corporate law’s macrosystemic purpose becomes clear: it is, at least in part, to guide or “scaffold” corporate development to ensure it heads in constructive direction. In other words, corporate law can act as a means to encourage corporations to manage themselves prudently for their own future and for the good of the economy as a whole. The technology tools of today’s corporations inextricably embed them within this greater ecological context.

Finally, the exosystem pushes on all three other levels, allowing for development in new directions, directions not possible without these “cultural tools” of the exosystem. Cultural tools, such as new technologies, facilitate development. They extend the abilities of individuals to achieve more than they otherwise would. Computerization and information technology innovation has done precisely that for corporations: it has extended their developmental capabilities.

¹¹⁴ Why are shareholders and directors on the meso level? Because they lack daily control

Figure: The developing corporate cyborg model



ii. The corporate cyborg as an imagined community

The last layer of developmental context for the corporate cyborg relates to understanding its boundaries and its reach. As corporate boundaries become increasingly permeable due to worker mobility, travel and a rise in outsourcing of work, a traditional physical conception of the geographic scope of a corporation no longer seems logical. A more malleable construct is needed.

Turning to the political theory of Benedict Anderson on nationalist identity construction, parallels can be drawn with today's corporate cyborg. In *IMAGINED COMMUNITIES*, Benedict Anderson introduces the idea of an

“imagined community.”¹¹⁵ Specifically, Benedict Anderson proposes that a nation is an “imagined political community” because “the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion.”¹¹⁶ Anderson argues that “nationality . . . nation-ness, as well as nationalism, are cultural artifacts of a particular kind.”¹¹⁷ Anderson maintains that once created, these cultural artifacts become modular, “capable of being transplanted, with varying degrees of self-consciousness, to a great variety of social terrains, to merge and be merged with a correspondingly wide variety of political and ideological constellations.”¹¹⁸ Anderson further asserts that nations have a compelling “narrative of ‘identity’” and compelling symbols of that narrative are imperative, Anderson argues, to the process of collective imagination that generates “emotional legitimacy.”¹¹⁹ The construction of this narrative, including channeling voices of the history of the past is a process Anderson calls reverse ventriloquism.¹²⁰

Much as Anderson’s imagined national community develops and creates its own collective identity, so too corporations practice the process of reverse ventriloquism to build histories, cultures and a meaning behind brand identity. Using technology tools such as internal wikis and websites, they create modularity in corporate knowledge and culture, allowing a widely dispersed workforce that still understands the corporate narrative and artifacts.¹²¹

The reach of the imagined corporate community can include not only officers, directors, shareholders, and employees, but also contractors, business partners, each person or entity whose information is held by the company, customers, beneficiaries of philanthropic acts and the like. The group of stakeholders¹²² impacted by a particular corporate decision or action is inherently malleable, varying across companies, contracts, time and contexts. In fact, it can be said that the goal of a truly effective brand building strategy is to generate the largest imagined corporate community possible. The external humanization efforts of the corporation seek to enmesh it into the daily lives of other companies and consumers, generating commercial trust, emotional connection and loyalty in purchasing.¹²³

¹¹⁵ Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (2d ed. 1991).

¹¹⁶ Benedict Anderson, *Imagined Communities* 6 (rev. ed. 1991). Benedict Anderson further asserts:

[I]t is imagined as a community, because regardless of the actual inequality and exploitation that may prevail in each, the nation is always conceived as a deep, horizontal comradeship. Ultimately it is this fraternity that makes it possible, over the past two centuries, for so many millions of people, not so much to kill, as willingly to die for such limited imaginings. *Id.* at 7.

¹¹⁷ *Id.* at 4.

¹¹⁸ *Id.*

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¹²⁰ Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* 198 (rev. ed. 1991).

¹²¹ For example, Google’s corporate structure is dispersed . . .

¹²² For a discussion of stakeholder theory, see, e.g., ...

¹²³ I’m a PC ads

c. Corporate cyborg versus other corporate law metaphors

The usefulness of a particular guiding metaphor or theory of the corporation has been eloquently called into question by Orts¹²⁴ and others.¹²⁵ H.L.A. Hart argued that all theories of the corporation can be divided into three types of theories: according to each theory, a corporation is correctly analyzed as (a) "really just a collective name or abbreviation for some complex but still plain facts about ordinary persons," (b) "the name of a fictitious person," or (c) "the name of a real person existing with a real will and life, but not a body of its own."¹²⁶ None is helpful in guiding thinking about corporate law, according to Hart.¹²⁷ Hart was undoubtedly correct that individually each theory leaves much to be desired; however, a theory which attempts to merge elements of all three of what H.L.A. Hart identified as the "three great theories of corporate personality" may conceptually assist in crafting the future of corporate law. The theory of the corporate cyborg set forth in this article attempts to blend elements of these three great theories of corporate personality – the fiction, realist and concessionist theories.¹²⁸

The dominant fiction view of the corporation has been the "nexus of contracts" view of the firm. It describes the corporation as a "nexus of contracts" among capital providers, managers, employees, and others, all of whom are rationally self-interested.¹²⁹ Contractarians believe that efficient corporate law should provide the best set of default contract rules¹³⁰ when the parties have not negotiated otherwise.¹³¹ Corporate law should not impose mandatory terms, which would preclude contracting on a given topic, unless justified by identifiable flaws in the bargaining process. According to nexus of contracts

¹²⁴ ____ Washington and Lee L. Rev. ____ (1993) THE COMPLEXITY AND LEGITIMACY OF CORPORATE LAW Eric W. Orts

"... In short, a survey of competing theories of "the corporation" leaves one to conclude that none has survived intact.] It is worth inquiring whether this failure of theory is not endemic to its topic. Given the general failure of attempts to construct a unified theory of the corporation, I do not propose to start with any particular theory of the corporation. Perhaps it is wiser to step back from the fray and reconsider whether such a theory is helpful or even possible."

¹²⁵ Seattle Journal for Social Justice Fall/Winter 2005 Linking Corporate Law with Progressive Social Movements

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Greenwood

¹²⁶ Orts n.19 citing ...

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¹²⁸ The consequences for distribution of power among shareholders, boards of directors, and others of these various models, have been great. See, e.g., Bren L. Buckley, Models of Corporate Conduct: From the Government Dominated Corporation to the Corporate Dominated Government, 58 Neb. L. Rev. 100 (1978) (examining the proper scope, function, and structure of corporate regulation).

¹²⁹ Michael C. Jensen & William H. Meckling, The Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure, 3 J. Fin. Econ. 305, 306-07 (1976) (discussing the corporation as a nexus of principal-agent contracts); see also Frank H. Easterbrook & Daniel R. Fischel, The Economic Structure of Corporate Law 17 (1991) [hereinafter Easterbrook & Fischel, Economic Structure] (discussing the corporate contract); Henry N. Butler & Larry E. Ribstein, The Contract Clause and the Corporation, 55 Brook. L. Rev. 767, 770 (1989) (characterizing the corporation as a nexus of contracts).

¹³⁰ See Easterbrook & Fischel, Economic Structure, supra note 56, at 7- 8.

¹³¹ Id. at 17.

theory, the corporation's actions are merely the sum of individual behaviors.¹³² Some scholars have argued that this notion of contract is so broad as to include virtually all voluntary social arrangements.¹³³ A key assumption is that managers are agents for shareholders¹³⁴ and that the board is regarded as responsible for maximizing the residual value of the firm remaining after non-shareholder claimants are satisfied.¹³⁵ Therefore, the goals of the corporation under this approach can be described as making money for its shareholders and that the interests of shareholders are to be preferred over those of others with interests in the firm - the "shareholder primacy" model.¹³⁶

Under a realist approach, by contrast, a corporation is not a fictitious legal person created by an act of the state, but rather the legal recognition of a collective identity that exists independently and possesses rights and liabilities.¹³⁷ Proponents assert that a corporation has an independent existence and culture separate from its individual employees. Consequently, "[c]orporations can act and be at fault in ways that are different from the ways in which their members can act and be at fault."¹³⁸ "The corporate entity was real, and group dynamics were more significant than individual contributions. . . . Since individuals and not the state supplied the creative force that brought the group into existence, respect for individuals counseled against regulation."¹³⁹ Finally, the concession theory approach claims that corporations are institutions that exercise authority delegated to them by the state.¹⁴⁰

The developing corporate cyborg metaphor borrows ideas from each approach.

¹³² Eisenberg has argued that main arguments against the contractual view of the corporate organization rests on the claim that trust and loyalty between corporate actors and that whatever the law does do to increase the potency of the social norm of loyalty will lead to greater efficiency. See Eisenberg _____ Blair and Stout argue that contract law encourages parties to be self-interested, whereas fiduciary law encourages them to be other-regarding; hence, a relationship cannot be both fiduciary and contractual at the same time. See Blair and Stout _____.

¹³³ See, e.g., Robert C. Clark, Agency Costs versus Fiduciary Duties, *in* Principals and Agents: The Structure of Business 55 (John W. Pratt & Richard J. Zeckhauser eds., 1985).

¹³⁴ Easterbrook & Fischel, Economic Structure, *supra* note __, at 35-39.

¹³⁵ *Id.*

¹³⁶ David Millon, New Game Plan or Business as Usual? A Critique of the Team Production Model of Corporate Law, 86 Va. L. Rev. 1001, 1005-09 (2000) (discussing shareholder primacy and managerial shirking).

¹³⁷ Medieval corporations in this sense included guilds, universities, the Church or some of its components, and, of importance here, towns. See Antony Black, Guilds and Civil Society in European Political Thought From the Twelfth Century to the Present 48 (1984).

¹³⁸ Eric Colvin, Corporate Personality and Criminal Liability, 6 Crim. L.F. 1, 2 (1995).

Katsuhito Iwai has argued that some cultural specificity may exist in conceptions of the corporation, with American law and culture tending toward a nominalistic or property view of corporations, while Japanese law and culture tend toward a realist view of corporations where corporations are autonomous and independent entities capable of self-ownership. Katsuhito Iwai, Persons, Things and Corporations: The Corporate Personality Controversy and Comparative Corporate Governance, 47 Am. J. Comp. L. 583 (1999).

¹³⁹ William W. Bratton, Jr., The New Economic Theory of the Firm: Critical Perspectives from History, 41 Stan. L. Rev. 1471, 1483 (1989).

¹⁴⁰ Nathan Oman, CORPORATIONS AND AUTONOMY THEORIES OF CONTRACT: A CRITIQUE OF THE NEW LEX MERCATORIA, Denver University Law Review 101 (2005)

From a fiction approach, specifically a nexus of contracts approach, the corporate cyborg metaphor acknowledges the importance of contractual relationships as one of the central forces in a company's existence. Indeed, it is as a consequence of the interactions set up by these contracts that development emerges. Similarly, just as various contracts differ and establish different types of corporate relationships, the idea of a corporate cyborg's imagined community encompasses a variability in relationships and their centrality to the company. It acknowledges the constraining power of contractual relationships to shape corporate behavior on the mesosystem level, but it demonstrates the unsatisfactory nature of the nexus of contracts approach. The nexus of contracts approach would suggest that a corporation is nothing more than the sum of individual behaviors, lacking a collective identity or unifying extra-contractual ethos. However, as was discussed in Section I of this piece and by business practice, today's corporate cyborg strives for a humanized exterior identity and seeks to construct a narrative of its history and identity, through advertising, philanthropy and, most recently, engagement in social networking. A corporate cyborg has a human face it shows to the outside and it strives to create a type of emotional relationship with its customers.

Borrowing from a realist approach, the corporate cyborg has a collective identity in its imagined community. Its collective identity has its own cultural artifacts and cultural norms. However, the developing corporate cyborg paradigm disagrees with a realist approach on the point of the importance of individual contributions to the collective identity. Individual contributions, particularly negative contributions in the form of mismanagement by an officer or director, can have a profound and lasting impact on a company's development. Whereas realist theories fear that regulation will stifle the creativity that lead to the company's creation, the corporate cyborg approach instead asserts that regulation is necessary to preserve and protect the company after creation. Further, regulation can assist in corporate development rather than hinder it.

Like a concession theory approach, the developing corporate cyborg metaphor acknowledges the role of the state in the life of companies. Instead of viewing the role of law as a minimal set of default rules, the corporate cyborg views law as its "parent" or protector from improper management. Nudging corporate development in economically and socially sound directions, law can prevent a company from self-harming due to bad management. However, perhaps unlike much concession theory, the corporate cyborg ultimately is responsible for its own development – not the state.

The metaphor of the developing corporate cyborg also tries to answer one of the basic questions of corporate law--whether the corporation was a purely private, purely public, or mixed entity¹⁴¹ - by questioning the premise of the question. This question presumes that it is somehow possible to exist in a vacuum, privately, without being impacted by government, society and the

¹⁴¹ See William T. Allen, *Our Schizophrenic Conception of the Business Corporation*, 14 *Cardozo L. Rev.* 261 (1992).

economic environment in fundamental ways. No person and no entity develops independent of public context. Framed in this way, the corporation is simultaneously fully private and fully public. This position allows for the realist conception of the corporation presented in most constitutional law jurisprudence,¹⁴² contract and tort law to be reconciled with the variations in corporate law. Corporations are generally treated as citizens, possessing all rights for purposes of jurisdiction and equal protection, for example. However, much like celebrities, their public stature diminishes their privacy.

Recognizing that part of a corporation is mechanized, devoid of reason, the developing corporate cyborg metaphor explains why the corporation does not always act logically or as a long-term rational maximize. Instead, it can sometimes act as a creature of the short-term, limited by its lack of facility with the technology tools upon which it increasingly depends.¹⁴³ For example, although best information security practices,¹⁴⁴ the Sarbanes-Oxley Act¹⁴⁵ and other laws¹⁴⁶ mandate that companies proactively seek to preserve the confidentiality and integrity of their information assets, they often choose not to do so.¹⁴⁷ Currently, information security culture wars are being waged within many companies.¹⁴⁸ Proponents of more rigorous information security practices and ethical data handling are facing off with those decisionmakers who believe information security is not really a problem, despite much evidence to the contrary.¹⁴⁹ These decisionmakers are frequently more worried about immediate short term costs than preserving key corporate assets for the long-run.¹⁵⁰ The debate usually revolves around short term profits in exchange for additional, sometimes unwise, long-term risk. Put another way, this corporate decision sacrifices the future assets of the corporation in favor of higher profits in the present, a tradeoff that raises concerns about prudent management. However, no legal mechanism currently exists to require otherwise on a prospective basis.

¹⁴² Redish article GW catalytic self-realization

¹⁴³ <http://www.gartner.com/it/page.jsp?id=767412>

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¹⁴⁷ Although aggregate improvements in corporate information security do appear to be happening, the pace is unacceptably slow.

⁸ (Ford and Richardson 1994).

¹⁴⁸ According to the PWC report, "CISOs don't see eye-to-eye with the rest of the executive suite on what single business issue is principally driving information security spending. They are far more likely to cite regulatory compliance than CEOs, CFOs, and even—quite surprisingly—Chief Compliance Officers (75% vs. 27%, 37% and 24%, respectively). And all of these executives—in addition to the CIO, who is the only other business leader who sits on the IT side of the table—unanimously disagree: they cite a completely different principal driver for security investments: business continuity and disaster recovery."

[http://www.pwc.com/extweb/insights.nsf/docid/0E50FD887E3DC70F852574DB005DE509/\\$File/Safeguarding_the_new_currency.pdf](http://www.pwc.com/extweb/insights.nsf/docid/0E50FD887E3DC70F852574DB005DE509/$File/Safeguarding_the_new_currency.pdf) p. __ These types of agreements will lead to different approaches and spending priorities.

¹⁴⁹ Privacy Rights Clearinghouse

¹⁵⁰ Costs of security cites

As such, this metaphor highlights the preexisting gaps in corporate law that technology has exacerbated. Corporate law requires updating to reflect and correct for this changed business reality, just as other fields of law have been updated in light of our new technological circumstances.¹⁵¹ Instead of acting as a minimal set of default rules, corporate law should move toward guiding the development of corporations toward positive long term outcomes. Officers and directors are frequently short lived in their positions and have few incentives, consequently, to manage for the long term. Corporate law may be the only force that can act as a normalizing element concerned with the health and development of the entity, requiring management to manage well for the long term, not on a quarterly basis.

Further, the developing corporate cyborg model acknowledges that current corporate reality indeed reflects what Prof. Bainbridge termed a “director primacy” regime.¹⁵² However, a regime closer to a shareholder primacy structure, as advocated by Profs. Hansmann and Kraakman, is likely to generate greater corporate development – directorial power is currently inadequately supervised. Because of shareholder turnover, however, and the ease of divestiture, a shareholder primacy regime will only solve part of the concerns over mismanagement. Stronger fiduciary duties are needed to mitigate damage of irrationally risky or inadequately knowledgeable management.

III. Protecting the developing corporate cyborg from itself: strengthening fiduciary duties and waste doctrine

Technology is exacerbating tensions in corporate law, just as it previously exacerbated doctrinal tensions in jurisdiction doctrine,¹⁵³ digital contracting,¹⁵⁴

¹⁵¹ See note __ infra.

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¹⁵⁴ For a discussion of how technology has exacerbated existing doctrinal tensions in contract law see, e.g., *See, e.g., ProCD v. Zeidenberg*, 86 F.Supp.2d 1165 (7th Cir. 1996); *Specht v. Netscape*, F.Supp.2d 585 (S.D.N.Y.2001), aff'd 306 F.3d 17 (2nd Cir. 2002). *Ticketmaster Corp. v. Tickets.com, Inc.*, 2001 WL 51509 (9th Cir.(Cal.1998). See also Ryan J. Casamiquela, *Contractual Assent and Enforceability in Cyberspace*, 17 BERKELEY TECH. L.J. 475 (2002). For a discussion of electronic signature legislation *See, e.g.,* Stephen Mason, *Electronic Signatures in Practice*, 6 J. High Tech. L. 148 (2006); David E. Ewan, John A. Richards, Margo H. K. Tank, *It's the Message, Not the Medium!*, 60 BUS. LAW. 1487 (2005); Ashoke S. Talukdar, *Electronic Signatures in E-Healthcare: The Need for a Federal Standard*, 18 J.L. & HEALTH 95 (2003-4); Lance C. Ching, *Electronic Signatures: A Comparison of American and European Legislation*, 25 HASTINGS INT'L & COMP. L. REV. 199 (2002); Mike Watson, *E-Commerce and E-Law; Is Everything e-Okay?*, 53 BAYLOR L. REV. 803 (2001); Gregory Todd Jones, *Electronic Signatures and Records: Permit the Use of Electronic Signatures and Records Even When a Statute, Regulation or Other Rule of Law Specifies a Non-Electronic Type of Signature or Record*, 18 GA. ST. U. L. REV. 6 (2001); Susanna Frederick Fischer, *Saving Rosencrantz and Guildenstern in a Virtual World? A Comparative Look at Recent Global Electronic Signature Legislation*, 7 B.U. J. SCI. & TECH. L. 229 (2001); Anthony M. Balloon, *From Wax Seals to Hypertext: Electronic Signatures, Contract Formation, and New Model for Consumer Protection in Internet Transactions*, 50 EMORY L.J. 905 (2001); Marianne Menna, *From Jamestown to the Silicon Valley, Pioneering a Lawless Frontier: The*

intellectual property law,¹⁵⁵ and caused legislators to draft new types of regulation on internet child protection,¹⁵⁶ spam¹⁵⁷ and spyware.¹⁵⁸ But, to date,

Electronic Signatures in Global and National Commerce Act, 6 VA. J.L. & TECH 12 (2001); Carl Carl, Corey Ciocchetti, Wes Barton and Nathan Christensen, *Are Online Business Transactions Executed by Electronic Signatures Legally Binding?*, 2001 DUKE L. & TECH. REV. (2001); Jonathan E. Stern, *The Electronic Signatures in Global and National Commerce Act*, 16 BERKELEY TECH. L.J. 391 (2001); Jared Sommer, *Electronic Signatures and the UETA: E-Commerce in an Insecure World*, 37 IDAHO L. REV. 507 (2001); Sarha E. Roland, *The Uniform Electronic Signatures in Global and National Commerce Act: Removing Barriers to e-Commerce or Just Replacing Them with Privacy and Security Issues?*, 35 SUFFOLK U. L. REV. 625 (2001); Jane K. Winn, *The Emperor's New Clothes: The Shocking Trust about Digital Signatures and Internet Commerce*, 37 IDAHO L. REV. 353 (2001); Robert Gilbert Johnston, *Digital Signature and Electronic Document Verification*, 17 J. MARSHALL J. COMPUTER & INFO. L. (1999); Thomas J. Smedinghoff, Ruth Hill Bro, *Moving with Change: Electronic Signature Legislation as a Vehicle for Advancing e-Commerce*, 17 J. MARSHALL J. COMPUTER & INFO. L. 723 (1999); Juan Andres Avellan, *John Hancock in Borderless Cyberspace: The Cross-Jurisdictional Validity of Electronic Signatures and Certificates in Recent Legislation Texts*, 38 JURIMETRICS J. 301 (1998); R.R. Jueneman, R.J. Robertson, Jr., *Biometrics and Digital Signatures in the Electronic Commerce*, 38 JURIMETRICS J. 427 (1998). For a discussion of state level digital signature statutes, see, e.g. Robin C. Capehart, Mark A. Starcher, *Wired Wonderful West Virginia – Electronic Signatures in the Mountain State*, 104 W. Va. L. Rev. 303 (2002); Andrew D. Stewart, *Navigating the E-Sign Nebula: Federal Recognition of Electronic Signatures and Impact on State Law*, 24 U. Haw. L. Rev. 309 (2001); Allison W. Freedman, *The Electronic Signatures Act: Preempting State Law by Legislating Contradictory Technology Standards*, 2001 Utah L. Rev. 807 Utah Law Review (2001); William E. Wyrrough, Jr., Ron Klein, *The Electronic Signature Act of 1996: Breaking Down Barriers to Widespread Electronic Commerce in Florida*, 24 Fla. St. U. L. Rev. 407 (1997). For a discussion of the proposed revisions to UCC Article 2 addressing software transactions in proprietary code, see, e.g., Richard E. Speidel, *Revising UCC Article 2: A View from the Trenches*, 52 HASTINGS L.J. 607 (2001); 11. Linda J. Rusch, *A History and Perspective of Revised Article 2: The Neverending Saga of a Search for Balance*, 52 SMU L. REV. 1683 (1999); Richard E. Speidel, *Contract Formation and Modification Under Revised Article 2*, 35 WM. & MARY L. REV. 1305 (1994). For a discussion of challenges of open source software contracts see, e.g., Peter P. Swire, *Theory of Disclosure for Security and Competitive Reasons: A Theory of Disclosure*, 42 HOUS. L. REV. 1333 (2006); Andrés Guadamuz González, *Open Science: Open Source Licenses in Scientific Research*, 7 N.C. J. L. & TECH. 321 (2006); Stephen M. Maurer, Arti Rai, Andrej Sali, *Finding Cures for Tropical Diseases: Is Open Source an Answer?*, 6 MINN. J.L. SCI. & TECH. 169 (2004); Robert W. Gomulkiewicz, *Entrepreneurial Open Source Software Hackers: MySQL and its Dual Licensing*, 9 Computer L. REV. & TECH. J. 203 (2004); Greg Vetter, *"Infectious" Open Source Software: Spreading Incentives or Promoting Resistance?*, 36 RUTGERS L.J. 53 (2004); Greg Vetter, *The Collaborative Integrity of Open Source Software*, 2004 UTAH L. REV. 563 (2004); David McGowan, *Legal Implications of Open Source Software*, 2001 U. Ill. L. REV. 241 (2001).

¹⁵⁵ For a discussion of technology and child protection, see, e.g., Jared Chrislip, *Filtering the Internet Like a Smokestack: How the Children's Internet Protection Act Suggests a New Internet Regulation Analogy*, 5 J. HIGH TECH. L. 261 (2005); Audrey Rogers, *Playing Hide and Seek: How to Protect Virtual Pornographers and Actual Children on the Internet*, 50 VILL. L. REV. 87 (2005); Susan Hanley Kosse, *Try, Try, Again: Will Congress Ever Get It Right? A Summary of Internet Pornography Laws Protecting Children and Possible Solutions*, 38 U. RICH. L. REV. 721 (2004); Felix Wu, *United States v. American Library Ass'n: The Children's Internet Protection Act, Library Filtering, and Institutional Roles*, 19 BERKELEY TECH. L.J. 555 (2004); Susan S. Kreston, *Computer Search and Seizure Issues in Internet Crimes against Children*, 30 RUTGERS COMPUTER & TECH. L.J. 327 (2004); Jennifer L. Rosato, *The Children of Art (Assisted Reproductive Technology): Should the Law Protect Them from Harm*, 2004 UTAH L. REV. 57 (2004); William D. Araiza, *Captive Audiences, Children and the Internet*, 41 BRANDEIS L.J. 397 (2003); Ronald J. Krotoszynski, Jr., *Childproofing the Internet*, 41 BRANDEIS L.J. 447 (2003); Mitchell P. Goldstein, *Congress and the Courts Battle Over the*

a major reevaluation of corporate law in light of technological innovation has not occurred. The previous section introduced the paradigm of the developing corporate cyborg. Applying this paradigm to traditional doctrines of corporate law, the need to resolve certain preexisting conflicts in doctrine and theory becomes pressing. In particular, the corporate cyborg metaphor suggests the need to clarify and expand the scope of officer and director fiduciary duties regarding ongoing management obligations.

As Section I discussed, as entities become increasingly organized around their information flows, information assets are growing in importance. Yet, their care is widely neglected. Unlike tangible assets which can be fixed, recreated or recovered if stolen or tainted, information assets cannot. Ignoring their ongoing management carries material negative consequences. It is true that information assets, much like mortgage backed securities or energy futures,¹⁵⁹ are a complicated and technically sophisticated subject area. Consequently,

First Amendment: Can the Law Really Protect Children from Pornography on the Internet?, 21 J. MARSHALL J. COMPUTER & INFO. L. 141 (2003); F. Barrett Faulkner, *Applying Old Law to New Births: Protecting the Interests of Children Born Through New Reproductive Technology*, 2 J. HIGH TECH. L. 27 (2003); Cortney Scott, *The Children's Internet Protection Act: Filtering Freedom or Protecting Young Minds?*, 2003 UCLA J. L. & TECH. NOTES 28 (2003); Steven D. Hinckley, *Your Money or Your Speech: The Children's Internet Protection Act and the Congressional Assault on the First Amendment in Public Libraries*, 80 WASH. U. L.Q. 1025; Dannielle Cisneros, "Virtual Child" Pornography on the Internet: A "Virtual" Victim?, 2002 DUKE L. & TECH. REV. 19 (2002); Eric Hwang, *Child Pornography on the Internet*, 2002 UCLA J.L. & TECH. NOTES 7 (2002); Rick Gallagher, *Downward Departures: Curing the Lenient Sentencing of Internet Child Pornographers and Statutory Rapists*, 5 U.C. DAVIS J. JUV. L. & POL'Y 111 (2001); Mercedes Plasencia, *Internet Sexual Predators: Pornographers and Statutory Rapists*, 4 J. GENDER RACE & JUST. 15 (2000); Adam Horowitz, *The Constitutionality of the Children's Internet Protection Act*, 13 ST. THOMAS L. REV. 425 (2000); Mehagen Doyle, *Bad Apples in Cyberspace: The Sexual Exploitation of Children in the New Millennium*, 21 WHITTIER L. REV. 119 (1999); Philip G. Peters, Jr, *Harming Future Persons: Obligations to the Children of Reproductive Technology*, 8 S. CAL. INTERDISC. L.J. 375 (1999); Cathleen A. Cleaver, *Cyberchaos v. Ordered Liberty: Protecting Children from Pornography on the Internet*, 1 TEX. REV. L & POL. 61 (1997).

¹⁵⁷ For a discussion of the dangers of spam and shortcomings of regulatory efforts *See, e.g.*, Andrea M. Matwyshyn, *Penetrating the Zombie Collective: Spam as an International Security Issue*, 3 SCRIPTED 370, <http://www.law.ed.ac.uk/ahrc/script-ed/vol3-4/matwyshyn.asp>; Peter B. Maggs, *Abusive Advertising on the Internet (Spam) Under United States Law*, 54 AM. J. COMP. L. 385 (2006); Beth Simone Noveck, *Public Participation in Electronic Rulemaking: Electronic Democracy or Notice-and-Spam?*, 30-FALL ADMIN. & REG. L. NEWS 7 (2006).

¹⁵⁸ For a discussion of spyware regulation, *See, e.g.*, Paul M. Schwartz, *Privacy Inalienability and the Regulation of Spyware*, 20 BERKELEY TECH. L.J. 1269 (2005); Patricia L. Bellia, *Spyware and the Limits of Surveillance*, 20 BERKELEY TECH. L.J. 1283 (2005); Jane K. Winn, *Contracting Spyware by Contract*, 20 BERKELEY TECH. L.J. 1345 (2005); Peter S. Menell, *Regulating "Spyware": The Limitations of State "Laboratories" and the Case for Federal Preemption of State Unfair Competition Laws*, 20 BERKELEY TECH. L.J. 1363 (2005); Susan P. Crawford, *First Do No Harm: The Problem of Spyware*, 20 Berkeley Tech. L.J. 1433 (2005).

¹⁵⁹ For the third time in this decade, a significant market overvaluation has shaken our economy. Briefly examining these three instances, the internet bubble and market crash of 2000-2001, the Enron and Worldcom bankruptcies in 2001, and now the mortgage backed securities crisis of 2008, a common characteristic emerges: in all three cases, the products at issue were complicated and technically sophisticated, well understood only by a handful of experts. The companies became overvalued, decisionmaking by officers become irrationally risky, and directors did nothing to stop the problem. Turning now to the problems facing the corporate cyborg, the same lack of oversight that lead to three debacles set forth above plagues the corporate cyborg in a different fashion.

many officers and directors view information management to be the province of information technology specialists; as studies show, they neglect to consider the implications of bad information management. And, but for the narrow exception carved out by the *Caremark* case, corporate law does not appear to require it of them. Unless and until a major transaction arrives before them where information assets are implicated, few incentives exist for them to take an interest. By then, however, as Section I explained, the damage to these assets will be irreparable.

Because of the transitive nature of information risk explained in Section I, mismanagement of information assets harms not only the company, but also numerous others outside the company. As such, corporate law should be retooled not as a set of default rules to protect shareholders, but rather as a set of rules to protect the corporation itself from neglectful or reckless managers and to assist the corporation in its development.

a. The time-interval problem of the business judgment rule and officer and director omissions

As previously explained through the example of information security, corporate inaction can harm today's corporate cyborg as much as incorrect corporate action. Failing to discuss and decide an important corporate matter, i.e. having no corporate process, should correctly be deemed more akin to a failed decisionmaking process than a successful one. This distinction between acts of commission and acts of omission is particularly not sustainable in an economy of corporate cyborgs. As information assets dominate the business landscape, their transactions are increasingly spread across long stretches of time, not one-shot deal agreements and transfers. Licenses to share information, for example, usually involve an ongoing data sharing arrangement over the course of months or years. As such, an iterated management process focus is required by these arrangements more so than a discrete transactional approach. The current focus of fiduciary duty law is almost solely on acts of commission, erroneously adopting a discrete transactional approach to fiduciary obligations. Only a long-term management process focus that considers all sources of possible harm – both acts of commission and acts of omission - is compatible with a healthy developmental trajectory for entities dominated by information assets. Fiduciary law needs to be similarly structured, focused both on acts on commission and acts of omission that lead to corporate self-harm. Phrased another way, corporate law suffers from a time-interval problem in crafting fiduciary duties.¹⁶⁰

The lynchpin of corporate law is the imposition of fiduciary duties on directors and officers of a corporation. Directors and officers of corporations¹⁶¹ have two basic “fiduciary” duties, the duty of care and the duty of loyalty,¹⁶² owed

¹⁶⁰ Time interval problem explanation

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¹⁶² The duty of loyalty requires that directors act on behalf of the corporation and its shareholders and refrain from selfdealing, usurpation of corporate opportunity and any acts that

to both the corporation itself and the shareholders.¹⁶³ Directors and officers must act in good faith, with the care of a prudent person,¹⁶⁴ and in the best interest of the corporation. They must refrain from self-dealing, usurping corporate opportunities and receiving improper personal benefits. In addition to the fiduciary duties of directors,¹⁶⁵ officers may have a duty to disclose to the board any fraud or wrongdoing of which they have knowledge and any situations calling for oversight attention, even where the behavior involved is not dishonest or inequitable.¹⁶⁶

Directors' decisions made on an informed basis, in good faith and in the honest belief that the action was taken in the best interest of the corporation will be protected by the "business judgment rule," the presumption that business decisions are made in such a manner until proven otherwise.¹⁶⁷ The basis for the rule is to encourage calculated business risk-taking without fear of repercussions if the outcome of the decision is not as expected. The business judgment rule thus provides significant protection to directors from personal

would permit them to receive an improper personal benefit or injure their constituencies. See, e.g., *Guth v. Loft, Inc.*, 5 A.2d 503, 510 (Del. 1939).

¹⁶³ See, e.g., *Revlon v. MacAndrews & Forbes Holdings Inc.*, 506 A.2d 173, 179 (Del. 1986) (Court held that the Board breached duty of loyalty by entering into a lockup agreement on the basis of impermissible considerations of the noteholders' interests at the expense of the shareholders). Courts have generally held that directors of such corporations do not owe fiduciary duties to other constituencies, such as creditors, whose rights are purely contractual. See, e.g., *Katz v. Oak Indus.*, 508 A.2d 873, 879 (Del. Ch. 1986). However, some states have adopted "other constituencies" statutes which permit directors to consider the interests of non-shareholder constituencies, including creditors, in making corporate decisions. In general, however, these statutes are usually permissive and do not appear to create new fiduciary obligations for directors but merely allow them to consider other constituencies as a factor in determining the best interests of the shareholders. Oregon has enacted (permissive) Nonshareholder Constituency statutes. See Or. Rev. Stat. § 60.357(5) (1997). But see Conn. Gen. Stat. § 33-756 (2000) (requiring consideration of other constituents).

¹⁶⁴ The duty of care, which is governed by statute in most states, usually requires that directors discharge their duties in good faith and with the care that an ordinarily prudent person in a like position would exercise under similar circumstances and in a manner the director reasonably believes to be in the best interests of the corporation. See, e.g., Or. Rev. Stat. § 60.357 (1). In some states, including Delaware, the standard of care, though essentially the same, is established by judicial decision. See, e.g., *Graham v. Allis-Chalmers Mfg. Co.*, 188 A.2d 125, 130 (Del. 1963).

¹⁶⁵ Although there is little law on the subject of the duties and liabilities of corporate officers, most authorities suggest that officers owe the corporation the same fiduciary duties as directors. See, e.g., William M. Fletcher, *Fletcher Cyc Corp* § 846 (perm. ed. 1994). The Revised Model Business Corporation Act also states that non-director officers must discharge their duties with the same standards of care as directors. Revised Model Bus. Corp. Act § 8.42. Under Delaware law "with respect to the obligation of officers to their own corporation and its stockholders, there is nothing ... which suggests that the fiduciary duty owed is different in the slightest from that owed by directors." David A. Drexler, et al., *Delaware Corporation Law and Practice*, § 14.02, at 14-5 to 14-6. See also, e.g., A. Gilchrist Sparks and Lawrence A. Hamermesh, *Common Law Duties of Non-Director Corporate Officers*, 48 *Bus. Law* 215 (Nov. 1992).

¹⁶⁶ See, e.g., *Bennett v. Propp*, 187 A.2d 405 (Del. 1962).

¹⁶⁷ *Aronson v. Lewis*, 473 A.2d 805, 812 (Del. 1984) (Court held that to invoke the protection of the "business judgment rule," directors have a duty to inform themselves of all material information reasonably available to them). In *Brehm v. Eisner*, 746 A.2d 244 (Del. Super. 2000) the court over-ruled the portion of *Aronson* suggesting that abuse of discretion was the appropriate standard of review for Rule 23.1 actions (shareholder derivative suits).

liability for their good faith, informed, business decisions.¹⁶⁸ Courts are divided as to whether the business judgment rule is available to officers. Several Delaware decisions have held that the rule is available to officers¹⁶⁹ but a Pennsylvania federal court, applying Delaware law,¹⁷⁰ and a California appellate court have stated the opposite.¹⁷¹ Most recent authority from jurisdictions other than Delaware appears to suggest the rule is applicable to non-director officers.¹⁷²

As a practical matter, in order to challenge the management of an entity through a derivative suit and assert a breach of fiduciary duty, shareholders must identify a particular corporate decision they seek to challenge. Courts' review of a board decision under the business judgment rule is not "determined by reference to the content of the board's decision that leads to a corporate loss" but by "the good faith or rationality of the process employed" in making the decision.¹⁷³ Provided the decision can be attributed to any rational business purpose and the process appears disinterested and independent, directors are almost never found to have violated it.¹⁷⁴ Successfully asserting a failure to decide is even more difficult than asserting an improperly made decision. Omissions or failures to proactively manage or discuss a corporate issue rarely provide adequate basis for asserting a breach of fiduciary duties.¹⁷⁵

¹⁶⁸ The presumption may be rebutted where it is shown that a director had a personal financial interest in a transaction, lacked independence, did not inform himself of all information that was reasonably available, failed to exercise the requisite level of care, or stood on both sides of the transaction; in these circumstances, the director must show that his conduct meets the stricter standard of "entire fairness" to the corporation.

¹⁶⁹ See *Kelly v. Bell*, 266 A.2d 878, 879 (Del. 1970).

¹⁷⁰ See *Platt v. Richardson*, Fed. Sec. L. Rep. (CCH) 94,786, at 94,231 (M.D. Pa. 1989).

¹⁷¹ See *Gaillard v. Natomas Co.*, 256 Cal. Rptr. 702, 711 (1989).

¹⁷² See *Sparks & Hamermesh*. Some commentators argue that particularly when there is delegation of managerial authority by boards of directors, the business judgment rule "should apply to officers to whom the board's discretionary authority is delegated, at least where the officer is discharging such authority." *Id.* at 234. In theory, the principle that accountability should reflect actual knowledge and involvement, if applied, can result in a higher level of liability for officers than for directors. Officers may be subject to a higher standard of scrutiny than directors by virtue of their greater accessibility to corporate information and their more intimate knowledge of the day-to-day operations of the corporation. See, e.g., *Sparks & Hamermesh* at 218. Officers may be more limited than directors in relying on information and reports from third parties by virtue of their greater first-hand knowledge of the corporation's affairs. See *Masonic Bldg. Corp. v. Carlsen*, 128 Neb. 108 (1934) (Court held that members of an executive committee are bound to scan critically the detailed reports which are made to them and their diligence is therefore greater and the rule of their liability more strict than that of a director not a member of that committee). See *Bates v. Dresser*, 251 U.S. 524, 530-31 (1920) (Court imposed personal liability on officer who was "practically master of the situation" for fraud which was chargeable to his fault).

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¹⁷⁴ 10 UPAJBEL 911 University of Pennsylvania Journal of Business and Employment L. 915
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RULE

¹⁷⁵ 10 UPAJBEL 911 University of Pennsylvania Journal of Business and Employment L. 915
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RULE

Currently corporate omissions are inadequately considered in law and, to the extent standards for finding director and officer liability exist, they are exceedingly difficult to prove.¹⁷⁶ As mentioned in Section I, the leading case on the relationship between fiduciary obligations and omissions is the *Caremark* case, as further explained by *Stone*. A very narrow decision, it has not given birth to a line of successful omissions cases.¹⁷⁷ *In re Caremark Int'l Inc. Deriv. Litig.* held that corporate directors would be liable for failing to know about wrongdoing by subordinate employees only if they were guilty of “such an utter failure to attempt to assure a reasonable information and reporting system exists” as would establish a lack of good faith.¹⁷⁸ “Liability to the corporation for a loss may be said to arise from an unconsidered failure of the board to act in circumstances in which due attention would, arguably, have prevented the loss.”¹⁷⁹ In *Stone v. Ritter*, the standard was explained further, holding that directors may be liable for their mere omissions only if either the directors fail to implement a reporting and information system, knowing that they should have done so, or, having implemented such a system, they consciously failed to monitor or oversee its operations.¹⁸⁰ Because knowing wrongdoing is required, under *Stone v. Ritter*, negligently made decisions and negligently occurring omissions are, therefore, treated differently.¹⁸¹ Negligent omissions require the plaintiff to so show conscious disregard for duty.¹⁸² This standard is overly protective of mismanagement.

Instead of turning to corporate law as a source for optional default rules, we can look to corporate law to encourage responsible officer and director decisionmaking for the good of long term corporate development. Although the traditional perception of the role of corporate law was simply to stay out of the way of market transactions and not hinder risk taking by corporate managers,¹⁸³ in the aftermath of several large corporate scandals resulting from inadequate oversight¹⁸⁴ and managers with a desire for imprudent risk, it is time to correct the gaps in corporate law that allow for mismanagement with no consequences. In this way, the law can provide legal scaffolding toward a positive corporate developmental direction.

The reason courts have been protective of omissions is the same reason courts have fastidiously avoided discussions into what a director or officer should know – what basic competence requires on an ongoing basis. I would submit that instead of avoiding this discussion, law should embrace it. The law should specifically create an officer and director “duty to actively manage,” for

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¹⁸² 10 UPAJBEL 911 University of Pennsylvania Journal of Business and Employment L. 915
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the good of the entity itself. Turning back again to the case study of information security deficiencies, if an officer or director were to read any major newspaper on a given day it is almost guaranteed that s/he would encounter at least one article about data breaches, poor corporate information handling and identity theft. Instead of choosing to ignore the issue, as many officers and directors are currently doing, a duty to actively manage” would push that officer or director to consider the issue in context of his or her own company. S/he would recognize that the implications of weak data control are potentially severe and that strong data control is fundamental to preservation of information assets and accuracy and integrity of financial reporting. That would trigger an inquiry to internally knowledgeable individuals, such as the general counsel, or a brief discussion at the next meeting with other corporate decisionmakers, for example.

Looking to other areas of commerce, the law regularly imposes oversight, licensing and education requirements on professions.¹⁸⁵ For example, if a lawyer fails to know the state of the art of the law and loses a case because of it, it is malpractice. If a lawyer fails to complete continuing education requirements, her license will not be renewed. If an officer or director mismanages or fails to manage because of a failure to stay attuned to well-recognized serious matters of corporate concern, consequences should pertain. It is reasonable to impose on officers and directors an obligation to educate themselves to a minimal level on matters of corporate operations and to stay abreast of major problems facing the business community and oversee that they have been addressed internally.

Practically speaking, a highly developed insurance market already exists to cover officers’ and directors’ errors. Empowering shareholders to more easily “second guess” officers and directors on unreasonable actions, such as failing to implement adequate information control processes, either in unique transactional situations or in major management decisions, can lead to better disclosure and more careful decisionmaking on the part of officers and directors – more stable scaffolding for the development of the corporate cyborg.

b. Invigorating corporate waste doctrine

The corporate waste doctrine, a doctrine that essentially lies fallow today, provides a circumvention of the application of the business judgment rule. Delaware courts define corporate waste as a director irrationally squandering corporate assets.¹⁸⁶ In *In re The Walt Disney Co. Derivate Litigation* the

¹⁸⁵ For example, to be a cosmetologist in the State of New York, a candidate is required to undertake 1000 hours of study. <http://www.dos.state.ny.us/LCNS/instructions/0034ins.html> To be a board member, on the other hand, carries no explicit educational or knowledge requirements.

<http://www.dell.com/content/topics/global.aspx/corp/directors/us/en/nominate?c=us&l=en&s=corp&~section=000>

¹⁸⁶ *Disney*, 907 A.2d at 748-49 (citing *Brehm v. Eisner*, 746 A.2d 244, 263 (Del. 2000)).

Delaware court stated that a finding of waste is appropriate only in “unconscionable cases” where the directors “irrationally squander or give away corporate assets.”¹⁸⁷ “A transfer of corporate assets, that serves no corporate purpose” might constitute waste.¹⁸⁸ Similarly, a transfer of corporate assets might constitute waste if no “consideration at all is received.”¹⁸⁹

To prove waste, the plaintiff must establish that an exchange was “so one-sided that no business person of ordinary, sound judgment could conclude that the corporation received adequate consideration.”¹⁹⁰ In light of the difficulty of proving this standard, unsurprisingly Delaware courts rarely find that directors or officers committed corporate waste. While the business judgment rule requires care in process of decisionmaking, the waste doctrine examines substantive due care in decisionmaking by officers and directors.¹⁹¹ A claim of waste alleges that the consideration received by the company in a particular transaction is “so disproportionately small as to lie beyond the range at which any reasonable person might be willing to trade.”¹⁹² Because the Delaware Supreme Court has held that every act of waste constitutes bad faith, upon a finding of waste, neither the optional exculpatory provisions of Delaware law, nor the business judgment rule, would protect a director or officer from liability.¹⁹³ Using the language of contract law, in instances where a problem of legally sufficient consideration exists for a corporate transfer of assets, regardless of the external impartiality of the decisionmaking (or lack thereof), a basis for a claim should in theory exist. This prohibition on asset transfers

¹⁸⁷ *Id.* at 74-75

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¹⁹⁰ *Id.* at 748.

¹⁹¹ *Brehm v. Eisner*, 746 A.2d 244, 262-64 (Del. 2000) (suggesting that business judgment rule requires “process due care” while waste doctrine inquires into “substantive due care”). See also, e.g., 96 NWLR 675 IN PRAISE OF PROCEDURE: AN ECONOMIC AND BEHAVIORAL DEFENSE OF SMITH V. VAN GORKOM AND THE BUSINESS JUDGMENT RULE Winter 2002

¹⁹² The Supreme Court has defined corporate waste as majority shareholders misusing corporate assets for its own private purposes and not for their benefit of the corporation. See, e.g., *Brooks*, 717 So. 2d at 761; *Banks v. Bryant*, 497 So. 2d 460, 464 (Ala. 1986); *Finance, Investment, & Rediscout Co. v. Wells*, 409 So. 2d 1341, 1342 (Ala. 1981) (upholding jury award on claim of corporate waste where majority shareholder misused corporate assets and usurped corporate opportunities). The Supreme Court has held that the corporation alone has standing to assert a such claim, because the injury to a minority shareholder is “incidental” and “indirect” while the injury to the corporation is direct. See *Pegram v. Hebding*, 667 So. 2d 696, 702 (Ala. 1995) (“It is well settled that when injuries sought to be recovered by a plaintiff are incidental to his or her status as a stockholder, the claim is a derivative one and must be brought on behalf of the corporation.”); *Galbreath*, 433 So. 2d at 457 (“Waste of corporate assets by majority stockholders is primarily an injury to the corporation itself. The injury to minority stockholders is secondary.”). Claims must be brought derivatively on behalf of the corporation. See *Brooks*, 717 So. 2d at 767 (holding that “a minority shareholder cannot recover on his own behalf for a director’s waste of corporate assets, even in the close corporation context”); *Distronics Limited v. Disc Manufacturing, Inc.*, 686 So. 2d 1154, 1164 (Ala. 1996) (rev’d on other grounds) (holding individual claim for misappropriation of corporate assets properly dismissed, because “[o]nly through a derivative action can a stockholder seek redress for injury to the corporation in which he owns stock”). See also, e.g., 63 ALLAW 315 *Alabama Lawyer SHAREHOLDER RIGHTS, THE TORT OF OPPRESSION AND DERIVATIVE ACTIONS REVISITED: A TIME FOR MATURE DEVELOPMENT?* September, 2002

¹⁹³ *Disney* at 749 (referring to *White v. Panic*, 783 A.2d 543, 551-55 (Del. 2001) (citing *J.P. Stevens & Co. S’holders Litig.*, 542 A.2d 770, 780-81)).

seeks to prevent unreasonable self-harm to the corporation,¹⁹⁴ even when the decisionmaking process appears unbiased.¹⁹⁵

As such, this waste doctrine should be resuscitated in a more potent formulation. As the example of information security deficits illustrates, companies are not vigilantly monitoring their information assets. Strengthening the waste doctrine offers one way of defending the corporate cyborg from mismanagement and a future of data “transfers” lacking consideration.

IV. Conclusion

[Grand summary]

¹⁹⁴ Business ethicists might argue that irrationally risky corporate behavior is violative of a widely acknowledged “duty not to harm.” See, e.g., Ruggie, J. 2008. Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development. Report to the Human Rights Council.; Dunfee, T. 2006. Do firms with unique competencies for rescuing victims of human catastrophes have special obligations? Corporate responsibility and the AIDS catastrophe in Sub-Saharan Africa. *Business Ethics Quarterly*, 16: 185-210. In the context of multinationals’ activity in other countries, Prof. Donaldson has argued that specific universal moral constraints mandate that businesses abide by a duty to cause no harm, even in the absence of explicit legal requirements. Donaldson, T. 1989. Moral minimums for multinationals. *Ethics and International Affairs*, 3: 163-182. Prof. Hsieh has argued that this duty extends to normal business activity. He argues that negative externalities from corporate business decisions frequently give rise to harms, harms which are not justified by alleged wealth creation. Hsieh Does Global Business have a Duty to Promote Just Institutions, *BEQ*

¹⁹⁵ The hallmark of the business judgment rule is its discretion to corporate decisionmakers, and the corporate form is partly designed to promote economic risk. The argument in favor of providing wide latitude in decisionmaking asserts that “[i]f courts were permitted more freely to ‘second guess’ the terms of corporate contracts (on for example a ‘reasonableness’ ground) there would be a substantial disincentive created for officers and directors . . . to approve risky transactions.” [cite] Although calculated risk is frequently the key to innovation, it is unclear that subsidizing unreasonably risky decisionmaking, even if pursuant to appropriate process, is a net good. If a major decision is more likely to harm the corporation than to develop it, it should only be made with great trepidation. First and foremost, officers and directors should actively manage in a way that seeks to develop the corporation; if a reasonable person would assume that a particular course of action will lead to significant harm to the corporation, corporate decisionmakers should reconsider the decision.