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**SUSTAINABILITY BY DISSOCIATION:
CATEGORIZATION, DIVESTITURES AND
ORGANIZATIONAL BOUNDARIES**

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by
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For Kara – my lobster

ABSTRACT

Sustainability has emerged as an increasingly important category of concern. Reflecting this shift, organizations are being evaluated on the basis of sustainability criteria. Firms in particular may find themselves rated as unsustainable because of their portfolios of businesses. I propose a cultural perspective on organizational boundaries. I theorize that when confronted with negative sustainability ratings, rather than decoupling their unsustainable practices symbolically or displacing them substantively, firms might instead choose to divest them altogether. Seen from this perspective, firms achieve sustainability by dissociation. Using an unbalanced panel of diversified firms from 1992 to 2010, I test whether negative sustainability ratings are related to divestitures, and whether the strength of this relationship is moderated by the extent to which firms are targeted by shareholder activists, and whether or not firms engage in sustainability reporting. Drawing on my analysis, I discuss implications for our understanding of organizational boundaries, as well as divestitures research, categorization theory, and sustainability research.

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ACKNOWLEDGMENTS

By October 2006 I had reached a point of profound doubt. The world no longer seemed to work the way I had been taught; prosperity and success no longer brought fulfillment. Kara, my best friend and partner, had been grappling with these issues too. In the midst of this search, late one night she sat up in bed: “I know what we should do. You should become a professor.” Minutes later we were in our office trying to figure out how one went about becoming a professor, and whether after 13 years in corporate America it was possible to navigate such a transformation.

.....

Kara first walked into my life on a blind date in 1995. I had graduated from Cornell the year before and Kara was nearly finished at Penn State. We had each separately concluded ahead of time that the match was unlikely to work, as it had been arranged by our parents. But by the second date, to our complete surprise, Kara and I had each privately realized we were in love – *love at second sight* we now call it – though it took several months before we made it common knowledge. By this time the dot-com boom was underway. With her dad’s encouragement, and the support of our families, we packed our few worldly possessions in our little car – the “blowfly” – and headed for Silicon Valley. When I proposed one night before we left, Kara said she would marry me, changing the trajectory of our lives forever.

Waiting to show us the ropes in Silicon Valley was my good friend and fraternity brother Shannon Murray. In California, Kara and I quickly found jobs and launched our careers. During this period, Bobby Napiltonia and Patrick Cosson provided me with important opportunities for development and growth. When the time came to move closer

to our families and friends, we made a bet: the first one to get a job offer that included a relo package was the winner. Kara won hands down. Moving to the Philadelphia area brought us closer to our families, and allowed us to re-connect with many of Kara's closest college friends and their spouses and partners. During this period Keith Phillips and Paul Wilmore were important mentors as I made the transition from individual contributor to middle manager. At EchoFactor, Andrea Michalek was the best cofounder and entrepreneurial partner I could have imaged.

By the time I arrived at Refinery, the dot-com bubble had burst. The next five years were a period of rapid professional and personal growth. At Refinery I had the opportunity to work with literally hundreds of remarkable colleagues and clients. But there were also new challenges and disappointments. It was during this time that I first began to realize the possibility of alternate paths. At imc² I leaned further into this inquiry. In particular, the folks at Stagen inspired me to ask even more questions, and without knowing, helped me develop the courage to do something different.

.....

When Kara sat up in bed in October 2006, she voiced the answer to a question that had been pregnant for several years. The idea immediately resonated with us. Or, as I now say, it had verisimilitude. Becoming a professor seemed to play to my strengths, while moving us in a direction to which we had slowly been turning. But the transformation also meant tremendous work and sacrifice. There were GMATs to be taken and admission essays to be written, not to mention courses to take, exams to pass and a dissertation to write. But more than this, on a personal level, it meant leaving the home we loved in Philadelphia, downsizing our lifestyle and moving away from our

network of friends and colleagues. Ten years before, Kara had willingly leaped into the unknown with me. Now she was ready to do it again.

Thankfully, new friends and colleagues were waiting for us. We became fast friends with our neighbors in State College – especially Michelle DiMidio and Wes Hackenberger and the rest of the Stonebridge and Friends School communities – all of whom opened their homes and hearts to us over the last five years. We will miss you all. At Penn State, I soaked up as much as I could from my seminar instructors: Linda Treviño, Barbara Gray, Tim Pollock, Don Hambrick, Wenpin Tsai, Vilmos Misanygi, Raghu Garud, Dave Harrison, Susan Stauss and Melissa Hardy. A special thanks to Len Lawlor for allowing me to wander into his philosophy classroom, not once, but twice. I was blessed with generous teaching mentors: Linda Treviño and Chuck Snow. Arvind Rangawamy and Gerry Susman helped me find the resources required for my dissertation, including several Smeal College of Business Research Grants and a Special Grant from the Dean’s Office. My classmate Niyati Kataria and the students before and after me offered assistance and encouragement throughout. Thanks to Barbara Gray and Bill Ross for serving on my comprehensive committee, and a huge thank you to my dissertation committee.

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After years spent listening to me rehearse one part or another at the dinner table, Noah and Lucy wondered aloud if I would *ever* finish the honor code paper. I believe it is finally finished! Your sparkling eyes and wide smiles are the best reward at the end of a long day. Thanks for all your love and support, and for embracing our new life.

.....

For our entire 17 year relationship, Kara's confidence, encouragement, and sacrifice have been my constant companions. Over the last five years, she has read and edited all my papers, often multiple times. My dissertation is no exception: it is organized, readable – and done – thanks to her. Along the way she has listened me through countless other projects, problems and puzzles. Our partnership is so complete that I could never name all her contributions. The closest I can come is *freedom*; Kara provided me with the freedom to pursue an emergent passion. Anything I have or will achieve is her achievement as well. Our entanglement is complete; the collaboration speaks. Kara, thank you for all that you have enabled, all that we have accomplished together, and your willingness to leap with me into the unknown one more time.

-- **Joel Gehman**
State College, Pennsylvania
June 27, 2012

“Dirt is dangerous... But what counts as dirt? It depends on the classifications in use.”

– Mary Douglas (1966/2005: x, xviii)

CHAPTER 1. INTRODUCTION

How do emerging sustainability concerns affect organizational boundaries?

Commonly defined as meeting the needs of the present without compromising the ability of future generations to meet their needs (World Commission on Environment and Development, 1987: 43), sustainability has recently emerged as an important category of concern. For organizations, emergent sustainability concerns have the potential to highlight associations that were previously irrelevant, and perhaps even invisible, such as carbon emissions, working conditions and product attributes. Through a process I call “categorical contamination,” organizations can become tainted by their associations with such emergent categories of concern. Building on insights from several strands of cultural sociology, I theorize that one way organizations are likely to respond to categorical contamination is through dissociation – that is, by severing their connections with categorically contaminated entities. I empirically test this proposition by analyzing the extent to which diversified firms respond to negative sustainability ratings by divesting businesses in their portfolios.

Culture and Organizational Categories

Notably, my research builds on prior work which has taken a cultural perspective on categories (Douglas, 1966/2005, 1970/1996, 1986). For instance, organizational scholars have found that cultural categories are consequential in a variety of ways, and that organizations are likely to play an active role in shaping how they are categorized (Porac, Wade, & Pollock, 1999; Ruef & Patterson, 2009). Such an approach is also compatible with prior research regarding the influence of institutional forces and social movements on corporate control (Davis & Thompson, 1994; Fligstein, 1990).

More recently, Zuckerman (1999, 2000) studied divestitures from a categorization perspective, showing that diversified firms suffered what he termed “illegitimacy discounts” to the extent that their businesses failed to obtain coverage by appropriate securities analysts. From this perspective, the decision to spin-off Darden Restaurants was explained as the result of General Mills’ failure to obtain appropriate analyst coverage, in this case for its Red Lobster and Olive Garden restaurants. Rather than suffering the consequences of coverage failures, Zuckerman showed that between 1985 and 1994 many large American firms acceded to this “categorical imperative” by divesting their “unrated” businesses, thereby bringing their organizational boundaries into better alignment with the industry categories recognized by securities analysts.

Zuckerman’s work demonstrates empirically how cultural categories, once institutionalized (Douglas, 1986), can easily lead to *ratings neglect* on the part of audiences and critics. By comparison, my focus is on the consequences of *negative ratings* by audiences and critics, given the emergence of new categories of concern. Whereas Zuckerman’s research setting included robust institutions and presumably stable categories, I am interested in situations in which institutions have yet to form and new categories of concern are still emerging. In these situations, rather than leading to coverage lapses, the emergence of new categories of concern can easily *attract* coverage by analysts and other stakeholders (Beunza & Garud, 2007; Callon, 1998; Freeman, 1984). As a result of this process, firms may find themselves contaminated due to emergent evaluations of their pre-existing associations. In such situations, I argue that the impetus for corporate divestiture is not the absence of coverage, but the contamination that results from negative coverage. In other words, inclusion in the “unsustainability”

consideration set highlights a firm's unsustainable associations, with potentially significant consequences for its boundaries.

Emergence of Sustainability as a Cultural Concern

What is sustainability and how did it emerge as a cultural concern? In 1987, the United Nations World Commission on Economic Development (WCED) offered what has become the most frequently cited definition of sustainability – “meet[ing] the needs of the present generation without compromising the ability of future generations to meet their needs” (WCED, 1987: 43). Reflecting on the commission's report, at least three distinct facets of sustainability become evident (Garud & Gehman, 2012). First, sustainability “must not endanger the natural systems that support life on earth: the atmosphere, the waters, the soils, and the living beings” (WCED, 1987: 45). This facet of sustainability emphasizes its sociotechnical embeddedness, and points to the shifts in “selection environments” that will be faced by almost any sector of operation. Second, sustainability “requires that societies meet human needs both by increasing productive potential and by ensuring equitable opportunities for all” (WCED, 1987: 44). Here the emphasis on “equitable opportunities” draws attention to another facet of sustainability – its relationality – and the need to reconfigure the corresponding networks of associations between human and material elements. Finally, as is evident in the definition itself, sustainability implicates comparisons between current and future generations (WCED, 1987: 43). This third facet suggests there will be intertemporalities involved in reconciling past and future in the present.

Organizational Responses to Sustainability Concerns

Together, these facets implicate the meanings that different actors accord the term sustainability (Jasanoff, 2004, 2010). Consequently, sustainability issues can well be understood from a cultural perspective. Such sustainability considerations have the potential to reshape what is valuable and what is not, perhaps even leading to new orders of worth (Boltanski & Thévenot, 2006; Stark, 2009). Already there are some notable examples of how sustainability concerns have transformed the significance of associations that were previously irrelevant and perhaps even invisible, such as carbon emissions (Callon, 2009; Kolk, Levy, & Pinkse, 2008), working conditions (Gereffi & Christian, 2009; Khan, Munir, & Willmott, 2007), supply chains (Linton, Klassen, & Jayaraman, 2007; Seuring, Sarkis, Müller, & Rao, 2008) and product attributes (Geibler, Liedtke, Wallbaum, & Schaller, 2006), transforming them into visible issues, sometimes almost overnight.

In other words, as sustainability has emerged as a category of concern, even associations that were once acceptable, or at least inconsequential, may be seen as tainted owing to their emergent categorization as unsustainable. As the visibility and salience of sustainability concerns has grown, continuing such unsustainable associations has become increasingly problematic, perhaps even “deeply discrediting” for the organizations so involved (Goffman, 1963: 3).

For firms, one of the challenges of sustainability is how to respond to shifts and transformations such as these. One possibility is that firms might *displace* unsustainable associations with more sustainable ones, for instance by reducing their emissions, modifying their working conditions, or reformulating their products (Chatterji & Toffel,

2010; Delmas & Toffel, 2004; Hoffman, 1999). For instance, Chatterji and Toffel (2010) found that firms with negative environmental ratings are more likely to decrease their toxic emissions than either unrated firms, or firms with positive or mixed ratings.

Undertaking transformations such as these may be quite formidable. Indeed, a variety of research has demonstrated the difficulties of abandoning associations from the past, owing to issues such as sunk costs, learning effects, organizational inertia and network externalities, among other issues (Arthur, 1989; David, 1985). Even if firms are able to overcome these challenges, they may find that their transformed businesses still have the taint of unsustainability. For instance, it has now been nearly 25 years since the *Exxon Valdez* oil spill. Despite spending billions in cleanup costs, completely revamping its safety practices, and becoming one of the safest companies in the oil and gas industry, Exxon Mobil has been unable to distance itself from these associations. In other words, even when firms are motivated to do so, becoming sustainable is likely to entail significant “translation” costs as firms reconfigure their networks of associations (Callon, 1986). As a result, firms may be reluctant or unable to undertake such efforts.

Another approach firms might take is to obfuscate their unsustainable associations by attempting to *decouple* their symbolic practices from their substantive practices (Meyer & Rowan, 1977). Rather than transforming their reality, firms might simply transform their rhetoric (Fiss & Zajac, 2006; Green, 2004; Sastry, Bernicke, & Hart, 2002). Such decoupling in response to sustainability concerns is popularly known as “greenwashing.” However, given the magnitude and the transparency of the issues involved, firms may find that decoupling is both increasingly difficult and potentially risky. Indeed, should discrepancies between their sustainable “talk” and their

unsustainable “walk” come to light, the consequences could be severe.

For instance, for many years BP promoted itself as “beyond petroleum” and was frequently praised as a sustainability leader; however, following the BP Macondo blowout in the Gulf of Mexico, the idea of a sustainable BP has lost credibility. Other scholars have even questioned the possibility of separating the symbolic from the material (Douglas, 1966/2005; Hallett & Ventresca, 2006; Latour, 2005; Pinch, 2008). Thus, even if firms are willing to transform themselves symbolically in response to sustainability concerns, they may find it difficult to sustain such decoupling over time.

A third option, and the one I will explore in my dissertation, is the possibility that diversified firms might *dissociate* themselves from emergent sustainability concerns. When entangled by unsustainable associations, rather than transforming themselves either substantively or symbolically, firms might simply sever their tainted connections altogether. Better to eliminate unsustainable associations than risk the whole firm becoming unsustainable by association. In particular, I theorize that for organizations associated with categorically contaminated entities, divestitures serve as a mechanism for dissociation. Through divestitures firms are able to dissociate themselves from unsustainable connections – relationships that in all likelihood were unproblematic at one point in time, but that later became tainted.

Theoretical Foundation

In proposing the concept of categorical contamination, I combine insights from literatures on categorization theory (Lakoff, 1987) and the sociology of associations (Latour, 2005). The resulting “categorization by association” perspective, conceives of organizations as comprised of both social and material associations, the ongoing

reconfigurations of which are consequential for the categories ascribed to organizations (Bowker & Star, 1999; Garud, Gehman, & Karnøe, 2010). Whereas prior studies have emphasized the formation of associations and the processes whereby linkages are made durable, I am interested in the extent to which categorical contamination might provoke firms to break otherwise strong and stable associations. In particular, given the emergence of sustainability concerns, I theorize that organizations are likely to respond to categorical contamination via dissociation, that is, by severing their connections with categorically contaminated entities, rather than allowing the entire firm to suffer the taint of unsustainability by association. As a practical matter, one way diversified firms might accomplish this is by divesting their contaminated businesses.

Research Setting

The setting for my inquiry is the emergence of sustainability ratings and their influence on firm divestitures. Using an unbalanced panel of diversified firms over a 19-year period, I test whether negative sustainability ratings are related to divestiture events, and whether the strength of this relationship is moderated by a firm's sustainability reporting practices and activism on the part of a firm's stakeholders. Drawing on my analysis, I propose a cultural perspective on organizational boundaries, as well as implications for divestiture research, categorization theory, and sustainability research.

Dissertation Overview

In Chapter 2, I review prior explanations for corporate divestitures, as well as the emergence of sustainability concerns. I also discuss the sociology of associations perspective that informs my dissertation, along with the concept of categorical contamination. In Chapter 3, I develop propositions about the effects of categorical

contamination on dissociations as well as potential cultural moderators of this relationship. In Chapter 4, I describe my sample, variables and model estimation techniques and in Chapter 5, I present my results. Finally, in Chapter 6 I conclude by discussing the contributions of my dissertation, as well as sketching out the possibilities it suggests for a cultural perspective on organizational boundaries.

CHAPTER 2. LITERATURE REVIEW

In this chapter, I begin by providing a brief history of the concept of sustainability and its transformation into an increasingly visible and potentially salient cultural concern for organizations. I then review pertinent studies on the history of diversified firms and related explanations for corporate divestitures. Next, I re-interpret prior explanations for corporate divestitures in light of emergent sustainability concerns, motivated by a brief case study of General Electric. Finally, I present the theoretical orientation of my research: categorization theory (Douglas, 1966/2005; Lakoff, 1987; Rosch, 1978) and the sociology of associations (Latour, 2005).

The Concept of Sustainability

Before exploring how cultural concerns impact organizational categories through the lens of sustainability, it is important to understand the concept in terms of its origins and evolution. Although some scholars have traced the concept of sustainability back to forest management practices developed in Germany in the early 1700s (Bosselmann, 2008; Schmuck & Schultz, 2002), more typically, its origins are linked to events that unfolded during the 1970s (Dixon & Fallon, 1989; Kidd, 1992). It was during this time period that sustainability began to be publicly discussed, initially in specialized books, academic articles, and at various policy conferences (e.g., Goldsmith, 1972; Solow, 1974a). By the late 1980s, sustainability had begun to crossover, becoming somewhat more mainstream, with discussions appearing in popular books, magazines and newspapers.

Despite its growing ubiquity, a universally accepted definition of sustainability remains elusive. So far, at least 100 definitions have been cataloged, dating back to the

middle ages (Schmuck & Schultz, 2002). Not only is sustainability a concern for societies, it is also a concern among numerous branches of science. For example, economists have long considered the problems of exhaustible resources (Devarajan & Fisher, 1981; Hotelling, 1931), intergenerational equity (Solow, 1974b), and the distribution of rents from exhaustible resources across generations (Hartwick, 1977). There are also those who have considered the governance of common-pool resources (Agrawal, 2001) and the problem of externalities (Buchanan & Stubblebine, 1962; Coase, 1960; Dahlman, 1979). Following the general pattern of other concerns and controversies, the production of sustainability science has not settled these disputes, but in fact multiplied them. Speaking about climate change, as Sarewitz (2004) puts it, paradoxically, “science makes environmental controversies worse.”

While definitional plurality worries some, others have demonstrated that sustainability is full of meaning despite any definitional vagueness (Solow, 1993). In this paper, I draw from the recent discourse on sustainability. In this regard, the Brundtland Commission has been widely cited for its definition of sustainability as “meet[ing] the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987: 43). This conception of sustainability rejects “intergenerational tyranny” (Achbar & Abbott, 2005) in favor of equity within and between generations and species (Schmuck & Schultz, 2002). As a result, sustainability recognizes the rights of future generations to sufficient ecological and economic capacity (Padilla, 2002). For organizations the challenge is to assess the extent to which their

impact threatens present needs or future generations (Sharpe, 2001).¹

Corporate Divestitures Revisited

Starting in the 1920s and continuing into the 1950s, the diversified firm emerged as the predominant form of industrial organization (Chandler, 1962). This trend accelerated during the 1960s and 1970s with the emergence of the firm-as-portfolio logic, setting off a wave of conglomerate mergers (Fligstein, 1991). By 1980, fewer than 25% of the largest U.S. firms generated all their revenues within a single industry (Davis, Diekmann, & Tinsley, 1994). But then quite suddenly, starting in the 1980s and continuing into the 1990s, conglomerate firms embarked on a massive wave of divestitures, defined as selling-off assets, spinning-off operations by distributing shares in new companies to existing shareholders, or carving-out new companies through initial public offerings (Brauer, 2006; Villalonga & McGahan, 2005). By the close of the twentieth century, large firms had become considerably less diversified than at any point in the preceding 100 years (Davis et al., 1994).

As these events unfolded, scholars launched a stream of research on the divestitures, especially its antecedents (e.g., Duhaime & Grant, 1984; Harrigan, 1982; Montgomery, Thomas, & Kamath, 1984). Over the next 30 years, the primary explanation for divestitures offered by this line of research has been related to economic and financial performance. In particular, these studies have found that conglomerate firms tended to financially underperform their more focused competitors; the greater the

¹ Note, however, that resource distribution across species and generations is a normative issue as resource distribution is within generations (Johanson, 1991). The difference is that nature and the unborn are unable to represent their interests, thus their utility functions are our projections. Such projections depend on critically ethical, technological and substitutability assumptions (Solow, 1974b). For example, are natural capital and human capital interchangeable? For a more detailed discussion, see Osberg and Sharpe (2005).

underperformance, the more likely a firm was to engage in divestitures (Ravenscraft & Scherer, 1987). Subsequent cross-national work suggests that the American experience may be due in large part to the presence of robust institutions that allow markets to function without costly transactions (Khanna & Palepu, 1997; Khanna, Palepu, & Sinha, 2005; Teece, 1980).

Departing from explanations rooted in market efficiency, a second and more recent explanation takes what might be termed a socio-cognitive perspective (e.g., Garud & Rappa, 1994; Porac, Thomas, Wilson, Paton, & Kanfer, 1995; Tripsas & Gavetti, 2000), arguing that underperformance per se may not be a sufficient explanation for divestiture. Instead, it has been shown that failure to obtain coverage by the appropriate securities analysts prompted large firms to divest unrelated businesses or suffer discounted valuations during the 1985-1994 time period (Zuckerman, 1999, 2000). On this view, the socio-cognitive work of intermediaries was a critical mechanism in the constitution and performance of poor performance.

Looking across the last 25 years of research, Brauer (2006: 777) concluded that “most of our knowledge is based on data from the 1980s and that very little attention has been paid to wider institutional contexts. Even more recent studies have continued to use data from the 1980s... Thus, it has remained unclear how time dependent... our current findings are.” Having established that prior studies related to the demise of the conglomerate form were rooted in the contingencies of the 1980s and 1990s, Bauer (2006) went on to question the continuing validity of such explanations for divestitures, suggesting the need to consider new alternative theoretical explanations.

Despite Brauer’s calls for new lines of inquiry, scholarly interest in divestitures

has actually waned, especially relative to other organization boundary phenomena such as mergers, acquisitions and alliances (Lee & Madhavan, 2010), even though managerial interest has remained high (e.g., Dobbs, Huyett, & Koller, 2009; Mankins, Harding, & Weddigen, 2008). Perhaps more intriguing, from an empirical standpoint, rather than subsiding as one might have expected, divestiture activity has actually increased over the past 20 years. In 1995, at the very moment Zuckerman’s (1999, 2000) studies leave off, there is a discernible inflection point in divestiture activity by large firms.

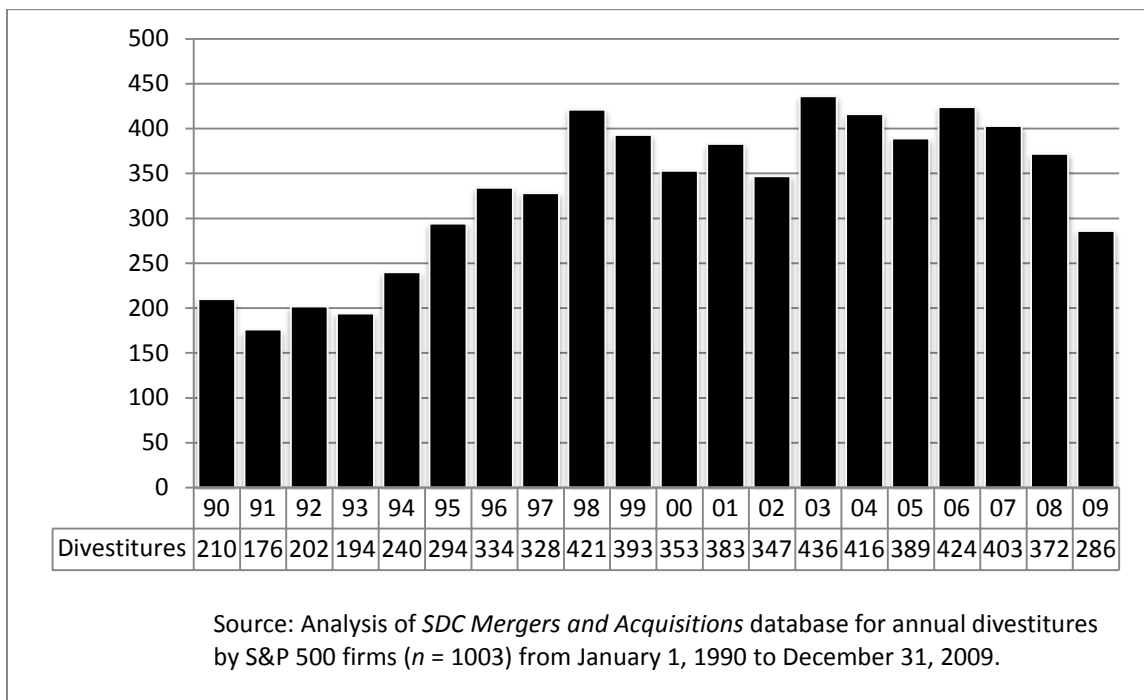


Figure 1. Annual Divestitures by S&P 500 Firms, 1990-2009.

After averaging approximately 200 divestitures per year during the first half of the 1990s, divestiture activity climbed to 350 per year during the second half of the 1990s, and reached almost 400 per year during the opening decade of the twenty-first century (see Figure 1). Paradoxically, in the decades since the “demise” of the conglomerate firm, large firms have completed thousands of divestitures, suggesting that prior explanations may indeed have been historically and culturally contingent, just as some scholars have

suggested (Davis et al., 1994; Fligstein, 1990).

Divestitures and Emergent Sustainability Concerns

In an effort to address these issues, Brauer (2006: 779) proposed that “future divestiture research efforts should also more strongly address issues of public concern.” Recently, sustainability has emerged as just such a public concern (Dixon & Fallon, 1989; Montiel, 2008; Pezzey, 1992). In many cases, sustainability concerns have transformed the significance of associations that were previously irrelevant, and perhaps even invisible, such as carbon emissions, working conditions and product attributes, turning them into potentially contaminating issues (Garud et al., 2010; Khan et al., 2007). In short, associations that were once acceptable may now be seen as contaminated owing to their categorization as unsustainable.

Reflecting these changes, many companies now consider sustainability as an integral part of corporate strategy, product innovation, and reputation building, among other issues (Bain & Company, 2008; Boston Consulting Group, 2009; McKinsey & Company, 2010). For instance, Accenture reported that 93% of CEOs consider sustainability to be important to their company’s future success (Accenture, 2010). Even firms that ignore sustainability issues are finding themselves subjected to sustainability ratings, much the way securities analysts have traditionally evaluated public companies (Chatterji & Toffel, 2010). Thus, whether by choice or compulsion, firms have been confronted with questions regarding sustainability.

As a concrete example, consider the case of General Electric (GE). In September 2006, the company agreed to sell its advanced materials business for \$3.8 billion. Eight months later, it announced the sale of its plastics business for \$11.6 billion. Together,

these two businesses comprised GE's chemicals division, employed more than 16,000 people worldwide, and produced materials used in diverse applications ranging from bulletproof glass and astronaut visors to water bottles and iPods. Both businesses were strong financial performers, leaders in their respective market segments, and contributed materially to GE's revenues and profits.² Moreover, Jeff Immelt, the company's Chairman and CEO at the time, was not an outsider, but had been promoted from within, and was likely personally attached to these businesses, having spent most of his 20-year career at GE with the plastics division.³ In other words, based on prior studies of divestitures, these are not businesses GE would have been expected to sell. And yet, with these two transactions, GE effectively exited the chemicals industry, businesses it had nurtured and grown for more than 100 years.

By comparison, GE's divestitures appear to coincide closely with emerging sustainability concerns. For instance, in May 2005 the company announced the launch of its Ecomagination strategy, pledging to double its spending on research and development related to "eco-friendlier" technologies and services – from \$700 million in 2004 to \$1.5 billion in 2010, and setting a goal to double related revenues – from \$10 billion in 2004 to at least \$20 billion in 2010. GE also announced plans to reduce its greenhouse gas

² In 2006, 2005, and 2004, total revenues were \$6.64, \$6.61 and \$6.07 billion, respectively. Profits were \$0.67, \$0.87 and \$0.57 over the corresponding periods. GE Advanced Materials was acquired by Apollo Management, a private equity firm, and renamed Momentive Performance Materials. GE Plastics was acquired by Saudi Basic Industries, a company controlled by the Saudi government, and renamed SABIC Innovative Plastics.

³ Immelt joined GE in 1982 after graduating from Harvard Business School. Following his training rotation, he was assigned to GE Plastics, where he remained until 1989. He returned again to the plastics division from 1992 to 1997. Immelt's first day as Chairman and CEO was September 10, 2001. See Bartlett & McLean, 2006.

(GHG) emissions by 1%, while improving its energy efficiency 30% by 2012.⁴ At the same time, GE was confronted with shareholder proposals concerning sustainability, growing media scrutiny over its cleanup of polychlorinated biphenyls (PCBs) in the Hudson River, and new evaluations of its overall sustainability profile.

In other words, based on the evidence one might reasonably infer that these two divestitures were motivated by sustainability concerns, or perhaps more accurately, by concerns about the taint of unsustainable associations. By divesting its chemicals division, GE went from producing 4.92 million pounds of toxic emissions in 2005 to just 0.42 million pounds in 2007, a more than 90% reduction. Over the same period, GHG emissions were reduced from 11.12 to 7.02 million metric tons of carbon dioxide equivalents (MMCO₂e), a nearly 37% reduction, all a direct result of these divestitures. Finally, GE transferred liabilities for its 510-acre Washington, West Virginia plant, its 700-acre Selkirk, New York plant, and its 254-acre Pittsfield, Massachusetts plant, all of which were considered “superfund” sites. Seen in this context, these divestitures appear to have offered GE a mechanism for severing its association with businesses that were increasingly categorized as unsustainable.

The GE example speaks to a core question that confronts all businesses and lies at the very heart of corporate strategy – “What business should we be in” (Andrews, 1971)? To the extent that considerations of sustainability (and unsustainability) now play an important role in corporate strategies – as they appear to have done in the case of GE’s decision to divest its chemicals division – further research appears warranted. Indeed, few studies have considered the potential effects of sustainability on fundamental strategic

⁴ GE’s GHG emissions were otherwise expected to increase 40% by 2012.

issues such as these. In particular, in this dissertation I consider the extent to which sustainability, conceptualized as an emerging category of concern, affects organizational boundaries.

A Cultural Perspective on Organizational Boundaries

My focus on emerging categories of concern answers recent calls for greater attention to “problem-driven boundary phenomena,” (Santos & Eisenhardt, 2005: 505), especially “issues of public concern” (Brauer, 2006: 779), though these authors did not suggest the specific agenda I am pursuing. In an effort to move toward a cultural perspective (Douglas, 1966/2005; Swidler, 1986) on organizational phenomena (Lounsbury & Glynn, 2001; Swidler, 1986; Weber & Dacin, 2011; Wry, Lounsbury, & Glynn, 2011), I build on two literatures: categorization theory (Douglas, 1966/2005; Lakoff, 1987; Rosch, 1978) and the sociology of associations (Latour, 2005).

Prior literature on categories has shown that they are consequential to organizations in a variety of ways, and that organizations play an active role in shaping how they are categorized (Durand, Rao, & Monin, 2007; Lounsbury & Rao, 2004). For instance, building on cultural approaches to categorization (Douglas, 1966/2005; Lakoff, 1987; Rosch, 1978), Porac and colleagues (1999) found that large companies manage how they are evaluated by selectively defining their peer groups, especially when faced with issues such as poor firm performance and activist shareholders. Others have investigated imposed categorizations. In their study of Dun and Company, a credit rating agency, Ruef & Patterson (2009) found that when rated businesses were members of multiple categories it was not initially problematic, but that over time, as the system of industry categories became more established, “boundary violations” were subject to

increased attention and penalty by credit reporters, prompting firms to respond accordingly.

Another literature to have theorized the importance of associations between diverse social and material actors is the sociology of associations (Latour, 2005).⁵ First developed in the domain of science studies (Callon, 1986; Latour, 1986), the sociology of associations perspective has been applied to studies of organizing (Czarniawska, 2008; Hutchins, 1995), values (Gehman, Treviño, & Garud, 2012), routines (Feldman & Pentland, 2003), innovation (Garud, Gehman, & Kumaraswamy, 2011), knowing and learning (Gherardi, 2006; Nicolini, 2009), information technology (Orlikowski, 2007) and institutional change (Garud, 2008; Garud, Jain, & Kumaraswamy, 2002).

More recently, Garud and Gehman (Garud & Gehman, 2010, 2012; Garud et al., 2010) have applied the sociology of associations to the domain of sustainability both theoretically and empirically, together with related issues such as climate change, nuclear power and electric vehicles. Applied to the question of category emergence and transformation, the sociology of associations adds to our understanding in several ways. First, it invites consideration of the multiple factors that are likely to be involved, including not only institutional forces, but also entrepreneurial efforts, stakeholder pressures and material realities (Garud et al., 2010). Second, it suggests that the categorization process is likely to be emergent. As new concerns emerge, so does the possibility that new linkages and entanglements will be made (Callon, 1998). In the

⁵ According to Oswick, Fleming, and Hanlon (2011: 321), the sociology of associations (also known as actor-network theory) is now one of the most popular theories within organization studies; it “has been extensively embraced within OMT [organization and management theory] and has both directly and indirectly impacted theory development within the discipline.”

process, new issues can become visible and salient (Callon & Rabeharisoa, 2004).

The sociology of associations offers what has been described as a kind of practical realism (Latour, 1999), emphasizing how the social and material world come together and how they are reciprocally transformed in this process. As it relates to sustainability as a category of concern, the sociology of associations draws attention to both the descriptive and evaluative consequences of associations (and dissociations) between various social and material elements, thereby entertaining the possibility that “categorization processes are materially anchored, yet institutionally performed, socially relevant, and entrepreneurially negotiated” (Garud et al., 2010: 54).

From this perspective, (un)sustainability is a continuously negotiated accomplishment, performed as networks of humans and things interact, deviate and contend about whether and how to proceed. Whereas prior studies have emphasized the formation of associations and the processes whereby linkages are made durable (e.g., Callon, 1986), I am interested in the breaking of associations, especially associations that have otherwise been considered strong and stable, such as associations between a firm and its business units. The resulting “categorization by association” perspective combines insights from these two literatures; organizations are comprised of both social and material associations, and these associations and their ongoing reconfigurations are consequential to organizational categorization (Bowker & Star, 1999; Garud et al., 2010). In particular, I propose that given emergent sustainability concerns, firms may find it expedient to sever their connections with unsustainable business units rather than allow the entire firm to suffer the taint of unsustainability by association. In the next chapter, I present my theory and hypotheses in detail.

CHAPTER 3. THEORY AND HYPOTHESES

In this chapter, I introduce the concept of categorical contamination. I then theorize that when contaminated by association with emergent concerns, rather than symbolically decoupling their practices or substantively displacing them, firms might choose to dissociate themselves from such contaminations altogether. In particular, I examine the extent to which diversified firms might respond to the contamination of negative sustainability ratings through divestitures. In addition to this core proposition, I develop hypotheses about how two cultural considerations – shareholder activism and sustainability reporting – are likely to moderate the relationship between categorical contamination and divestitures.

Categorical Contamination

In *Purity and Danger*, Douglas (1966/2005) analyzes what she refers to interchangeably as pollution or dirt. As she repeatedly makes clear, dirt is not “natural,” but rather an entirely cultural phenomenon. “There is no such thing as absolute dirt” (Douglas, 1966/2005: 2).⁶ Instead, nothing counts as dirt, apart from a particular categorization system in which it does not fit. “Dirt then is never a unique isolated event. Where there is dirt there is a system. Dirt is the byproduct of a systematic ordering and classification” (Douglas, 1966/2005: 44). Conversely, where there is no differentiation, there can be no defilement; contamination depends on difference.

Whenever cultural categories are contravened, “dirt appears as a residual category” (Douglas, 1966/2005: 45). But unlike marginality, which calls for precaution

⁶ In *Natural Symbols*, Douglas (1970/1996: i) extends her analysis from dirt to cultural categories more generally, concluding that no categories are natural: “There are no such things as natural symbols.” Instead, all categories are culturally located – that is, a matter of social and material relations.

and can be anticipated, “pollution is an altogether different class of danger” (Douglas, 1966/2005: 123; see also Bowker & Star, 1999). One discovers pollution by its effects; it is transmitted through contact. By definition, to become entangled with such residual categories is to become polluted.

Here again Douglas stresses that what is residual or anomalous (or what Star, 2010 describes as “not classified elsewhere”) is culturally located, at one point describing such categorizations as “network effects” (Douglas, 1966/2005: 88). In other words, what cannot be categorized, organized or contained within prevailing social and material arrangements (Callon, 1998) is potentially polluting (Coase, 1960; Douglas, 1966/2005; Marx, 1867/2007). But because this potential for pollution is “manifold and omnipresent... Anxiety has to be selective” (Douglas, 1966/2005: xix). From all possible materials, a limited selection has to be made; and from all possible relations, a limited set has to be used. In sum, what counts as pollution is the result of the networks of social and material associations operant in a given culture and time.

Owing to these two factors – heterogeneous sociomaterial networks and manifold potential pollutions – there are likely to be marked differences across times and cultures as to what counts as dirt. Each time and culture will have its own notions of dirt, and these will always be contrasted with its notions of purity. But regardless of the particular pollutions recognized by a given time and culture, pollution always works by exaggerating differences, thereby placing pressure at the margins or boundaries (Douglas, 1966/2005: 5).

To be polluted is always to be in the wrong, whether because some wrong condition was developed or because some line was crossed which should not have been.

Whether this pollution was intentional or not is irrelevant. Either way, pollution cannot be contained, thereby unleashing danger for oneself, and potentially others. In such situations, evaluations serve as weapons for clarifying and strengthening the categorical structure, enabling guilt to be pinned on the source of confusion and ambiguity.

In this regard, pollution lies between public code and private conscience. According to Douglas, it is precisely where the lines between these two are precarious that we find pollution at work. In particular, when codes lack adequate practical sanctions, pollutions are likely to be called upon. But rather than arousing moral fervor, such as in the case of public scandals (Adut, 2004, 2005), pollution is a pragmatic response, oriented towards purification rather than punishment.

Stated differently, dirt can be understood as constituting a cultural solution to institutional failures (Coase, 1960; Douglas, 1993). One reason that dirt is considered a practical solution is that it is easier to cancel than moral defects. For instance, whereas stigmas (e.g., Goffman, 1963) are marks that cannot be cancelled, pollution can be eliminated simply through time, effort and cost. It is all a matter of performing the appropriate social and material actions at the appropriate time and in the appropriate place.

Whatever the particulars adopted by a given culture, Douglas concludes that in all cases the most culturally expedient way of dealing with dirt is what I refer to as *dissociation*. As she puts it, the quest for purity is pursued by *rejection* (Douglas, 1966/2005: 199). Elsewhere she refers to “renunciation” as the means of regaining purity (Douglas, 1993: 465). Such an elimination of dirt is “not a negative movement, but a positive effort to organize the environment” (Douglas, 1966/2005: 2).

In sum, building on Douglas's concept of pollution or dirt allows us to understand what I call *categorical contamination*, by which I mean the processes whereby one set of actors becomes negatively evaluated by others owing to their entanglements with cultural categories of concern. Douglas's work also suggests that the antidote to such contamination is what I will refer to as *dissociation*. Importantly, on her analysis both contamination and dissociation are culturally located.

To this point, Douglas's analysis has taken the categories of concern within a particular culture and time as given. In fact, *Purity and Danger* offers a largely static analysis; Douglas gives examples of numerous contaminations, but does little to investigate their processes of emergence or transformation over time. Nonetheless, implicit in her theorization is the possibility that the set of social and material relations that have been selected may be revisited. For instance, in a later essay, she notes that "now and again through human history there have been upheavals which have reshaped institutions, not by violent attack, but by cultural withdrawal. In the confrontation, values are revised and priorities regrouped..." (Douglas, 1993: 464).

Such emergent "cultural withdrawals" typically call for purification through the rejection and renunciation of prevailing cultural categories. In other words, cultural withdrawals attempt to reshape the very definitions of purity and contamination. Writing nearly two decades ago, Douglas proposed that the then contemporary environmental movement could be seen as such a cultural withdrawal – one that called for purity of air, food and water, along with justice for those deprived, while condemning the concealment of related risks (Douglas, 1993). It is precisely such a situation – the emergence of new cultural categories of concern, in this case sustainability – that my dissertation explores.

Apart from Douglas, not many scholars have invoked the concept of dirt, pollution or contamination. One example I found is Lowe's (1998) inductive study of banking mergers in which he proposed the concept of "tainting" to describe the process whereby a client of Bank A becomes "tainted by association" following its acquisition by a larger bank, Bank B. The issue of contamination by association also has been shown to have consequences in the courtroom. For instance, in the case of tobacco litigation, some judges have considered the testimony of expert witnesses to be contaminated, and thus, devalued, to the extent that these witnesses have advocated for one position or another outside the courtroom (Simpson, 2005).

Another interesting legal study considered whether "persistent professional association with evildoing clients taints the character of the lawyer to some degree" (Uviller, 1990: 3). In the case of lawyers who run for political office, such "client taint" might be perceived by the electorate as "obnoxious." For instance, after Rudolph Giuliani decided to run for mayor of New York City, it came to light that he was counsel to White & Case, a registered agent of the Panama government controlled by General Manuel Noriega (who was later convicted of drug trafficking, racketeering and money laundering).

Assuming that Noriega was a criminal, but that all services performed for White & Case "were not only lawful but completely ethical in all respects" (p. 4), Uviller asks how an attorney's client relationships might taint his qualification for public office by association. After reviewing the evidence he concludes: "The disclosed fact of Giuliani's failure to avoid the unjust imputation of taint may itself have some marginal bearing on his fitness to serve in a role where image management counts. Insofar as this marginal

datum counts in the total calculation of qualifications, the news media cannot be faulted for discovering and disclosing the candidate's oversight" (Uviller, 1990: 10).

In other words, Uviller offers a potentially important insight into the dynamics of categorical contamination. Giuliani was not tainted by his relationship with White & Case per se, but rather, it was his failure to avoid such taint by association, however marginal, that brought into question the kinds of judgments and calculations he might make in the future, and hence, his qualifications for mayor. Thus, categorical contamination appears to operate at the margins, but nonetheless counts, in the sense that such marginal oversights may have profound consequences for the actors involved.

Associations that are acceptable given one set of evaluative standards may become problematic as those standards shift. In Giuliani's case, this re-evaluation was the result of his decision to run for mayor, but more generally, actors may be susceptible to categorical contamination whenever such shifts occur. Indeed, sustainability encompasses precisely this type of evaluative shift, confronting firms with the need "to address multiple stakeholders, uncertain science, potentially difficult organizational challenges, and shifting performance standards" (Sastry et al., 2002: 262).

In the case of corporate sustainability, some have invoked a logic that directly parallels these insights on categorical contamination. For instance, according to Goldman Sachs, sustainability ratings are an indicator of management quality:

Companies do not operate in a vacuum, but in the context of the economic, social, environmental and industrial trends facing societies broadly. Rising social expectations on companies and growing environmental concerns make effective management of these diverse pressures increasingly important to sustained leadership. In our view, companies developing strategies to address emerging social concerns or environmental tensions and reporting on their progress in doing so, under a strong governance structure, will be better placed to adapt to the

changing pressures facing their industries” (Goldman Sachs, 2010: 11).

Consistent with these arguments, a study of 188 companies in six emerging markets found that companies with better corporate governance practices (considered by most sustainability ratings agencies to be one of three major dimensions of sustainability) received valuation premiums of up to 28% compared with their more poorly governed counterparts (Newell & Wilson, 2002). Thus, in the same way that Giuliani’s client relationships served as quality signals, given the many complexities and uncertainties surrounding sustainability, unsustainable associations have become an increasingly visible and salient marker of a firm’s qualities.

Categorical Contamination and Corporate Divestitures

Organizations are constantly being evaluated by diverse stakeholders. Examples include securities analysts (Benner, 2010; Beunza & Garud, 2007), credit rating agencies (Ruef & Patterson, 2009), social activists (Proffitt & Spicer, 2006; Soule, 1997) and various other informational intermediaries (Casile & Alison, 2002; Durand et al., 2007; Elsbach, 2006), not to mention employees, customers, suppliers and investors (Freeman, 1984; Mitchell, Agle, & Wood, 1997). Despite the ubiquity and potency of stakeholder evaluations, researchers are only beginning to consider how organizations respond to emergent negative ratings (Chatterji & Toffel, 2010; Elsbach & Kramer, 1996; Randel, Jaussi, & Standifird, 2009).

Along the way, a growing number of corporate sustainability ratings have emerged. For instance, a recent report by the consulting firm SustainAbility counted more than 100 different corporate sustainability ratings. On Wall Street, numerous actors – such as Bloomberg, Dow Jones, Goldman Sachs, MSCI and Thomson Reuters – have introduced sustainability rating systems. In particular, among public companies,

corporate sustainability is now increasingly assessed on the basis of ESG – environmental, social and corporate governance factors (McKinsey & Company, 2010; Waddock, 2008). The ESG acronym was first popularized in June 2004, as part of the United Nations Global Compact (UNGC) “Who Cares Wins” initiative (UNGC, 2004), which had as its goal the “integration of environmental, social and governance criteria into research and investment processes” (Power, 2006).

Building on this program, in 2005 the UNGC partnered with the United Nations Environment Program (UNEP) Finance Initiative in coordinating a series of meetings with a group of the world’s largest institutional investors. The process led to the launch of the Principles for Responsible Investment (PRI) in 2006. The six principles, as stated in the PRI 2010 Annual Report, stipulate specific practices for integrating ESG factors into investment decisions, including the incorporation of ESG issues into investment analysis and decision-making processes and ownership policies and practices, seeking appropriate disclosure on ESG issues by the entities in which the firm has invested, promoting acceptance and implementation of the principles within the investment industry, working together with other signatories to enhance effectiveness in implementing the principles; and reporting on activities and progress towards implementing the principles. By the close of 2010, more than 850 companies representing \$25 trillion in assets, or more than 10% of global capital markets, had signed the principles.

Rather than ceremonially adopting ESG principles and then decoupling them from actual practice (Meyer & Rowan, 1977), some investment banks appear to have transformed their investment processes to explicitly incorporate ESG criteria. For example, Goldman Sachs both shaped and was shaped by these developments. In April

2005, the company launched its own ESG research team, with the vision of integrating “environmental, social and governance issues with industrial analysis and valuation on a sector-by-sector basis” (Goldman Sachs, 2006). Two years later, the company rebranded these efforts under the name GS SUSTAIN, a “proprietary ESG framework” incorporating “corporate governance, social issues with regard to leadership, employees and wider stakeholders, and environmental management” (Goldman Sachs, 2007). Since then, Goldman Sachs has evaluated more than 800 large companies and 500 smaller companies using this ESG framework, a move it has likened to “crossing the Rubicon” (Goldman Sachs, 2010).⁷

The growing demand for ESG assessment also spawned the creation of an entirely new breed of market intermediaries – sustainability ratings agencies – and subsequently, a wave of consolidation, as mainstream investment advisory firms rushed to add ESG assessment to their offerings. Founded in 2003, the trajectory of ASSET4 is illustrative. After launching its prototype ESG rating system in January 2005, the company expanded its coverage to 500 companies in April 2006, 1,200 companies in May 2007, and 2,300 companies in May 2008. In November 2009, ASSET4 was acquired by Thomson Reuters, and in 2011, its ESG ratings were made available to the more than 45,000 brokers who subscribe to the company’s Datastream service. Figure 2 provides an example of Datastream’s ratings, in this case, comparing some major banks on their summarized ESG ratings during 2006, before the collapse of Bear Stearns. In the case of Datastream, subscribers can further analyze more than 100 ESG attributes on thousands

⁷ In 49 BC, Julius Caesar crossed the Rubicon River, which marked the boundary between Italy and Gaul, thereby instigating war against Rome. Accordingly, the idiom “crossing the Rubicon” refers to a point of no return.

of companies.

of companies

ESG scores for major banks before collapse
2006 values

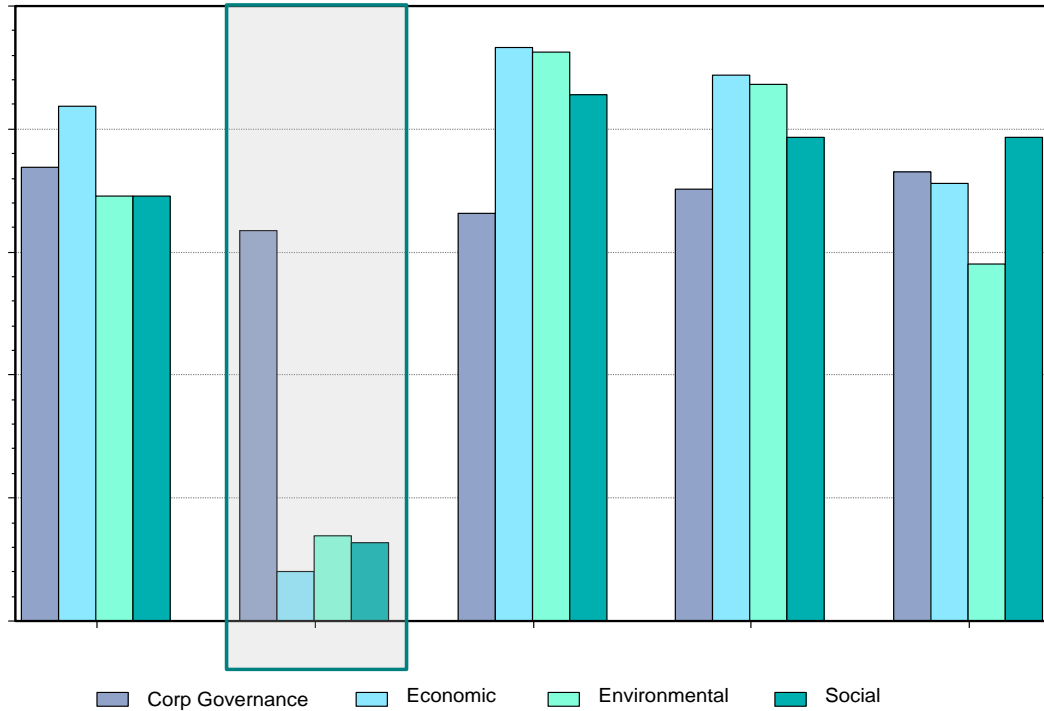


Figure 2. An Example of ESG Ratings from Thomson Reuters

Thomson Reuters appears to have undertaken this latter move largely in response to Bloomberg, its chief competitor, which began providing ratings on 120 ESG variables to its network of 250,000 terminals in 2009 – at no extra cost. According to Emil Efthimides, manager of Bloomberg’s Environmental, Social and Governance data project, “financial statements provide about 20% of the relevant information on a company. ESG measures seek to cover the remaining 80%... It can help distinguish two companies which are very similar financially, but which may have significant differences in their carbon footprint, workforce practices and board of directors’ policies” (China Water Risk, 2012). In the second half of 2010, some 5,000 different customers across 29 countries accessed more than 50 million ESG indicators via Bloomberg’s network – a

29% increase over the first half (Tulls, 2011).

Among academic researchers, MSCI ESG Research has emerged as the most widely used provider of sustainability ratings (Chatterji, Levine, & Toffel, 2009; Margolis & Walsh, 2003).⁸ MSCI ESG Research first began rating firms in 1991, initially covering approximately 650 firms, including all firms in the S&P 500, and later expanding its coverage to include more than 3,000 firms. MSCI ESG Research rates firms on seven major issue areas, including community, corporate governance, diversity, employee relations, environment, human rights, and product (see Appendix).

Within each major issue, MSCI ESG Research provides ratings of both strengths and concerns on a number of specific issues. However, both theoretical arguments and empirical evidence suggest that “bad is stronger than good” (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Pontikes, Negro, & Rao, 2010). In the case of MSCI ESG Research, studies have found that concerns, or being rated as unsustainable, are more valid and powerful predictors than being rated as sustainable (Chatterji et al., 2009).

First published in 1991, STATS, which originally stood for “Statistical Tool for Analyzing Trends in Social & Environmental Performance” (KLD, 2008), provides a snapshot of a company’s sustainability ratings as of the end of each calendar year. Since then, “STATS has enabled over 100 academic institutions to track historical trends in the ESG performance of thousands of US companies” (MSCI Website, 2011). Beginning in 1991 and continuing through 2000, STATS rated approximately 650 companies,

⁸ KLD was founded in 1988, and acquired by RiskMetrics in 2009. RiskMetrics had previously acquired a number of other specialist firms, including Innovest (another sustainability research provider) and Institutional Shareholder Services (a proxy advisory service). RiskMetrics was acquired by MSCI in 2010, at which time the former KLD ratings were incorporated into its “MSCI ESG Research” offerings.

comprised of the S&P 500 and the KLD 400 Social Index. Binary variables indicating membership in both indexes were included through 2005. However, beginning in 2006, at the request of its “index team” (Personal Communication, 2011), STATS stopped providing proprietary index membership information, and instead, began referring collectively to these two indexes as Universe A. Through 2009, Universe A has been consistently defined to include the S&P 500 and the KLD 400, providing 19 years of continuous sustainability ratings. However, in 2010, Universe A was redefined to include the largest 500 companies (and not the S&P 500), together with the KLD 400. Thus, Universe A from 1991-2009 is not directly comparable with Universe A from 2010 forward. Separately, as described further below, the criteria for inclusion in the KLD 400 has shifted somewhat over time, again, most notably since 2010, following the acquisition of RiskMetrics by MSCI.

In 2001, STATS expanded its ratings coverage to include the Russell 1000 Index, which consists of approximately the 1,000 largest U.S. stocks collectively representing about 90% of the investable U.S. equity market. For the period 2001 to 2005, STATS includes a binary variable indicating membership in the Russell 1000 Index. In 2005, STATS also stopped supplying information on membership in the Russell 1000, and instead, began referring to these companies as Universe B.

In 2002, KLD launched the Large Cap Social Index (sometimes referred to as LCS), selecting approximately 700 from a universe of 1,100 companies as members. In 2003, KLD again expanded its ratings coverage to include the Russell 2000 Index, an index of approximately the 2,000 smallest U.S. companies collectively representing an additional 8% of the investable U.S. equity market. Together, the Russell 1000 and the

Russell 2000 comprise the Russell 3000 Index and represent some 98% of the investable U.S. equity market. In 2003, KLD also launched the KLD Broad Market Social Index (sometimes referred to as BMS), comprised of a subset of 2,200 to 2,300 companies from this universe. Table 1 summarizes changes to the STATS ratings universe, including the indices covered, the approximate total number of companies rated, and the cumulative number of firm-years rated.

Table 1. STATS Ratings Universe, 1991-2009

Indices Covered	1991-2000	2001	2002	2003-2009
S&P 500	x	x	x	x
KLD 400	x	x	x	x
Russell 1000		x	x	x
KLD Large Cap Social Index			x	x
Russell 2000				x
Russell 3000				x
KLD Broad Market Social Index				x
Companies Rated Annually	~650	~1,100	~1,100	~3,000
Cumulative Firm-Years Rated	6,524	7,631	8,739	29,484
US Equity Market Coverage (%)	> 75%	> 90%	> 90%	> 98%

Considering the difficulties inherent to both decoupling and displacement, I explore the extent to which firms respond to sustainability concerns through *dissociation*. When entangled by unsustainable associations, I propose that firms might instead choose to divest themselves of these businesses altogether. Better to eliminate an unsustainable business than risk exposing the entire firm to categorical contamination. In particular, when confronted with negative sustainability ratings, firms are likely to divest their offending businesses.

My core argument about what is happening is quite simple, but I believe it may be quite powerful, because if I am able to show it, then it opens up a potentially large agenda. First, building on work by Bruno Latour, I define an *emerging category of*

concern as a device for describing and evaluating social and material relations that provoke perplexity and debate (see Latour, 2004 on "matters of concern"). When a category of concern emerges, such as sustainability, there is the possibility that it will become salient. For instance, in the case of sustainability, we have already seen how sustainability concerns were translated into sophisticated ratings systems.

As this happens, new associations can come into play. For instance, business units and practices that were unproblematic at one point in time may now be subjected to new evaluations. Issues that may not have been associated or related before can become linked and coupled together. Like it or not, firms become entangled in questions about sustainability. "Outside" concerns can quickly become translated into issues that firms must consider. To illustrate these concepts, consider the case of a diversified firm involved in business Units A, B, C, and D (see Figure 3).

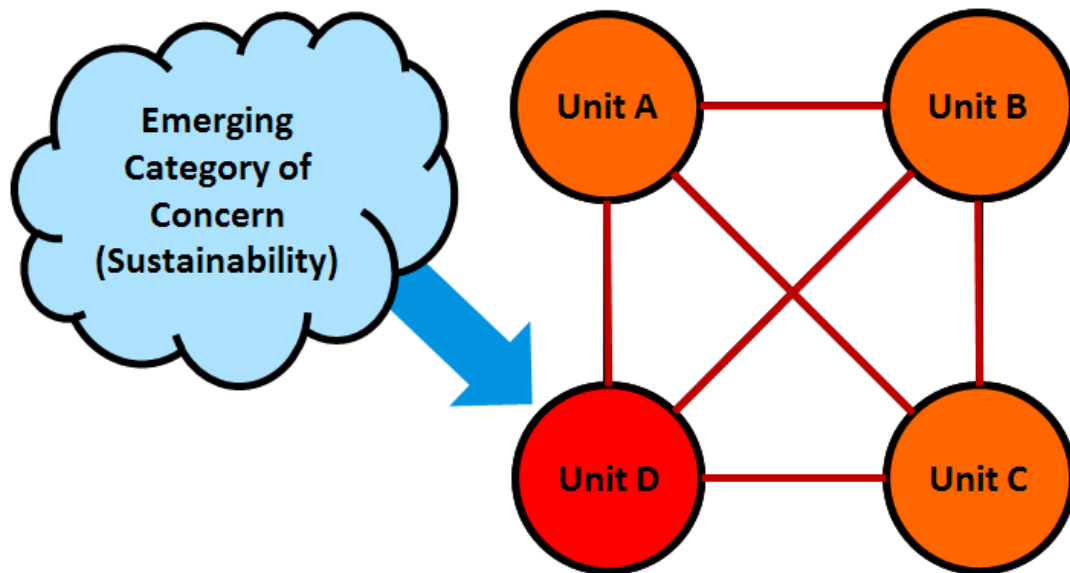


Figure 3. From Emergent Concerns to Categorical Contamination

As a new category of concern emerges, such as sustainability, the firm may find

itself subject to new evaluations because of its portfolio of business and their associated practices. In this case, the emergence of sustainability as a category of concern draws attention to one or more aspects of the company that are the result of particular practices. As depicted in Figure 3, in this case, the company becomes associated with emerging categories of concern because of business Unit D, whether because of carbon emissions, child labor, poor governance, or other practices.

My argument is that when new categories of concern emerge and become salient, analysts and other stakeholders may become involved. As they do, firms may be subject to new evaluations. To the extent they are associated with new concerns, they can easily become contaminated. As the process of categorical contamination unfolds, the entire firm can become tainted, that is, negatively evaluated by others because of its association with such emerging categories of concern. Once an organization is contaminated, in this case because of its inclusion in the “unsustainability” consideration set, one expedient response may be to dissociate itself from these concerns altogether, through divestiture.

In sum, how firms are categorized is consequential (Kennedy, 2008; Porac et al., 1999; Zuckerman, 1999). There is always the possibility that new concerns will emerge (Callon, 1998) and be translated into emergent categories of concern (Latour, 2004). Association with culturally “dirty” categories is contaminating (Douglas, 1966). Dissociation allows actors to eliminate dirt without taking blame or justifying their involvement (Butler, 2005; Weick, 1995).

In my dissertation I focus on the possibility that firms deal with this type of problem by dissociation – or cleaning out. Once contaminated, firms may find it expedient to eliminate their dirty businesses altogether. That said, there are reasons why

this could be difficult. For instance, to the extent there are synergies across business units, eliminating one of the businesses may be difficult. And so, I believe if anything, my approach is likely a conservative test of the extent to which divestitures are induced by sustainability concerns.

Hypothesis 1: Categorical contamination is positively related to subsequent corporate divestiture events.

Concerned Stakeholders and Corporate Divestitures

My next hypothesis has to do with the role that social groups play in shaping categories and making them salient. From a cultural point of view, as new concerns emerge, social groups are likely to become implicated (Callon, 1998; Callon & Rabeharisoa, 2004). At the same time, firms may vary in terms of the power, urgency and legitimacy of their stakeholders (Freeman, 1984; Mitchell et al., 1997; Selznick, 1949). In particular, activist investors have dramatically increased their influence over corporate governance (Davis et al., 1994), especially with regard to social and environmental issues (Lounsbury, 2001; Proffitt & Spicer, 2006). And firms are likely to respond differently when activists are present (Briscoe & Safford, 2008; King, 2008).

The history of investor activism dates to 1942, when the U.S. Securities and Exchange Commission (SEC) adopted the shareholder proposal rule. Rule 14a-8, as it is now known, permits investors to submit proposals requesting that certain corporate matters be put to a vote at a company's annual meeting.⁹ Shareholders typically initiate a proposal by writing to a firm, at which point firms may: (a) engage, (b) accommodate, (c)

⁹ To be eligible to submit a proposal, a shareholder must (a) be a beneficial owner of at least 1% or \$2,000 in market value of securities entitled to vote, (b) have owned these securities for at least one year, and (c) continue to own them through the date of the meeting.

acquiesce, or (d) contest (cf. Logsdon & Van Buren, 2009; Proffitt & Spicer, 2006). According to RiskMetrics, “Withdrawal of a proposal usually means that companies have agreed to implement part or all of the resolution and, thus, is sometimes considered more successful than a high vote.” In cases where shareholder proposals are voted on, most are merely precatory, or non-binding. Nonetheless, a recent study found that 31% of the shareholder proposals that pass are implemented (Ertimur, Ferri, & Stubben, 2010).

Broadly speaking, shareholder proposals are categorized as dealing with environmental, social and corporate governance issues. Initially, the SEC allowed companies to exclude environmental and social issues from consideration. However, in 1969, an anti-war group called the Medical Committee for Human Rights submitted a proposal requesting that Dow Chemical discontinue the manufacture of napalm. The SEC allowed Dow to exclude the proposal, prompting the Medical Committee to appeal in federal court. In a “pathbreaking decision” the court held that the SEC’s order was reviewable and erroneous, and remanded the matter back to the SEC for further consideration (Chisum, 1970).

Faced with the court’s ruling, in 1972 the SEC amended Rule 14a-8, significantly reducing the ability of companies to exclude social and environmental proposals. Since then, a variety of activist investors have made use of the shareholder proposal rule, including public and private pension funds, mutual funds, insurance companies and banks (for a typology and review of institutional investor activism, see Ryan & Schneider, 2002). On the heels of these changes, shareholders promptly began submitting proposals to companies with operations in South Africa (see Kinder, Lydenberg, & Domini, 1993: Chapter 5). By the time it had concluded in 1995, the issue of apartheid had generated

more than 1,100 shareholder proposals (Proffitt & Spicer, 2006). Although the content of these proposals varied, many specifically called on companies to divest their South African operations, and many companies did just that (Kumar, Lamb, & Wokutch, 2002; Meznar, Nigh, & Kwok, 1998; Posnikoff, 1997; Wright & Ferris, 1997).

Since then, there have been other isolated calls for divestiture (e.g., tobacco operations), but increasingly, the trend is away from discrete issues and toward generalized reviews of corporate activities across all countries and products in which a company does business (Proffitt & Spicer, 2006). Even as shareholder proposals have become less targeted, however, the overall level of shareholder activism has increased in terms of the number of proposals submitted, the number of companies targeted, and the success achieved. Today, sustainability related issues are among the most frequently cited by these stakeholders. To the extent that a firm is confronted with salient stakeholders who take issue with a firm's unsustainable associations, I suggest that the firm is more likely to divest in response to negative sustainability ratings.

Hypothesis 2: Contaminated firms targeted by shareholders activists are more likely to subsequently divest than non-targeted firms.

Sustainability Reporting and Categorical Dissociation

Organizations not only react and respond to new categories of concern, but also may try to shape the visibility and meaning of such categories through entrepreneurial efforts (Lounsbury & Glynn, 2001; Navis & Glynn, 2010; Wry et al., 2011). One way firms might try to shape categories and signal their membership in them is through their own measurement and reporting practices. For instance, according to Weick (1995: 160) an "organization chooses who it will be by first choosing what actions, if any, it needs to explain, and second, by choosing which explanations for these actions it will defend"

(Weick, 1995: 160). In particular, the sociology of associations has proposed that organizational reporting practices are most interesting at the “margins” (Miller, 1998). It is at the margins where new reporting practices are introduced, where controversies are debated and where reporting is linked up with diverse social and material demands.

Consistent with these insights, as sustainability concerns have emerged, a number of organizations have begun producing “sustainability reports,” detailing their environmental, social and governance practices. Notably, the Global Reporting Initiative (GRI) was launched in 1999 “with the goal of enhancing the quality, rigor and utility of sustainability reporting” (GRI, 2002). Since launching, the GRI has emerged as “the preeminent global framework for voluntary corporate environmental and social reporting” (Levy, Brown, & de Jong, 2010; see also Brown, de Jong, & Lessidrenska, 2009; Etzion & Ferraro, 2010; Waddock, 2008). In the 10-year period from 2000 to 2009, the GRI guidelines have been used as the basis for more than 4,700 sustainability reports by organizations in more than 70 countries. More than half of these reports were produced in 2008 and 2009 alone.

Although several precursors have been documented (Hogner, 1982; Maltby, 2004), the more immediate impetus for the emergence of sustainability reporting was the March 1989 *Exxon Valdez* oil spill. Provoked by this disaster and Exxon’s subsequent lack of responsiveness and transparency, a coalition of some 75 environmental groups, public pension managers, religious organizations, and social investors joined together to form Ceres (see Smith, 1993 for a review). By September 1989, the Ceres Principles were launched, establishing a 10-point code of environmental conduct. Over the next 10 years, about 50 companies, including a dozen Fortune 500 companies, committed to

support the principles.

Seeking to go beyond environmental considerations, in 1999, Ceres and the United Nations Environment Program (UNEP) launched the GRI “with the goal of enhancing the quality, rigor and utility of sustainability reporting” (GRI, 2002). In 2006, the GRI published the third and current version of its guidelines (see Table 2). Known as the G3 guidelines, they consist of 79 indicators in six categories.

Table 2. GRI Topics and Indicators

Topic	Number of Subtopics	Core Indicators	Optional Indicators	Total Indicators
Economic	3	7	2	9
Environment	9	17	13	30
Labor practices	5	9	5	14
Human rights	7	6	3	9
Society	5	6	2	8
Product responsibility	5	4	5	9
Totals	34	49	30	79

Source: Analysis of GRI 2006 Sustainability Reporting Guidelines

The G3 guidelines also require that reporters self-declare one of three application levels: A, B, or C. Level C reports must include a total of 28 profile disclosure items, and a minimum of 10 performance indicators, including at least one each from economic, environmental, and social. Level B reports must include a total of 42 profile disclosure items, management approach disclosures for each indicator category, and a minimum of 20 performance indicators, including at least one each from economic, environmental, human rights, labor, society, and product responsibility. Level A reports must respond to all G3 core indicators, and sector supplement indicators when available in final version, either by reporting on the indicator, or by explaining its omission.

Each level may be designated as self-declared, third-party checked or GRI checked. These are not mutually exclusive categories. Minimally, all reports must be self-

declared. Concurrently, a report may be third-party checked and/or GRI checked. In the case of these latter two options, all that is confirmed is “the extent to which the GRI reporting framework was utilized” (GRI, 2006). By comparison, when GRI reports are “externally assured” as to the quality of their contents, the reporting organization can declare a “plus” at each level (i.e., A+, B+, or C+). Table 3 provides a breakdown of the number of G3 reports by application level and year. From 2006 to 2009, more than 3,000 reports were issued using the G3 guidelines. Of note, even as the number of Level A reports rose from 30 in 2006 to nearly 500 in 2009, the percentage of externally assured Level A reports remained relatively constant, averaging 72 percent during this time. Comparisons for Level B and C reports are provided.

Table 3. GRI Version 3.0 Reports by Application Level and Year

Declared Level	2006	2007	2008	2009	Totals
# of Level A	9	47	82	112	250
# of Level A+	21	121	208	284	634
% of As externally assured	70%	72%	72%	72%	72%
# of Level B	11	89	143	210	453
# of Level B+	5	68	115	135	323
% of Bs externally assured	31%	43%	45%	39%	42%
# of Level C	10	67	155	223	455
# of Level C+	5	27	25	65	122
% of Cs externally assured	33%	29%	14%	23%	21%
# of Undeclared	33	123	316	326	798
Total # of reports	94	542	1,044	1,355	3,035
Total % externally assured	33%	40%	33%	36%	36%

Source: Analysis of GRI Reports List for G3 reports 2006-2009

Following the publication of the G3 guidelines, the GRI began working on various sector supplements. Currently there are 15 sector supplements in various stages of development. Of these, the electric utilities and financial services sector supplements have been published as final versions. Effective January 2010, affected organizations are required to utilize these supplemental indicators in order to be recognized as GRI Level A

reporters. Similarly, the use of the mining and metals sector supplement will be required for recognition as a Level A reporter by affected organizations starting in January 2012. For the other 12 sectors, supplements are in various stages of development, including recently initiated (e.g., media), under public comment (e.g., oil & gas), available for pilot testing (e.g., automotive), available in first draft (e.g., airport operators), and available in final draft (NGOs).

Although the GRI has emerged as “the preeminent global framework for voluntary corporate environmental and social reporting” (Levy et al., 2010), numerous firms have chosen to produce sustainability reports which are inspired by, but not necessarily in direct conformity with, these guidelines. One way of interpreting sustainability reports is as an indicator of a firm’s efforts to signal membership in a category. Several studies have found that whether or not firms implement ISO 14001 depends in large part on whether or not environmental concerns have the attention of managers (Delmas & Toffel, 2008; King, Lenox, & Terlaak, 2005). More generally, reporting serves as an important device for performing corporate strategy (Kaplan, 2011; Skærbæk & Tryggestad, 2010).

Regardless of specific approach, by engaging in sustainability reporting, firms signal that sustainability has their attention. Given this heightened salience, when confronted with negative sustainability ratings, firms that report on sustainability can be expected to be more responsive to negative sustainability ratings. Such reporting serves as an important device for performing corporate strategy (Kaplan, 2011; Skærbæk & Tryggestad, 2010). Thus, when confronted with negative sustainability ratings, firms that account for sustainability can be expected to respond in more extreme ways.

Hypothesis 3: Contaminated firms that produce sustainability reports are more likely to subsequently divest than non-reporting firms.

Summary

In this chapter, I presented the theoretical motivation for this research, specifically, the concept of categorical contamination, which builds on the concepts of cultural dirt (Douglas, 1966/2005) and categorization by association (Bowker & Star, 1999; Garud et al., 2010). Although scholars thus far have mostly invoked terms such as contamination and taint in a vernacular way, I explore them conceptually by examining the relationship between negative sustainability ratings and corporate divestiture.

Having established that sustainability is a salient cultural concern for organizations, I hypothesized that negative sustainability ratings are positively correlated with subsequent divestiture events. In other words, one way diversified organizations might achieve sustainability is through dissociation. Furthermore, I hypothesized that in the face of negative sustainability ratings, firms that are targeted by shareholder proposals and produce sustainability reports are more likely to subsequently divest. In the next chapter, I describe the data sample, dependent, independent and control variables and the statistical model I used to test these hypotheses.

CHAPTER 4. METHODOLOGY

In this chapter, I explain the methods used in this study. To test my hypothesis about the effects of categorical contamination on corporate divestiture events and my related hypotheses about potential cultural moderators of these effects, I needed a sample of firms that were subjected to sustainability ratings. The longest running, continuously available source of sustainability ratings I could locate is the STATS dataset from MSCI ESG Research. Among organization scholars, it is also the most frequently used source of sustainability ratings (Margolis & Walsh, 2003).

MSCI ESG Research formally launched its STATS dataset in 1991 at which time it began rating approximately 650 companies on ESG criteria. Included in this universe of companies are all members of the S&P 500, plus another 150 mid cap and small cap companies. MSCI ESG Research rated a comparable universe of companies through the end of 2009, which is the end of my observation window for lagged independent and moderating variables. For each rated firm, MSCI provides an annual rating of the firm's handling of between 24 and 34 different sustainability concerns.

Some examples of the issues rated include: the company's legal emissions of toxic chemicals are among the highest of the companies followed by KLD; the company has either a substantially underfunded defined benefit pension plan, or an inadequate retirement benefits program; the company has no women on its board of directors or among its senior line managers; the company's actions have resulted in major controversies concerning its economic impact on the community; the company has recently paid substantial fines or civil penalties, or is involved in major recent controversies or regulatory actions relating to the safety of its products and services; and

the company has operations, direct investment in, or sourcing from Burma.

Firms entered or left my sample because of mergers, failures and other corporate changes. The result is an unbalanced panel of firms. I then matched the MSCI ESG Research sample of firms with other databases, including Thomson Reuters, RiskMetrics, and Compustat. Finally, my sample was reduced due to missing data related to some of the control variables, and cases where only one observation was available, meaning that it was not possible to model the data given the lag structure of my analytic approach.

Dependent Variable

Annual divestitures. The dependent variable is a count of the number of divestitures completed by each parent company in year t . Data for this measure came from the *SDC Platinum* mergers and acquisitions database available through Thomson Reuters. Following Villalonga & McGahan (2005), I included transactions (a) classified as divestitures, carve-outs or spin-offs, and (b) completed by sample firms during the study period. Overall, firms divested one or more businesses in approximately 30% of the firm-years included in my study.

Independent Variables

Negative sustainability ratings. To test hypothesis 1, I measured *negative sustainability ratings* for year $t-1$. A review of completed divestiture transactions showed that, generally, less than 1 year transpires between a firm's announcement that it plans to sell a business unit and the close of the transaction; this timing was supported by explorations of other lag durations. Data for this measure came from MSCI ESG Research's *STATS* database. This database provides annual firm ratings on several dozen indicator variables across seven major sustainability issue areas, including community,

corporate governance, diversity, employee relations, environment, human rights, and product (see Appendix for a summary). Consistent with my theoretical arguments, I constructed an overall measure of negative sustainability ratings as follows: for each year that a firm was in the sample, I calculated the total number of sustainability concerns the firm received. This total was then standardized into a z -score by year. Standardizing the negative sustainability ratings variable controls for additions and subtractions by MSCI ESG Research to the number of concern variables rated each year, as well as any differences in the mean and standard deviation of concerns each year.¹⁰

Concerned stakeholders. To test hypothesis 2, I measured *annual proposals* calculated as a count of the total number of shareholder resolutions presented to each parent company in year $t-1$ (Proffitt & Spicer, 2006). I collected data for this measure from Institutional Shareholder Services (ISS), a division of MSCI.¹¹ As originally delivered, the dataset consisted of a Microsoft Excel file (referred to as ISS Historical below). ISS Historical contained two worksheets. The main worksheet consisted of two header rows with 16 columns, followed by 17,091 rows of data, each representing a year-firm-proposal observation during the period 1990-2010. CUSIPs were available for 13,032 records. Ticker symbols were available for 12,806 records.

I cleaned the ISS Historical data for use in my analysis. The first step was to make sure all firm-year-proposal observations contained a unique firm-level identifier. Using a

¹⁰ As a robustness check, I also modeled negative sustainability ratings as a simple ratio of total sustainability concerns _{ij} divided by maximum sustainability concerns _{j} , where i refers to the i th firm and j refers to the j th year. In all cases the results of these models were comparable to the results obtained using standardized scores.

¹¹ This dataset was originally assembled by the Investor Responsibility Resource Center (IRRC), which in turn was acquired by Institutional Shareholder Services (ISS) in 2005. Then in 2007, ISS was acquired by RiskMetrics. Finally, RiskMetrics was acquired by MSCI in 2010, at which point MSCI re-branded its proxy advisory and corporate governance solutions as ISS.

combination of the SEC's EDGAR database, the WRDS Company Search tool, Wikipedia, and other internet searches as necessary, I hand-coded any observations that had either missing or ambiguous CUSIP variables. Of the 17,091 original observations, 4,059 were missing CUSIPs. I was able to identify CUSIP information for all but 12 of these. Additionally, I updated another 5,604 observations where the CUSIP information was historically accurate, but now out of date. Finally, I used a combination of automated lookups and hand-coding to match CUSIP to GVKEY. Of the 17,079 observations with CUSIPs, I was able to match 17,045 with GVKEYs. This is the file used in my analysis.

Sustainability reporting. To test hypothesis 3, I measured *sustainability reporting* for year $t-1$ as a binary variable coded 1 for any firm-year in which the parent firm issued a sustainability, corporate responsibility, environmental or similar report. Data for this measure was derived from a custom extract of the CorporateRegister.com database, which has cataloged over 30,000 sustainability and related reports from more than 7,500 companies. To insure its integrity, I verified this dataset against the GRI database, the UNGC database and the Ceres database, and where necessary, using company websites, press releases and other archival data. The resulting database covers the sustainability reporting practices of my sample of firms for a nearly 20-year period, making it, to the best of my knowledge, the most comprehensive measure of sustainability reporting in existence.

Control Variables

I controlled for a number of factors identified by prior research as predictors of divestitures (see Brauer, 2006; Decker & Mellewigt, 2007; Moschieri & Mair, 2008 for reviews).

Firm performance. Over the last 30 years of research, poor firm performance has emerged as the strongest and most consistent predictor of divestiture (Cho & Cohen, 1997; Duhaime & Grant, 1984; Harrigan, 1982; Montgomery & Thomas, 1988; Ravenscraft & Scherer, 1987). Consistent with these studies, I measured *firm performance* as return on equity of the parent firm. These data came from Compustat and were accessed through WRDS.

Debt intensity. To measure *debt intensity* I calculated a firm's current ratio by dividing current assets by current liabilities, a standard accounting measure of liquidity (Chang, 1996; Duhaime & Grant, 1984; Hamilton & Chow, 1993; Hitt, Hoskisson, Johnson, & Moesel, 1996).

Blockholder ownership. I measured *blockholder ownership* as the cumulative percentage of shares owned by investors with more than 5% beneficial control (Bethel & Liebeskind, 1993; Hoskisson, Johnson, & Moesel, 1994; Kaiser & Stouraitis, 2001). It controls for the potential effects of large shareholders on corporate decisions such as divestitures. Data for this measure came from the Thomson Reuters Institutional Holdings database. Formerly known as CDA/Spectrum, this database contains ownership information by institutional managers with \$100 million or more in assets under management as reported on Form 13F with the Securities and Exchange Commission.

This dataset initially contained some 49 million observations covering the period 1980-2010. First, I extracted just the relevant observations – meaning any records where the reported ownership was greater than or equal to 5% as determined by reported ownership and outstanding share information. This left just over 1 million blockholder records covering the years 1980-2010. I then further refined the dataset by dropping any

observations outside the 1991-2009 observation period for my lag variables. This left approximately 800,000 observations.

At this point, there were numerous rows of data per CUSIP-YEAR-MGRNO; this occurred for several reasons. First, because of the way that Thomson and/or WRDS updated the database over time, a given observation can be reported multiple times. I dealt with this by retaining only the most recent copy of the record, resulting in about 24,000 records out of ~800,000 being dropped. Duplicates also result from more than one filing per CUSIP-MGRNO per year. In particular, investors can (and should) file once a quarter. I kept the latest filing in the year (typically the 4th quarter). This dropped nearly 500,000 observations, leaving $n = 315,262$. Together, these two operations resulted in no duplicate records at the CUSIP-YEAR-MGRNO level. Finally, I collapsed multiple rows of data per CUSIP-YEAR into a single row per CUSIP-YEAR by counting the number of blockholders and totaling their percent ownership. The resulting dataset contained 105,461 observations.

Firm size. Prior studies have shown that firm size is positively related to divestiture intensity (Bergh, 1997; Duhaime & Grant, 1984; Hamilton & Chow, 1993; Hoskisson et al., 1994; Hoskisson & Johnson, 1992). I calculated firm size by using the logarithm of total sales. These data came from Compustat via WRDS.

Year effects. To control for changes in divestiture rates that may have been specific to a particular year (e.g., as a result of overall economic trends), I tried several time specifications, including year dummies, and time and time squared. As the results were virtually identical regardless of the specification, I reported my final models using time and time squared because of their greater parsimony.

Industry effects. Consistent with emerging research on industry classification systems (Bhojraj, Lee, & Oler, 2003; Chan, Lakonishok, & Swaminathan, 2007), I categorized firms using the Global Industry Classification Standard (GICS; a registered trademark of McGraw-Hill). The GICS is an industry taxonomy developed by MSCI Barra and Standard & Poor's for use by the global financial community. The GICS taxonomy currently categorizes more than 40,000 global public companies into 10 sectors, 24 industry groups, 68 industries and 154 sub-industries. These data came from Compustat via WRDS.

Model Estimation

The dependent variable in this study, which represents the total number of divestitures per parent firm-year, is a count variable. Count data are discrete, positive integers; noninteger, nonnegative estimates are impossible. As a result, ordinary least squares (OLS) models are not an appropriate choice as they produce estimates that are both inaccurate (i.e., they can yield negative count estimates) and inefficient (i.e., they fail to account for the heteroscedastic nature of event counts, whose distributions are skewed left with long right tails) (King, 1988).

Instead, event count panel data are best modeled using either Poisson or negative binomial models (Allison & Waterman, 2002; Greene, 2008; Hausman, Hall, & Griliches, 1984). Although the Poisson model is simpler in form, it is sensitive to overdispersion (Gardner, Mulvey, & Shaw, 1995). When this assumption is violated, standard errors are typically underestimated, and significance levels are spuriously high. In my case, a goodness-of-fit test rejected the Poisson distribution. For this reason, I utilized the negative binomial model.

Additionally, to control for potentially unobserved differences between firms, I specified a conditional fixed effects model, thereby relying only on the within-firm variation in both independent and dependent variables (e.g., see Benner & Tushman, 2002). The final model had the following form:

$$\ln \lambda_{it} = \beta'X_{it} + \mu_i + \varepsilon_{it}$$

where X is a vector of characteristics of the parent firm i at time t , and μ_i are firm specific effects. All models were computed using the *xtnbreg* command in Stata 11.

CHAPTER 5. RESULTS

In this chapter, I present the results of my study regarding the effects of categorical contamination on corporate divestiture events, as well as the effects of two cultural factors that are potential moderators of this relationship. In particular, using the methods described in Chapter 4, I present conditional fixed effects negative binomial models predicting the count of divestitures per year, 1992-2010. I find statistically significant and practically substantive support for Hypothesis 1 – that categorical contamination is positively related to subsequent corporate divestiture events. However, my hypotheses regarding the moderating effect of shareholder proposals and sustainability reporting are not supported.

Summary Statistics and Correlations

In Table 4, I present summary statistics and correlations for the variables used in this study: *divestitures*, *log sales*, *debt ratio*, *return on equity*, *blockholder ownership*, *negative ratings*, *reporting*, and *shareholder proposals*. I checked for multicollinearity in two ways. First, I evaluated the correlations among the independent and control variables. The median correlation magnitude was 0.13, while the largest correlation magnitudes were 0.51 and 0.52, between *log sales* and *negative ratings*, and between *log sales* and *shareholder proposals*, respectively. Consistent with prior studies, larger firms are more likely to be negatively rated and to be targeted by shareholder proposals. Although there is no definitive agreement on what constitutes a serious multicollinearity problem, concern typically centers on values greater than 0.8 or 0.9 (Berry & Feldman, 1990; Farrar & Glauber, 1967). As a second check, I also calculated the variance inflation factor (VIF) for each independent and control variable. All were less than 2, well below

acceptable limits (Kutner, Nachtsheim, & Neter, 2004: 406-410). Taken together this evidence suggests that multicollinearity was not a concern.

Table 4. Summary Statistics and Correlations

Panel A: Summary Statistics

	mean	sd	min	max
Divestitures	0.55	1.17	0.00	16.00
Log Sales	8.13	1.39	3.29	12.96
Debt Ratio	1.83	1.32	0.09	20.50
Return on Equity	0.19	3.07	-26.70	221.44
Blockholder Ownership	0.20	0.16	0.00	1.00
Negative Ratings	0.01	0.99	-1.25	6.48
Reporting	0.12	0.32	0.00	1.00
Shareholder Proposals	1.01	1.88	0.00	28.00

Panel B: Correlations

	1	2	3	4	5	6	7	8
1 Divestitures	1.00							
2 Log Sales	0.27	1.00						
3 Debt Ratio	-0.14	-0.39	1.00					
4 Return on Equity	-0.01	0.01	-0.01	1.00				
5 Blockholder Ownership	-0.05	-0.15	0.06	-0.02	1.00			
6 Negative Ratings	0.28	0.51	-0.20	-0.00	-0.12	1.00		
7 Reporting	0.10	0.34	-0.08	0.02	-0.08	0.28	1.00	
8 Shareholder Proposals	0.25	0.52	-0.18	0.01	-0.12	0.47	0.29	1.00

Hypothesis Test Results

In Table 5, I present the results of the models that test hypotheses 1, 2 and 3. For convenience, in all cases I have reported exponentiated coefficients (e^b) rather than beta

coefficients (*b*). For the negative binomial model, exponentiated coefficients have the interpretation of incidence-rate ratios (Stata Corp, 2009). Standard errors and confidence intervals are similarly transformed. Of note, this option affects how results are displayed, not how they are estimated.

Model 1 is the baseline specification. It includes time and time squared to account for any year over year changes that affected all firms in the sample, GICS-based industry-level controls to account for any industry-specific effects, firm-level conditional fixed effects to account for any factors unique to particular firms over time, and the time and firm varying control variables described earlier: *log sales*, *debt ratio*, *return on equity* and *blockholder ownership*.

Model 2 adds the negative ratings variable and provides a test of hypothesis 1, that negative sustainability ratings are positively related to subsequent corporate divestitures. The result is positive and significant, indicating support for hypothesis 1. This specification is a fairly conservative test of my categorical contamination hypothesis. The results can be interpreted as showing that after controlling for any time-related unobserved heterogeneity, any firm-level unobserved heterogeneity, as well as the specific time and firm varying control variables, negative sustainability ratings in year *t-1* have a significant positive effect on divestitures in the following year. Not only is the result statistically significant, it is practically meaningful as well. After controlling for all other factors, a one-unit increase in a firm's negative sustainability rating in year *t-1* results in an approximate 8% increase in the expected number of divestitures a firm completes in year *t*.

Model 3 adds the shareholder proposals variable and the interaction term *ratings* x

proposals. Although the main effect of shareholder proposals is positive and significant, the interaction term is not. Thus, hypothesis 2 is not supported.

Model 4 adds the reporting variable and the interaction term *ratings x reporting*, allowing for a test of hypothesis 3. Although the sign of the interaction term is in the expected direction, it is not significant. Accordingly there is no support for hypothesis 3 which argued that firms engaged in sustainability reporting are more likely to divest in response to negative sustainability ratings than firms that do not produce sustainability reports.

Finally, Model 5 includes all of the variables discussed above, and again demonstrates support for the hypothesis that negative ratings have a significant effect on corporate divestitures, even after controlling for a variety of factors.

Table 5. Conditional Fixed Effects Negative Binomial Models Predicting the Count of Divestitures per Year, 1992-2010

	Model 1	Model 2	Model 3	Model 4	Model 5
Time	1.088*** (0.0157)	1.090*** (0.0158)	1.085*** (0.0158)	1.090*** (0.0158)	1.085*** (0.0158)
Time Squared	0.995*** (0.000683)	0.995*** (0.000683)	0.995*** (0.000685)	0.995*** (0.000686)	0.995*** (0.000688)
Log Sales	1.541*** (0.0564)	1.491*** (0.0569)	1.456*** (0.0572)	1.491*** (0.0573)	1.457*** (0.0574)
Debt Ratio	0.922* (0.0309)	0.920* (0.0309)	0.917** (0.0309)	0.920* (0.0310)	0.916** (0.0309)
Return on Equity	0.977 (0.0160)	0.978 (0.0158)	0.978 (0.0159)	0.978 (0.0158)	0.978 (0.0159)

Blockholder Ownership	1.637** (0.260)	1.626** (0.257)	1.667** (0.265)	1.628** (0.258)	1.671** (0.266)
Negative Ratings		1.079** (0.0284)	1.069* (0.0315)	1.075** (0.0303)	1.070* (0.0319)
Shareholder Proposals			1.035** (0.0133)		1.034** (0.0134)
Ratings x Proposals			1.000 (0.0041)		1.000 (0.0045)
Reporting				1.000 (0.0746)	1.014 (0.0768)
Ratings x Reporting				1.012 (0.0369)	0.986 (0.0399)
Firm-Level Fixed Effects	Yes	Yes	Yes	Yes	Yes
Industry-Level Controls	Yes	Yes	Yes	Yes	Yes
Observations (<i>n</i>)	8727	8727	8727	8727	8727
Groups (<i>N</i>)	736	736	736	736	736
AIC	13478.4	13466.0	13459.3	13469.7	13463.1
BIC	13527.9	13522.6	13530.0	13540.5	13547.9
d.f.	6	7	9	9	11
χ^2	251.5	265.9	276.6	266.1	276.8
Log Likelihood	-6732.2	-6725.0	-6719.6	-6724.9	-6719.5

Exponentiated coefficients; Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Robustness Checks

In results not reported, I also performed several robustness checks. I tried multiple alternative specifications of my primary independent variable. In one case, I used a raw count of the number of sustainability concerns a firm received. In another case, I used a

ratio of the number of sustainability concerns a firm received divided by the number of sustainability concerns that were rated. My results were robust to both of these alternative specifications of the primary independent variable. Additionally, in results not supported I investigated several alternative definitions of the independent variable. Specifically, I modeled environmental concerns, social concerns and a combination of environmental and social concerns (leaving out corporate governance concerns). In all three cases the pattern of results was again substantively similar to the results reported above.

As noted in Chapter 4, I also modeled time in two ways – as both a series of year dummy variables (one for each year of my study, minus 1992 as the omitted variable), and as a clock, incremented by 1 for each year of my study. My results were not sensitive to either of these specifications (e.g., Bidwell & Briscoe, 2010). Accordingly, in the interest of parsimony I utilized time and time squared in the models shown in Table 5 above. In Table 6 below, time is modeled using year dummies.

Table 6. Alternate Models with Year Dummies

	Model 6	Model 7	Model 8	Model 9	Model 10
1993	0.956 (0.106)	0.959 (0.106)	0.968 (0.107)	0.958 (0.106)	0.969 (0.107)
1994	1.072 (0.117)	1.078 (0.118)	1.061 (0.116)	1.077 (0.118)	1.061 (0.116)
1995	1.228 (0.130)	1.237* (0.131)	1.217 (0.129)	1.235* (0.130)	1.218 (0.129)
1996	1.333** (0.139)	1.345** (0.140)	1.316** (0.137)	1.343** (0.140)	1.317** (0.137)
1997	1.296* (0.130)	1.312** (0.131)	1.279* (0.129)	1.309** (0.130)	1.279* (0.129)

	(0.135)	(0.137)	(0.134)	(0.137)	(0.134)
1998	1.448 ^{***} (0.148)	1.469 ^{***} (0.150)	1.443 ^{***} (0.148)	1.463 ^{***} (0.150)	1.444 ^{***} (0.148)
1999	1.384 ^{**} (0.142)	1.399 ^{**} (0.144)	1.380 ^{**} (0.142)	1.395 ^{**} (0.144)	1.380 ^{**} (0.142)
2000	1.184 (0.127)	1.202 (0.128)	1.174 (0.126)	1.197 (0.128)	1.174 (0.126)
2001	1.146 (0.124)	1.163 (0.126)	1.141 (0.124)	1.158 (0.126)	1.142 (0.125)
2002	1.034 (0.116)	1.045 (0.117)	1.029 (0.115)	1.040 (0.117)	1.029 (0.116)
2003	1.183 (0.132)	1.184 (0.132)	1.125 (0.127)	1.180 (0.133)	1.125 (0.128)
2004	1.267 [*] (0.139)	1.270 [*] (0.140)	1.224 (0.135)	1.266 [*] (0.140)	1.224 (0.136)
2005	0.994 (0.115)	1.002 (0.116)	0.966 (0.112)	0.997 (0.116)	0.966 (0.113)
2006	1.125 (0.129)	1.135 (0.130)	1.093 (0.126)	1.127 (0.131)	1.093 (0.127)
2007	1.039 (0.122)	1.047 (0.123)	1.000 (0.119)	1.039 (0.124)	1.001 (0.120)
2008	0.907 (0.110)	0.916 (0.111)	0.876 (0.107)	0.910 (0.112)	0.876 (0.109)
2009	0.6250 ^{***} (0.0814)	0.6310 ^{***} (0.0823)	0.6110 ^{***} (0.0800)	0.6270 ^{***} (0.0834)	0.6110 ^{***} (0.0815)
2010	0.813 (0.102)	0.814 (0.102)	0.800 (0.101)	0.809 (0.104)	0.800 (0.103)

Log Sales	1.5720 ^{***} (0.0591)	1.5220 ^{***} (0.0595)	1.4870 ^{***} (0.0597)	1.5220 ^{***} (0.0599)	1.4880 ^{***} (0.0601)
Debt Ratio	0.9180 [*] (0.0312)	0.9160 [*] (0.0313)	0.9130 ^{**} (0.0312)	0.9160 [*] (0.0313)	0.9130 ^{**} (0.0313)
Return on Equity	0.9730 (0.0169)	0.9750 (0.0167)	0.9750 (0.0167)	0.9750 (0.0167)	0.9750 (0.0167)
Blockholder Ownership (%)	1.795 ^{***} (0.311)	1.778 ^{***} (0.308)	1.850 ^{***} (0.322)	1.781 ^{***} (0.308)	1.854 ^{***} (0.323)
Negative Ratings		1.0770 ^{**} (0.0283)	1.0670 [*] (0.0314)	1.0730 [*] (0.0302)	1.0680 [*] (0.0318)
Shareholder Proposals			1.0320 [*] (0.0134)		1.0310 [*] (0.0135)
Ratings x Proposals			1.00000 (0.00409)		1.00000 (0.00448)
Reporting				0.9990 (0.0750)	1.0140 (0.0773)
Ratings x Reporting				1.0130 (0.0370)	0.9870 (0.0401)
Firm-Level Fixed Effects	Yes	Yes	Yes	Yes	Yes
Industry-Level Controls	Yes	Yes	Yes	Yes	Yes
Observations (<i>n</i>)	8727	8727	8727	8727	8727
Groups (<i>N</i>)	736	736	736	736	736
AIC	13472.2	13460.3	13455.3	13464.0	13459.1
BIC	13634.9	13630.1	13639.3	13647.9	13657.2
d.f.	22	23	25	25	27
χ^2	289.7	303.6	312.5	303.9	312.8
Log Likelihood	-6713.1	-6706.1	-6701.7	-6706.0	-6701.5

Exponentiated coefficients; Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Another possible question has to do with the effects of divestitures in $t-1$ on divestitures in t . In other words, are some companies more likely to perennially divest than others? To control for this possibility, in models not reported I included a lagged divestiture variable. I found that while prior period divestitures are a significant predictor of subsequent period divestitures, controlling for this possibility did not change the overall pattern of my results. Negative ratings remained a significant predictor of subsequent divestitures.

In Table 5, I used the GICS taxonomy to control for industry-level effects. I opted to use GICS, rather than the more conventional Standard Industrial Classification (SIC) codes based on emerging research which has suggested GICS is superior to SIC in a number of contexts (Bhojraj et al., 2003; Chan et al., 2007). Nonetheless, as an alternative to GICS, I constructed two different industry indicators: one based on two-digit SIC codes, and the other based on three-digit SIC codes. My sample contained 64 and 208 unique industries at the two- and three-digit level, respectively. Of note, using the six-digit GICS also yielded 64 industries in my sample. However, that is where similarities between GICS and SIC stopped. In no case was I able to get my models to converge on a solution using either two- or three-digit SIC codes.

In light of these difficulties, I tried one more alternative. Drawing on prior research related to sustainability, I adapted the industry categorization scheme proposed by Waddock and Graves (1997: Table 1) as follows. My first nine industry definitions were identical to theirs. I expanded their definition of “Wholesale, retail” to include SIC

codes 4992-5999; and their definition of “Bank, financial services” to include SIC codes 6000-6799. This latter change is tantamount to expanding the scope of the category to include the Real Estate Investment Trust (REIT) industry. I also created a fourteenth industry category – “Unclassified” – which included SIC codes 9900-9999. I then re-estimated my models using these industry classifications, with Industry 14 – Unclassified as the omitted reference category. As shown in Table 7, a number of these industry categories are significant.

Table 7. Alternate Models with Industry Categories

Adapted from Waddock & Graves (1997)

	Model 11	Model 12	Model 13	Model 14	Model 15
Time	1.0850 ^{***} (0.0157)	1.0870 ^{***} (0.0157)	1.0820 ^{***} (0.0158)	1.0870 ^{***} (0.0158)	1.0820 ^{***} (0.0158)
Time Squared	0.995 ^{***} (0.000685)	0.995 ^{***} (0.000686)	0.995 ^{***} (0.000688)	0.995 ^{***} (0.000689)	0.995 ^{***} (0.000691)
Mining, construction	4.708 [*] (3.607)	4.622 (3.620)	4.870 [*] (3.725)	4.616 (3.615)	4.841 [*] (3.709)
Food, textiles, apparel	2.752 (2.095)	2.770 (2.150)	2.998 (2.275)	2.776 (2.154)	2.993 (2.275)
Forest products, paper, publishing	3.029 (2.258)	3.019 (2.296)	3.146 (2.333)	3.027 (2.303)	3.143 (2.335)
Chemicals, pharmaceuticals	6.318 [*] (4.800)	5.870 [*] (4.543)	5.967 [*] (4.498)	5.929 [*] (4.590)	6.021 [*] (4.551)
Refining, rubber, plastics	1.875 (1.431)	1.785 (1.391)	1.852 (1.410)	1.788 (1.393)	1.859 (1.418)
Containers, steel,	2.248	2.221	2.337	2.218	2.330

heavy manufacturing	(1.665)	(1.678)	(1.721)	(1.676)	(1.719)
Computers, autos, aerospace	4.617* (3.399)	4.566* (3.430)	4.783* (3.500)	4.585* (3.444)	4.782* (3.506)
Transportation	0.950 (0.828)	0.924 (0.816)	0.975 (0.848)	0.925 (0.817)	0.971 (0.846)
Telephone, utilities	2.112 (1.541)	2.129 (1.587)	2.225 (1.615)	2.123 (1.582)	2.211 (1.608)
Wholesale, retail	1.363 (1.023)	1.409 (1.079)	1.477 (1.103)	1.400 (1.072)	1.465 (1.096)
Banks, financial services, REITs	16.89 (41.76)	13.14 (26.72)	13.58 (27.08)	13.53 (28.04)	13.77 (27.68)
Hotels, entertainment	3.980 (2.990)	3.905 (2.988)	4.067 (3.036)	3.892 (2.977)	4.045 (3.026)
Hospital management	2.819 (2.234)	2.851 (2.302)	3.188 (2.533)	2.838 (2.291)	3.164 (2.518)
Log Sales	1.5640*** (0.0592)	1.5230*** (0.0599)	1.4850*** (0.0602)	1.5260*** (0.0604)	1.4880*** (0.0605)
Debt Ratio	0.9040** (0.0312)	0.9050** (0.0312)	0.9030** (0.0311)	0.9060** (0.0313)	0.9030** (0.0312)
Return on Equity	0.9750 (0.0169)	0.9760 (0.0168)	0.9760 (0.0169)	0.9760 (0.0169)	0.9760 (0.0170)
Blockholder Ownership (%)	1.635** (0.264)	1.633** (0.263)	1.668** (0.270)	1.630** (0.263)	1.666** (0.270)
Negative Ratings		1.0700* (0.0287)	1.0610* (0.0318)	1.0650* (0.0304)	1.0610 (0.0322)
Shareholder Proposals			1.0350** (0.0134)		1.0350** (0.0136)

Ratings x Proposals			1.00000 (0.00422)		1.00000 (0.00461)
Reporting				0.9600 (0.0726)	0.9730 (0.0747)
Ratings x Reporting				1.0190 (0.0374)	0.9940 (0.0403)
Firm-Level Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations (<i>n</i>)	8727	8727	8727	8727	8727
Groups (<i>N</i>)	736	736	736	736	736
AIC	13467.4	13463.0	13455.1	13466.7	13458.7
BIC	13608.9	13611.6	13617.8	13629.4	13635.6
d.f.	19	20	22	22	24
χ^2	288.5	294.8	306.8	295.2	307.1
Log Likelihood	-6713.7	-6710.5	-6704.5	-6710.3	-6704.4

Exponentiated coefficients; Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

My dependent variable is a count variable, and approximately 70% firm-year observations are zeros, suggesting the possibility that the number of zero values may be inflated (Greene, 2008). Zero inflation occurs when zeros are recorded for two qualitatively different reasons – some are truly zeros, whereas as others are the result of some other process, such as a failure to observe the phenomena in question. Such situations can be dealt with using zero-inflated models. However, one limitation of this class of models is that they are not well equipped to handle repeated observations of the same entity over time (i.e., panel data). In particular, the default assumptions of zero-inflated models are not robust to these conditions. One possible work around is to use entity-level clustered errors. Accordingly, as an alternative to conditional fixed effects

negative binomial models reported above, I also estimated zero-inflated Poisson (ZIP), and zero-inflated negative binomial (ZINB) models (with and without clustered errors). In all variations, the pattern of results was substantially similar to those reported.

As a separate robustness check, I also modeled divestitures using repeated hazards event history analysis in which the dependent variable was a dichotomous variable coded 1 for any year in which a parent company in my sample completed 1 or more divestitures, and 0 otherwise. Here again, I obtained results consistent with those reported above. In short, I examined a variety of alternate models and variables, and in all cases found that negative sustainability ratings are a significant predictor of corporate divestitures among large diversified firms in the period 1992 to 2010.

Summary

In this chapter I analyzed the extent to which diversified firms may be utilizing divestitures as a mechanism for dissociating themselves from categorical contamination, in this case, negative sustainability ratings. The results yielded several findings. In particular, I found statistically significant support for Hypothesis 1 – that categorical contamination is positively related to subsequent corporate divestiture events. However, my hypotheses regarding the moderating effects of shareholder proposals and sustainability reporting are not supported.

CHAPTER 6. DISCUSSION

I began my study by asking: *How do emerging categories of concern affect organizational boundaries?* In this chapter I discuss the results of my study in light of this research question. In particular, I enumerate some of the theoretical contributions of my study and reflect on some of the implications of my results for organizational theory and practice. I also discuss some of the potential limitations that should be kept in mind when interpreting my findings. Finally, my research on categorical contamination opens up a number of potentially interesting questions and promising directions. I conclude by discussing some avenues that might be worth pursuing in future research.

Contributions

Prior research on divestitures and organizational boundaries has been dominated by economic and financial explanations. Although such perspectives have generated important insights into organizational boundary phenomena, more recently there have been calls by scholars of both divestitures and organizational boundaries to broaden the agenda to consider the potential role that public and societal concerns might play in explaining organizational boundaries (Brauer, 2006; Santos & Eisenhardt, 2005).

I started with a simple proposition: culture matters. More specifically, I built on literatures related to cultural categories and the sociology of association. Theoretically, I introduced the concept of *categorical contamination*, defined as the processes whereby one set of actors may become negatively evaluated by others owing to their entanglements with cultural categories of concern. I then proposed that when diversified firms are contaminated by association with emerging categories of concern, one response may be *dissociation*.

I examined contamination and dissociation empirically by analyzing the extent to which diversified firms respond to negative sustainability ratings through divestitures. The results provide empirical evidence that in the case of divestitures, negative sustainability ratings play a significant role, even after controlling for the usual economic and financial explanations, as well as year-level effects, industry-specific effects, and firm-level effects. In other words, my results suggest that over the last two decades a significant number of diversified firms have pursued sustainability through a strategy of dissociation, and that this result appears to have been induced by cultural concerns. This insight contributes to our understanding of the evaluative consequences of categorical associations, and the powerful effects such external ratings can have on organizational actions, an issue that has implications for both policymakers and practitioners alike.

At the same time, the context for my study is corporate sustainability, an issue that has emerged as an important concern over the past several decades. Here, my research contributes to our understanding of how such emergent concerns can become translated into strategic issues, and the consequences of emergent concerns for achieving sustainability. Indeed, despite the ubiquity of sustainability concerns, scholars are only beginning to consider its impact on fundamental strategic questions, such as “What businesses should we be in” (Andrews, 1971)?

More generally, the results of my study illustrate the power of taking a cultural perspective on organizational boundaries. Rather than conceiving an organization’s boundaries as markers of efficiency, power, competency or identity (Santos & Eisenhardt, 2005), the cultural perspective I am proposing views an organization’s boundaries as driven by cultural concerns. On this view, an organization’s boundaries are

constituted by the emergence and performance of categories of concern in its cultural milieu. As a basic proposition, as new cultural categories of concern emerge – whether sustainability or something else entirely (e.g., hydraulic fracturing, climate change; Garud & Gehman, 2010; Cahoy, Gehman, & Lei, 2012) – an organization’s boundaries can be expected to ebb and flow in response. Such a perspective brings us a long way from the efficiency arguments that have dominated extant discussions.

Here I can only speculate, but theoretically, the mechanisms of contamination and dissociation I have proposed appear to have the potential to explain far more than just sustainability concerns. In particular, it may be worthwhile to reconsider prior literature on divestitures. For instance, my research suggests that divestitures could be re-conceptualized as a generalizable cultural response to all sorts of tainted associations – whether in the form of underperforming assets and discounted valuations – or in this case – negative sustainability ratings.

On this account, a cultural perspective on organization boundaries emerges as not merely an alternative to economic and financial explanations. Instead, it may be more parsimonious and powerful to interpret economic and financial explanations (i.e., underperforming assets, discounted valuations) as culturally located. Just like dirt itself, what is “economic” or “financial” is not given, but depends on the classifications in use and their performance. Obviously, such classifications are subject to changes over time (Beunza & Garud, 2007; Kennedy, Lo, & Lounsbury, 2010; Stark, 2009).

What made economic sense in 1970 need not resemble what made economic sense in 2010. Indeed, following the financial crisis of 2008, the current environment has been described as the “new normal” suggesting a shift in what is economically or

financially rational. For instance, seen from a cultural perspective, the erosion of the conglomerate firm as documented by prior studies may well have been the result of emergent concerns regarding contamination. As these cultural concerns were progressively and performativity inscribed into economic indicators, the conglomerate firm became contaminated by association (Davis et al., 1994; MacKenzie & Millo, 2003).

Apart from such transformations in the underlying cultural categories and their associations, how else can we explain why firms were suddenly responsive to securities analysts and illegitimacy discounts between 1985 and 1994, when prior to this time period they apparently were not? Why might firms engage in illegitimate and discounted activities in time period one, only to make an about face and respond to these illegitimacies and discounts in time period two? It makes no sense to subscribe to such mechanisms as an explanation for the de-conglomeratization of large corporations, unless we allow for the fact that the emergence of these mechanisms must have been culturally located, and thus, subjected to transformation over time.

Without bringing culture into the picture, it is not possible to symmetrically account for the emergence and disappearance of conglomerate firms. Thus, my research suggests it may be constructive to re-interpret Zuckerman's (1994) study as an instance of categorical contamination, one that was likewise resolved through dissociation. In sum, economic and financial explanations for organizational boundaries may be better understood as particular instances of cultural mechanisms, rather than alternatives.

Implications

My sample includes some of the largest firms in the world over a 19 year period, suggesting that categorical contamination and sustainability by dissociation may be a

relatively widespread phenomenon. But to the extent that is the case, it suggests a potentially sobering conclusion. Rather than cleaning up, firms may be cleaning out. Although large diversified firms are apparently becoming more sustainable, they appear to be doing so, at least in part, by shifting their contamination elsewhere.

Such an outcome suggests, ironically, that dissociation may not actually offer a solution to the problem of contamination. Rather than dealing with dirt directly, one cultural solution that appears to have emerged is to simply displace the dirt somewhere else. As a result, the world may not be any more sustainable now than 20 years ago – although on the basis of various sustainability indicators, the companies in my sample may appear to have cleaned themselves up. If that is the case, then the emergence of sustainability concerns is having potentially unintended and perhaps even perverse effects. To the extent that the largest corporations appear to be more sustainable, we might easily conclude progress is being made, when that may not be the case.

Perhaps not surprisingly, these insights resonate with Mary Douglas. For instance, at one point she concludes that purity “is an attempt to force experience into logical categories of non-contradiction. But experience is not amenable and those who make the attempt to find themselves led into contradiction” (Douglas, 1966/2005: 200). In particular, “that which is negated is not thereby removed” (p. 202). Instead, that which does not fit tidily into accepted categories is still there and demands attention. In the case of sustainability concerns, it appears that the contamination may indeed still be there; it has simply become part of another organization.

Although further empirical work is required, anecdotally, I found that a number of business units divested by firms in my sample were acquired by private equity firms and

sovereign wealth funds. In other words, the contamination is being translated from public markets to private markets. Whereas the “market” is typically conceptualized as homogeneous and singular, this insight suggests it may be worthwhile to theorize heterogeneous and plural markets. In this case, my research implies the possibility of asymmetry between markets for purity and markets for dirt. The determinants of worth and the network of actors within these two markets is likely very different. But all of this remains to be investigated further.

Limitations

Although the results of my analysis provide evidence that categorical contamination is an important driver of divestitures in diversified firms, there are several potential limitations to keep in mind when evaluating these results. Owing to data limitations, my dependent variable is rather blunt. I have analyzed the extent to which a firm divests in year t , given negative sustainability ratings in year $t-1$.

This approach assumes that all divestitures are created equal, both in terms of their dirtiness and their magnitude to the divesting firm. However, it is unlikely that this was the case. For instance, it may be useful to measure the size and scope of divestiture. Along these lines, Hitt and colleagues (Hitt, Hoskisson, Johnson, & Moesel, 1996: 1099) defined “divestiture intensity” using two different indicators: (1) number of divestitures made, and (2) percentage of sales divested, resulting in a measure of total percentage of sales divested. Although I measured the first of these, the latter measure was unavailable for most observations in my sample.

A potentially related concern has to do with differences in the ability of firms to divest – from a synergy standpoint and in terms of the market for dirt. In other words, it is

possible that some firms may have had an easier time divesting because the business unit in question was not integral to their overall operations, because there were ample markets for the business unit in question, or both.

Another issue has to do with the timing assumptions inherent in my models. I used MSCI ESG Research's STATS as my measure of negative sustainability ratings. This dataset provides an end of year snapshot of a firm as of that moment in time. However, MSCI updates these ratings in real time throughout the year. As a result, a firm's rating as of December 31 of a given year may have been its rating for anywhere from 1 to 365 days. And in all likelihood, firms responded to negative sustainability ratings in real time, not at a single point in time. Similarly, divestitures may occur throughout the year. However, I only analyzed the number of divestitures a firm made as of December 31 of a given year. In short, the structure of the data is considerably coarser than the underlying phenomena it is intended to assess. In light of these limitations, future qualitative research could study interactions between raters and firms, how these interactions unfold over time, and the temporal dynamics of firm responses.

Limitations in the data I collected also prevented me from dealing with the issue of dirt in a more granular way. In particular, I was not able to observe the "dirtiness" of the divested unit. In future research, I would like to be able to devise a way of measuring both the dirtiness of an overall portfolio of businesses, as well as particular business units. Consistent with my theorization, such a measurement scheme would need to allow for both absolute and relative assessment of dirt. For instance, a given business unit may be dirty on an absolute basis, but may not be dirty relative to a portfolio of particularly dirty businesses. Similarly, a business unit which is contaminating to one firm may not be

contaminating to another firm, owing to significant differences in their overall portfolios of businesses. Although these issues can be readily dealt with conceptually and theoretically, it is another matter entirely to deal with them empirically. Nonetheless, I believe that datasets appropriate to answer these questions will become available, or could be assembled, albeit on a smaller scale than the dataset utilized in this study.

Another potential limitation has to do with my primary independent variable. Although MSCI ESG Research is the oldest, most frequently used provider of sustainability ratings, its measures are still somewhat coarse, both in terms of their level of specificity, and in terms of their level of analysis. In particular, MSCI ESG Research provides binary indicators for between 24 and 34 different sustainability concerns per year, and only at the parent level, not at the business unit level. A more sophisticated approach might be to gather finer-grained data regarding sustainability concerns, both overall, and specific to a firm's different business units. This would allow one to test not only whether negative ratings result in divestitures, but whether the specific unit divested was the one responsible for the negative ratings. Here again, I was unable to find any datasets capable of measuring either of these aspects, but given the growing importance of sustainability, perhaps alternate data will become available in the future.

One of my other substantive predictor variables – sustainability reporting – may also merit additional consideration, as it was only a binary variable. Although my dataset is larger and more comprehensive than any known sustainability reporting dataset, this variable is somewhat blunt. First, sustainability reporting has evolved considerably and is likely to have varied both within and across firms and time. Thus, a binary indicator may not reflect the underlying heterogeneity involved. Second, among the companies in my

sample, the decision to engage in sustainability reporting is entirely voluntary. Thus, firms exercise a great deal of discretion about whether and when to produce a sustainability report. In other words, this variable may be somewhat endogenous, and therefore, a biased indicator of the extent to which firms are engaged in and committed to sustainability. In that case, an alternate indicator may be required for assessing the extent to which firms are engaged in shaping sustainability.

The data source used for one of my control variables, blockholder ownership, has been shown by prior studies to have some problems regarding the accuracy of ownership and outstanding share information (Dlugosz, Fahlenbrach, Gompers, & Metrick, 2006). To the extent that either of these values is systematically misreported, my indicator of blockholder ownership may be biased. Specifically, I may have included observations that are not actually 5% owners, or excluded others that should have been retained as 5% owners. Despite these issues, scholars persist in using this dataset since no better alternatives are commonly available.

Future Considerations

Based on the results of this study, it appears that it may be worthwhile to undertake further research – both empirically and theoretically – on the role of cultural concerns in shaping organizational boundaries. In some cases, such follow-on studies might be able to leverage the large and robust dataset that I produced as part of this study. In other cases, additional data will need to be assembled. Additionally, there are theoretical questions that merit further consideration.

The most exciting extension of this study may be theoretical. In particular, it appears that it may be worthwhile to further elaborate and refine the concepts of

categorical contamination and categorical dissociation, as well as their connections to organizational boundary moves. For instance, in terms of contamination, what are some of the determinants of whether or not a particular cultural concern becomes contaminating? In terms of dissociation, besides divestitures, what alternate mechanisms are available?

Next, building on my dissertation, an obvious follow-up question is: *Who buys unsustainable businesses?* I plan to explore this question theoretically and empirically in a project that looks at the privatization and offshoring of ownership related to unsustainable businesses. In particular, such a project would allow me to investigate some anecdotal insights that have emerged from this study regarding the tendency for contaminated businesses to be purchased by private equity firms and sovereign wealth funds. Among other data requirements, this project would entail developing a typology of acquirer types, and then constructing an appropriate way to measure them.

Another possible extension of this research would be to investigate “values practices” (Gehman et al., 2012) in the context of sustainability reporting. Specifically, it appears that it may be worthwhile to investigate the heterogeneous diffusion of sustainability reporting as a case of values work. This would entail theorizing and then analyzing how managerial-level, firm-level and industry-level differences influence the way sustainability practices are translated over organizations and time.

A third possibility is somewhat more methodological in nature. As part of this research project I’ve become quite familiar with shareholder proposals. Along the way, I found there are several substantive issues with these data that do not appear to have been fully explored and that may be consequential to research conclusions. For instance,

omitted and withdrawn proposals are not uniformly observed, and yet, a nascent body of research suggests withdrawn proposals are one of the most potent outcomes shareholder activists might achieve (Bauer, Moers, & Viehs, 2011; Chidambaran & Woidtke, 2000). Future research might investigate this possibility and others by first building a comprehensive dataset of shareholder proposals from the ground up, and then comparing this dataset with existing commercially available datasets. Another output would be the dataset itself, which could be made available to future researchers at nominal cost, thereby eliminating the need to purchase what are otherwise costly datasets (e.g., the ISS Shareholder Proposals dataset).

Separate from these studies, one question I initially set out to explore in my dissertation remains unanswered. In particular, I had hoped to assess “categorical legitimacy,” defined as the extent to which a particular category of concern is seen as appropriate within a particular cultural system (Deephouse & Suchman, 2008; Douglas, 1966/2005, 1986; Suchman, 1995).¹² My argument was that the greater the legitimacy of a category of concern, the more likely a contaminated firm would be to subsequently divest. In other words, I argued that the evaluative consequences of a particular categorical association will vary depending on the category’s legitimacy, and this legitimacy may be subject to changes over time (Durand et al., 2007; Garud et al., 2010; Kennedy et al., 2010; Zuckerman, 1999).

¹² Although Suchman (1995) discusses what he calls structural or categorical legitimacy as a third kind of moral legitimacy, his definition refers to the legitimacy of an organization, not to the legitimacy of a category itself. “[A]udiences see the organization as valuable and worthy of support because its structural characteristics locate it within a morally favored taxonomic category” (Suchman, 1995: 581). By comparison, I am interested in the extent to which the taxonomic category itself is considered valuable and worthy of support.

Given my context, I had proposed to measure the categorical legitimacy of sustainability using the level of financial assets investors have been willing to commit to sustainability-related investment products. In particular, I had proposed to collect annual data on the total sustainability-related assets under management from the Forum for Sustainable and Responsible Investment (SIF). However, upon contacting SIF, it turned out that they were able to supply such data for less than half of the years required by my study. Nor was I able to identify an alternate provider of such data. As a result, I was unable to assess categorical legitimacy and its possible effects on the relationship between contamination and dissociation.

In the future, it may be worthwhile to gather data on an alternate measure of categorical legitimacy. For instance, in the case of organizational legitimacy, Vergne (2011) advocated for the use of a perceptual measure based on media content analysis. Specifically, Vergne (2011) introduced a multidimensional media-based measure of organizational legitimacy, which accounts for the heterogeneity of perceptions across space and time. It appears that such an approach could be modified to assess the concept of categorical legitimacy. However, it remains to be seen whether this approach could differentiate between descriptive and evaluative dimensions of legitimacy.

Conclusion

Over the past several decades, sustainability has emerged as an increasingly important category of concern. Reflecting this shift, organizations are being evaluated on the basis of sustainability criteria. Firms in particular may find themselves rated as unsustainable because of their portfolios of businesses. In this study I theorized that when confronted with negative sustainability ratings, firms might choose dissociation rather

than decoupling their unsustainable practices symbolically or displacing them substantively. Using an unbalanced panel of diversified firms from 1992 to 2010, I found that categorical contamination was a significant predictor of subsequent divestitures, although the presence of shareholder activists and a firm's engagement in sustainability reporting did not moderate this relationship as proposed. Taken as a whole, my study suggests the benefits of taking a cultural perspective to understanding organizational boundaries, and opens up a number of important future research directions.

REFERENCES

- Accenture. 2010. A new era of sustainability: CEO study. New York: Accenture.
- Achbar, M., & Abbott, J. 2005. The corporation: 145 minutes. United States: Zeitgeist Films
- Adut, A. 2004. Scandal as norm entrepreneurship strategy: Corruption and the French investigating magistrates. *Theory and Society*, 33: 529-578.
- Adut, A. 2005. A theory of scandal: Victorians, homosexuality, and the fall of Oscar Wilde. *American Journal of Sociology*, 111: 213-248.
- Agrawal, A. 2001. Common property institutions and sustainable governance of resources. *World Development*, 29: 1649-1672.
- Allison, P. D., & Waterman, R. P. 2002. Fixed effects negative binomial regression models. *Sociological Methodology*, 32: 247-265.
- Andrews, K. R. 1971. *The concept of corporate strategy*. Homewood: Dow Jones.
- Arthur, W. B. 1989. Competing technologies, increasing returns, and lock-in by historical events. *Economic Journal*, 99: 116-131.
- Bain & Company. 2008. Growth through sustainability. Boston: World Economic Forum.
- Bartlett, C. A., & McLean, A. N. 2006. *GE's talent machine: The making of a CEO*. HBS No. 9-304-049. Boston: Harvard Business School Publishing.
- Bauer, R., Moers, F., & Viehs, M. 2011. *The determinants of withdrawn shareholder proposals*: Available at: <http://ssrn.com/abstract=1885392>.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. 2001. Bad is stronger than good. *Review of General Psychology*, 5: 323-370.
- Benner, M. J. 2010. Securities analysts and incumbent response to radical technological change: Evidence from digital photography and internet telephony. *Organization Science*, 21: 42-62.
- Benner, M. J., & Tushman, M. 2002. Process management and technological innovation: A longitudinal study of the photography and paint industries. *Administrative Science Quarterly*, 47: 676-706.
- Bergh, D. D. 1997. Predicting divestiture of unrelated acquisitions: An integrative model of ex ante conditions. *Strategic Management Journal*, 18: 715-731.
- Berry, W. D., & Feldman, S. 1990. *Multiple regression in practice* Beverly Hills: Sage.
- Bethel, J., & Liebeskind, J. 1993. The effects of ownership structure on corporate

- restructuring. *Strategic Management Journal*, 14: 15-32.
- Beunza, D., & Garud, R. 2007. Calculators, lemmings or frame-makers? The intermediary role of securities analysts. *Sociological Review*, 55: 13-39.
- Bhojraj, S., Lee, C. M. C., & Oler, D. K. 2003. What's my line? A comparison of industry classification schemes for capital market research. *Journal of Accounting Research*, 41: 745-774.
- Bidwell, M., & Briscoe, F. 2010. The dynamics of interorganizational careers. *Organization Science*, 21: 1034-1053.
- Boltanski, L., & Thévenot, L. 2006. *On justification* (C. Porter, Trans.). Princeton: Princeton University Press.
- Bosselmann, K. 2008. *The principle of sustainability: Transforming law and governance*. Burlington: Ashgate.
- Boston Consulting Group. 2009. The business of sustainability: Imperatives, advantages, and actions. Boston.
- Bowker, G. C., & Star, S. L. 1999. *Sorting things out: Classification and its consequences*. Cambridge: MIT Press.
- Brauer, M. 2006. What have we acquired and what should we acquire in divestiture research? A review and research agenda. *Journal of Management*, 32: 751-785.
- Briscoe, F., & Safford, S. 2008. The Nixon-in-China effect: Activism, imitation and the institutionalization of contentious practices. *Administrative Science Quarterly*, 53: 460-491.
- Brown, H. S., de Jong, M., & Lessidrenska, T. 2009. The rise of the Global Reporting Initiative: A case of institutional entrepreneurship. *Environmental Politics*, 18: 182-200.
- Buchanan, J. M., & Stubblebine, W. C. 1962. Externality. *Economica*, 29: 371-384.
- Butler, J. 2005. *Giving an account of oneself*. New York: Fordham University Press.
- Cahoy, D., Gehman, J., & Lei, Z. 2012. The emerging trend of patents as information containment tools: A consideration of the use of hydraulic fracturing patents in the Marcellus Shale, *The Changing Face of American Patent Law and Its Impact on Business Strategy*. University of Michigan, Ross School of Business, May 17-18, 2012.
- Callon, M. 1986. Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St. Brieuc Bay. In J. Law (Ed.), *Power, action and belief*. London: Routledge.

- Callon, M. (Ed.). 1998. *The laws of the markets*. Oxford: Blackwell.
- Callon, M. 2009. Civilizing markets: Carbon trading between *in vitro* and *in vivo* experiments. *Accounting, Organizations and Society*, 34: 535-548.
- Callon, M., & Rabeharisoa, V. 2004. Gino's lesson on humanity: Genetics, mutual entanglements and the sociologist's role. *Economy & Society*, 33: 1-27.
- Casile, M., & Alison, D.-B. 2002. When accreditation standards change: Factors affecting differential responsiveness of public and private organizations. *Academy of Management Journal*, 45: 180-195.
- Chan, L. K. C., Lakonishok, J., & Swaminathan, B. 2007. Industry classifications and return comovement. *Financial Analysts Journal*, 63(6): 56-70.
- Chandler, A. D., Jr. 1962. *Strategy and Structure: Concepts in the history of American industrial enterprise*. Cambridge: MIT Press.
- Chang, S. J. 1996. An evolutionary perspective on diversification and corporate restructuring: Entry, exit and economic performance 1981-89. *Strategic Management Journal*, 17: 587-611.
- Chatterji, A. K., Levine, D. I., & Toffel, M. W. 2009. How well do social ratings actually measure corporate social responsibility? *Journal of Economics & Management Strategy*, 18: 125-169.
- Chatterji, A. K., & Toffel, M. W. 2010. How firms respond to being rated. *Strategic Management Journal*, 31: 917-945.
- Chidambaran, N. K., & Woidtke, T. 2000. *The role of negotiations in corporate governance: Evidence from withdrawn shareholder-initiated proposals*: Available at: <http://ssrn.com/abstract=209808>.
- China Water Risk. 2012. The architecture of ESG: An interview with Emil Efthimides. Accessed on April 10, 2012, at: <http://chinawatererrisk.org/interviews/the-architecture-of-esg/>.
- Chisum, D. S. 1970. Napalm, proxy proposals and the SEC. *Arizona Law Review*, 12: 463-476.
- Cho, M.-H., & Cohen, M. A. 1997. The economic causes and consequences of corporate divestiture. *Managerial and Decision Economics*, 18: 367-374.
- Coase, R. H. 1960. The problem of social cost. *Journal of Law and Economics*, 3: 1-44.
- Czarniawska, B. 2008. *A theory of organizing*. Northampton: Elgar.
- Dahlman, C. J. 1979. The problem of externality. *Journal of Law and Economics*, 22:

141-162.

- David, P. A. 1985. Clio and the economics of QWERTY. *American Economic Review*, 75: 332-337.
- Davis, G. F., Diekmann, K. A., & Tinsley, C. H. 1994. The decline and fall of the conglomerate firm in the 1980s: The deinstitutionalization of an organizational form. *American Sociological Review*, 59: 547-570.
- Davis, G. F., & Thompson, T. A. 1994. A social movement perspective on corporate control. *Administrative Science Quarterly*, 39: 141-173.
- Decker, C., & Mellewigt, T. 2007. Thirty years after Michael E. Porter: What do we know about business exit? *Academy of Management Perspectives*, 21(2): 41-55.
- Deephouse, D. L., & Suchman, M. 2008. Legitimacy in organizational institutionalism. In R. Greenwood, C. Oliver, R. Suddaby, & K. Sahlin-Andersson (Eds.), *The Sage handbook of organizational institutionalism* 49-77. Thousand Oaks: Sage.
- Delmas, M., & Toffel, M. W. 2004. Stakeholders and environmental management practices: An institutional framework. *Business Strategy and the Environment*, 13: 209-222.
- Delmas, M. A., & Toffel, M. W. 2008. Organizational responses to environmental demands: Opening the black box. *Strategic Management Journal*, 29: 1027-1055.
- Devarajan, S., & Fisher, A. C. 1981. Hotelling's "Economics of exhaustible resources": Fifty years later. *Journal of Economic Literature*, 19: 65-73.
- Dixon, J. A., & Fallon, L. A. 1989. The concept of sustainability: Origins, extensions, and usefulness for policy. *Society and Natural Resources*, 2: 73-84.
- Dlugosz, J., Fahlenbrach, R., Gompers, P., & Metrick, A. 2006. Large blocks of stock: Prevalence, size, and measurement. *Journal of Corporate Finance*, 12: 594-618.
- Dobbs, R., Huyett, B., & Koller, T. 2009. Are you still the best owner of your assets? *McKinsey Quarterly*, November: 1-7.
- Douglas, M. 1966/2005. *Purity and danger*. New York: Routledge.
- Douglas, M. 1970/1996. *Natural symbols*. New York: Routledge.
- Douglas, M. 1986. *How institutions think*. Syracuse: Syracuse University Press.
- Douglas, M. 1993. Governability: A question of culture. *Millennium: Journal of International Studies*, 22: 463-481.
- Duhaime, I. M., & Grant, J. H. 1984. Factors influencing divestment decision making:

- Evidence from a field study. *Strategic Management Journal*, 5: 301-318.
- Durand, R., Rao, H., & Monin, P. 2007. Code and conduct in French cuisine: Impact of code changes on external evaluations. *Strategic Management Journal*, 28: 455-472.
- Elsbach, K. D. 2006. *Organizational perception management*. Mahwah,: Erlbaum.
- Elsbach, K. D., & Kramer, R. M. 1996. Members' responses to organizational identity threats: Encountering and countering the *Business Week* rankings. *Administrative Science Quarterly*, 41: 442-476.
- Ertimur, Y., Ferri, F., & Stubben, S. R. 2010. Board of directors' responsiveness to shareholders: Evidence from shareholder proposals. *Journal of Corporate Finance*, 16: 53-72.
- Etzion, D., & Ferraro, F. 2010. The role of analogy in the institutionalization of sustainability reporting. *Organization Science*, 21: 1092-1107.
- Farrar, D. E., & Glauber, R. R. 1967. Multicollinearity in regression analysis: The problem revisited. *Review of Economics and Statistics*, 49: 92-107.
- Feldman, M. S., & Pentland, B. T. 2003. Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48: 94-121.
- Fiss, P. C., & Zajac, E. J. 2006. The symbolic management of strategic change: Sensegiving via framing and decoupling. *Academy of Management Journal*, 49: 1173-1193.
- Fligstein, N. 1990. *The transformation of corporate control*. Cambridge, Mass.: Harvard University Press.
- Fligstein, N. 1991. The structural transformation of American industry: An institutional account of the cause of diversification in the largest firms, 1919-1979. In W. W. Powell, & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis*: 311-336. Chicago, IL: University of Chicago Press.
- Freeman, R. E. 1984. *Strategic management: A stakeholder approach*. Boston: Pitman.
- Gardner, W., Mulvey, E. P., & Shaw, E. C. 1995. Regression analyses of counts and rates: Poisson, overdispersed Poisson, and negative binomial models. *Psychological Bulletin*, 118: 392-404.
- Garud, R. 2008. Conferences as venues for the configuration of emerging organizational fields: The case of cochlear implants. *Journal of Management Studies*, 45: 1061-1088.
- Garud, R., & Gehman, J. 2010. Procrustean transformations: Climategate, scientific

- controversies, and hope. In M. Akrich, Y. Barthe, F. Muniesa, & P. Mustar (Eds.), *Débordements: Mélanges offerts à Michel Callon*: 153-167. Paris: Presses de Mines.
- Garud, R., & Gehman, J. 2012. Metatheoretical perspectives on sustainability journeys: Evolutionary, relational and durational. *Research Policy*, 41: 980-995.
- Garud, R., Gehman, J., & Karnøe, P. 2010. Categorization by association: Nuclear technology and emission-free electricity. In W. D. Sine, & R. David (Eds.), *Research in the Sociology of Work*, Vol. 21: 51-93. Bingley: Emerald.
- Garud, R., Gehman, J., & Kumaraswamy, A. 2011. Complexity arrangements for sustained innovation: Lessons from 3M Corporation. *Organization Studies*, Forthcoming.
- Garud, R., Jain, S., & Kumaraswamy, A. 2002. Institutional entrepreneurship in the sponsorship of common technological standards: The case of Sun Microsystems and Java. *Academy of Management Journal*, 45: 196-214.
- Garud, R., & Rappa, M. A. 1994. A socio-cognitive model of technology evolution: The case of cochlear implants. *Organization Science*, 5: 344-362.
- Gehman, J., Treviño, L., & Garud, R. 2012. Values work: A process study of the emergence and performance of organizational values practices. *Academy of Management Journal*, Forthcoming.
- Geibler, J. v., Liedtke, C., Wallbaum, H., & Schaller, S. 2006. Accounting for the social dimension of sustainability: Experiences from the biotechnology industry. *Business Strategy and the Environment*, 15: 334-346.
- Gereffi, G., & Christian, M. 2009. The Impacts of Wal-Mart: The Rise and Consequences of the World's Dominant Retailer. *Annual Review of Sociology*, 35(1): 573-591.
- Gherardi, S. 2006. *Organizational knowledge: The texture of workplace learning*. Malden: Blackwell.
- Goffman, E. 1963. *Stigma*. Englewood Cliffs: Prentice-Hall.
- Goldman Sachs. 2006. Goldman Sachs ESG: Integrating ESG into investment research. New York.
- Goldman Sachs. 2007. Introducing GS SUSTAIN. New York.
- Goldman Sachs. 2010. Crossing the Rubicon: Our investment framework for the next decade. New York.
- Goldsmith, E. 1972. *Blueprint for survival*. Boston: Houghton Mifflin.

- Green, S. E., Jr. 2004. A rhetorical theory of diffusion. *Academy of Management Review*, 29: 653-669.
- Greene, W. H. 2008. *Econometric analysis* (6th ed.). Upper Saddle River: Prentice Hall.
- GRI. 2002. Sustainability reporting guidelines. Boston: Global Reporting Initiative.
- GRI. 2006. Sustainability reporting guidelines. Amsterdam: Global Reporting Initiative.
- Hallett, T., & Ventresca, M. J. 2006. Inhabited institutions: Social interactions and organizational forms in Gouldner's *Patterns of Industrial Bureaucracy*. *Theory and Society*, 35: 213.
- Hamilton, R. T., & Chow, Y. K. 1993. Why managers divest: Evidence from New Zealand's largest companies. *Strategic Management Journal*, 14: 479-484.
- Harrigan, K. R. 1982. Exit decisions in mature industries. *Academy of Management Journal*, 25: 707-732.
- Hartwick, J. M. 1977. Intergenerational Equity and the Investing of Rents from Exhaustible Resources. *The American Economic Review*, 67(5): 972-974.
- Hausman, J., Hall, B. H., & Griliches, Z. 1984. Econometric models for count data with an application to the patents-R & D relationship. *Econometrica*, 52: 909-938.
- Hitt, M. A., Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. 1996. The market for corporate control and firm innovation. *Academy of Management Journal*, 39: 1084-1119.
- Hoffman, A. J. 1999. Institutional evolution and change: Environmentalism and the U.S. chemical industry. *Academy of Management Journal*, 42: 351-371.
- Hogner, R. H. 1982. Corporate social reporting: Eight decades of development at U.S. Steel, *Research in Corporate Social Performance and Policy*, Vol. 4: 243-250: JAI Press.
- Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. 1994. Corporate divestiture intensity in restructuring firms: Effects of governance, strategy, and performance. *Academy of Management Journal*, 37: 1207-1251.
- Hoskisson, R. O., & Johnson, R. A. 1992. Corporate restructuring and strategic change: The effect on diversification strategy and R&D intensity. *Strategic Management Journal*, 13: 625-634.
- Hotelling, H. 1931. The economics of exhaustible resources. *Journal of Political Economy*, 39: 137-175.
- Hutchins, E. 1995. *Cognition in the wild*. Cambridge: MIT Press.

- Jasanoff, S. 2004. The idiom of co-production. In S. Jasanoff (Ed.), *States of knowledge: The co-production of science and social order*: 1-12. New York: Routledge.
- Jasanoff, S. 2010. A new climate for society. *Theory, Culture & Society*, 27: 233-253.
- Johanson, P.-O. 1991. *An introduction to modern welfare economics*. New York: Cambridge University Press.
- Kaiser, K. M. J., & Stouraitis, A. 2001. Reversing corporate diversification and the use of the proceeds from asset sales: The case of Thorn EMI. *Financial Management*, 30(4): 63-102.
- Kaplan, S. 2011. Strategy and PowerPoint: An inquiry into the epistemic culture and machinery of strategy making. *Organization Science*, 22: 320-346.
- Kennedy, M. T. 2008. Getting counted: Markets, media, and reality. *American Sociological Review*, 73: 270-295.
- Kennedy, M. T., Lo, J. Y.-C., & Lounsbury, M. 2010. Category currency: The changing value of conformity as a function of ongoing meaning construction. In G. Hsu, G. Negro, & Ö. Koçak (Eds.), *Categories in Markets: Origins and Evolution (Research in the Sociology of Organizations)*, Vol. 31: 369-397. Bingley: Emerald.
- Khan, F. R., Munir, K. A., & Willmott, H. 2007. A dark side of institutional entrepreneurship: Soccer balls, child labour and postcolonial impoverishment. *Organization Studies*, 28: 1055-1077.
- Khanna, T., & Palepu, K. 1997. Why focused strategies may be wrong for emerging markets. *Harvard Business Review*, 75(4): 41-51.
- Khanna, T., Palepu, K. G., & Sinha, J. 2005. Strategies that fit emerging markets. *Harvard Business Review*, 83(6): 63-76.
- Kidd, C. V. 1992. The evolution of sustainability. *Journal of Agricultural and Environmental Ethics*, 5: 1-26.
- Kinder, P., Lydenberg, S. D., & Domini, A. L. 1993. *Investing for good: Making money while being socially responsible*. New York: Harper Collins.
- King, A. A., Lenox, M. J., & Terlaak, A. N. N. 2005. The strategic use of decentralized institutions: Exploring certification with the ISO 14001 management standard. *Academy of Management Journal*, 48: 1091-1106.
- King, B. G. 2008. A political mediation model of corporate response to social movement activism. *Administrative Science Quarterly*, 53: 395-421.
- King, G. 1988. Statistical models for political science event counts: Bias in conventional

- procedures and evidence for the exponential Poisson regression model. *American Journal of Political Science*: 838-863.
- KLD. 2008. *Frequently asked questions for KLD STATS*. Boston: KLD Research & Analytics.
- Kolk, A., Levy, D., & Pinkse, J. 2008. Corporate Responses in an Emerging Climate Regime: The Institutionalization and Commensuration of Carbon Disclosure. *European Accounting Review*, 17(4): 719-745.
- Kumar, R., Lamb, W. B., & Wokutch, R. E. 2002. The end of South African sanctions, institutional ownership, and the stock price performance of boycotted firms. *Business & Society*, 41: 133-165.
- Kutner, M. H., Nachtsheim, C. J., & Neter, J. 2004. *Applied linear regression models* (4th ed.). New York: McGraw-Hill.
- Lakoff, G. 1987. *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Latour, B. 1986. The powers of association. In J. Law (Ed.), *Power, action and belief*: 264-280. London: Routledge.
- Latour, B. 1999. *Pandora's hope*. Cambridge: Harvard University Press.
- Latour, B. 2004. *Politics of nature* (C. Porter, Trans.). Cambridge: Harvard University Press.
- Latour, B. 2005. *Reassembling the social*. New York: Oxford University Press.
- Lee, D. D., & Madhavan, R. 2010. Divestiture and firm performance: A meta-analysis. *Journal of Management*, 36: 1345-1371.
- Levy, D. L., Brown, H. S., & de Jong, M. 2010. The contested politics of corporate governance: The case of the Global Reporting Initiative. *Business & Society*, 49: 88-115.
- Linton, J. D., Klassen, R., & Jayaraman, V. 2007. Sustainable supply chains: An introduction. *Journal of Operations Management*, 25: 1075-1082.
- Logsdon, J. M., & Van Buren, H. J., III. 2009. Beyond the proxy vote: Dialogues between shareholder activists and corporations. *Journal of Business Ethics*, 87: 353-365.
- Lounsbury, M. 2001. Institutional sources of practice variation: Staffing college and university recycling programs. *Administrative Science Quarterly*, 46: 29-56.
- Lounsbury, M., & Glynn, M. A. 2001. Cultural entrepreneurship: Stories, legitimacy, and

- the acquisition of resources. *Strategic Management Journal*, 22: 545-564.
- Lounsbury, M., & Rao, H. 2004. Sources of durability and change in market classifications: A study of the reconstitution of product categories in the American mutual fund industry, 1944-1985. *Social Forces*, 82: 969-999.
- Lowe, A. 1998. Managing the post-merger aftermath by default remodelling. *Management Decision*, 36: 102-110.
- MacKenzie, D., & Millo, Y. 2003. Constructing a market, performing theory: The historical sociology of a financial derivatives exchange. *American Journal of Sociology* 109: 107-145.
- Maltby, J. 2004. Hadfields Ltd: Its annual general meetings 1903-1939 and their relevance for contemporary corporate social reporting. *British Accounting Review*, 36: 415-439.
- Mankins, M. C., Harding, D., & Weddigen, R. M. 2008. How the best divest. *Harvard Business Review*, 86(10): 92-99.
- Margolis, J. D., & Walsh, J. P. 2003. Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, 48: 268-305.
- Marx, K. 1867/2007. *Capital: A critique of political economy*. New York: Cosimo.
- McKinsey & Company. 2010. McKinsey global survey results: How companies manage sustainability.
- Meyer, J. W., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83: 340-363.
- Meznar, M. B., Nigh, D., & Kwok, C. C. Y. 1998. Announcements of withdrawal from South Africa revisited: Making sense of contradictory event study findings. *Academy of Management Journal*, 41: 715-730.
- Miller, P. 1998. The margins of accounting. In M. Callon (Ed.), *The laws of the markets*: 174-193. Oxford: Blackwell.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. 1997. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22: 853-886.
- Montgomery, C. A., & Thomas, A. R. 1988. Divestment: Motives and gains. *Strategic Management Journal*, 9: 93-97.
- Montgomery, C. A., Thomas, A. R., & Kamath, R. 1984. Divestiture, market valuation, and strategy. *Academy of Management Journal*, 27: 830-840.

- Montiel, I. 2008. Corporate social responsibility and corporate sustainability: Separate pasts, common futures. *Organization & Environment*, 21: 245-269.
- Moschieri, C., & Mair, J. 2008. Research on corporate divestitures: A synthesis. *Journal of Management & Organization*, 14: 399-422.
- Navis, C., & Glynn, M. A. 2010. How new market categories emerge: Temporal dynamics of legitimacy, identity, and entrepreneurship in satellite radio, 1990-2005. *Administrative Science Quarterly*, 55: 439-471.
- Newell, R., & Wilson, G. 2002. A premium for good governance. *McKinsey Quarterly*, 3: 20-23.
- Nicolini, D. 2009. Zooming in and out: Studying practices by switching theoretical lenses and trailing connections. *Organization Studies*, 30: 1391-1418.
- Orlikowski, W. J. 2007. Sociomaterial practices: Exploring technology at work. *Organization Studies*, 28: 1435-1448.
- Osberg, L., & Sharpe, A. 2005. How should we measure the economics aspects of well-being? *Review of Income and Wealth*, 51: 311-336.
- Oswick, C., Fleming, P., & Hanlon, G. 2011. From borrowing to blending: Rethinking the processes of organizational theory building. *Academy of Management Review*, 36: 318-337.
- Padilla, E. 2002. Intergenerational equity and sustainability. *Ecological Economics*, 41: 69-83.
- Pezzey, J. 1992. Sustainability: An interdisciplinary guide. *Environmental Values*, 1: 321-362.
- Pinch, T. J. 2008. Technology and institutions: Living in a material world. *Theory and Society*, 37: 461-483.
- Pontikes, E., Negro, G., & Rao, H. 2010. Stained red: A study of stigma by association to blacklisted artists during the "Red Scare" in Hollywood, 1945 to 1960. *American Sociological Review*, 75: 456-478.
- Porac, J. F., Thomas, H., Wilson, F., Paton, D., & Kanfer, A. 1995. Rivalry and the industry model of Scottish knitwear producers. *Administrative Science Quarterly*, 40: 203-227.
- Porac, J. F., Wade, J. B., & Pollock, T. G. 1999. Industry categories and the politics of the comparable firm in CEO compensation. *Administrative Science Quarterly*, 44: 112-144.
- Posnikoff, J. F. 1997. Disinvestment from South Africa: They did well by doing good.

Contemporary Economic Policy, 15: 76-86.

- Power, G. 2006. Who cares wins: The convergence of global corporate citizenship and financial markets. Speech given January 6, 2006, at the Investment Management Institute Conference. Miami.
- Proffitt, W. T., Jr., & Spicer, A. 2006. Shaping the shareholder activism agenda: Institutional investors and global social issues. *Strategic Organization*, 4: 165-190.
- Randel, A. E., Jaussi, K. S., & Standifird, S. S. 2009. Organizational responses to negative evaluation by external stakeholders. *Business & Society*, 48: 438-466.
- Ravenscraft, D. J., & Scherer, F. M. 1987. *Mergers, sell-offs, and economic efficiency*. Washington, DC: Brookings Institution.
- Rosch, E. 1978. Principles of categorization. In E. Rosch, & B. Lloyd (Eds.), *Cognition and categorization*: 27-48: Erlbaum.
- Ruef, M., & Patterson, K. 2009. Credit and classification: The impact of industry boundaries in nineteenth-century America. *Administrative Science Quarterly*, 54: 486-520.
- Ryan, L. V., & Schneider, M. 2002. The antecedents of institutional investor activism. *Academy of Management Review*, 27: 554-573.
- Santos, F. M., & Eisenhardt, K. M. 2005. Organizational boundaries and theories of organization. *Organization Science*, 16: 491-508.
- Sarewitz, D. 2004. How science makes environmental controversies worse. *Environmental Science & Policy*, 7: 385-403.
- Sastry, M. A., Bernicke, J. W., & Hart, S. L. 2002. Changing shades of green: Coupling and decoupling in Monsanto's environmental orientations, 1991-1997. In A. J. Hoffman, & M. J. Ventresca (Eds.), *Organizations, policy, and the natural environment*: 262-290. Stanford: Stanford Business Books.
- Schmuck, P., & Schultz, P. W. 2002. Sustainable development as a challenge for psychology. In P. Schmuck, & P. W. Schultz (Eds.), *Psychology of sustainable development*: 3-17. Norwell, MA: Kluwer Academic.
- Selznick, P. 1949. *TVA and the grass roots*. New York: Harper & Row.
- Seuring, S., Sarkis, J., Müller, M., & Rao, P. 2008. Sustainability and supply chain management: An introduction to the special issue. *Journal of Cleaner Production*, 16: 1545-1551.
- Sharpe, A. 2001. The development of indicators for human capital sustainability,

- Canadian Economics Association 2001 Annual Meeting*. Montreal, Canada.
- Simpson, D. 2005. UK: Judge says advocacy links taint witnesses. *Tobacco Control*, 14: 298-299.
- Skærbæk, P., & Tryggestad, K. 2010. The role of accounting devices in performing corporate strategy. *Accounting, Organizations and Society*, 35: 108-124.
- Smith, J. A., III. 1993. The CERES principles: A voluntary code for corporate environmental responsibility. *Yale Journal of International Law*, 18: 307-317.
- Solow, R. M. 1974a. The economics of resources or the resources of economics. *American Economic Review*, 64: 1-14.
- Solow, R. M. 1974b. Intergenerational equity and exhaustible resources. *Review of Economic Studies*, 41: 29-45.
- Soule, S. A. 1997. The student divestment movement in the United States and tactical diffusion: The shantytown protest. *Social Forces*, 75: 855-882.
- Star, S. L. 2010. This is not a boundary object: Reflections on the origin of a concept. *Science, Technology & Human Values*, 35: 601-617.
- Stark, D. 2009. *The sense of dissonance*. Princeton: Princeton University Press.
- Stata Corp. 2009. *Stata Longitudinal Data/Panel Data Reference Manual Release 11*. College Station, TX: Stata Press.
- Suchman, M. C. 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20: 571-610.
- Swidler, A. 1986. Culture in action: Symbols and strategies. *American Sociological Review*, 51: 273-286.
- Teece, D. J. 1980. Economies of scope and the scope of the enterprise. *Journal of Economic Behavior & Organization*, 1: 223-247.
- Tripsas, M., & Gavetti, G. 2000. Capabilities, cognition, and inertia: Evidence from digital imaging. *Strategic Management Journal*, 21: 1147-1161.
- Tulls, P. 2011. Bloomberg's push for corporate sustainability, *Fast Company*.
- UNGC. 2004. Who cares wins. New York: UN Global Compact.
- United Nations. 1987. *Our common future*. New York: Oxford University Press.
- Uviller, H. R. 1990. Client taint: The embarrassment of Rudolph Giuliani. *Criminal Justice Ethics*, 9: 3-10.

- Vergne, J.-P. 2011. Toward a new measure of organizational legitimacy: Method, validation, and illustration. *Organizational Research Methods*, 14: 484-502.
- Villalonga, B., & McGahan, A. M. 2005. The choice among acquisitions, alliances, and divestitures. *Strategic Management Journal*, 26: 1183-1208.
- Waddock, S. 2008. Building a new institutional infrastructure for corporate responsibility. *Academy of Management Perspectives*, 22(3): 87.
- Waddock, S. A., & Graves, S. B. 1997. The corporate social performance-financial performance link. *Strategic Management Journal*, 18: 303-319.
- Weber, K., & Dacin, M. T. 2011. The cultural construction of organizational life: Introduction to the special issue. *Organization Science*, 22: 287-298.
- Weick, K. E. 1995. *Sensemaking in organizations*. Thousand Oaks: Sage.
- World Commission on Environment and Development. 1987. *Our common future*. New York: Oxford University Press.
- Wright, P., & Ferris, S. P. 1997. Agency conflict and corporate strategy: The effect of divestment on corporate value. *Strategic Management Journal*, 18: 77-83.
- Wry, T., Lounsbury, M., & Glynn, M. A. 2011. Legitimizing Nascent Collective Identities: Coordinating Cultural Entrepreneurship. *Organization Science*, 22: 449-463.
- Zuckerman, E. W. 1999. The categorical imperative: Securities analysts and the illegitimacy discount. *American Journal of Sociology*, 104: 1398-1438.
- Zuckerman, E. W. 2000. Focusing the corporate product: Securities analysts and de-diversification. *Administrative Science Quarterly*, 45: 591-619.

APPENDIX. MSCI ESG SUSTAINABILITY RATING COMPONENTS

ISSUES	STRENGTHS	CONCERNS
Community	Charitable Giving Innovative Giving Non-US Charitable Giving Support for Education Support for Housing Volunteer Programs Other Strengths	Investment Controversies Negative Economic Impact Tax Disputes Other Concerns
Corporate Governance	Compensation Ownership Political Accountability Transparency Other Strengths	Compensation Ownership Political Accountability Transparency Accounting Other Concerns
Diversity	Board of Directors CEO Employment of the Disabled Gay & Lesbian Policies Promotion Women & Minority Contracting Work/Life Benefits Other Strengths	Controversies Non-Representation Other Concerns
Employee Relations	Health and Safety Retirement Benefits Union Relations Cash Profit Sharing Employee Involvement Other Strengths	Union Relations Health and Safety Retirement Benefits Workforce Reductions Other Concerns
Environment	Beneficial Products & Services Clean Energy Management Systems Pollution Prevention Recycling Other Strengths	Agricultural Chemicals Climate Change Hazardous Waste Ozone Depleting Chemicals Regulatory Problems Substantial Emissions Other Concerns
Human Rights	Labor Rights Relations with Indigenous Peoples Other Strengths	Labor Rights Relations with Indigenous Peoples Burma Other Concerns
Product	Benefits Economically Disadvantaged Quality R&D/Innovation Other Strengths	Antitrust Marketing/Contracting Controversies Safety Other Concerns

Source: MSCI ESG Research

CURRICULUM VITAE

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EDUCATION

Pennsylvania State University
Ph.D., Business Administration, 2012

Cornell University
B.S., Hotel Administration, 1994

ACADEMIC EMPLOYMENT

University of Alberta, Alberta School of Business, Assistant Professor (starting July 2012)

RESEARCH INTERESTS

I am an organization theorist. My research explores organizational strategies and practices for responding to emerging cultural concerns related to sustainability and values, and the impact of such concerns on technological trajectories and institutional arrangements.

PUBLICATIONS

Gehman, J., Treviño, L. & Garud, R. 2012. Values Work: A Process Study of the Emergence and Performance of Organizational Values Practices. Forthcoming at *Academy of Management Journal*.

Garud, R. & Gehman, J. 2012. Metatheoretical Perspectives on Sustainability Journeys: Evolutionary, Relational and Durational. *Research Policy*. 41: 980-995.

Garud, R., Gehman, J. & Kumaraswamy, A. 2011. Complexity Arrangements for Sustained Innovation: Lessons from 3M Corporation. *Organization Studies*. 32: 737-767.

Garud, R., Gehman, J. & Karnøe, P. 2010. Categorization by Association: Nuclear Technology and Emission-Free Electricity. *Research in the Sociology of Work*. 21: 51-93.

Garud, R. & Gehman, J. 2010. Procrustean Transformations: Climategate, Scientific Controversies, and Hope. In *Débordements*. 153-167.

AWARDS, FELLOWSHIPS AND GRANTS

Academy of Management, OMT, Best Paper on Environmental and Social Practices, 2012
Pennsylvania State University, Alumni Association Dissertation Award Finalist, 2012
Academy of Management, OMT, ABCD Reviewing Award, 2011; 2012
Pennsylvania State University, Graduate Assistant Outstanding Teaching Award, 2011
Strategic Issues around Sustainability Journeys (with R. Garud), 2011-12
Dean's Office Special Dissertation Research Grant, 2011-12
John M. and Kara H. Arnold Endowment Fund Scholarship, 2011-12
Smeal Competitive Dissertation Summer Stipend Award, 2011
Gerald P. and Joyce Kessler Graduate Scholarship, 2010-11
Frank P. and Mary Jean Smeal Endowment Fund Scholarship, 2009-10; 2010-11
Summer Stipend Supplementation Award, 2010
Graham Endowed Fellowship, 2007-08; 2008-09
Smeal Doctoral Research Grants, Spring 2009, 2010, 2011; Fall 2009, 2010, 2011