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Image Trends in Corporate Environmental Reporting: Bolstering Reputation through Transparency or Widening the "Sustainability Gap"?

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IMAGE TRENDS IN CORPORATE ENVIRONMENTAL REPORTING:

BOLSTERING REPUTATION THROUGH TRANSPARENCY OR WIDENING THE

"SUSTAINABILITY GAP"?

by

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ABSTRACT

As companies discover the monetary benefits of a positive environmental image, a proliferation of green imaging confounds the public sphere. The consequence becomes the disarticulation of terms like *environmental excellence*, *sustainable development*, and *minimum environmental harm*. Because the oversaturation of greening efforts has elicited public distrust, stakeholders need timely and accurate information regarding environmental claims. As a major vehicle for communicating these efforts, corporate environmental reports (CERs) are laden with colorful and sublime images. This study examines the functionality of images found in CERs from 27 industry leaders, applying Sonja Foss's tenets of visual rhetorical analysis to identify the nature and function of the images and offer an evaluation based on emergent themes. Because images are increasingly important to corporate transparency, the study concludes with several best practice recommendations to serve as ethical image design strategies and to reflect the ways companies address impactful operations.

INDEX WORDS: Transparency, Corporate environmental reports, Visual rhetorical analysis, Image study, Environmental image, Visual discourse analysis, Corporate social responsibility, Ethical public relations

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1. INTRODUCTION

In the foreground, a whale's tail crests the deep blue water, sending ripples over its surface. Blurred in the background, an oil rig and its cargo vessels drill to maintain ExxonMobil's $37 billion in annual revenue (IndustryWeek, 2010). Taking a cursory look at its *2009 Corporate Citizenship Report*, the oil giant painted an overwhelmingly positive picture of its commitments to the environment, its employees, and communities throughout the world. However, twenty years earlier, the Exxon Valdez crisis spilled 11 million gallons of crude oil into the Prince William Sound, and in late 2008, the company paid a reported $20 million in Environmental Protection Agency (EPA) fines to settle two Clean Air Act violations (Allen, 2009). The company has also admitted to supporting policy and research groups working to discredit global warming and undermine climate change reports, bankrolling these groups with millions of dollars in funds (Allen, 2009). Since these events became public knowledge, ExxonMobil has worked to regain the public's trust by marketing its green initiatives.

1.1 Corporate Greening Efforts Dilemma

ExxonMobil is not alone in its efforts to gain public trust by maintaining environmental commitment. Over the last few decades, as media propagates environmental concerns, various approaches to environmental management and communication emerge and develop. In response, corporate greening efforts have shifted from contemporary to commonplace as companies discover the monetary benefits of a positive environmental image and corporate conscientiousness. In some cases, the oversaturation of greening efforts has created public distrust and claims of greenwashing, an act in which companies exaggerate corporate stewardship. The consequence becomes the disarticulation and ambiguity of terms like *environmental excellence*, *sustainable development*, and *minimum environmental harm*. A

growing risk for corporations is the widening gap between the company's stated goals and its actual environmental actions. When consumers realize this "sustainability gap", real transparency (defined in this study as relevant, accessible and timely information) and the corporation's reputation are jeopardized.

1.2 Corporate Environmental Reporting

Corporate environmental reports (CERs), which were first issued in the early-1990s, have become a popular way to communicate social and environmental efforts to stakeholders and to create a green image in the public sphere. Although shareholders are the primary audience for this method of reporting, environmental groups often turn to CERs for corporate discourse and statistics. Like annual financial reports, CERs are professionally designed brochures "laden with eye-catching photos, messages from corporate leadership, mission and vision statements…colorful graphs, tables, and pie charts" (Feller, 2004, p.72). Reporting methods in the U.S. are still largely unregulated and present opportunities for improvement, specifically in regard to the often contradictory imagery used throughout the reports. To avoid accusations of greenwashing, reporting corporations should be held accountable for all information communicated.

1.2.1 Image design

Laden with imagery designed to communicate environmental stewardship, CERs imply progress, which would not be possible without a degree of environmental destruction. The manufacturing industry's specific sustainability claims, including CERs as significant communication vehicles, have yet to be scrutinized, even though these corporations are major culprits in environmental degradation. Previous research has suggested such claims are exaggerated, non-transparent, and misleading, warranting further investigation. I have

concentrated on the most powerful portions of CERs: Those photographs and other visuals that are meant to symbolize and epitomize surrounding environmental discourse.

1.2.2 Research trends

CERs have been the subject of economic cost accounting (Crowther, 2002; Gray, Owens, & Adams, 1996) and quantitative business trend reports, focused on managerial tendencies in CERs, poor credibility in scoring methods, and comprehensiveness factors (Elkington, Kreander, & Stibbard, 1998; Thomas & Kenny, 1997), but very few have been analyzed rhetorically (Feller, 2004). In this thesis, I determine the extent of real transparency delivered by CERs (which are typically assumed a transparent public relations strategy) by employing Sonja Foss's (1994) visual rhetorical analysis framework and identifying emergent themes in photographs, computer-generated graphics, and graphs among the 27 largest revenue-earning industrial corporations from *IndustryWeek*'s "IW 1000." This study provides a framework for the application of visual rhetorical analysis to public relations texts, where stakeholders are publics becoming increasingly aware of environmental crises and the need for corporate transparency and accountability.

1.3 Thesis Topic and Methodology

The bodies of research from which this project draws upon and to which it contributes include visual rhetoric, environmental communication, public relations ethics, and image design. Specifically, the literature review covers topics such as the evolution of corporate social responsibility (CSR), transparency, reputation management, green marketing versus greenwashing, environmental reporting trends and research, environmental urgency and threats, and visual data analysis. My study is unique in its evaluation of CERs using this diverse range of scholarship to argue visual textual analyses could pave the way to increasingly ethical corporate

environmental efforts. To better establish the method, I conclude with notes on visual rhetoric, image creation, visual analysis, and most important to the core of this study, the ethical dilemmas facing image-makers. I argue that images should not be an afterthought, added for special interest or distraction from damaging evidence, but should instead be a true reflection of corporate activities and efforts to reduce the environmental impact of these activities.

1.4 Justification

With the environmental severities and pressures of the 21st century, industrial companies are encouraged but not mandated to release CERs. Still unregulated in the U.S., CER imagery may play off the uninformed reader. Paying closer attention to visual stimuli, readers may focus on the aesthetics of imagery, unaware of the true environmental impacts of corporations. Clearly, there are many ethical questions regarding the power of the visual. These reports, in conjunction with other green marketing tactics, may be successful in generating an environmental image, but are they successful at the expense of ethics?

Many industrial corporations have been scrutinized for environmental claim legitimacy. This study hopes to address those questions of functionality in CER imagery; likewise critics must address all forms of corporate rhetoric and discourse. Transparent images used by industry leaders should be condoned and modeled by other corporations, because these particular images are successful in nature and function while acting to inform stakeholders. Imperfect images depicting corporate pollution and impactful activities may not always be aesthetically pleasing, but they better define *environmental footprint* and the ways in which organizations can address this impact. In the 21st century, oversimplification can lead to finger-pointing, because stakeholders expect transparency. Images will become increasingly important to the concept of transparency with the evolution of the public screen (DeLuca & Peeples, 2002). As stakeholders,

we must hold these corporations accountable for the ways in which they create visual messages, because image creators hold the power to shape reality.

1.5 Researcher Perspective

For this project, I draw from various scholarly and professional experiences, bringing a critical but hopeful perspective which should be acknowledged. After graduating from the Georgia Institute of Technology in 2008 and working as a construction professional, I witnessed firsthand the toll of the built environment and worked to expand my own knowledge of environmentally efficient design principles, becoming interested in green building and earning my Leadership in Energy and Environmental Design (LEED) certification. Shortly thereafter, I lost a loved one to a rare occupational lung disease, exacerbated by particulate matter and air pollution. This experience taught me that the smallest of corporate behaviors could impact environmental well-being and human health.

I continue to advocate for the preservation, restoration, and improvement of the environment through my involvement with historic preservation societies. It is my primary goal, however, to study how communication can bridge the gaps between scholars, practitioners, environmentalists, and politicians. As an academic, I am motivated to share the principles of accountability, ethical transparency, competing values, and stakeholder demands with these various groups. I believe that corporations engaging in the environmental movement to create more equitable relationships with publics experience great progress in other areas: higher profit margins, increased diversity, and less exploitation overall. In the future, I will act to facilitate change from within organizations. I have always worked in corporate America and hope to continue to champion environmental causes from my own unique perspective, encouraging decision-makers to a place of understanding. Risks of this perspective include being hesitant to

be too critical of corporate interests, but the benefits include having a deep knowledge of the various players that, together, dictate future consumption habits, public policy, and the communication of environmental efforts.

For this study, I was drawn to the unique ethical considerations of visual communication. A background in the design of space and place instilled in me a respect for the politics of design, a concept I cover briefly in this thesis and that is central to my own unique viewpoint on corporate communication channels. Design is political in the sense that it has direct consequences, and it embodies ideology (Barton & Barton, 1993). Whereas I believe it is the responsibility of the designer to communicate an accessible design that challenges the status quo and makes life easier for ordinary people, some designers reinforce the dominant ideology. My intent, like any critical scholar or public relations practitioner, is to address these ethical infringements for the betterment of society, corporate relations, and the environment.

2. THEORY AND LITERATURE REVIEW

In this section I cover the wide range of literature from which the thesis draws, beginning with an overview of corporate ethics and social responsibility, the basis for this study. Corporate social responsibility (CSR) has become a staple in the workplace, with whole departments and business units dedicated to its development; corporate foundations and endowments, scholarship funds, charity work, employee health programs, and environmental pledges are among the common CSR functions. Recently, however, the corporate environmental report has become a mode of environmental image enhancement, so this synopsis will distinguish green marketing from greenwashing. I also use this section to address the urgency of environmental threats, positing that education and communication must be at the forefront of today's movements. This includes an examination of environmental communication literature with specific focus on image studies and the maturation of the public screen (the public sphere of the digital age), which lends power to the visual.

2.1 Corporate Social Responsibility

Corporate conscientiousness or corporate social responsibility (CSR) has evolved from its emergence as a mode of philanthropy and community involvement to a method of addressing society's social issues (Banerjee & Shastri, 2010). CSR is the corporate faction of a larger global responsibility: we must ensure that all species enjoy the resources needed to survive and thrive. Corporate entities realize the value in taking on some of this responsibility and integrate environmental, social, economic, and ethical strategies (ESEE) and practices into the workplace (Jones, Hillier, & Comfort 2009). More specifically, Jones et al. (2009) named nine potential benefits of CSR:

- Improved financial performance or profitability
- Reduced operating costs

- Long-term sustainability
- Increased employee commitment
- Enhanced innovation
- Better public and stakeholder relations
- Better risk management
- Enhanced reputation
- Development of closer links to customers

Rozuel and Kakabadse (2011) added that the prerequisite of CSR must be managerial ethics, that top-tier level of an organization with the power to redefine "how much in harmony we live with society at large" (p. 19). These companies, they argued, should "embrace a system that does not put humanity's survival at stake" (p. 19). Adding value to society balances market and non-market forces, maximizes stakeholder value, and results in decreased corporate corruption (Rozuel & Kakabadse, 2011).

The triple-bottom line approach to CSR (Elkington, 1998) emphasized environmental credibility as equal to social and economic credibility for profit building. Financial analyses and additional methods were developed to measure environmental stewardship (Brady, 2005). Environmental stewardship and sustainability as defined by Banerjee and Shastri (2010) is the "hope for this planet to maintain the life-reinforcing capabilities so that human life along with other species, animals, and minerals can be sustained in the physical environment" (p. 2). In this way, the concept of global environmental entrepreneurship is becoming a best business practice both socially and fiscally.

The shift to strategic sustainability has not come without its share of problems though, so it is crucial to examine the efficacy of contemporary CSR practices. With specific attention on CSR rhetoric, seven European research institutions investigated CSR goals versus implementation and found that rhetoric claimed many more benefits than could really be

measured or performed (Brueckner & Pforr, 2011). While measurable benefits of CSR for sustainability are still unknown, corporations see monetary benefits and they are satisfied. For my study, I adopt the optimistic perspective of CSR scholars who conclude that "CSR rhetoric is still stronger than its reality; that the reality on the other hand is strong enough to allow for some rhetoric; and that there still is a potential to improve reality" (Barth, Wolff, & Schmitt, 2007, p. 34; Brueckner & Pforr, 2011, p. 83).

2.1.1 Image and reputation management

Using environmental strategy to create value and build a competitive advantage, otherwise known as "green to gold," is not possible without maintaining a positive reputation among key publics (Etsy & Winston, 2006). As communicators, public relations practitioners and corporate representatives try to uphold a positive reputation through effective communication and image repair discourse (Benoit, 1997). Image restoration theory, as introduced by Benoit (1995, 1997), included a set of five various strategies that are utilized to rebuild a damaged reputation: denial, evasion of responsibility, reducing offensiveness of the act, corrective action, and mortification (a sincere apology). Coombs (2007) expanded on these strategies to create the comprehensive *Master List of Reputation Repair Strategies*: attack the accuser, deny involvement, choose a scapegoat, make an excuse, blame another party, claim a lack of information, claim incident was accidental, recall good intentions, provide a justification, remind audience of good past deeds, praise stakeholders, compensate victims, and apologize for actions. His work and the work of Ulmer, Sellnow, and Seeger (2006) broadened reputation repair to address ethical consequences of the news ways organizations address crises.

Corporations enact the methods following image attacks that arise after crises, which Barton (1993) defined as events that threaten damage to an organization's reputation, an

intangible and valuable corporate asset. Image repair is one of the most studied functions of corporate environmental communication. Cox (2010) defined this as the use of public relations strategies to restore corporate credibility after an act of environmental harm or for "dirty" industries. Referred to as an element of crisis management, image repair strategies can be viewed as controversial, particularly when the company's communication efforts are viewed as insincere. Image restoration strategies and the discourse therein are chosen, altered, and arranged for the specific crisis or stakeholders. This research indicated that a corporation best serves itself when it takes full responsibility and is transparent and apologetic (Brinson & Benoit, 1996).

2.1.2 Transparency

Many large corporations are charged for a lack of relevant, effective, and environmentally-conscious transparency decisions, which Drew and Nyerges (2004) defined as integrated, accessible to stakeholders, clear and concise, logical and relevant, truthful, and accountable. Theoretically, corporate transparency should be becoming less managerial and more influenced by stakeholder expectations, because it plays a significant role in the context of contemporary public relations practices rooted in CSR and seems to be the "precondition for trust, collaboration, dialogue, insight, accountability, rationality and freedom" (Christensen & Langer, 2009). Regardless, transparency assumes a level of hypocrisy but still condemns it for being deliberate. Christensen and Langer (2009) researched formal accountability systems of corporations and found that these companies had learned to master transparency to their own advantage, which resulted in one-sided, ambiguous claims. They urged public relations practitioners to educate the corporation and society to "deliver and expect more elaborate and complex accounts of issues and decisional situations" (p. 29).

Research on transparency suggests that it can occur in cross-situational contexts. Hood (2007) referred to four separate applications of openness including event transparency (open information in response to crises), process transparency (open information about business functions and operations that affect crises), real-time transparency (information released immediately), and retrospective transparency (information released a considerable time after an issue arises). Publics tended to value real-time and process transparency, suggesting corporations should provide as much information as timely as possible (Hood, 2007).

A strategic approach to corporate transparency ensures better behavior on the part of businesses while helping to assess performance; both are critical to organizational accountability (Koppell, 2005). Transparency can increase profits, reduce the need for duplicating efforts, decrease the likelihood that decisions will have to be revised (at potentially huge costs), and reduce the risk of potential financial penalties (Holtz & Havens, 2009). A report issued by the Global Environmental Management Initiative (GEMI) titled *Transparency: A Path to Public Trust,* promoted a proactive environmental approach dubbed "transparency by design" (p. 9). This suggests that applying traditional transparency tactics and whole-system approaches to report how companies identify and manage social, ethical, and environmental risks may explain how these risks affect business value. Effective transparency, GEMI argued, contributes to bottom line success.

Studies in environmental management and transparency suggest that perceptions of transparency among consumers affected their willingness to collaborate in environmental programs. Vaccaro and Echeverri (2010) studied consumer perceptions of transparency efforts of an electrical company's environmental outreach programs and found that the company's publics became more aware of environmental issues and more willing to collaborate if they perceived

these efforts to be transparent, or relevant to corporate impact and function. The research suggested that corporate information disclosure could affect customers' behaviors, particularly if the transparency could be contributed to corporate sustainability.

Although corporate environmental efforts are not always apparent from the products or services they deliver, consumers are likely to assess environmental performance from commercials or other accessible information such as environmental reports. This asymmetry between the companies' real efforts and the awareness of consumers should force more transparent statements. When a company is doing something damaging but not talking about it, or talking about something incessantly but doing nothing about it, audiences distinguish what they are saying from what they are actually doing. In sum, it seems these industry players should broaden disclosure practices in corporate environmental reporting to include greater transparency and narrow the sustainability gap.

2.2 Environmental Image Enhancement

Cox (2010) defined environmental image enhancement as the "use of advertising to improve the image or identity of a corporation itself, reflecting its environmental concern" (p. 339). Because of the benefits outlined above, corporations actively link identities and behaviors with "images of environmentally responsible corporate citizens," and in doing so may succeed in bolstering their public persona (p. 339). In *The Sustainability Effect*, Arlo Brady (2005) found that global chief executive officers from 35% of the largest multinational corporations (MNCs) believed environmental credibility was a key element of corporate reputation and image enhancement.

In practice, though, most corporations fail to realize sustainability represents a journey and not a destination, an issue central to the often transient strategies of greenwashers (Brady,

2005). Greenwashers use deceptive eco-marketing to promote perceptions of environmental protection. These corporations may seek temporary sales increases on green products, hurriedly pushing "eco-friendly" merchandise into the marketplace to vie for consumer loyalty. So, when a product launch or campaign is successful, the company's reached its destination, greener pastures, neglecting that its journey should involve post-campaign testing, market research, stakeholder engagement, and additional campaigns to refine these image enhancing strategies.

2.2.1 Green marketing versus greenwashing

In response to consumers' changing habits, corporations have adopted a number of environmental communication strategies. Cox (2010) defined this approach as "green marketing," or the construction of an environmental identity for products, images, behaviors, and industry advocacy campaigns, which is different from greenwashing in intent. Gomez and Chalmeta (2011) reviewed corporate websites' social responsibility pages, which are popular green marketing channels, to compare content and presentational elements. What they discovered was a proliferation of image-centric hypertext rather than news or real dialogue. It is important for these corporations to realize that presentation is not synonymous with effective communication. When image campaigns are successful, corporations can benefit. Not surprisingly, examining the stock performance of these environmentally conscious corporations versus the market overall, Etsy and Winston (2006) found that these companies easily outperformed the competition on all major indices. They defined these businesses as eco-efficient and "more productive, profitable, and less polluting" overall (Etsy & Winston, 2006, p. 298).

Greenwashing is evidenced by "socially and environmentally destructive corporations attempting to preserve and expand their markets by posing as friends of the environment and

leaders in the struggle to end poverty" (Brady, 2005, p. 39). It has various definitions in the public sphere, but its negative and purposive connotation separates it from green marketing. First introduced as a term in Jay Westervelt's 1986 study about the energy conserving claims of hotel chains, greenwashing is generally used when corporations spend significantly more effort advertising environmental practices rather than using resources to address environmental impact (Pearsall, 1999). Product packaging of this nature portrays images that evoke environmental concern, such as animal photos and the ever-present, ambiguous tree, colored with neutral palettes, yet the actual product may contain harmful chemicals.

To help consumers indicate when companies are covering up for lack of environmental advocacy, TerraChoice, an environmental marketing and consulting firm, named "the seven sins of greenwashing" (2009): (1) the sin of hidden trade-off (advertising based on a narrow aspect of the product while not revealing its full impact), (2) the sin of no proof (green claims that cannot be proven with accessible data), (3) the sin of vagueness (poorly defined green claims), (4) the sin of worshiping false labels (marketing and artwork with a third-party endorsement when product has no legitimate certification), (5) the sin of irrelevance (true green efforts are marginal or already required by law, environmental images are unrelated to efforts), (6) the sin of the lesser of two evils (product may be greener than the competition, but the whole category is harmful), and although fairly uncommon, (7) the sin of fibbing (outright lies). In its 2010 Sins of Greenwashing report, TerraChoice found that over 95% of "greener" products (those claiming to be green) commit one or more of the seven sins.

Some corporations commit greenwashing sins to market themselves as green industry leaders. The aircraft manufacturer, Airbus, marketed themselves as a green industry leader, with advertisements showing jets set amid natural landscapes and flying through cerulean skies.

("Corporate Social Responsibility," 2012), demonstrating the sin of irrelevance. Hormel promoted the all natural ingredients in its Natural Choice deli meats and reduced millions of pounds of packaging from its product lines, but still sources the meat from factory farms (the sin of hidden trade-off) (Flisrand, 2010).

In many cases, the world's largest polluters use the most sophisticated techniques for green marketing (CorpWatch, 2003). Major oil, chemical, nuclear, and biotechnology companies depict images of lush green forests, animals in their natural habitats, and pristine landscapes in advertisements. Due to legal battles and accusations regarding greenwashing efforts, companies tend to close the doors and decrease transparency, but this is not necessarily the most responsible or suitable response (Brady, 2005). In May 2005, General Electric unveiled its $90 million "Ecomagination" advertising campaign. The massive eco-effort targeted future energy, technology, manufacturing and infrastructure challenges and demonstrated General Electric's willingness and capableness to find solutions such as "solar energy, hybrid locomotives, fuel cells, lower-emission aircraft engines, lighter and stronger materials, efficient lighting, and water purification technology" ("General Electric's Ecomagination Campaign," 2008). The company's CEO, Jeff Immelt, pledged the company would reduce its greenhouse gas emissions and sell $14 billion of "self-described environmentally friendly products in 2007 (Kranhold, 2007). In the years following the campaign's launch, General Electric reportedly discounted plant emissions, delved deeper into oil-and-gas production, and continued to sell coal-fired steam turbines, all the while promoting green efforts with a $1 million-a-year advertising campaign (Kranhold, 2007).

Many nonprofit organizations form to hold greenwashers accountable for unethical or misleading marketing efforts. These include SourceWatch (sourcewatch.org), Greenpeace (stopgreenwash.org), and EnviroMedia (greenwashingindex.com). Researchers target

greenwashers who aren't necessarily engaging in illegal business communication practices;
however the consequences of the corporations' industrial efforts result in contamination of the
air, soil, and water by the discharge of toxic substances. These companies make large
investments to create environmentally-friendly perceptions among publics, including millions
spent on green advertising and websites, lobbyists, and endowments for green research while
simultaneously supporting anti-environmental efforts (Allen, 2009).

2.2.2 Corporate environmental reporting

Many nongovernmental organizations are attempting to set CER guidelines, as they are
largely unregulated, and promote effective reporting efforts. The Coalition for Environmentally
Responsible Economies (CERES), the International Institute for Sustainable Development
(IISD), the Global Reporting Initiative (GRI), the Global Environmental Management Initiative
(GEMI), and the Green Alliance have all demonstrated leadership in this area by creating
guidelines and best business practices and awarding companies with outstanding environmental
initiatives.

CERES launched the GRI as a separate institution in the late 1990s to enable greater
transparency about economic, environmental, social, and governance performance. Now,
thousands of companies use its reporting framework to communicate their sustainability
performance. The standardized reporting criteria concerning the environment include both
"Performance Indicators (PI) on energy, biodiversity and emissions and 30 environmental
indicators ranging from EN1 (materials used by weight) to EN30 (total environmental
expenditures by type of investment)" ("Global Reporting Initiative," 2012). Guidelines include:
total water discharge by quality and destination, total weight of waste by type and disposal
method, percentage of products sold and their packaging materials that are reclaimed by

category, monetary value of significant fines, environmental impacts of transporting products and other goods, and total environmental protection expenditures and investment by type ("Global Reporting Initiative," 2012). Despite the many guidelines offered, within the body of existing reports, there are still many corporations that do not disclose important data or choose not to report at all (Koehler and Chang, 1999).

Content analysis of current trends in environmental reporting has revealed some disturbing conclusions. Power (2000) claimed that environmental audits were becoming increasingly managerial and professional (particularly in layout) and therefore capable of distorting green discourse. In line with those findings, Ball et al. (2000) evaluated third-party verification statements in CERs and discovered that verification practices (in which another party attributes authority to the report) exhibited a "managerial turn" (in which authoritative figures replaced scientific data), rather than "representing corporate commitment to external transparency and accountability" (p. 1). Feller's (2004) rhetorical study found that CERs resembled utopian narratives, moving away from accountability measures and attempting to "elicit re-visioning and renewed trust, rather than rational agreement," or transparency (p. 72). Skulstad (2008) analyzed the discourse of CERs and found the majority of text was misleading because few were "true reports of the company's environmental action and data concerning emissions, waste, etc." but instead contained confusing or "fluffy" discourse (p. 181). Rhee and Lee (2003) examined the role rhetoric played in widening the sustainability gap and argued the gap constantly changes over time depending on internal and external influences, such as economic interests. Each of these analyses suggest there are weaknesses in the comprehensiveness of CERs, but the documents are multisemiotic in nature (combining words, pictures, bar charts, and tables) and should be analyzed from an image-based perspective as well.

Issues with CER scoring have led to additional questions of credibility in past research. There are several systems in place for studying the comprehensiveness of reports quantitatively and distributing the information to the public, however companies use these scores to promote their environmental efforts and to call out competitors with low scores. Morhardt (2001) compared three environmental numeric scoring methods released by the corporate sector (Davis-Walling & Batterman, UNEP/Sustainability, and Deloitte Touche Tohmatsu methods) and found that, despite their differences, all three produced similar company rankings. Additionally, high scores could be obtained without good environmental performance, underlying the problem of purely quantitative, comprehensive performance indices. Although each method scored similar indicators, or topics (including environmental violations or fines, wastewater treatment, land contamination and remediation, water consumption, and charitable contributions), it was difficult to compare indices for unrelated corporate functions. Morhardt asked, "How does one rationally compare a typical brewery performance indicator of barrels of water used per barrel of beer produced with the amount of water used per anything in a computer chip manufacturing facility" (p. 887)? Ultimately, the study's findings suggested that future CER research would benefit from incorporating qualitative measures and comparing only specific types of facilities (Morhardt, 2001).

In a related study, Morhardt, Baird, and Freeman (2002) found that companies could still score highly using outdated, existing scoring systems, but if those same reports were judged using the current detailed and comprehensive reporting guidelines (such as the GRI), scores would be much lower. In old scoring systems, only the company's significant or relevant topics with performance indicators count. In other words, any company wanting to improve its score, simply needed to add topics (or indices), irrespective of actual performance. Cerin (2002)

indicated the problem with the large number of organizations trying to influence reporting methods is they ultimately fail to work together, which may make it easier for underachieving corporations to score higher.

Implementing mandatory government regulations and thereby further transparency may translate into firm value and improved business processes. What we have learned from the current state of CERs is that stakeholders should demand regulations that extend beyond generic management statements and quantitative data. By misleading consumers or avoiding covering real efforts, corporate rhetoric shifts the power balance and can be detrimental to reputation and public trust.

2.3 Environmental Communication

We face many threats in the 21st century, and communicators are charged with naming these severe problems before it's too late. Environmental issues are the subject of political debate, advertising, scientific research, and the like, but over time, the challenges environmentalists face in protecting nature have changed dramatically. Since the growth of the ecological movement in the 1960s and 1970s, prevailing views of society have shifted, and the meaning of the environment has been rearticulated several times over. Various discourses, symbols, and rhetorical perspectives have worked to define issues like natural resource depletion, wilderness exploitation and preservation, public health, pollution, environmental justice, and climate change.

Dryzek (2005) named four environmental discourses, or shared ways of apprehending the world, that frame and shape how we perceive or interpret environmental issues: Problem solving (which recognizes ecological problems as tractable within industrialized societies), survivalism (which prescribes drastic change to prevent global disaster and resource depletion), sustainability

(which imagines attempts to dissolve environmental/economic conflicts), and green radicalism (which rejects basic economic structure and promotes evolution of human consciousness and politics) (p.8). These discourses appeal to different audiences and values, but for each, industrialism plays a major role.

2.3.1 Urgency and threats

In recent years, popular environmental discourses are attributing more blame to economies that are dependent upon burning fossil fuels, generating carbon dioxide, and other greenhouse gases. The "business as usual" approach to massive growth results in consumption of fossil fuels, electricity, fuel transportation and heating, and many other dimensions of modern life (Cox, 2010). Adverse air quality, noise pollution, hazardous waste, and unsafe water damage the environment and affect human health, causing diseases such as respiratory infections, unintentional injuries, and malaria. According to the World Health Organization (2010), 13 million deaths worldwide could be prevented by making our environments healthier. In children under five years old, one-third of all deaths are the direct result of unsafe environmental conditions (World Health Organization, 2010). Population growth is partly responsible for the problems we face; in fact, the developed world is responsible for producing most of the greenhouse gases and depleting the precious resources – actions that result in the detriment of the entire planet.

The industries that contribute to chemicals in our food, rising energy costs, congestion, and global warming have spurred a "palpable sense of urgency" in comments about the environment (Cox, 2010, p. 1). Oftentimes, it's the corporations themselves that tout renewable energy, pioneer new eco-friendly products, and expound on the virtues of sustainability. Given the resources required for manufacturing processes, some companies actively seek to offset

footprints. For example, Whole Foods purchased enough wind-energy credits to offset 100 percent of its electricity use. Others stage self-serving marketing stunts (Hurt, 2008). Boeing's new 787 Dreamliner and 747-8 Intercontinental are said to use considerably less fuel than comparable airplanes, contributing to the organization's self-proclaimed exceptional environmental performance, however the company has been guarded about corporate greenhouse-gas emissions, declining to make this information public (Hurt, 2008). Also, Boeing has exceeded limits on dumping toxic pollutants including lead and mercury at its California laboratory (Hurt, 2008). Boeing, the earnings leader in the aerospace and defense industry, is among a long list of corporate polluters that we, nonetheless, rely on in our day-to-day lives. These corporations pose great threats to the well-being of species, but these corporations may also hold the means and technologies to address environmental impact on a global scale.

2.3.2 Environmental image studies

Visual representations of nature have shaped perceptions of the environment since the early 18th and 19th centuries, and as a result, rhetorical scholars have examined these images and their power to persuade. Recently, images of vulnerable polar bears struggling for survival have become iconic symbols of the already-defined problem of global warming. Cox (2010) wrote that the image of polar bears swimming in Arctic oceans functions as a "visual condensation symbol," or "word or phrase that stirs vivid impressions" involving human values (p. 67). The condensation symbol of the bears elicits powerful emotions that can be connected to the planet's warming.

Scholars have suggested the political and cultural effects of visual rhetoric warrant critical intervention in a number of discourses (Delicath & DeLuca, 2000). DeLuca and Demo's (2000) essay on wilderness landscapes found the construction of pristine wilderness as the

sublime object of the environmental movement and separate from reality, "a nature out there ontologically divided from culture" (p. 254). In other words, although it is common for environmentalists to portray the wilderness as untouched and devoid of human development, this is actually counterproductive because it suggests there is no actual impact from which to recover. Humans exist in and therefore interact with the environment, so representing nature as a separate realm perpetuates a harmful nature/culture dichotomy (DeLuca & Demo, 2000). Additionally, the sublime experience is captured by technology and becomes a reproduction of a positioned lens and "the private possession of tourists, East Coast urban dwellers, and armchair adventures" (DeLuca & Demo, 2000, p. 247). The authors contended there are cultural and ethical costs to paying homage to nature by painting a picture of a separate utopia, charged to the image creator to protect.

Related to the power and usage of environmental images, DeLuca and Peeples (2002) examined the World Trade Organization Seattle protests and compared the notions of the public sphere and "public screen." Because modern communication is increasingly visual in nature, corporations capitalize on the image, colonizing all aspects of public life. The public screen is the public sphere of our digital age, but is not overly simplistic nor is it devoid of rationality or ethical implications. The authors wrote that the public screen " takes technology seriously" and "takes seriously the work of media theorists suggesting that new technologies introduce new forms of social organization and new modes of perception" (p. 131). These evolved technologies constitute our modern-day social milieu and allow people to gather in ways that don't involve physical proximity to promote a cause. For instance, protestors of corporate activities can turn to mass media to stage alternative image events. Activist use of the public screen offers room for

optimism and increased ethical audits. In turn, this concept contributes to the justification for a visual rhetorical study of corporate environmental reports.

2.4 Visual Rhetoric and Images

Sontag's (1977) writings on photography teach us that images "alter and enlarge our notions of what is worth looking at and what we have a right to observe" (p. 3). Photographic memories stick with us because they are experiences captured. Arguably, photographs are more powerful than the written word because, instead of interpretations or statements about the world, a person, event, or the past, they are "miniatures of reality," providing knowledge that anyone can make (p. 3). Even though images have the power to fill gaps in our minds of the past and present, there are limits to photographic knowledge of the world. For instance, Sontag (1977) argued that photos can never be interpreted as ethical knowledge because there will always be some kind of sentimentalism from the photographer's perspective.

The consequences of image design dictate how readers extract meaning from a text. Studies in advertising and photojournalism suggest that viewers look at the largest images first and only if motivated will they continue to read the surrounding text (Kobré & Brill, 2004). Also, photos tend to be paired or included in a spread, creating an effect in which the viewer sees separate and different images and mentally combines them, generating a new meaning or narrative. Images readers receive by eye or metaphor influence their behaviors, so with great power should come great responsibility.

2.4.1 Stock images

Current technologies and trends, such as digital editing and stock art, pose ethical challenges for image-makers. In the last decade, the stock art and photography industry became synonymous with marketing, advertising, editorials, multimedia products, websites, and all types

of digital platforms. Its leading corporations, including the duopoly of Corbis (owned by Bill Gates) and Getty Images, may own historical photographic archives and reproduction rights to much of the world's fine art, but we mostly recognize stock art for its obtuse angles, close-ups, silhouettes, and stylized landscapes; generic images are widely applicable. Commercial stock photographs, though generally unremarkable, taken-for-granted, and ubiquitous clichés, populate contemporary media as the "result of an elaborate system of manufacture, distribution and consumption that is itself largely concealed from view" (Frosh, 2007, p. 5). Aside from a small group of cultural intermediaries who study them, stock images seem to enjoy a degree of invisibility and ideological advantage in our visual culture (Frosh, 2007).

Frosh (2007) examined the stock photography industry dialectically, as a set of discourses and cultural practices by looking at three interlinked developments: the representational power and cultural authority of images to construct the world, the reach and economic nature of the industry, and the characteristics of the "visual regime" (p. 5). At the "frontier of contemporary cultural dynamics," including digitization, intellectual battles, globalization, and the "aestheticization of the lifeworld," Frosh focused on the potentialities of the stock art industry to conquer its own ideological problems (p. 2). One reason he gave for the stereotypical character of stock images is that only a handful of powerful stock houses maintain rigid pricing structures, so the flow of images comes from global centers of representation in the United States and Europe. For example, a search for "people" on a stock website might only result in non-Western ethnicities if a sub-category label is used. Also, because stock photography depends on the ability of agencies to promote and sell images to advertising, marketing, and design elites, it becomes natural for agencies to reproduce what the "visual language of multinational capital," depicted by "icons of business and management (briefcases, shaking

hands, executives on their cell phones or at their computers)" or more consumerist, leisure

activities (Frosh, 2007, p. 13).

Stock art's advantages make it difficult for corporate creative heads to rationalize going

back to conventional art, so what does this mean for the face of brands in the 21st century? Tillitt

(2005) interviewed several image-makers regarding their use of photo libraries to search for art,

the advantages of stock art over conventional art, and the various services agencies provided

buyers. Though the creative heads believed that independent houses produced the "most

interesting, fresh, and irreverent images," they still preferred working with Corbis and Getty

because of the high-quality and high-resolution images that they can attain in half the time

(Tillitt, 2005, p. 50). One interviewee challenged, "Almost everything in the world has already

been photographed: why photograph it again if a suitable image can be found" (p. 51)?

Traditionally, corporations would work with agency researchers who would source the art from

photo editors for specific uses, often hiring photographers, and then provide feedback based on

photo integration. Now, because the process has become more anonymous, there's little

communication between the agency and the photo editors or individual photographers. The result

is a corporate stock that is well-organized and searchable, but ill-defined.

Some research regarding stock art shows transformative potential for corporations

looking for top quality, but relevant images. Moore (2012) wrote that the stock library industry

in New Zealand appeared to be changed by technology. Though anyone with a cell phone camera

can upload "free stock" to sites like Tumblr and Flickr, there are still demands for hi-resolution,

rights-managed images. One reason being corporations can test images in layouts before going to

print or paying for finished pieces. Also, in New Zealand, generic stock and rights-managed

shots with more regional flavor, are roughly the same price (Moore, 2012, p. 36). Regardless of

promotional budgets, image-makers could source applicable stock art, but generalities seem to arise when companies give creative heads unreasonable time frames (Moore, 2012). This over-simplification and globalization of stock art challenges the audience's ability to attribute meaning to visual data.

2.4.2 Visual data analysis

Visual data are images or data that we sense with our eyes (e.g., photographs, art, pictures, video images, nonverbal expressions). Visual images can be analyzed using one or a combination of the following three techniques: photo interviewing analysis (whereby participants examine and analyze images), semiotic visual analysis (images are identified, interpreted, and attributed symbolic meaning), and visual content analysis (images are identified, counted, given characteristics and translated into data). Corporate environmental reports lend themselves to qualitative, multisemiotic visual analyses, because they contain photographs, computer-generated graphics, text pullouts, graphs, and color palettes to be interpreted as meaningful, message-driven data. When verbal cues are removed from the text, we are left with a narrative of sorts, a collection of visual artifacts that, as Sonja Foss (2005) suggested "may formulate, modify attention, perceptions, attitudes, or behavior" of the viewers (p. 141).

2.4.3 Discourse analysis

Groups of images create narratives that are powerful tools of discourse, and so, discourse analysis concerns how images construct accounts of society (Tonkiss, 1998). Foucault insisted that " the most powerful discourses, in terms of productiveness of their social effects, depend on assumptions and claims that their knowledge is true" (Rose, 2012, p. 193). Interpreting claims to truth and power by the dominant ideology requires various methodological approaches, therefore discourse analysis involves multiple tactics. These procedures are less rigorous and explicit and

are inherently reflexive, because visual analysis requires a fresh pair of eyes and is a continual

learning process (Phillips & Hardy, 2002). Rose (2012) wrote that discourse analysis differs

from content analysis in that you are not required to stop the investigation anytime a new

question emerges. Discourse analysis is more flexible, allowing for multiple "moment[s] of

interpretation," where the details of the material guide the research process (Rose, 2012, p. 215).

However, the method addresses a power/knowledge dynamic, and in doing so, fulfills the criteria

for a critical approach to visual image: "one that thinks about the agency of the image, considers

the social practices and effects of its viewing, and reflects on the specificity of that viewing by

various audiences, including the academic critic" (Rose, 2012, p. 17).

 The most essential step in a critical discourse analysis is to begin with no preconceptions

about the material under investigation (Gill, 1996). This is important because looking with a

fresh view may ultimately lead to unforeseen insights. As Foucault (1972) saw it, pre-conceived

notions about your material "must be held in suspense. They must not be rejected definitely, of

course, but the tranquility with which they are accepted must be disturbed; we must show that

they do not come about by themselves, but are always the result of a construction the rules of

which must be known and the justifications of which must be scrutinized" (p. 25).

 A novel perspective allows key themes, or recurring visual images to occur. The research

can then start to connect various key words and images. There may be "words or images given

specific meanings," or "meaningful clusters of words and images," or "associations established"

by reoccurring images (Rose, 2012, p. 213). Either way, the text analyzed must be considered

for the ways its discourse works to persuade (Rose, 2012, p. 215).

2.4.4 Sonja Foss's visual rhetorical analysis

Visual images have long been used as persuasive tools, but visual rhetoric is a relatively new area of study within the centuries-old rhetorical discipline. One way to analyze and understand the power of the image is to follow Sonja Foss's (1994) rhetorical schema for evaluating the communicative nature of images. In the late-1980s and 1990s, Foss developed a visual rhetoric research program, providing a new way to think about the power of images and legitimizing the field. She writes from a contemporary perspective of theory and criticizes normal rhetorical studies for not fully recognizing the persuasive elements of images, arguing that visual images can be just as powerful if not more potent than the verbal. Foss (2004) expanded the definition of visual rhetoric from the visual object as a communicative artifact to "the perspective scholars take on visual imagery or visual data" (p. 305). Foss (2005) described the importance of analyzing the symbolic and communicative nature of images in addition to those distinguishing features such as mass, size, media format, colors, and surrounding text.

Following Foss's (1994) framework, there are three aspects of visual objects to examine: nature, function, and evaluation. Nature deals with the components, qualities, and characteristics of visual artifacts and includes both presented elements (color, space, and medium) and suggested elements (ideas, concepts, themes, and allusions identified by viewer assumptions). Function concerns the communicative effects of visual rhetoric on viewers, or the ways in which the image works to persuade the reader. Evaluation is the process of assessing visual artifacts to find how well the function is communicated. Do the image's elements convey its intended message? This step involves comparing the function to that of the critic or analyst. Another way to evaluate the image is to consider the function from an ethical perspective. Foss (2004) stated in regard to function: "Reflecting on their legitimacy or soundness determined largely by the

implications and consequences of those functions – perhaps, for example whether an artifact is congruent with a particular ethical system or whether it offers emancipatory potential" (p. 309). Evaluation is the most critical portion of the process, where the viewer determines whether the image has been an ethical success or failure.

2.4.5 Visual rhetorical analysis: A novel application

Visual rhetoric, a rather new area of study within the centuries-old discipline of rhetorical communication is flourishing for a number of reasons. Primary among them is the pervasiveness of the image and its persuasive impact on its viewer, much like public speeches were once most impactful and orators were held accountable for the messages delivered. Another force prompting the rhetorical study of visual imagery is DeLuca and Peeples's (2002) public screen notion. The screen generates images to be analyzed much like discourse is shaped through the public sphere. Foss's visual rhetorical analysis has been applied in image studies of corporate advertising to judge the ethical and/or effective elements of persuasiveness. Two examples are Mullen and Fischer's (2004) drug advertising study and Charles Hill's (2004) work regarding the psychology of visual imagery.

Elaborating Foss's method was not easy. Her methodological statements regarding function, specifically, are rather complex and interpretive. To better underscore the harm in deficient reporting while producing a clear set of criteria for evaluating CER images, required supplementing Foss's framework with elements of critical visual discourse analysis. Specifically, additional analysis criteria included: an emphasis or de-emphasis on surrounding text, clustered subjects and associations, claims to truth, invisibility (what is not seen or said), and level of complexity or ambiguity. Common among drawbacks to discourse analyses is the failure to draw relations between image context and discourse, other than the social location of producers and

audiences of specific images (Rose, 2012). For that reason, this study situates images in the context of industrial CERs and incorporates concepts central to corporate responsibility, like transparency and the sustainability gap between discourse and corporate greening efforts. Some visual investigations benefit from mixed methods, such as those used in this application, to explore more fully the range of images, "allow for richly detailed pictures of images' significance to be developed," and "shed interesting light on the contradictory meanings an image may articulate" (Rose, 2012, p. 349).

2.4.6 Ethical dilemmas

To understand rhetorical analyses in the digital age, it helps to apply classic tenets of rhetoric to the case of visual imagery and its persuasive elements. LaGrandeur (2003) applied classic principles of rhetoric to assess the impact of digital images. He referenced both the Aristotelian basis for linking poetic images and the power of persuasive speech which is popularly associated with the Roman writer Horace. LaGrandeur (2003) classified computer-generated images according to:

- logos (How effectively do digital graphics work together or replace text to create an appeal to reason?);

- pathos (How effectively do images enhance emotional appeal?); and

- ethos (How well do digital images work in concert with written text to enhance ethical appeal or credibility to the corporation?).

His research suggested that digital images created an ethical dilemma, where the use of images directly affected the author's reputation. Effective analyses, then, regard these symbols as influencers and managers of meaning through an inductive or image-based approach in which image characteristics lead to an evaluation of traditional rhetorical theory (Foss, 2005).

Persuasion and visual impact imply that a message is consciously constructed and understood through a rhetorical process. Studies in persuasion focus on the word over the image (Perloff, 2003), but notable exceptions include advertising studies in which social and commercial messages are encoded in images (Messaris, 1997). Some scholars (Mullen & Fischer, 2004, Hill, 2004) have applied the principles of visual rhetoric to advertising images. Barnes (2009) reiterated the findings of these studies and writes that "visual messages can have an impact on a viewer on a number of levels that are not always understood" (p. 1). Creating communication messages with images is dangerous in many circumstances. To best summarize the bias and control of such scenarios, Williams (2005) sent a powerful heads-up about a visual consumer culture:

> [W]hen the construction of those messages is controlled by corporate elite who also control the mass communication systems of delivery; when those message are designed by highly literate, intuitive communicators to merge commerce and art into a strategy of persuasion; when that strategy is to exploit the visual illiteracy of the populace by developing unconscious biases within the individual and the culture; and when those unconscious biases construct a perception of reality that reflects only the constructed reality of the corporate ethic, then the personal and social ethic is lost and all that counts is the bottom line. Quantity has trumped quality (p. 55).

The power of visual imagery has created challenges for scholars and practitioners, many concerning the notion of truth (Jones, 2009). Analyses such as those outlined by Foss, elicit debates regarding sublime or utopian natural settings instead of transparent or realistic images, lending to the "sustainability gap", the difference in words and actions on environmental matters. Frascara (1997) lent accountability to designers, photographers, and the public relations

representatives who choose the images for audiences. It is a major social and cultural responsibility of these individuals, he wrote, to "produce communications that actually communicate something" (p. 25).

Another ethical dilemma concerns the politics of design, the notion that ideologies surround us in the design of buildings, goods, and services. It was Foucault who described ideological power as ubiquitous and embedded in our daily lives (Foucault, 1972). In this way, we interact with systems and inhabit spaces that are mediated by designers, who may reinforce powerful ideologies. One example of the way design can mediate political ideology is prison architecture. In the 19th century, criminal justice centered on thorough surveillance, control through oppression, and punishment. Governing bodies hired architects to design building void of any feature which would promote autonomy. Central watch towers, called panopticons, were used to observe prisoners without their knowledge. Unfortunately, these design elements did nothing to encourage the rehabilitation of inmates (Lewis, 2009). As ideologies shift away from corporal punishment toward rehabilitation, the design of prisons still deter freedoms but encourage a greater sense of community. This is reflected through larger, more open common rooms, increased daylighting, and grouped cells. Political ideology plays an important role in the life of modern-day designers whose audiences depend increasingly on visual cues for self-identification.

2.5 Summary

The goal of this study is to assess the relevance and ethicality of CER imagery. An ethical and transparent communication or excellent public relations strategy would remain true to the corporation's activities (expressing relevance) and promote an environmental image based on actual efforts. Many scholars have investigated CERs through textual analysis and have found

errors in reporting, flowery language, and utopian narratives. Others have pointed to the ethical

dilemmas of painting such a portrait. Rhetorical analysis is a common method in environmental

communication studies and communication research in general, but visual rhetorical analysis and

its ethical counterpart have yet to be applied to public relations texts, particularly in regard to

environmental claims and harmful consequences.

3. RESEARCH QUESTIONS

I structured the study's primary research questions to address individual public relations texts and the texts as a whole. Questions address CER images from individual reports and the overall group of images and reports to find moments of interrelatedness.

3.1 RQ1 Emergent Themes (Nature): *What common themes, if any, are found across the sample? Are there any unexpected themes?*

Analyzing the nature of the images includes identifying ideas, themes, and allusions provided by visual cues. I observed elements, aesthetic and un-presented, as both dominant and overlooked. For each image in the sample, I noted thematic elements based on subjects, image aesthetics (medium, size, placement, foreground/background, and colors), supporting text and captions, and claims to truth. I also noted major exclusions and those elements too ambiguous or complex to be impactful.

3.2 RQ2 Values (Function): *To what values are the images appealing?*

Based on common themes, I identified probable audiences the corporations hoped to reach and whether the CERs created alignment between corporate values and those of stakeholders. In some cases, the photos were framed to elicit sympathetic emotions from readers instead of acting to inform them. Value appeals could have communicative effects on readers, including persuading the reader to sympathize with the corporation.

3.3 RQ3 Transparency (Evaluation): *Are the nature of the images congruent or incongruent with corporate activities? Do the ways these images function have ethical implications?*

This question, the final step in the adaptation of Foss's framework, is the ultimate test for each image. The emergent themes were evaluated according to relevancy. For instance, do animals in their natural habitats relate to the industry's activities or environmental efforts? Do

presented elements of an image emphasize or de-emphasize the surrounding text? This

necessitated an evaluation of the images' congruency according to Foss's framework.

3.4 RQ4 Prescriptive: *Based on my findings, what practices serve as examples of ethical visual*

communication related to environmental impact?

This question is meant to be optimistic and provide guidelines for several best practice

recommendations related to visual communications in public relations texts.

4. METHODOLOGY

This study's main method is the adaption of Sonja Foss's theories regarding visual rhetoric as a communicative artifact and perspective combined with tenets of public relations theory. The sample consisted of images in CERs released by earnings leaders in global manufacturing industries. To evaluate the sample effectively and in a true rhetorical response, thereby attributing meaning to the images, it was necessary to transcribe the qualitative data. Initially, images were grouped by the industry represented, looking for commonalities within each report. Later, images were grouped into thematic categories to find overarching elements. A spreadsheet was generated to capture each image, its aesthetic qualities, and its emergent theme(s) to address the research questions.

4.1 Corporations and Reports under Investigation

This study is meant to focus on the rhetorical form of corporate environmental imagery, enlisting the concept of transparency as it relates to ethical public relations. For that reason, the sample is somewhat purposive; it consists of all images from corporate environmental or sustainability reports from the top corporation (by revenue) in each major manufacturing industry (for a total of 27 industries that make up *Industry Week*'s IW 1000) that were publically available (see Appendix A for complete sample). Some are true environmental reports issued in GRI or GEMI format while others are smaller sections taken from annual reports. The sample unavoidably represents different years (2008 – 2011), because not every company releases these reports annually. I selected the most recent report (as of May 2012) from each corporation for analysis, with 2011 being the most common year represented.

The rationale for choosing 27 corporations from global manufacturing industries is twofold: (1) to apply the qualitative analysis approach in a timely but effective fashion (it would be unfeasible to evaluate images from 1,000 reports in the thesis format or timeframe) and (2) to

provide a solid base for comparison and contrast among industry leaders. I chose not to select multiple reports from a single industry because it might privilege one industry over another or disregard the inefficiencies within an unrepresented manufacturing industry. I chose not to bias the study by selecting the dirtiest industries or, conversely, the "greenest," so this sample encompasses a mix of activities. The nature of the corporations included was purposive in the sense that each represents a different manufacturing industry, traditionally among the world's heaviest polluters. (Manufacturing industries, as defined in this study, exclude service and retail industries.) To hold those corporations accountable for misleading functions in image selection is to, in a sense, advocate for the morality of those that are transparent, meaning of course, that the images included relate to industry activities. Finally, the sample represents a cross-section of global corporate environmental claims, because national borders cannot protect us from global-scale environmental threats.

4.2 Criteria for Inclusion

Specifically, the CER sample contained images, defined as photographs, computer-generated graphics, and graphs (see Appendix B for sample image bank). (The researcher catalogued image captions, which are contextually important, but captions did not qualify as images.) Each image was evaluated according to its nature (presented aesthetics and suggested elements), function (meaning attributed), and evaluation (validity or morality of function), the key attributes of Foss's visual rhetoric perspective. The evaluative nature of the images was reviewed to find elements of effective transparency. Another key to deducing transparency is indicating what subjects are *excluded*. Specifically, what is missing that might be relevant to business practices or environmental damage caused by the corporation? This, in addition to the emergent themes facilitated a complete analysis.

Transparent elements (RQ3) could be evident in photographs of typical work activities attributed to the industry featured. Examples would include an oil company laying extraction lines, development and demonstration facilities for new technologies, the construction of new electrical plants, and aerial views of mountaintop mining operations. Evidence of pollutants and corporate impact could be common in these images, supported by text suggesting solutions. Corporate environmental transparency could be evidenced by effectively labeled graphs showing actual emissions for many years of operation, proximity of corporate facilities to low-income areas (an environmental justice issue), or the full-cycle of emissions from gasoline production and refining methods. To operationalize transparency is to define these images as relevant to the nature of the corporation or industry represented and to weigh these features against other emergent themes.

The emergent themes (RQ1) helped to indicate whether or not corporate environmental reporting is a truly transparent measure or part of an image-based strategy relying on persuasive tactics or greenwashing. Common themes identified how the producers framed the CERs. Consulting the "Sins of Greenwashing" helped distinguish efficacy from irrelevance within the reports (TerraChoice, 2009). Public relations literature suggests that legitimacy through transparency is imperative for ethical and effective communications. Visual rhetorical analyses are frequently used by advertising scholars to study the messages formed by corporate-generated texts, but public relations scholarship, particularly studies in transparency, have yet to apply the efficacy and ethical issues arising from image analyses. The upward momentum of corporate responsibility promotion must be met with an image audit of this nature.

4.3 Data Management and Organization

One report at a time, I catalogued images in an Excel database according to: corporation represented, medium (photograph, computer-generated graphic, art, chart or graph), image size, image page placement, subject(s), subject placement (foreground/background), dominant colors, and emergent themes. The proponents of discourse analysis also suggest further tactics for interpreting image meaning, so I also catalogued images according to: emphasis/de-emphasis on surrounding text, clustered subjects and associations, claims to truth, invisibility (what is not seen or said), and level of complexity or ambiguity. I alphabetized the database by industry title, abbreviated corporations with their corresponding stock ticker symbols, and documented images according to page number, resulting in the following labeling system: BA.2.4 (Boeing, page #2, Image #4). This organizational strategy allowed for an orderly, but still flexible analysis process, common to discourse and rhetorical analyses.

4.4 Analysis

With the description of Foss's framework in hand and a better understanding of the production and rhetorical organization of discourse, a proper analysis of the rhetorical appeals of CER images indicated thematic elements common across the sample. Based on a cursory study, emergent themes were expected to include idealistic photographs, neutral/natural color palettes, people enjoying the outdoors, animals and nature as separate from corporate activities, serene and untouched landscapes, colorful graphs, impertinent or random images, corporate leadership, and references to global change. Examining the nature of the images and emergent themes set a foundation to provide a clear segue into the function and ethical/transparent evaluation of those images.

4.5 Limitations

Obviously, there are inherent weaknesses in the adaptation of Foss's techniques for the purpose of pushing corporate responsibility into a more transparent realm. The average CER reader may not look intentionally at images as this study has. One drawback is the perceptions drawn from the content itself; messages drawn from images are virtually limitless in scope bound only by the viewer's assessment. (This is a limit of visual analyses in general.) The sample, limited to the largest corporation in each industry may lack comprehensiveness and may not be generalizable to other non-manufacturing industries; however the goal is to target those organizations in traditionally polluting industries. Finally, there have been very few studies in which rhetorical perspective has been applied to visual imagery and in the areas it has, the subjects vary widely, therefore a definitive model for public relations research is not necessarily in place. This study hopes to provide one such framework for the application of visual rhetorical analysis to corporate public relations texts, where stakeholders are publics becoming increasingly aware of environmental crises and the need for corporate transparency.

5. RESULTS

This section addresses the four research questions that comprise this study. Based on the visual analysis of the environmental reports, I explain and categorize what themes the corporations communicated and how they presented these images. Research Questions 1 – 3 (RQ1 – RQ3) covered in this chapter include (in this order): emergent themes and the nature of images, promotion of values and image function, and the evaluation of image transparency. Research Question 4 (RQ4) offers communication prescriptions for CER images. Each section cites pertinent examples of visual messages used by the 27 corporations I examined and also intersperses supporting text to provide further context.

5.1 RQ1 (Nature): *What common themes, if any, are found across the sample? Are there any unexpected themes?*

A group of shiny new planes set against a cerulean sky, a two-page spread of a dew-kissed rainforest at sunrise, a little-league baseball team celebrating a win, an outdoorsman standing high on a mountain's summit, and a woman dressed in pajamas lounging on a chaise say little about companies' environmental efforts. For the most part, subject matter varied throughout individual reports, but commonalities existed across the sample.

5.1.1 Subject(s)

I identified ten major subject themes, which I discuss in order of frequency and prominence: (1) corporate leadership, (2) workers in the field, (3) diversity, (4) environmental landscapes and references, (5) corporate function, (6) safety commitment, (7) random or irrelevant images, (8) scientific research, (9) children, and (10) non-human animals. I follow this with separate thematic findings concerning image aesthetics, including: (1) medium, (2) size, (3) placement, (4) colors, (5) foreground/background, and (6) surrounding text. I close this section with an explanation of themes related to exclusion and ambiguity as well as claims to truth,

including power, environmental dedication, and impact. A thorough description of all emergent themes will provide a clear segue into the ethical evaluation of the CER imagery.

5.1.1.1 Corporate leadership

Employees were the subject of many images, but there was an interesting dichotomy in this representation. Two groups of employees – white- and blue-collar – were shown as separate, working in two divergent environments. Chief officers, presidents, and directors appeared as smiling subjects in nearly every report, but only a few were photographed in the field. They were dressed professionally, in suits and ties, and posed for professional portraits, sometimes seated in an office or conference room, but usually in front of a neutral photographer's backdrop (Figure 1). Some action shots showed concerned leaders mid-conversation, although it was unclear what they discussed or with whom they were speaking (see Figure 2). In several instances, CERs featured corporate leaders in the field, working with other employees or visiting plants and facilities in other countries (see Figure 3). White males composed the majority of corporate leaders featured, although some reports incorporated (and paired) diverse leadership, including black males and females, white females, Indian men and women, and Japanese men. In some cases, multiple leaders representing a range of divisions, were pictured together on one page.

Oftentimes, white-collar employees appeared in business attire, accepting awards, attending conventions and symposiums, or sitting in a classroom environment receiving training. The general appearance of these events, (hotel ballrooms, hi-tech displays, and learning boards) as well as the attendees (massive audiences dressed in similar clothing) further demarcated the two employee groups. One photograph appeared unnatural and staged, because workers stood, dressed in suits, grouped casually in front of a power facility (see Figure 4). Reputation

management scholars would suggest corporate leaders be pictured as a part of the process, not just the visionaries.

Figure 1. MAS.8.4: CEO and COO photographed in front of backdrop.

Figure 2. CAT.2.7: CEO photographed in office chair, mid-conversation, showing concern.

NESTLÉ CHAIRMAN IN KENYA:
Nestlé Chairman Peter Brabeck-Letmathe (left) visits a water facility at a farm that delivers milk to the East African Dairy Development project factory in Kabiyet, Kenya.

Figure 3. NSRGF.10.4: Chairman in shirt and slacks visiting facility in Kenya with informative caption.

Figure 4. ENAKF.96.44: Two groups of men and one woman dressed in suites in front of power facility.

5.1.1.2 Hard-working employees in the field

Corporations tended to picture both corporate leaders in offices, separate from corporate function, and workers in safety garb and casual clothing; however, the two groups were rarely photographed together. Blue-collar workers appeared working in the field (inspecting machinery and tending to plant activities) on environmental or everyday tasks. Smiling men (and only a few women) clothed in safety vests, jeans, boots, and hard hats, worked on indoor equipment in many photographs (see Figure 5) and in only several cases, were they photographed outdoors (see Figure 6).
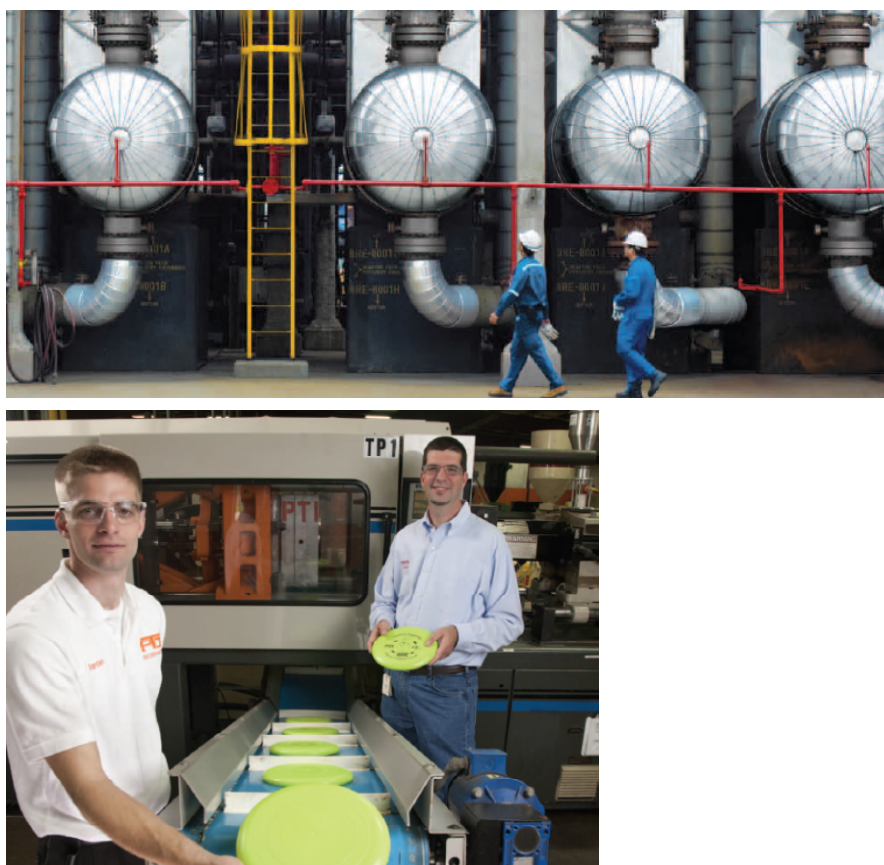
Figure 5. XOM.38.11, TOYOF.30.18: Two male workers in safety attire tend to tanks at an Exxon capture facility. Two male workers in safety goggles at indoor machinery.

Figure 6. XOM.36.13: One worker in safety attire tends to machinery at an outdoor facility.

5.1.1.3 Diversity

Diversity among employees, consumers, and groups of people impacted by corporate efforts, was a common theme in nearly all CERs. Reports revealed a number of diverse image statements including: a Hispanic man dressed in Behr painter coveralls; a black man and Asian woman sharing a meal on recyclable paper products; a white female technology officer standing in front of hydraulic mechanisms; a group of people representing various races, staring up at the camera; and an Indian woman in a sari surrounded by a group of Indian children in costumes.

The most common type of diversity, gender diversity, emerged in nearly every report, but an unexpected theme concerned face identification in photos. Quite often, women faced the camera so readers could identify age, race, and dress, while men faced away from the camera or were cropped out in the printed layout. This included men at computers, with their backs to the camera and men in the background with women in the foreground.

Similarly, global diversity emerged as a theme, identifying corporate interests in expanding and community building abroad. In less harmful ways, companies repeatedly demonstrated global reach with maps showing all worldwide locations, but in some cases,

Western readers could acknowledge a global diversity of stewardship efforts in non-Western

cultures. Vague global settings, beautified for the camera were common but do not allude to any

specific project, only community building in general. According to these images, the

corporation's interests are large-scale and international, bringing its resources to faraway places.

Following this inference was a more disturbing occurrence—the corporation as the developing

world's "savior." Specific activities or programs were not evident from viewing the images

without surrounding text. These images often included a group or groups of local inhabitants

with only one member from the corporation represented (see Figure 7). In this case, the subject

ratio is an element of image "nature" that cannot be overlooked, because report images

preference untouched, non-Western cultures.

Figure 7. CAT.14.21, NSRGF.60.9, PFE.24.47: Local inhabitants photographed in faraway places and removed from corporate activity.

5.1.1.4 Environmental landscapes and references

A very common element of CER imagery was the serene and untouched natural quality of the outdoors. These beautiful photographs often feature sweeping landscapes, some digitally altered to appear even more crisp and editorial. Sometimes, the environment was featured completely removed from the industry, meaning there was no indication of corporate activity or function in the photograph (see Figure 8). Other times, a factory or skyline, for example, was included, but too far in the distance to identify (see Figure 9). In a few photographs, the natural landscape and human presence shared equal representation, but the environment revealed no impact (pollution, haze, or erosion) whatsoever (see Figure 10). Near production sites and corporate offices, the land was a deep green or covered in a thriving crop like corn; the sky was a bright blue with only a few scattered clouds; and the water ran clear. Corporate offices with glass facades even reflected the blue sky back to the reader, appearing as a seamless piece of the untouched landscape.

Some companies, like Samsung, used single images to show both an environmental reference and a product or service. The computer-generated image on the cover of its report featured a new Samsung tablet reflecting a blue sky and clouds, covered, in part, by a tree limb. Only a couple pages later, a new Samsung smart phone displayed a real photograph (and the background of the page itself) of a grassy field through its screen. Bridgestone also used many close-up photographs of tires on the road, taken from the perspective of the tire, alongside serene landscapes (see Figure 11).

Under this heading, I would include another common finding: people enjoying the untouched outdoors. Reports included photos of children celebrating little league victories, playing soccer, blowing into a colorful toy windmill, and running through a field. Adults cycled,

walked a dog along a beach, and held surfboards (see Figure 12). Generally, it was unclear where these activities took place because these photos were rarely captioned and certainly not informative.

Figure 8. THLEF.14.28, RLNIY.4.3, IP.23.13: Untouched sweeping landscapes show no indication of corporate activity.

Figure 9. RLNIY.63.57, NISTF.1.1, JAPAF.5.12, ENAKF.71.19: Corporate function is visible, but too far in the distance, or not the image's focal point.

Figure 10. BA.3.3, BRDCF.10.14: Evidence of corporate impact is not apparent in these images.

Figure 11. SSNLF.1.1, SSNLF.2.2, BRDCF.21.42: Single images include products and generic environmental images.
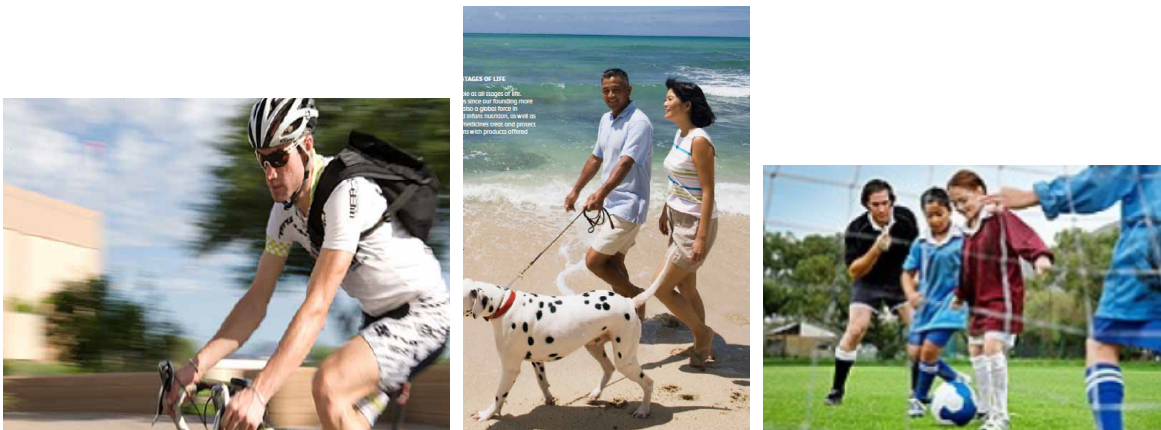
Figure 12. BA.15.28, PFE.16.32, ENAKF.86.33: Photos show adults and children enjoying the outdoors.

5.1.1.5 Transparency: Corporate function and impact

Although these were far outnumbered by landscapes free of impact, I uncovered plenty of instances of impacted environments, typically due to corporate function. Relevancy through corporate function tended to be either addressed, minimally addressed, or disregarded. The subject or nature of the photographic images was typically work activities attributed to the industry featured. Examples included Exxon laying extraction lines in the U.S. Gulf of Mexico, development and demonstration facilities for advanced biofuel technologies representing corporate joint ventures, the construction of new electrical plants (that would generate less harmful emissions), aerial views of offshore shipyards, and mountaintop mining operations using Caterpillar equipment (see Figure 13). Evidence of pollutants and corporate impact were common in these images, but the text suggests ways in which these issues are met with solutions. Buildings were more common subjects than employees, animals, or natural landscapes.

Corporate environmental impact caused by corporate function was evident in effectively labeled graphs as well, unlike those that had no labels at all. Labeled graphs showed actual carbon dioxide emissions for many years of operations, proximity of low-income areas to landfills (an environmental justice issue), and the full-cycle of emissions from gasoline production and refining methods based on geographic measures. Some graphs were large enough on the page to read, while the less relevant ones were small and showed more goal or target years as opposed to recent, measurable years.

Among the most transparent images were those used in the reports by ArcelorMittal, Boeing, and Hyundai Heavy Industries. These images were largely informative, related to corporate function (metals, aeronautics, and industrial transportation), well-captioned, and large enough to analyze effectively. The least transparent images came from the reports by Masco,

E.ON.AG, Nestlé, General Electric, International Paper, and Pfizer, who incorporated vague

stock art as opposed to exclusive art, little to no imagery overall, or meaningless images large in

size and scope.

Figure 13. HYHZF.5.5, CAT.29.40: Photographs demonstrate corporate function and impact on the environment.

5.1.1.6 Safety commitment

Corporate social responsibility endorses safety measures and health initiatives, so I

expected there would be many references to the safety and well-being of employees, and there

were quite a few. Human safety was demonstrated through indices of fall protection; eye, ear,

head, and skin protection; footwear; breathing and respiratory apparatuses; and reflective vests.

These photographs typically incorporated alternate subjects, such as workers in the field,

scientific research, progress, children and diversity, suggesting all corporate activities consider

safety. Interestingly, there were very few references to non-human animal or environmental

safety measures, signifying the corporations prioritize *human* health and safety in CERs.

5.1.1.7 Random and irrelevant

One of the most emergent themes across the sample was random or irrelevant imagery. Although indicators of irrelevancy surfaced alongside other themes, these images met unique criteria reminiscent of the greenwashing sin of vagueness; they were altogether uninformative, poorly defined, broad, and likely to be misunderstood or generalized. Format-wise, these images were consistently computer generated or assisted. Many images featured a white background and were reminiscent of editorial or fashion photo shoots, aesthetically pleasing without much in the way of excess visuals or supportive content. Affected and staged in nature, the intent or purpose of their inclusion was unknown, but seemed to rely on metaphorical concepts, such as the ecological footprint or mother nature.

Many graphics featured a close-up hand, or pair of hands, cupped. (Figure 21 incorporated this theme, as well.) Commonly, hands cupped a graphic Earth, grains, or what appeared to be sand (see Figure 14). These random images were not labeled or captioned, so it was unclear whose hands they were or what they were holding.
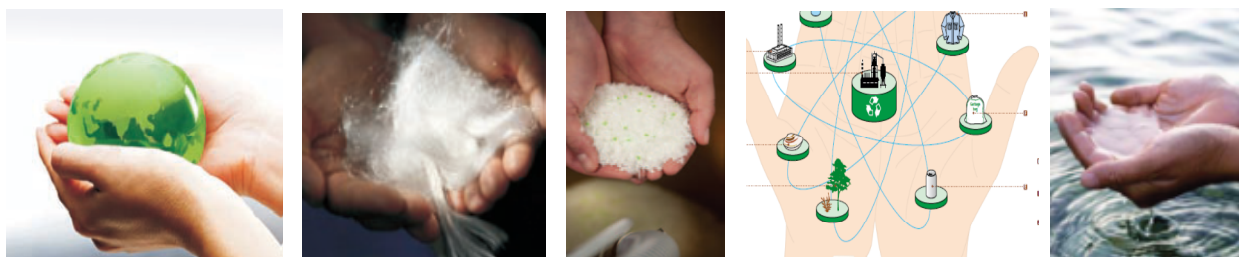
Figure 14. RLNIY.18.15, RLNIY.64.58, TOYOF.30.19, NISTF.9.51, BRDCF.1.1: A common random and irrelevant theme included close-ups of hands cupped.

As expected, stock images appeared throughout the CERs, many of which were irrelevant or overtly simplistic. A brief section in the Reliance report, mentioned disclosure practices in business management approaches and was "supported" by an image of the word "disclosure" circled in what looked like a dictionary. Similarly, one report paired a section about product

responsibility indicators with a pile of books and reading glasses and a section about awards received during the reporting period with a woman internet surfing on a couch in her pajamas (see Figure 15).

Figure 15. RLNIY.28.18, RLNIY.30.19, MAS.16.8: Overtly simplistic images exhibit irrelevancy on the part of these CERs.

5.1.1.8 Scientific research

An unexpected finding in my data set involved the repeated use of what I call "progress image statements." These images referenced research and development and technological innovations, signifying corporate interest in progress on many levels. Time and time again, corporations included photographs of scientists and employees dressed in lab coats and safety goggles. These people were deeply engrossed in experiments and surrounded by beakers and test tubes filled with colorful liquids or they were dressed similarly and tending to new technologies in a lab setting (see Figure 16). In one case, a woman is pictured eye-level, in a lab coat, glasses, and gloves, examining solar cells on a panel. It is unclear from the image alone what she is actively researching. Most often, there is no contextual evidence of any kind to point to specific progress in experimentation.

Figure 16. TOYOF.1.4, PFE.19.44, BRDCF.1.4, BA.4.7: Employees dressed in lab coats perform experiments.

5.1.1.9 Children

Many CERs included photographs of happy children, ranging in age from young toddlers to young teenagers. Corporations showed children as separate from corporate function or impact, but instead, as the recipients of corporate activities, products, or education. PepsiCo, a food and beverage company, showed two young girls preparing to enjoy oatmeal in its report, while Compagnie de Saint-Gobain, which manufactures glass products, showed a young toddler and his mother peering at his reflection in glass (see Figure 17). Denso, a manufacturer of motor vehicle parts, used various photos of young children at play, set against colorful backdrops for the cover page of each of the report's sections. Children were also the subject of educational photos, set in a classroom with an adult reading or actively teaching a group of children in school clothes (see Figure 18). In some cases, corporations pictured children as completely removed from evidence of corporate activity, enjoying the outdoors, fascinated by nature, or engrossed in play (see Figure 19).

Figure 17. PEP.14.15, PEP.29.38, CODGF.1.1: Children pictured as recipients of corporate products.

Figure 18. MAS.30.13, NSRGF.11.5: Children attending school, educated and visited by employees.

Figure 19. RLNIY.1.1, PEP.21.24: Children pictured as completely removed from corporate activities.

5.1.1.10 Non-human animals

Although the environmental efforts of the companies seemed largely anthropocentric

(addressing sustainable communities, human health, renewable energy, and greener building

practices), non-human animals are pictured in some CERs. Because of the environmental quality

of the reports, wild animals outnumbered domesticated animals. Non-human animals ranged

from large mammals, to fish (koi fish in treated wastewater), to small insects, like butterflies and

ladybugs on leaves and flowers. A loggerhead turtle, bluebird, brown bear, and red fox were also

featured in photos. A pair of antelope dwelling deep in a forest, pictured in Exxon's CER,

appeared not to be impacted by the company's land management practices (see Figure 20).

In some cases, the animals photographed are associated with corporate conservation or

wildlife outreach programs, suggesting that the corporation is acting as a "savior" on behalf of

the animals. However, there was little in the way of non-anthropocentric dialogue as textual

evidence, signifying no corporate impact on wildlife. Pfizer's report included a photo of a couple

walking a domesticated dog on the beach, but makes no visual references to its animal testing or

laboratory animal care policies. International Paper and Sumitomo Forestry are leading

deforesters throughout the world, but their CER images show non-human animals in their natural

habitats. Sumitomo's report names the brown bear and red fox umbrella species, and writes,

"their habitats, capable of supporting a diverse range of mammalian and avian species are being

preserved" (Sumitomo Forestry Co., 2012, p. 179). In many cases, non-animal photographs were

taken close-up, so there was little environmental evidence suggesting that the animals lived in

their natural habitats. Surrounding textual evidence laid claim to biodiversity projects,

conservation efforts, and experimental environmental programs. In addition to photographs,

computer-generated graphics also portrayed animals (see Figure 21).

Figure 20. XOM.26.3: One grown and one young antelope pictured, unharmed in a forest.

Figure 21. IP.1.1: Butterfly and bluebird graphics set against an image of Earth, cupped in a hand demonstrate non-photographic animal evidence.

5.1.2 Image aesthetics

Image aesthetics are central to this, and any, visual rhetorical analysis, because they comprise image integrity, precedence, and association. The sample revealed tactical image choices based on (1) medium, (2) size, (3) placement and layout, (4) colors, (5) foreground/background, and (6) surrounding text. In the section that follows, I will offer an in-depth description of thematic aesthetic findings without commentary or evaluation.

5.1.2.1 Medium

Medium choices concern: stock art versus exclusive artwork; the repeated use of graphics; and colorful graphs, diagrams, and cartoons used to simplify complex information. Alternate image types included cartoons, artistic renderings (architectural or computer-

generated), maps, and mixed mediums. Overall, I did not uncover as much stock art as expected. (I discerned stock art from exclusive art based on zero reference to the corporation itself or relevance to surrounding text.) The few stock images included were unsurprisingly vague, irrelevant, and random. Reports tended to consist mainly of exclusive photographs and graphs with only a few stock images per report. However, E.ON AG's report used a glaring number of stock art images of employees, dressed in business attire, standing in groups indoors and outdoors, engaged in conversation, and seated in meetings at conference tables. Several male and female employees held signs with handwritten numbers while standing in a courtyard (see Figure 22). Stock art in this report also included close-up edited photos of clocks, notebooks, and a toy truck. Although the literature on stock art suggested companies prefer the high-quality and high-resolution images of the foremost agencies, Corbis and Getty (Tillitt, 2005), many of the blatant stock images in these reports were low-quality or poorly reproduced.

The repeated use of rather purposeless graphics, or clip art, became another common theme. PepsiCo's 2010 "Sustainability Summary" is a good example of this pattern in practice. Large graphic outlines of a green raindrop, blue heart, purple arrow, and orange person adorn its cover, surrounded by tiny color-coordinating clip art, including a globe, mountain, plastic bottle, windmill, clock, scale, and sun (see Figure 23). The same graphics recur on 14 of the following 35 pages of the CER. Coordinating graphics like these are likely used to maintain cohesion throughout the reports. They also provide unfussy visual contrast when photographs and graphs scatter the page.

Among the sample's many graphs, the most common were bar graphs, followed by pie charts and illustrated diagrams. Graphs acted as informers, providing as much or as little information as the company desired. Graphs colorfully illustrated emissions and waste tonnage

produced and reduced, financial performance including net revenue from various sectors, energy

supply from electricity versus steam, and regional indicators. Comprehensive, well-labeled

graphs showed figures from at least five years and included target years, while others were

overly simplistic, illustrative, or complex. Effective illustrated diagrams used only a few colors

and were not too complicated to read (see Figure 24).

Figure 22. ENAKF.35.12: Random and meaningless stock image of employees dressed in business attire, grouped outdoors.

Figure 23. PEP.1.1: The cover of PepsiCo's report shows graphic clip art that is repeated on 14 of the following 35 pages.

Hydraulic Fracturing Example

Berlin Television Tower | Empire State Building

Solid Rock Layers

1000 ft / 305 m

2000 ft / 610 m

3000 ft / 915 m

4000 ft / 1220 m

5000 ft / 1525 m

6000 ft / 1830 m

Wellhead
Soil
Multiple Layers of Steel Casing and Cement

Aquifer
Multiple Layers of Steel Casing and Cement
50 ft

Shale Zone
Hairline Fractures Created
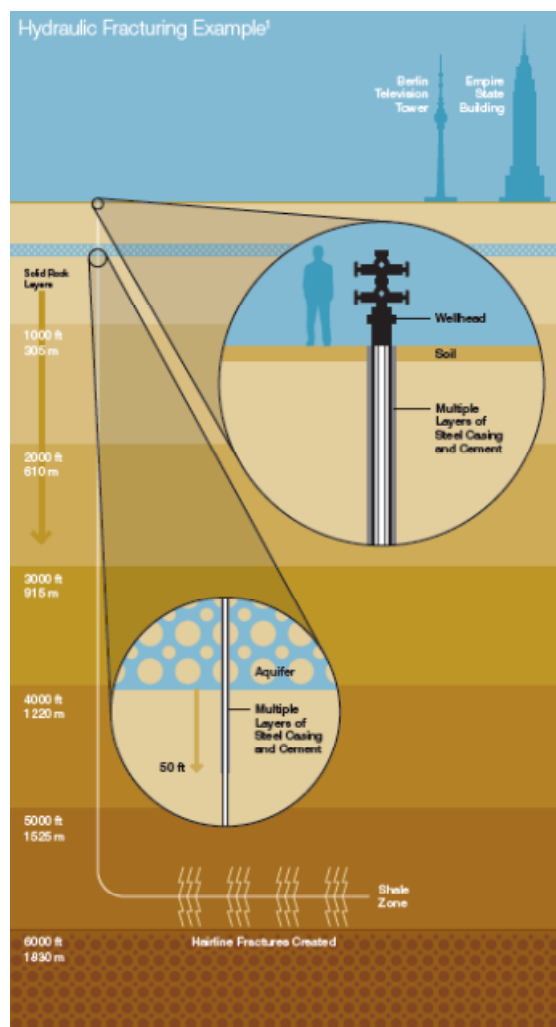
Figure 24. XOM.31.7: Hydraulic fracturing diagram is well-labeled, simple to read, and fills the right side of the page.

5.1.2.2 Size

Small, medium, half-page, full-page, and two-page images situated in various layouts

comprised the sample. Photojournalism scholarship suggested viewers look at the largest images

first, and, only if motivated will they continue to read the surrounding text (Kobre & Brill, 2004).

The larger images in the sample included photographs of serene, untouched landscapes, and

people enjoying outdoor activities, with or without text pullouts or titles superimposed over the

image (see Figure 25). Other photos used for full-page layouts often included industry activities

alongside untouched environmental landscapes, suggesting a positive and harmless relationship

between the two. Some images depicted environmental impact, but were too small to be

meaningful. In some cases, I could not make out the foreground or background subjects, because

the images were too small to see (see Figure 26). Medium and large, high-quality images

provided the most clarity to read and comprehend subject matter.

Figure 25. SSNLF.83.21, MAS.1.1: Two images used as full-page spreads without titles, descriptors, or captions.

Figure 26. JAPAF.3.7: An incomprehensible image (at report size) makes it difficult to distinguish foreground and background subjects.

5.1.2.3 Placement and layout

Companies tended to feature single, large images on a page or grouped images in spreads.

The grouping tactic created a third effect in which the viewer sees separate and different images

and mentally combines them, creating a new meaning or narrative. In this way, photographic

evidence supported informational graphs and corporate impact statements were associated with children, non-human animals, or untouched landscapes. Other images were grouped creatively to appear artistic or visually pleasing. For example, one graph showing rental and corporate car carbon dioxide emissions from the previous reporting period to the current period, used car-shaped images to show the decrease in emissions (see Figure 27). A large grouping of various animals, photographed in their natural habitats, in Thales' report exhibited the breadth of commitment to biodiversity (see Figure 28). Images positioned in collages like this one were often similar in nature and were shown together to express the scope of efforts. Denso's report highlighted earthquake relief efforts in Japan with before and after photos (taken from the same vantage point) of a village that employees cleared (see Figure 29). ArcelorMittal grouped multiple project photos, perspectives, and renderings of the Orbit—the steel monument of London's 2012 Paralympics—demonstrating its magnitude and architectural novelty. In this case, one lone image would not create a power statement.

For the most part, no pattern existed for the page placement of images. Some exclusive photographs appeared at the top and center of the pages, with less informative images at the bottom left or right. But in other reports, applicable and relevant images were located near the bottom of the page, while repeated or vague images appeared prominent. Some companies crowded images and text, such that a page appeared completely saturated, making it difficult to delineate new topics. For example, Nippon Steel used a two-page spread of 24 images and accompanying text to describe its products, technology, and efforts aimed toward a sustainable future. If layouts like this have an overwhelming effect on readers, it could cause them to overlook the section.

Common to most reports was some degree of image repetition. At times, variations occurred, wherein one photo would have the same overall subject as another in the report (i.e. workers in safety gear reviewing documents in front of machinery). Some reports used the exact same image on multiple pages. Reliance Industries received awards in so many photos, that with each shown, they became monotonous and less impactful. Caterpillar included one or two pieces of its equipment (bulldozers, excavators, and tractors) on nearly every page of its report. Likewise, when too many nearly identical graphs of the same color appeared multiple times on one page, impact was de-emphasized because differentiating became difficult (see Figure 30).
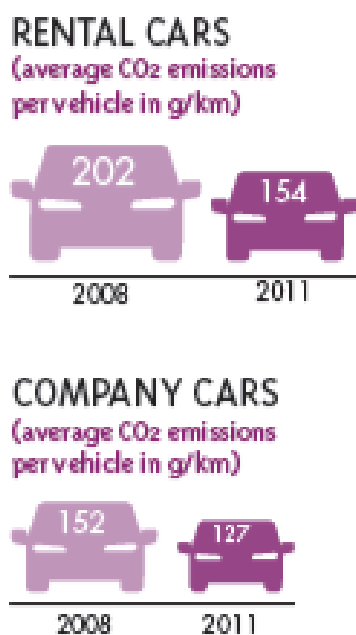
Figure 27. THLEF.21.49: An artistic approach to the typical graph shows rental and company car emissions.

Figure 28. THLEF.19.38 – THLEF.19.45: A collage grouping of animals and their natural habitats demonstrates breadth of commitment to wildlife.

Employees undertaking recovery work in a disaster area   Before clearing (left) and after clearing (right)

Figure 29. DNZOF.11.11 – DNZOF.11.13: Three images grouped to show employee relief efforts and before, and after clean-up. (Note: photos 12 and 13 are taken from the same perspective.)

WORKPLACE SAFETY

Recordable Injury Frequency (RIF)
(Recordable injuries per 200,000 hours worked)

Lost-Time Case Frequency (LTCFR)
(Lost-time injuries per 200,000 hours worked)

1. Data does not include facilities acquired after June 1, 2008.

2. Data prior to 2010 has been restated due to acquisitions, by data updates realized from improved accuracy.

3. Percent recycled waste excludes the weight of metal, which is 100 percent recycled. Including metal raises the level to 64.1% in 2010.

4. Based only on renewable energy. Alternative energy will be included in the future.

5. Data does not include Progress Rail operations.

ENVIRONMENTAL IMPACT [1,2]

Absolute GHG
(Absolute million metric tons of CO_2e)
(Baseline 2006)

Water Use
(Absolute billion gallons used)
(Baseline 2006)

Percent Recycled [3]
(Absolute pounds recycled waste/absolute pounds total waste) x 100

Percent Alternate/Renewable Sources [4]
(Renewable electrical energy use/total electrical energy use) x 100

Energy Efficiency
(Dollars of revenue/absolute gigajoules energy use)
(Baseline 2006)

REMANUFACTURING (REMAN) [5]

Reman Business Growth
(Percent revenue increase over 2007 base)

Reman End-of-Life "Take Back" Percent
(Actual end-of-life returns/eligible returns) x 100

Reman End-of-Life "Take Back" by Weight
(Millions of pounds of end-of-life material received)

CAT CERTIFIED REBUILD [2,4]

Cat Certified Rebuild Business Growth
(Percent revenue increase over 2007 base)

Figure 30. CAT.50.79: Multiple performance graphs on one page seems transparent, but graphs are too small and repetitive to be impactful.

5.1.2.4 Colors

I expected that the color palettes in the CERs would be largely vibrant versions of blues, greens, and yellows, because these are common to green marketing in general. Green and blue were by far the most commonly used colors. Corporate colors carried over to images in many cases (specifically graphs and computer-generated elements) just as greens and blues substituted corporate color palettes. A common green marketing strategy, these companies capitalized on the already established color palette for use in CER imagery, suggesting that the logos themselves

may be used for environmental reputation enhancement. Finally, a few CERs maintained graphic consistency with color palettes unrelated to corporate colors or neutral tones.

5.1.2.5 Foregrounds/backgrounds

An important characteristic of image layout was the foreground and backgrounds used in photographs. Backgrounds tended to be blurred, suggesting that context was less important than the foreground focal point. In one image, people (employees) were in shadow in the foreground and were illuminated by a sunset in the background, making the identities of the people secondary to the beauty of the landscape. In many cases, the image was too small to identify a background. Close-up photographs, found across the sample, provided no contextual background either.

Occasionally, when the foreground and background were both visible, a subject cluster or association appeared. Employees pictured in the foreground of job sites suggested an investment in people. One such full-page photo featured an overlay section about safety, health, employee relations, and leadership development, which attributed equal preference to employees, corporate impact and function, and supporting text (see Figure 31). In another very large photo, a Boeing officer and vice president appeared in the foreground in front of a visible forest background, which associated the company with nature. The recurring subject of gender diversity developed, in part, because women stood in the foreground, while men appeared (sometimes cropped) in the background (see Figure 32). Corporate function, often visible in the foreground, appeared against a backdrop of untouched environmental landscape, associating the brand with environmental commitment (see Figure 33).

Figure 31. AMSYF.26.36: Two workers in safety dress are pictured in the foreground with a text overlay, giving precedence to people and information.

Figure 32. PEP.16.16: Two women in the foreground are visible, while the men are in the background with faces cropped out of the photo.

Figure 33. PEP.21.20: Corporate function is visible in the foreground, while the background features an untouched environmental landscape.

5.1.2.6 Surrounding text

I call this theme "surrounding text" as opposed to "supporting text" because not all surrounding text acted to support the images. Captions ranged from nonexistent to exceedingly informative. Very few CER images required no explanation, yet many were not accompanied by text of any kind. Poorly labeled graphs and diagrams left readers questioning benchmark data, previous years, or target goals. The absence of supporting text generated more questions than answers regarding environmental efforts. On the other hand, too much text de-emphasizes image power and busies the page, so much so, that readers could be overwhelmed. In a few cases, extensive text overpowered the actual image size. Informative captions could be found directly under or next to the image and identified the image's subject, action, and significance. Companies had either informative, well-written captions, or uninformative, sometimes nonexistent captions.

In general, image subjects emphasized text or neither emphasized or de-emphasized surrounding text (meaning the image remained neutral, neither adding or subtracting from the information presented). Only a few times did the company blatantly disregard the report's verbal focus with non-verbal cues so deviant, the text was jeopardized. For example, in a section that detailed its diligent risk mapping system which led to zero fines for environmental litigation, Thales included a computer-generated image of a city stretched to fit the curve of the earth. The futuristic nature of the photo and its setting, a well-developed city, did not speak to the importance of the topic discussed. Incidentally, the image is nearly identical to the one featured on the report's cover page (see Figure 34). Another repeated, de-emphasizing image appeared in E.ON AG's report. A photo of a man and women in an office building, holding signs with

handwritten numbers and an exclamation mark, bordered a section on human resources and

talent acquisition and management (see Figure 35).

Figure 34. THLEF.9.15, THLEF.1.1: Image 15 adjoined section on risk mapping, de-emphasizing importance of surrounding text.

Figure 35. ENAKF.98.45: This photo bordered section on talent management, acquisition, and human resources, de-emphasizing importance of surrounding text.

5.1.3 Exclusions and ambiguity

What was not depicted, or the non-emergent themes, became intriguing findings in my

research. Instances of discontinued products that had created more harm than consumer benefits,

exploitations of nonrenewable resources, and impact related to increased commutes to reach new

acquisitions were among the missing subject themes. For example, due to its ties to commuter

transit and vehicle maintenance, I expected Bridgestone to allude to environmental complications

of commuting and car pollution and its efforts to reduce the car industry's impact. Also absent

were any allusions to corporate access to politicians, lobbyists, action committees, or environmental regulators. Although ExxonMobil reported lobbying expenses totaling $12.7 million in 2011, its CER from the same year made no visual references to the existence of or the environmental interests of these lobbyists ("Political involvement," 2012). Palpable missteps included no acknowledgement of corporate function or impact. Companies cited pollution in graphs only, listing emissions tonnage for several years, but provided very little photographic evidence of air and water pollution.

A closer examination of images in Sumitomo Forestry Co., the leading producer of wood products, and International Paper, the leading paper producer, revealed a glaring exclusion—deforestation. In the beginning pages of Sumitomo's report, an illustrated diagram shows the various segments of the company, including its "forestry environment business," depicted by green trees atop a hill (see Figure 36). One truck carried logs to a home under construction. This diminishes, or completely excludes, environmental harm created by deforestation practices. Additionally, "overseas operations" has no relevant icon, thereby outright excluding any overseas harm. International Paper's 2010 report used a green graphic diagram to show the fiber-based product life cycle from product design to recovery or disposal (see Figure 37). Icons are over-simplified and refer to raw material sourcing as "trees" instead of the action of "cutting down trees" and recovery or disposal icon as a recycling can, suggesting that all products are recovered and reused, instead of ending up in landfills. The omitted information in CERs is essential to analyzing the function, or the reader's reception of corporate citizenship based on these painted pictures of "excellence."

Figure 36. SMFRF.15.6: An illustrated diagram of business practices excludes any acknowledgement of deforestation.

Figure 37. IP.12.3: A graphic diagram showing the lifecycle of paper products fails to show action of cutting trees and suggests all products are recovered instead of disposed.

Ambiguity, though not as harmful as exclusion, can be equally misleading. Common ambiguous findings across the sample included overly simplistic cartoons and illustrations, no captions or surrounding text, poorly-labeled graphs, graphs without multiple years represented, or purposeless, random images. Other images provide little or no contextual information, leaving readers to ask, what does this mean? What is the purpose of including this image? What does this

have to do with environmental regulations, carbon footprints, community-building, or minimal impact?

5.1.4 Claims to truth

Borrowing from visual discourse analysis, this framework highlights the need for persuasive message to provide accurate and sufficient context and relevancy to avoid being misleading. However, image-makers have the power to construct knowledge, so they carefully select what they reveal in CERs. How images work to persuade readers through producing effects of truth, including claims to truth or the natural way of things, were important to this study's framework.

Given the preceding emergent subject themes, aesthetic findings, exclusions, and ambiguities, I outline four major truths the 27 companies claimed through images: (1) power, (2) environmental dedication, (3) impact, and (4) sensitivity. Images often portrayed companies as powerful, but did so in different ways. One photographic technique involved the camera lens perspective. Shots taken from the ground looking up included an International Paper image of a massive leafy tree cover, sky-scraping corporate headquarters, and a group of men high on a stage, dressed in tuxedos, accepting awards. One photo, taken from an oddly high perspective, looked down on a fish pond well below the ground's surface. Subject sizes also indicated power associations. Numerous photos depicted workers dwarfed by enormous pieces of machinery and equipment or outdoors, barely identifiable against nature's substantial landscapes. Brand identity, a common occurrence in reports like PepsiCo, Samsung, and Nestlé, named companies as powerful, pervading forces of consumer culture. The vast product displays gave these CERs a more commercial feel than those that focused on environmental imagery. Even though the intent of the reports concerned environmental and social responsibility, these companies represented

nearly complete product lines (regardless of product eco-friendliness) and used recognizable

logos throughout. PepsiCo pictured professional product photos on nearly every page of its CER

(see Figure 38). Subjects including corporate leadership and global diversity also demonstrated

power relationships between the "savior" (corporation) and the "saved" (children, village

inhabitants, animals, etc.).

I indicated third-party verifications as an authoritative power truth claim. Most often,

companies included an image of the GRI letter, showing an applicable checklist and the grades

received. (Although, it was usually too small to read.) Logos from various agencies emerged in

nearly every CER, including the United Nations Global Compact, Forestry Stewardship Council,

The World Business Council for Sustainable Development, CSR Europe, Deloitte auditing

services, International Organization for Standardization, Occupational Safety and Health

Administration, and the World Wildlife Foundation.

CERs demonstrated the second claim to truth, environmental commitment, in various

ways. A kayaker picking up trash in a river, a bank of solar panels sitting outside of a corporate

facility, a model of an energy-efficient home with grass growing on the roof, a man teaching a

young boy to recycle, wind turbines, and environmental agency logos were among the abundant

claims to environmental commitment.

Corporate impact, the third major claim to truth in my findings, warranted closer

examination based on the degree of impact revealed. Impact statements made in the images

ranged from minimal to substantial, with little impact being the most represented. (Skies

remained free of visible pollutants, trees and grass grew rampantly alongside facility activities,

and healthy employees tended to power lines high against a deep blue sky.) Impact images were

not all gloomy or disheartening; many, including a wastewater treatment plant, showed

simultaneous impact and rectification. These companies demonstrated, "we have a significant impact on the environment, but we are taking steps to reduce that impact."

The fourth truth claim, sensitivity, encompassed all indices of corporate care and giving, including visiting faraway places, teaching children, assisting disaster victims, and donating time and goods to charity. Because many of these reports encompassed sustainability as a whole, as opposed to strictly environmental endeavors, I found many indices of social responsibility toward humanity. Because of the reporting period and Japanese offices of many of the companies in the sample, quite a few reports dedicated images to relief efforts for Japan's 2011 Tōhoku tsunami and earthquake, dispatched employees, and temporary offices running electricity from generators. Domestic companies showed photos taken at fun runs and Habitat for Humanity builds. In a few photos, corporate leaders handed oversized checks to military men, school principals, and children receiving scholarships. Overall, these claims to truths situate the 27 companies as solicitors of public trust.

Figure 38. PEP.2.2: An assortment of corporate brands demonstrates the company's pervasiveness of power in consumer culture.

RQ2 (Function): To what values do the images appeal?

The aforementioned claims to truth provided a core group of well-defined value appeals. These appeals help to address the functional element of Sonja Foss's framework, wherein the researcher is concerned with the communicative effects of visual rhetoric on viewers, or the

ways in which the image works to persuade the reader. I identified 4 straightforward value appeal categories: (1) moral/ethical, (2) family-oriented, (3) economic, and (4) aesthetic.

Perhaps the foremost function of the image sample is to build trust in the viewer's eyes by appealing to moral sympathies. The image function associated with wildlife outreach and community-building ties strongly into the emotional appeal of those images. Feller's (2004) study found that emotional appeals were far more prevalent than rational appeals in CERs. This "sympathy appeal" strikes a chord in readers because the majority of individuals associate animal conservation and global citizenship with responsible corporations. Corporate intent could be said to elicit an emotive response from readers, particularly because many non-human animals are pictured in their respective habitats and because humans typically desire to assist non-human animals and less-fortunate people. Images assumed additional values, such as benevolence, compassion, charity and generosity, and personal integrity.

One appeal made by several of the 27 reports concerned family-oriented values related to educating, protecting, and ensuring a future for children. The children subject, a clear indicator of family values, included children at play, accompanied by peers, siblings, and parents, and children learning from elders. These children represent our families' legacies, future generations, and innocence in need of protection. Images of families, including adults grouped with children or pets, appealed to values such as togetherness, nurturing, and wellbeing.

Clearly, the power claim associated consumer culture with the corporations represented and targeted consumers driven by success and economic values. Economic values guide individual and collective choices such as what to buy, how hard we're willing to work, and what sacrifices we're willing to make toward material goals. In other words, if you have money, you can buy their organic juices, hybrid cars, or FSC-certified wood products. Economic values also

guide our conceptions of ethical and healthy work environments, sustenance, work ethic, productivity, and stability.

Aesthetics, the symbolic language of cultural values, refer to opinions concerning what is or isn't beautiful or pleasing, but they're not completely random or subjective; they are often symbols of deeper cultural values. Layout choices, color palettes, and crisply-edited photos appealed to aesthetic values just as human subjects appealed to the aesthetic values of cleanliness, beauty, and children's purity.

5.3 RQ3 Transparency (Evaluation): *Are the nature of the images congruent or incongruent with corporate activities? Do the ways these images function have ethical implications?*

The evaluation step of Foss's visual rhetorical schema consists of a validity and morality assessment of image implications. Many of these images remained too vague and uninformative to succeed in bolstering corporate reputation or environmental image enhancement. Strictly adhering to public relations concepts regarding transparency, the nature of the images does relay certain functions, such as emotive appeals, but lacks the general intent of the documents: to inform stakeholders about the consequences of corporate production, consumer consumption, and the company's attempts to become sustainable and mitigate problems. The images could be attributed to any corporation and therefore lack validity and relevance. LaGrandeur (2003) might reference logos and conclude that irrelevant images may as well not replace text, because they do not appeal to reason.

More logical image subjects matched corporate activities, proving congruency, but aesthetic issues limited transparent potential. Transparent images showing corporate activities and impact were often too small to see clearly, even when magnified. Other times, an overwhelming amount of verbal and non-verbal information littered the page, making it difficult

to identify the useful from the meaningless. Repetition typically did not occur with transparent images, but when it did, images were too similar to show various facets of activities or to be impactful. The size and appearance of transparent images would not ordinarily cause an ethical dilemma, except that many value-based images were substantially larger and placed high or dead center on the pages. An ethos analysis would concur that oftentimes, images neither worked in or out of concert with verbal text to enhance ethical appeals; instead, the emphasizing capabilities of the images were strained by the size or quality of the photographs.

A more disturbing ethical dilemma discovered concerns pathos, images working to enhance emotional appeals. Image subjects outlined under the label global diversity showed a pattern of the corporation as the developing world's "savior." When corporate involvement was not apparent, reports pictured "sad" children of color, alone or in small peer groups (see Figure 39). This ethical failure would cause sympathetic readers to associate corporate interests with those of the developing world. In most cases, reports fail to identify these children or any demographic information. This leads me to conclude that the companies hope to appeal to reader values by using sweeping generalizations concerning "others." Creating communication messages, like "we take care of the developing world and its children," with images is dangerous in any situation, but when the goal of the text is to promote social and environmental responsibility, the stakes are raised for image-makers.

Evidence of the "seven sins of greenwashing," those not extremely pervasive, raised ethical questions regarding these images. Car and motor vehicle product manufacturers advertised hybrid and electric cars and tires made of less rubber, without revealing their full environmental impact (the sin of hidden trade-off and the sin of lesser of two evils). Both the sin of vagueness and the sin of irrelevance surfaced through the overuse of stock and meaningless

images, including the ubiquitous clip art tree or leaf. One could argue that an image with no captions, identifying features, or explanation demonstrates the sin of no proof.

Not all findings were ethical failures; in fact, some corporations, including Boeing and ArcelorMittal, used extensive exclusive, pertinent, high-quality, and well-labeled images throughout the reports. These images acted to inform and educate readers on real impact, commitments, progress, and goals. These CERs were aesthetically-pleasing enough to evoke environmental concern, but included unedited and candid portrayals of activities and impact. Environmental references stayed specific to actual efforts or corporate function. Image relevancy and organized presentation made these reports valuable transparency statements for readers and stakeholders. No patterns of ethical images existed based on industries represented or corporate functions and many reports included both transparent and non-transparent imagery.
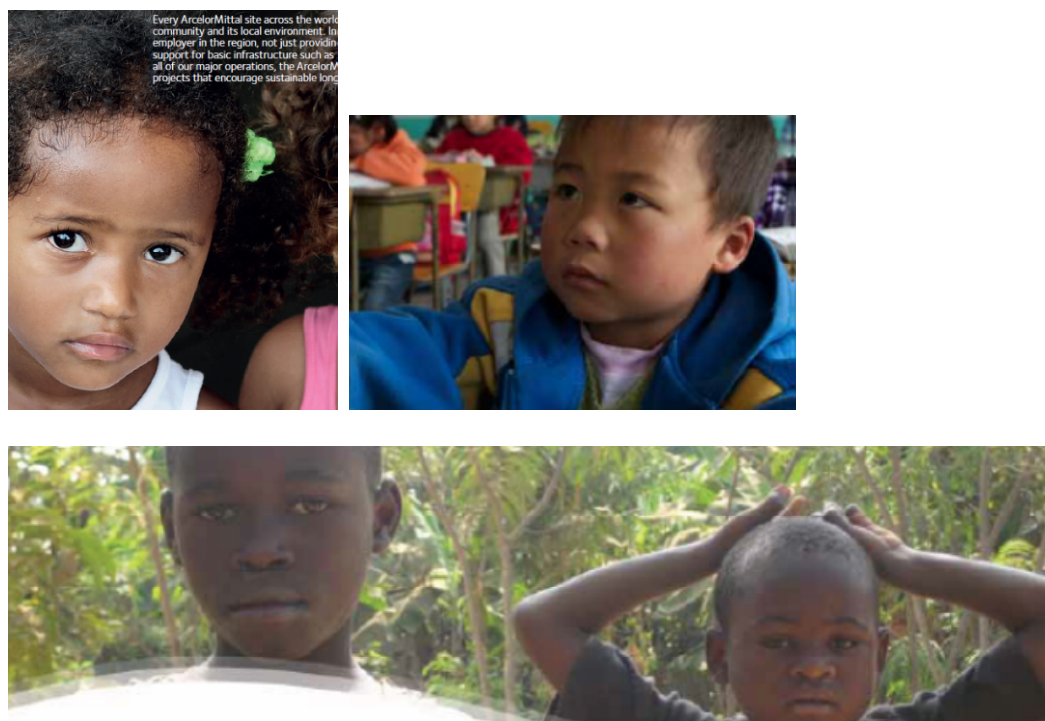

Figure 39. AMSYF.38.56, CAT.30.42, CAT.15.22: Some reports included unidentified "sad" children of color to appeal to reader sympathies or associate corporate interests with those of the developing world.

5.4 RQ4 Prescriptive: *Based on my findings, what practices serve as examples of ethical visual communication related to environmental impact?*

Based on positive findings, I identified five best practices for image use in environmental reporting and public relations texts: (1) clearly define subject significance by matching subject(s) to text, (2) provide concise, but descriptive captions and well-labeled graphs, (3) use transparent or detailed photographs and graphs in medium to large applications only, (4) use only applicable close-ups in small applications, for comprehension, (5) mix mediums when multiple images are used per page, and (6) incorporate impact/resolution statements.

5.4.1 Subject significance

If nothing else, image-makers and CER creators should clearly define their subjects' significance and match those subjects to relevant text. For instance, employees are necessarily the subject of many images because most corporations value them as the single largest stakeholder group, but there are multiple reasons to incorporate employee images: to communicate a shared vision of corporate stewardship, to exhibit day-to-day facility activities and safety standards, and to demonstrate the benefits of working there, to name a few. So, there should be no reason that the same type of employee photo, a worker in a hard hat and boots analyzing the inner-workings of a machine, for example, is used throughout the report.

The easiest way to earn a transparent CER reputation, is to incorporate a variety of exclusive images that support textual evidence. For example, the ExxonMobil report uses photographs representative of different stakeholder groups, each with a unique and explanatory caption. These include an advisory panel, customers, suppliers, and employees.

5.4.2 Captions

Captions provide the most immediate information to readers, because they serve as explanations of images. Effective captions are short, descriptive phrases with any necessary clarifications. What is it and why are you using it here? A reader should not always have to refer back to the text to decipher the message. Many images in the sample provided effective examples of captions, including one posted directly below a photo of a Boeing construction site: "Construction is well under way at Boeing's new metal-treatment facility in Portland, Ore. Using new technologies at the site will reduce the amount of cadmium, historically used to protect metal against corrosion, in the manufacturing process" (2011, p. 14). Likewise, graphs should be labeled with at least five years of data, including the reporting period, because readers require a more objective benchmark to compare "progress" and assess the direction of change. Even more useful would be including industry-wide statistics or worldwide figures to offer a comprehensive basis for comparison. Graphical presentations are not always optimal for effective communication, but for emissions and waste figures, they suffice. Parallel graphs or graphs of equal importance should be of equal size and scale, but clearly labeled so they can be identified.

5.4.3 Large detailed applications

Graphs and other detailed images must be large enough to read clearly. Images showing corporate impact should not be small, but can range in size from medium to very large depending on detail and aesthetic application. For example, ArcelorMittal used two mining operation photos as background images for its table of contents and geographic location information (see Figure 40). The result is an aesthetically-pleasing, two-page, graphic spread, that informs the reader of corporate function, mining, and claims some impact is required as a result.

5.4.4 Small close-up applications

Close-ups and graphic clip art should be the only images used in a small CER application. They might addend other images, such as a magnified adjoining pullout image for further clarification, but should not be standalone images, because they provide no background or other context clues.

5.4.5 Mixed mediums

When reports call for multiple images per page, mixing mediums (by using illustrated diagrams alongside photographic evidence of real world applications or graphs with supporting photos, for example) can offer visual explanations for complex statements. In Japan Tobacco's report, an easy-to-follow flow diagram and photographic evidence of specific sanitary processes being used, assisted a complicated verbal description of factory safety operations (see Figure 41). Graphic presentations also benefitted from photographic evidence of recycling efforts and types of waste generated. To be effective, however, mediums should appear side-by-side or close together on the page so the reader can signify the relation. Finally, like figures should be combined to show comparisons, such as before and after photographs taken from the same perspective (see Figure 42).

5.4.6 Impact/resolution statements

I define impact/resolution images as powerful images capable of simultaneously bolstering reputation, closing the sustainability gap, and most importantly, informing readers in a transparent fashion. By far my favorite finding was that these images were not gloomy or disheartening, but rather showed simultaneous impact and rectification. (This could occur in one single image or a grouping of images.) These companies demonstrated, "we have a significant impact on the environment, but we are taking steps to reduce that impact." Image statements like

these do not act to hide or cover up corporate impact, nor do they celebrate it by featuring grey

hazy sky after grey hazy sky. They simply demonstrate the true nature of the company's business

activities and supplement those with real efforts to reduce impact.

Figure 43 shows three separate examples of the impact/resolution prescription.

HYHZF.6.10 – HYHZF.6.14 and HYHZF.6.16 demonstrate corporate function and impact:

heavy industry is evident on cargo ships, at factories, and at an excavation site. Photo

HYHZF.6.15, however, points to green energy business components, acknowledgement of

environmental dedication. Likewise, HYHZF.5.7 and HYHZF.5.9 demonstrate impact on the

natural environment, while HYHZF.5.8 also demonstrates impact (a large plant and surrounding

parking lot), but its caption refers to solar-cell production, an investment in new technologies to

harvest power from the sun. The hazy, yellow sky in image GE.1.1 might be the product of

corporate activities or facilities. However, the wind turbines suggest GE uses alternative energy

sources to power these facilities.

Figure 40. AMSYF.12.14, AMSYF.13.15: A graphic two-page spread uses a transparent, but still aesthetically-pleasing, large image showing mining as corporate function.

Figure 41. JAPAF.5.13 – JAPAF.5.17: Evidential photos of specific safety precautions substantiate an easy-to-read flow diagram.

Before reforestation (September 2005)　　After reforestation (October 2010)

Figure 42. SMFRF.209.31: Transparency evident from before and after photos taken from the same perspective.

- Gunsan Shipyard

- Eumseong Solar cell-producing Plant

- Seoul office

Figure 43. HYHZF.6.10 – HYHZF.6.16, GE.1.1, HYHZF.5.5 – HYHZF.5.9: Environmental impact and resolution statements made concurrently in image and image groupings.

6. DISCUSSION

The study's descriptive and prescriptive findings have implications concerning corporate image choices in terms of public relations theories and image ethics. Here I discuss those conclusions and consequences and offer transformative image strategies for public relations texts. In addition, I examine the study's novel visual rhetorical framework and its contribution to communications theory and professional practice as well as its limitations.

To summarize my perspective on image design, much of which was explained in the visual theory chapters, the ideal images to use would be ones that are transparent, meaning relevant and congruent with corporate activities, as well as being effective at informing readers, readable, and neither too simplistic or complex. Whether or not honest images are pretty, what is true and authentic, or honest communications, should be expressed by today's heavy industry elite to avoid the "business as usual" mindset and the widening of the sustainability gap. Corporations, particularly those embroiled in industrialism of the modern age, best serve themselves when they take full responsibility for environmental impact, transparently and apologetically (Brinson & Benoit, 1996).

Transparency, a buzzword of public relations in the digital age, should be taken seriously and applied in various contexts, so that large corporations are not charged for a lack of relevant, effective, and environmentally-conscious transparency decisions, which Drew and Nyerges (2004) defined as integrated, accessible, clear and concise, logical and relevant, truthful, and accountable. As Christensen and Langer (2009) learned, companies can learn to master transparency in various situational contexts to their own advantage. When a company is doing something damaging but not talking about it, or talking about something incessantly but doing nothing about it, audiences distinguish what they are saying from what they are actually doing.

In sum, it seems these industry players should broaden disclosure practices in corporate environmental reporting to include greater transparency and narrow the sustainability gap. I hope this study urges public relations practitioners to educate the corporation and society to deliver and expect more elaborate and complex accounts of environmental impact issues.

6.1 Implications of Visual Rhetorical Findings for CERs

To summarize, for RQ1, I identified ten major subject themes, six aesthetic themes, and themes related to exclusions, ambiguity, and truth claims. In RQ2, I assessed the values that CER images appealed to and loosely indicated the motivational component of including value appeals. In RQ3, I evaluated these findings from an ethical perspective and in RQ4, offered prescriptions for CER communicators based on an ethical evaluation. In this section, I begin with a discussion of the implications of thematic findings, followed by a discussion of the implications of the values to which they appealed.

Just as Feller (2004) suggested that CERs acted as utopian narratives, attempting to "elicit re-visioning and renewed trust, rather than rational agreement," CER images acted in an imagined environmental equilibrium. In these images, corporations coexisted with non-human animals and plants in the natural world with little impact explanation. The more provocative themes in reporting reveal that corporate environmental issues are governed by ideology as much as science, and that the basis of reporting is more voluntary than necessitated by stakeholder interests. Would stakeholders believe that these manufacturing companies in high-waste industries could become environmental leaders simply by implementing a bricolage of animal photographs, landscapes, pull quotes, and graphs? These same publics are investing in corporate activities, so it is doubtful that the cover can be pulled over their heads completely.

In RQ1, I identified the major emergent subject themes CERs used as: (1) corporate leadership, (2) workers in the field, (3) diversity, (4) environmental landscapes and references, (5) corporate function, (6) safety commitment, (7) random or irrelevant images, (8) scientific research, (9) children, and (10) non-human animals. The interrelatedness of many of these themes, like the dichotomy between corporate leaders dressed in suits versus workers in the field, presented ethical dilemmas, such as taken-for-granted power ideologies. In RQ1, I also identified commonalities and distinctions in: (1) medium, (2) size, (3) placement, (4) colors, (5) foreground/background, and (6) surrounding text. In order to reinforce my framework, I used elements of discourse analysis, such as invisibility, positioning, complexity, and the effects of truth and discovered themes related to exclusion, ambiguity and claims to truth, including power, environmental dedication, and impact.

Vague and irrelevant images did not succeed in bolstering corporate reputation or environmental image enhancement, lacking the general intent of the documents which is to inform stakeholders about the consequences of corporate production and consumer consumption and attempts to mitigate problems. More logical image subjects matched corporate activities, proving congruency, but aesthetic issues, including size, placement, crowdedness, close-ups, and foregrounds (with lack of background context) limited transparent potential. The identification of nature, or presented and suggested elements of CER images conveys quite a bit about corporate strategies.

The portion of my analysis focused on subject matter uncovered problematic power relationships, specifically concerning employees. An evident hierarchy existed, wherein corporate leaders (CEOs, CFOs, directors, and presidents) appeared toward the beginning of reports, rarely photographed in the field, among other employees. Based on what we learn from

positioning, we could infer corporate leaders are most important. Blue collar employees, always identifiable based on clothing and safety attire, were typically pictured in the field, reviewing plans, installing machine parts, inspecting machinery, or standing nearby equipment. These two employee groups, making up either end of the hierarchal spectrum, were chiefly composed of white males. Other employees, those dressed in business attire, tending to nameless office tasks, included a diverse range of men and women of various ages and races. The office/field dichotomy attributes great power to the visionaries and less power to those tasked with implementing the vision.

Gendered social and community-building inferences represented another problematic power relationship concerning the corporation as the developing world's savior. With little to no reference made to the companies, these images could be harmful to reputation for a number of reasons. By prioritizing its social strategies, General Electric, for example, neglected environmental, ethical, and economic strategies of corporate social responsibility. The result is preference for human culture over non-human culture. Additionally, reports rarely identified the non-Western cultures represented, suggesting these groups were not important (or the images were non-exclusive). Finally, I say that these environments are "gendered," because the people featured were nearly all women and children. This suggests that women and children are weak or innocent and in need of protection, while the corporation is willing and able to do the protecting. This is problematic because it seems to be an ideological choice of image-makers, one in which the worldview is limited to Western culture as "normal," "powerful," and "socially-conscious" while the non-Western world, particularly its women and children are "sad," "unfortunate," and "in need of corporate aid."

If a reader presumed his/her only definition of the environment from CER images, it would be difficult to understand reality, because there were alternate environmental "realities" working in tandem throughout the reports. An untouched landscape or an attractive, but touched landscape (such as a cornfield beneath a sunset) proposes that humans have little interaction with the non-human environment, while those sites showing corporate impact relate a different reality where humans overpower the natural world. Then there are those images of people picking up trash, cleaning rivers from kayaks, and otherwise acting as the savior of the natural world. There were few images that relayed a symbiotic relationship, wherein the corporation relied as much on the environment as the environment succumbed to the powers of the corporation. (In many images, people enjoyed the outdoors, but these were unrelated to the corporation itself.) In some cases, such as Samsung and Bridgestone's use of environmental imagery to back product figures, corporations relied on nonspecific references to the environment to promote its commercial interests. In this way, the nonhuman world is used for aesthetic purposes only without any specific acknowledgement of environmental stewardship.

The relationship between human animals and non-human animals is tilted in favor of little impact on non-human wildlife. Non-human animals were either pictured in close-ups or in natural habitats, suggesting almost no human impact and certainly no corporate impact. (In other cases, cartoon or digital images of animals showed no background.) Instead, surrounding text laying claim to biodiversity projects and conservation efforts suggests corporations come to the aid of non-human animals. Again, there is no acknowledgement of a symbiotic relationship, in which corporations rely on non-human animals for their services, research, or entertainment. All of these relationships place preferential treatment on corporate interests and pose the corporation

as the savior, meaning these texts do not overcome the anthropocentric hierarchy of human culture.

To employ the rhetorical perspective on visual imagery is to attribute meaning to the images and emergent themes based on viewer experience. The audience-centered perspective places the viewer as the dominant factor in the construction of arguments from images (Foss, 2004). Obviously, implications vary for value appeals. Appealing to readers with references to economic security and aesthetics concerning page layout and color palettes is much less problematic than emotive appeals based on humanity and sympathy. These latter appeals attempt to differentiate readers from non-human animals and inhabitants of developing countries. These implications teach image-makers to show more evidence of cohabitation and symbiotic relationships between the company and its stakeholders.

The most troubling ethical dilemma concerned images working to enhance emotional appeals. Corporations seemingly attempted to appeal to reader values by using sweeping generalizations concerning "others" and the developing world. The reference to community-building ties strongly to the emotional appeals of sympathy, benevolence, compassion, and charity, thereby attributing these values to the corporation. Claims may not necessarily be exaggerated, but corporations overlook the ways their actions are disempowering or otherwise negatively impacting people in developing nations, including pollution, displacement, and cultural homogeneity.

Each of these image functions, when taken in concert, reveal an underlying function: the promotion of corporate activities with the mission to create a positive environmental image for the company. This includes eliciting sympathetic or overly positive feelings toward corporate

efforts and to remain somewhat unambiguous while doing so. Intermixed images, like these, could cause stakeholders to either trust or question reality.

Values are often vague and abstractly defined and most people don't spend that much time thinking about their own values or the relation of one value to one another. Nevertheless, people are certainly motivated to behave based on values that serve as standards or criteria (Rokeach, 1973). In turn, companies should invest time to understand audience values before trying to convince them that claims fit their values.

6.2 Contributions to Academia

First and foremost, I hope this study provides a more comprehensive visual analysis framework for public relations texts that considers the ethical components of both communications and visual theory. I was fortunate enough to work with scholars representing various communication expertise, including environmental discourse, public relations theory, and visual rhetoric. To discount any one of these areas of study would have dramatically jeopardized the study's contributions and prescriptions or rendered it without proper justification.

6.2.1 Visual communication

In the end, supplementing Sonja Foss's framework with elements of visual discourse analysis, provided for a flexible, yet critical approach to visual images: "one that thinks about the agency of the image, considers the social practices and effects of its viewing, and reflects on the specificity of that viewing by various audiences, including the academic critic" (Rose, 2012, p. 17). Specifically, the mixed method approach to visual rhetorical analysis involves performing Foss's nature, function, and evaluative steps, as well as analyzing: surrounding text (does the image emphasize or de-emphasize the text?), clustered subjects and associations, claims to truth, invisibility (what is not seen or said), and level of complexity or ambiguity. Foss's components

allowed me to draw relations between image context and discourse, by situating images in the context of industrial CERs and incorporating concepts central to corporate responsibility, such as transparency and the sustainability gap that exists between discourse and corporate greening efforts.

6.2.2 Public relations

Like Rozuel and Kakabadse's findings related to CSR value (2011), this study confirms that to truly add value to society and bolster corporate reputation, the prerequisite for CSR must be ethical standards at all tiers of business activity. Modern public relations practitioners face many ethical challenges in the digital age, but visual communication choices do not have to be difficult.

I hope the study's operating prescriptions for image-makers reinforce the importance of embedded ideologies that play a role in the life of modern-day designers, whose audiences depend increasingly on visual cues for self-identification. After synthesizing results, I composed two sets of guidelines; the first is more generic and can be applied to various public relations text, while the second applies to CERs, specifically. Following these visual guidelines will result in more honest and informative communications with stakeholders.

I recommend the following be applied to all public relations texts: (1) clearly define subject significance by matching subject(s) to text, (2) provide concise, but descriptive captions and well-labeled graphs, (3) use transparent or detailed photographs and graphs in medium to large applications only (4) use applicable close-ups in small applications only, and (5) mix mediums when multiple images are used per page.

I offer the following CER image guidelines for consideration in report generation: (1) incorporate impact/resolution statements, (2) avoid overdependence on untouched landscapes

and environments, (3) photograph corporate leaders in the field (avoid portraits), (4) employ exclusive images whenever possible, and (5) relay symbiotic relationships between subjects as opposed to power relationships.

In general, I hope this study opens up opportunities for scholarship in the area of visual communication related to public relations. As the public screen becomes all-encompassing, visuals will tell stories that "bind us, build understanding, assign meaning, and forge relationships," and the already important issue of transparency will be transferred to visual messages (Pearce, 2010). Effective visual thinking and image decisions can play a major role in achieving communication and business objectives and building a positive reputation.

Finally, this study's findings suggest that public relations practitioners involved in crises or campaigns maintain transparency in visual communications. Brinson and Benoit (1996) reminded us that a corporate best serves itself when it takes full responsibility and is transparent and apologetic. Transparent images that inform stakeholders can not only establish trust and dialogue with our stakeholders (Christensen & Langer, 2009), they might affect consumers' willingness to participate in campaigns (Vaccaro & Echeverri, 2010).

6.2.3 Environmental communication

If a corporation wishes to be truly environmentally conscious, it must pay close attention to the environmental identity (for products, images, and behaviors, and industry advocacy campaigns) it builds (Cox, 2010). CERs will continue to be a major part of this identity-building process, so I hope this study offers some unique perspectives on corporate/human relationships with the environment that may lead to more comprehensive, holistic, and ethical reporting. This involves steering clear of greenwashing sins and opening up to publics about funds spent on any anti-environmental efforts, though hopefully there are none (Allen, 2009).

The threats that we face in the 21st century are severe and over time, the challenges environmentalists face in protecting nature have changed dramatically. Various discourses and rhetorical perspectives frame how we perceive and interpret these threats, with the most pervasive of our age being sustainability, which imagines attempts to dissolve environmental conflicts (Dryzek, 2005). I hope this study shines a light on *sustainability* and the *sustainability gap* as problematic terms for major industrial corporations. No doubt, these companies will continue to tout the virtues of sustainability as they seek to offset their increasing environmental footprints, however, when it comes to environmental communication, it may help these companies to focus on visual messages. Finally, I hope this study has successfully applied and provided a framework for future studies in environmental image studies that considers ethical implications of visual rhetoric.

6.3 Contributions to Society

In the 21st century, the urgency of environmental threats is greatening, positing that environmental education and communication must be at the forefront of today's social movements, particularly for those high-revenue earning corporations with the resources to tackle such urgencies. Environmental issues will continue to be the subject of political debate, advertising, scientific research, and the like, but over time, the challenges environmentalists face in protecting the natural world have changed dramatically. Various discourses, symbols, and rhetorical perspectives have worked to define issues like natural resource depletion, wilderness exploitation and preservation, public health, pollution, environmental justice, and climate change (Cox, 2010), but the visual will become our primary educator.

The digital age has seen the maturation of the public screen, which lends power to the visual and demands examinations of environmental public relations texts with specific focus on

image integrity (DeLuca and Peeples, 2002). What we have learned from the current state of CERs is that stakeholders should demand regulations that extend beyond quantitative data and superfluous, flowery discourse. By misleading consumers or covering real efforts, corporate rhetoric shifts the power balance and can be detrimental to reputation, public trust, and the environment we share.

6.4 Limitations

Overall, this study attempts to contribute to and pull from multiple academic areas, which complicates the research process and likely leaves room for more thorough coverage of certain positions. In addition, readers may wish that instead of merely describing CER images, I was able to prove that my prescriptions would resonate with stakeholders, thereby either bolstering corporate reputation or generating public mistrust. While including an audience study would be a useful addition, it would entirely redirect the study's focus from image production to image reception, which was beyond the scope of this thesis. The aim was both to describe how images could better align with corporate function and efforts for increased transparency and to build a case for how these images could be aligned to resonate with stakeholder values in an ethical manner.

Additionally, I did not choose to prioritize corporate impact statements in my findings. Instead, I chose to focus where I saw ideological problems and otherwise random, but harmless choices. Quite a few reports incorporated these functional and transparent impact statements (though, not predominately), so a future image study might focus on only corporate impact statements, since they are significant. Likewise, a drawback to the study was generating themes from the content itself; messages drawn from images are virtually limitless in scope bound only by the viewer's assessment.

6.5 Future Research

Areas for related future research could include: (a) audience studies on the resonance of CER images for industrial and non-industrial corporations, (b) cross-regional studies of how various cultures' corporations use images (c) identification of opportunities for alignment between CER verbal discourse and non-verbal images, and (d) identification of how corporate impact statements (transparent images) are most successfully communicated, based in part on the prescriptions I offer.

6.6 Final Summary

With the environmental severities and pressures of the 21st century, heavy industries are encouraged but not mandated to release CERs. Still unregulated in the U.S., the imagery used in CERs may be playing off the uninformed reader. Paying close attention to visual stimuli, readers may buy into the beautiful imagery, unaware of the true impacts of the corporations. Clearly, there are many ethical questions regarding the power of the visual. These CERs, in conjunction with other green marketing tactics, may be successful in generating an environmental image, but are they successful at the expense of ethics? Rather than serving to inform those who are not educated, the images, layout, colors, and formats suggest that corporations are voluntary benefactors to environmental urgencies, while inducing readers to skip the process of becoming informed on the topics. In sum, the aesthetic choices of the image creators can be misleading for readers, creating sympathetic ties to mega-industries who capitalize on the promotion of non-information.

Who is charged with carrying out image goals and necessitating real change? Corporations provide a vision for a better world, but aren't necessarily helping to create it.

Modern public relations practitioners, as image-makers, face many challenges in steering an environmentally-conscious corporate image, not the least of which requires informative, engaging, and transparent visual communications.

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APPENDIX

Sample: 2011 "IW 1000" top revenue-earning corporation from each industry

#49 <u>Boeing Co.</u> (BA) - United States
Revenue $US Million: 64306
Aerospace & Defense
http://www.boeing.com/aboutus/environment/environment_report_11/

#43 <u>Christian Dior SA</u> (CDI) - France
Revenue $US Million: 28254
Apparel
NO REPORT TO INCLUDE IN SAMPLE

(2nd ranking)
#207 <u>Nike Inc.</u> (NKE) - United States
Revenue $US Million: 19014
Apparel
http://www.nikebiz.com/crreport/content/pdf/documents/en-US/full-report.pdf

#59 <u>PepsiCo Inc.</u> (PEP) – United States
Revenue $US Million: 57838
Beverages
http://www.pepsico.com/Download/PepsiCo_2010_Sustainability_Summary.pdf

#33 <u>BASF SE</u> (BASA) – Germany
Revenue $US Million: 86726
Chemicals
http://www.basf.com/group/corporate/en/content/sustainability/index

#52 <u>France Telecom</u> (FTE) - France
Revenue $US Million: 62063
Communications Equipment
http://www.orange.com/sirius/CSR2011/

#12 <u>Samsung Electronics Co. Ltd.</u> (SSNLF) – South Korea
Revenue $US Million: 139169
Computers & Other Electronic Products
http://www.samsung.com/us/aboutsamsung/sustainability/sustainabilityreports/sustainabilityreports.html

#11 <u>General Electric Co.</u> (GE) – United States
Revenue $US Million: 150211
Electrical Equipment & Appliances
http://static.gecitizenship.com/wp-content/uploads/2012/07/GE_Sustainable_Growth_2011.pdf

#93 <u>Nippon Steel Corp.</u> (NISTF) - Japan
Revenue $US Million: 42899
Fabricated Metal Products
http://www.nsc.co.jp/en/eco/report/pdf/english_2011.pdf

#21 <u>Nestlé SA</u> (NSRGF) - Switzerland
Revenue $US Million: 117463
Food
http://www.nestle.com/Common/NestleDocuments/Documents/Library/Documents/Corporate_Social_Responsibility/2011-CSV_creating-shared-value.pdf

#472 <u>Masco Corp.</u> (MAS) – United States
Revenue $US Million: 7592
Furniture & Fixtures
http://www.masco.com/pdfs/2009-10MASCOGRI.pdf

#227 <u>Thales</u> (THLEF) - France
Revenue $US Million: 17556
Instruments
http://www.thalesgroup.com/Workarea/DownloadAsset.aspx?id=6442451811&LangType=2057

#94 <u>Caterpillar Inc.</u> (CAT) – United States
Revenue $US Million: 42588
Machinery
http://www.caterpillar.com/cda/files/2838620/7/2010SustainabilityReport.pdf

#183 <u>Fresenius SE</u> (FSNUF) - Germany
Revenue $US Million: 21364
Medical Instruments & Equipment
http://www.fresenius.com/89.htm

#18 <u>E.ON AG</u> (ENAKF) - Germany
Revenue $US Million: 124215
Miscellaneous
http://www.eon.com/en/responsibility/35073.jsp

#107 <u>Denso Corp.</u> (DNZOF) - Japan
Revenue $US Million: 36614
Motor Vehicle Parts
http://www.globaldenso.com/en/csr/report/2011/documents/e2011.pdf

#5 <u>Toyota Motor Corp.</u> (TOYOF) - Japan
Revenue $US Million: 233099
Motor Vehicles
http://www.toyota.com/about/environmentreport2011/pdfs/2011_Toyota_NAER.pdf

#160 <u>International Paper Co.</u> (IP) – United States
Revenue $US Million: 25179
Paper
http://www.internationalpaper.com/documents/EN/Sustainability/SustainabilityReport.pdf

#1 <u>Exxon Mobil Corp.</u> (XOM) – United States
Revenue $US Million: 372544
Petroleum & Coal Products
http://www.exxonmobil.com/Corporate/Imports/ccr2010/pdf/community_ccr_2010.pdf

#46 <u>Pfizer Inc.</u> (PFE) – United States
Revenue $US Million: 67809
Pharmaceuticals
http://www.pfizer.com/files/annualreport/2010/annual/review2010.pdf

#741 <u>Sealed Air Corp.</u> (SEE) – United States
Revenue $US Million: 4490
Plastics
http://www.sealedair.com/sustainability/environment.aspx

#40 <u>ArcelorMittal SA</u> (AMSYF) - Luxembourg
Revenue $US Million: 78025
Primary Metals
http://www.arcelormittal.com/corp/news-and-media/publications-and-reports/cr-report2011

#96 <u>Hyundai Heavy Industries Co. Ltd.</u> (HYHZF) – South Korea
Revenue $US Million: 40567
Railcars, Ships, & Other Trans. Equip.
http://www.hhi.co.kr/about/down/2011%ED%99%98%EA%B2%BD%EB%B3%B4%EA%B3%A0%EC%84%9C.pdf

#109 <u>Bridgestone Corp.</u> (BRDCF) - Japan
Revenue $US Million: 35198
Rubber Products
http://www.bridgestone.eu/filelibrary/English/Global/FILES/PR/Corporate/2011/PDF/BSEU%20Environmental%20Brochure.pdf

#67 <u>Compagnie de Saint-Gobain</u> (CODGF) - France
Revenue $US Million: 53780
Stone, Clay, Glass & Concrete Products
http://www.saint-gobain.com/files/Construire_ensemble_notre_environnement_2008_EN.pdf

#77 <u>Reliance Industries Ltd.</u> (RLNIY) - India
Revenue $US Million: 49408
Textiles
http://www.ril.com/downloads/pdf/ril_sr2010_11.pdf

#42 <u>Japan Tobacco Inc.</u> (JAPAF) - Japan
Revenue $US Million: 75458
Tobacco
http://www.jt.com/csr/report/pdf/report2011.pdf

#427 <u>Sumitomo Forestry Co. Ltd.</u> (SMFRF) - Japan
Revenue $US Million: 8904
Wood Products
http://sfc.jp/english/information/kankyo/pdf/pdf/2011web.pdf