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THE GLOBAL ENVIRONMENTAL MOVEMENT AND CORPORATE ACTORS

STRATEGIZING BEYOND THE STATE:

THE GLOBAL ENVIRONMENTAL MOVEMENT AND CORPORATE ACTORS

By JESSICA L. EDGE, B.A., M.A.

A Thesis Submitted to the School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree Doctorate of Philosophy

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ABSTRACT

Due to the political, economic, and technological changes brought on by the processes of globalization, since the mid-1990s, civil society groups have increasingly chosen to target corporate actors. This thesis focuses on the circumstances under which civil society groups have chosen to target corporate actors in addition to and instead of states. How corporate actors respond to activist demands and the factors that shape how they approach corporate social responsibility and the environment are also examined. This thesis uses a political economic opportunity structure approach to understand the relationship between civil society groups and corporate actors. While activist networks are increasingly targeting corporate actors, they also continue to target the state to achieve their objectives. This two prong strategy has been effective for activist networks because it allows them to take advantage of weaknesses found in both political and industry opportunity structures. However, while the impact of activist networks is shaped by the structural environment in which they operate, activist networks also create new opportunities through the strategic use of frames and tactics to draw attention to and create support for the issues with which they are concerned. Two case studies involving the global environmental movement and corporate actors are examined in this thesis. The first case study focuses on a global network of activists opposed to genetically modified organisms (GMOs) and the network's interactions with states and a variety of corporations in their campaign to prevent the introduction of GMOs into the environment. The second case study examines the activities of a network of activists concerned about the environmental impacts of electronic waste (the e-waste network). The e-waste network sought to ensure the proper disposal of electronic waste and increase the sustainability of the electronics industry through the targeting of states and corporations.

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ABBREVIATIONS

AEA	American Electronics Association
Agbiotech	Agricultural biotechnology
Anti-GM network	Network of activists opposed to GMOs
A SEED	Action for Solidarity, Equality and Diversity
BAN	Basel Action Network
BEUC	The European Consumers' Organization
BFR	Brominated flame retardant
BSE	Bovine spongiform encephalopathy
BWG	Biotechnology Working Group
CBD	Convention on Biological Diversity
CEA	Consumer Electronics Association
CEH	Center for Environmental Health
CEO	Corporate Europe Observatory
CFC	Chlorofluorocarbon
CFL	Compact fluorescent light bulb
CFS	Center for Food Safety
CPA	Clean Production Action
CSR	Corporate social responsibility
CTBC	Computer TakeBack Coalition
DSP	Dispute Settlement Panel
EIA	Electronics Industry Alliance
EEB	European Environmental Bureau
EFSA	European Food Safety Authority
ETBC	Electronics TakeBack Coalition
ENGO	Environmental nongovernmental organization
EPA	Environmental Protection Agency
EPEAT	Electronic Product Environmental Assessment Tool
EPR	Extended producer responsibility
Europabio	European Association for Bioindustries

EU	European Union
E-waste	Electronic waste
E-waste network	Network of activists focussed on the issue of e-waste
FDI	Foreign Direct Investment
FDA	Food and Drug Administration
FoE	Friends of the Earth
GIC	Global Industry Coalition
GHG	Greenhouse gas
GMA	Grocery Manufacturers Association
GMO	Genetically modified organism
GURT	Genetic use restriction technology
HMO	Health maintenance organization
HP	Hewlett-Packard
ICRT	International Campaign for Responsible Technology
IMF	International Monetary Fund
IPE	International Political Economy
IPR	Individual producer responsibility
IR	International Relations
JBCE	Japanese Business Council in Europe
MAIT	Manufacturers' Association for Information Technology
NCFAP	National Center for Food and Agricultural Policy
NEPSI	National Electronics Product Stewardship Initiative
NGO	Nongovernmental organization
PC	Personal computer
PVC	Polyvinyl chloride
R2	Responsible Recycling Practices
RAFI	Rural Advancement Foundation International
RoHS	Restriction of hazardous substances
SCOPE	Society for Conservation and Protection of Environment
SMO	Social movement organization
SVTC	Silicon Valley Toxics Coalition

TABD	TransAtlantic Business Dialogue
TCE	Texas Campaign for the Environment
TEAN	Taiwan Environmental Action Network
TNC	Transnational corporation
UN	United Nations
USDA	United States Department of Agriculture
U.S. GAO	United States Government Accountability Office
USTR	United States Trade Representative
WEEE	Waste electrical and electronic equipment
WTO	World Trade Organization
WWF	World Wildlife Fund

INTRODUCTION
STRATEGIZING BEYOND THE STATE: GLOBAL CIVIL SOCIETY AND CORPORATE ACTORS

On March 18, 1999, Iceland Foods, a food retailer in the United Kingdom, announced that it was voluntarily discontinuing the use of genetically modified organisms (GMOs) in its store brand products. In July 1999, the baby food manufacturer Gerber decided that it would also exclude GMOs from its products. In 2004, the computer manufacturer Dell announced that it would take back and recycle its products for free in the U.S., a policy the company has since expanded worldwide. In May 2007, Apple announced that it would take back and recycle its products for free in the U.S. and would voluntarily phase brominated flame retardants (BFRs) and poly vinyl chlorides (PVC) out of its products by 2008. These voluntary initiatives taken by corporate actors are due to the efforts of activist networks that have utilized corporate campaigns to create change in a variety of issue areas. Activists have argued corporate actors have a role to play in addressing environmental and social problems even if they are not legally obligated to do so. In many cases companies have changed their behaviour in response to activist campaigns.

A substantial amount of environmental governance is taking place outside of state-based regulation. Activists have targeted corporate actors in response to the declining willingness and/or ability of states to regulate. While many activists would prefer to see states implement regulation addressing their concerns, they feel corporate campaigns can play an important role in helping to create legislative change. Activists may hope to alter corporate behaviour so that eventually corporations will not oppose or

will even support stronger government regulation. Furthermore, many of the issues that activists focus on are transnational or global in nature; transnational corporations (TNCs) can be a more appealing target than states because if activists are successful in changing corporate behaviour or policies they can potentially create change transnationally.

This thesis focuses on the dynamics of the relationship between civil society groups and corporate actors. It examines the circumstances under which activists are able to successfully alter the behaviour of corporate actors. It also analyses how corporate actors respond to activist demands and the factors that shape how they approach corporate social responsibility (CSR) and the environment. Two case studies involving the environmental movement and corporate actors are examined. The first case study focuses on a global network of activists opposed to GMOs and the network's interactions with states and a variety of corporations. The second case study looks at activists' efforts to ensure the proper disposal of electronic waste (e-waste) and increase the sustainability of the electronics industry through the targeting of states and corporations.

Research questions

This thesis is driven by the overarching research question: *Under what circumstances are civil society groups able to alter the behaviour of corporate actors?* As well as examining the direct relationship between corporate actors and civil society groups, the examination of this research question also requires detailed analysis of the agency of activist networks and the political opportunity structures in both of the cases examined in this thesis. In focussing on the relationship between civil society groups and corporate actors a number of ensuing research questions are addressed. What are the

frames and tactics civil society groups use to draw attention to issues and target corporate actors? Does mass mobilization impact on activist success when targeting a corporate actor? What is the importance of mass mobilization to activist campaigns targeting states? What role does the media play in shaping the success of activist campaigns targeting corporate actors?

A subsequent series of research questions focuses on the impact the characteristics of corporate actors have on the ability of activists to alter corporate behaviour. Characteristics theorized to affect the vulnerability of specific firms or industries to activist tactics include: firm investments in brand names and reputations, firm efforts to protect or capture market share, the nature of the markets in which firms are engaged, the nature of economic ties to other firms or industries, corporate cultures, strong ties to the state or political elites, the nature of the goods or service produced and internal firm leadership. This leads to a number of related questions about the relationship between corporate actors and civil society groups such as: What types of corporate actors are activists most likely to target? What characteristics make a corporate actor susceptible to activist tactics and more willing to adopt progressive CSR policies? Why do similar corporate actors differ in their response to corporate campaigns?

The tactics and strategies of civil society groups and the vulnerability and/or responsiveness of corporate actors are the central elements on which this thesis focuses. However, many corporate campaigns, including those examined in this thesis, have concurrent and complementary legislative campaigns. The state remains an important variable for my study due to its ability to regulate. Does a willingness on the part of the

state to regulate make a targeted industry or company more responsive to activist demands? Furthermore, in order to better understand why civil society groups are increasingly targeting corporate actors, it is necessary to examine why activists choose not to focus their campaigns solely on the state. If activists are increasingly targeting corporate actors what does this mean for the relationship between civil society groups and the state and the willingness of the state to regulate?

This thesis also examines the impact international organizations and agreements have on civil society groups and corporate actors. International agreements or organizations pertaining to non-economic concerns such as the environment (on which this thesis will focus) are often weak, especially compared to economic organizations and agreements such as the World Trade Organization (WTO). It is unclear if the existence of international organizations or agreements helps or hinders activist campaigns. In some instances the existence of an international agreement or international organization may legitimate an issue as an area of concern, while in other instances a weak or ineffective international agreement or organization could circumvent or discourage stronger regulation, possibly to the benefit of corporate actors.

This thesis also addresses the long term implications of successful corporate campaigns. Do changes in corporate behaviour enacted in response to activist demands result in long term 'policy' change in an issue area? To what extent will this policy change be sustained if public opposition to an issue wanes or if the economic incentives that may have motivated corporations to cede to activist demands decrease? What happens if an issue loses salience and how does this affect any successes achieved by

activists? Accompanying these questions are more general questions regarding issues of democratic accountability, transparency and legitimacy.

These questions are united and oriented by my primary research question focussing on the relationship between civil society groups and corporate actors. This thesis argues activists are increasingly interacting with corporate actors and in doing so altering how certain issue areas are governed. However, while this thesis focuses mainly on the targeting of corporate actors, the state also continues to be an important target for activists. Activists may choose to target corporate actors to alter their preferences or dampen their opposition to legislation. This two-prong strategy, of targeting both policymakers and corporate actors, is the most effective strategy for activists to pursue as it allows them to exploit the vulnerabilities of both corporate actors and governments and play one actor off another. Therefore, this thesis argues for the use of a political economic opportunity structure approach, which incorporates the concepts of political opportunity structure and industry opportunity structure. A political economic opportunity structure approach emphasizes the interplay between the political and economic spheres. It contends that while the influence of corporate actors makes them an appealing target for activists, the role of the state remains significant because of its ability to determine the regulatory environment.

This thesis also underscores the agency of activist networks. The structures in which activist campaigns operate are significant in determining their outcome. However, activist networks have considerable agency when navigating those structures and may be able to alter them. Through the use of creative frames and tactics, activist networks can

place new issues on the political agenda and gain political allies. Activists can change how corporate actors view an issue by creating new reputational concerns or market opportunities. The most effective activist frames connect to existing political and cultural concerns and values. Effective frames also attribute blame for a problem and offer solutions. This thesis shows how activists strategically frame issues and utilize tactics to attract the attention of the media, the public, policymakers, and individuals within corporations. The activist networks examined in this thesis have altered their frames and tactics over time in response to evolving political economic opportunity structures. This thesis also illustrates how effective frames can help unite activist networks whose membership may encompass a diversity of organizations.

The activist networks examined in this thesis deployed their tactics and frames at a variety of different levels of governance: local, sub-national, national, and international. This thesis argues that in addition to targeting both states and corporate actors, activist networks will target the levels of government most open to their arguments. When activists are able to successfully pressure local or subnational governments to create policy change, this may put pressure on higher levels of government to also take action, particularly if industry is confronted with a patchwork of legislative requirements and would prefer to see regulatory harmonization.

Activists also strategically choose to target particular corporate actors or industries they view as most vulnerable to their arguments and tactics. Organizational, economic and cultural characteristics all shape how corporate actors approach CSR, respond to activist demands and engage with activist networks. The cases examined in this thesis

suggest that where an industry is situated in a supply chain is the most significant factor in shaping its response to activist arguments. However, there is considerable variability within industries in the vulnerability of particular companies. Activist campaigns examined in this thesis achieved significant successes when they divided industry. Economic factors including the competitiveness of a particular industry, reputational considerations, and opportunities for new markets may make companies more responsive to the demands made by activist campaigns. Cultural factors, particularly the influence of senior management, are also important in shaping how companies respond to activists and approach CSR. The multi-level and multi-target strategy utilized by the activist networks examined in this thesis highlights the need to take a political economic opportunity structure approach to understanding the complex dynamics of corporate campaigns.

Case studies: GMOs and e-waste

My research questions are addressed through a study of the global environmental movement. The environment is an ideal issue area in which to study the relationship between civil society groups and corporate actors. Environmental concerns, particularly climate change, have received increased attention in recent years from academics, policymakers, civil society and private actors. Policymaking within the environmental sphere generally involves governmental, corporate and civil society actors and a lack of strong international institutions (Kanie and Haas 2004).

The environmental movement first rose to prominence in the 1970s. While throughout its early history the environmental movement generally focussed on pressuring regional or national policymakers to implement policy changes, during this

period the movement exhibited a global awareness in its analysis of environmental problems. Since the 1990s, the movement has become increasingly active on a transnational scale. The globalization of the environmental movement can be attributed to technological developments such as the internet and fax machine, as well as political developments such as the break-up of the Soviet Union and the growth of protest against neoliberalism (Doherty and Doyle 2006, 698-700). As O'Brien et al. state, "The international politics of the environment with its emphasis on scientific knowledge, erosion of national interest and search for global solutions provides an entry for non-state actors into the global arena" (2000, 113). The environmental movement is well organized and well resourced with a history of targeting both states and corporate actors. As Wapner states with regards to the environmental movement: "Activists understand that the economic realm, while not the center of traditional notions of politics, nevertheless furnishes channels for effecting widespread changes in behaviour; they recognize that the economic realm is a form of governance and can be manipulated to alter collective practices" (1995, 329).

The global network opposed to genetically modified organisms

The first of my two case studies focuses on the global network opposed to genetically modified organisms (the anti-GM network). This network is diverse and includes environmental non-governmental organizations (ENGOs), social justice organizations, natural and organic foods groups and consumer groups. The anti-GM network has had varying levels of success globally. Motivated by social, environmental, and health concerns, activists strategically employed a variety of tactics to oppose GMOs

and undermine the power and influence of the agricultural biotechnology (agbiotech) industry. The network targeted states as well as agbiotech companies and food retailers and manufacturers. While the overall success of the network was mixed, activists were able to slow the spread of GM crops.

In response to public concerns about the safety of GMOs, the European Union (EU) enacted a temporary unofficial moratorium on GM crops in 1998, as well as strict labelling requirements for products containing GMOs. The anti-GM network was largely unsuccessful at pressuring U.S. policymakers to enact stronger GMO regulations. However, some North American farmers became hesitant to grow GM crops due to opposition to GMOs in their export markets. On both continents, policymakers and food retailers and manufacturers found themselves addressing questions about the safety of GMOs. In the EU, public opposition to GMOs and the targeting of food retailers and manufacturers resulted in decisions by many companies to exclude GMOs from their products.

The anti-GM network is an ideal case study with which to pursue my research questions. The network has consciously targeted a variety of corporate actors in addition to governments. It targeted agbiotech companies, most significantly Monsanto, as well as food manufacturers and retailers. In the case of GMOs, food manufacturers and retailers were unsurprisingly more responsive to the network's demands than agbiotech companies. However, food manufacturers and retailers also varied in their responsiveness partly due to the features of the products they produce as well as the nature of the markets in which they operate.

The case study of the anti-GM network is also interesting because the network's success has varied depending on the national context in which it has operated. The political opportunity structure in the EU as well as in several key EU Member States (e.g. France, the United Kingdom) was much more open to the network than the political opportunity structure in the U.S. The varied success of the network is useful for examining the impact that the state has on activist success and corporate campaigns. While Europeans were strongly opposed to GMOs, the U.S. public exhibited much less concern about the safety of the technology. This was a significant factor in making corporate actors in the U.S. less responsive to the demands of the anti-GM network.

The issue of GMOs has also been addressed at the international level. The Cartagena Protocol on Biosafety was adopted in 2000 as a supplementary agreement to the Convention on Biodiversity and provides an international forum for the governance of GMOs. In 2003, the U.S., supported by Canada and Argentina, challenged the EU's GMO authorization regime at the WTO. In 2006 the WTO ruled that several of the EU's regulations violated international trade law. However, the dispute did not significantly open up the EU to GM crops and food. The impact of these two organizations on the issue of GMOs, allows for the examination of the impact that international organizations and agreements have on activist campaigns.

The anti-GM network peaked in the late 1990s and early 2000s. Since that time the EU has approved several GM crops to be grown or consumed (although a number of EU Member States continue to block the cultivation of GM crops). The amount of GM crops grown worldwide continues to increase and GM food is widely consumed in North

America without any documented adverse consequences. These changes in the network's external environment makes this case useful for gauging the long term success of the network and the effectiveness of corporate campaigns.

The e-waste network

This thesis also examines the case of e-waste. E-waste refers to discarded computers and other electronics such as cell phones, televisions and small appliances. E-waste contains substances such as lead, mercury, cadmium, and BFRs that make it extremely harmful to both humans and the environment if disposed of improperly. Electronics are difficult to recycle because they consist of numerous materials and parts and require specialized processing facilities to be safely recycled. Due to the expense associated with recycling e-waste, it is often shipped to countries in the Global South, such as China, India, and Nigeria, where environmental and labour regulations are weak or poorly enforced and e-waste causes severe environmental degradation and health consequences. In recent years a network of activists has drawn attention to the e-waste problem (the e-waste network). Activists have pushed for the better regulation of e-waste and for toxic chemicals to be phased out of electronics. They have targeted states to implement regulations to govern e-waste disposal and the use of toxic chemicals in electronics, as well as electronics manufactures to voluntarily take responsibility for their products at end-of-life, phase toxins out of their products, and support e-waste legislation.

The regulations governing e-waste vary widely amongst states. The EU is a policy entrepreneur in e-waste regulation. It has passed comprehensive e-waste take-back legislation as well as legislation prohibiting several hazardous substances from being used

in electronics. The EU's e-waste legislation was passed despite strong opposition from much of the electronics industry. The political opportunity structure in the EU favoured the interests of the e-waste network. The political opportunity structure at the federal level in the U.S. has been much less favourable to the interests of the e-waste network, partly due to the greater influence of the electronics industry. The e-waste network's legislative campaign in the U.S. has focussed on getting take-back legislation passed in individual U.S. states. The network has been very successful with this strategy. As an increasing number of states have passed e-waste legislation, electronics manufacturers have become more accepting of the need for federal electronics take-back legislation, so they no longer have to deal with a patchwork of state-based legislation. E-waste is also regulated by an international agreement, the Basel Convention, which addresses the transboundary movement of hazardous wastes. While the implementation of the Convention itself has been largely ineffective, the network has used its existence to bolster its arguments for the better disposal of e-waste.

The e-waste network has also run a successful corporate campaign targeting electronics manufacturers. While activists have pressured the electronics industry as a whole, they have also specifically targeted several well-known electronics manufacturers including Apple and Dell. Due to the actions of the e-waste network, many electronics manufacturers now take back their old products for free recycling and several companies have voluntarily phased toxic substances out of their products. Some electronics manufacturers have even worked cooperatively with the e-waste network to advance common goals. However, electronics manufacturers have differed considerably in how

they have approached the problem of e-waste and in the extent to which they have been willing to engage with activists. This makes e-waste a helpful case study in which to examine how the characteristics of individual corporate actors shape how they approach CSR and stakeholder engagement. In addition, because the electronics industry's position on product take-back has shifted in response to the e-waste network's corporate and legislative campaigns, this case study is also useful for examining how activist campaigns may alter the interests of corporate actors. The cases of both e-waste and GMOs offer numerous insights into the relationship between civil society groups and corporate actors.

Outline of this thesis

Chapter One of this thesis discusses the factors that have led activists to increasingly target corporate actors. It reviews the global governance and global civil society literature, the literature on private authority and private certification systems, the business and CSR literature, and the social movement literature. It discusses the theoretical framework utilized in this thesis: a political economic opportunity structure. A political economic opportunity structure examines the vulnerability of both political and economic actors to civil society groups. This chapter concludes by outlining the research methods used in this thesis.

Chapters Two through Four focus on a case study of the anti-GM network. Chapter Two provides an overview of the anti-GM network. It gives a brief history of the origins of the network in the 1970s and then focuses on the network's activities during its peak in the late 1990s and early 2000s. This chapter discusses the non-governmental organizations (NGOs) active in the anti-GM network. It analyzes the effectiveness and

long term implications of the frames that have been utilized by the network: the corporate control frame, the environmental frame, the health and food safety frame, and the food sustainability frame. The tactics employed by the network are also discussed.

Chapter Three addresses the regulatory framework governing GMOs, focussing on the EU and U.S. In both the case studies examined in this thesis the regulatory frameworks were a significant factor that shaped the nature and strategies of the networks' corporate campaigns; therefore, this thesis will first examine the regulatory frameworks in each issue area before focussing on their corporate campaigns. Chapter Three discusses the evolution of the EU's regulatory framework for GMOs. It argues the ability of the anti-GM network to shape the EU's GMO regulations can be attributed to the strength of the precautionary principle in EU policymaking and the openness of the political opportunity structure. The U.S. regulatory framework for GMOs and the challenges the anti-GM network's legislative campaign in the U.S. have faced are also discussed. Finally, this chapter briefly examines the WTO trade dispute over GMOs and the negotiations for the Cartagena Protocol on Biosafety.

Chapter Four analyses the anti-GM network's corporate campaigns targeting agbiotech companies and food retailers and manufacturers. The characteristics that made these companies more or less vulnerable to activist campaigns and differences in industry opportunity structures in the U.S. and EU are analyzed. This chapter also discusses how some members of the anti-GM network in the U.S. created a private certification system for non-GM food. Finally, this chapter considers the initial impacts of the network's campaigns in the late 1990s and early 2000s, as well as the network's long term impact.

Chapters Five through Seven focus on the e-waste network. Chapter Five provides an overview of the e-waste network. It discusses the history of the e-waste network and outlines the NGOs active in the network. This chapter discusses extended producer responsibility (EPR), which the network has promoted as a waste management solution to e-waste. The frames the network has advanced are examined, including the waste frame, the environmental justice frame, the toxic chemicals frame and the data security frame. This chapter also discusses how media attention has benefitted the e-waste network's campaigns.

Chapter Six focuses on the regulatory framework for e-waste and the e-waste network's efforts to advocate for producer responsibility for used electronics in e-waste legislation worldwide. It examines the negotiations leading to the passage of the EU's pioneering e-waste legislation: the Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances (RoHS) Directives. The global impact of these Directives is discussed. This chapter then looks at the e-waste network's legislative campaign in the U.S. It also briefly discusses e-waste legislation introduced in other countries around the globe. Finally, the Basel Convention's impact on the regulation of e-waste is examined.

Chapter Seven looks at the e-waste network's corporate campaigns targeting electronics manufacturers. It considers the characteristics that made the electronics industry and particular companies appealing targets for activist campaigns. Reasons why companies have varied in how they approach environmental sustainability and e-waste are also discussed. This chapter examines the role large institutional purchasers have

played in encouraging electronics manufacturers to adopt more progressive environmental policies, as well as the development of private certification systems for e-waste recyclers in the U.S.

The conclusion of this thesis argues that the successes achieved by the anti-GM network and the e-waste network can be attributed to both their agency in addressing issues and the vulnerability of the political economic opportunity structures they navigated. It outlines the factors that make corporate actors vulnerable to corporate campaigns. It also discusses the long term implications that the increased prevalence of corporate campaigns will have for states, corporate actors, and activist networks.

CHAPTER ONE
GLOBAL CIVIL SOCIETY AND CORPORATE ACTORS

In the last twenty years, corporate actors have been increasingly targeted by civil society groups. The increasing prevalence of activist campaigns targeting corporate actors can be attributed to the technological, economic and political impacts of globalization. Globalization has decreased the ability and willingness of many states to implement significant policy changes while it has simultaneously increased the power and influence of TNCs. Globalization has also made it easier for activists to network transnationally and to target a variety of actors around the globe. While corporations have often been resistant to the demands of activists, they have also recognized that ignoring activist concerns can potentially damage their reputations and bottom lines. As such, corporations have begun to devote greater attention to CSR initiatives and stakeholder engagement.

While scholars in a number of disciplines are paying increasing attention to the interactions between activists and corporate actors and the implications of this relationship for governance, many disciplines were initially slow to recognize the significance of these interactions. Traditionally, International Relations (IR) has neglected non-state actors, while the social movement literature similarly focuses on the state as its primary agent of concern. Therefore, this thesis will draw on a number of literatures to examine the relationship between civil society groups and corporate actors: the literature on global governance and global civil society, the literature on private authority and private certification systems, the literature on business and CSR, and the social movement literature. Together these literatures allow for an understanding of the circumstances

under which civil society groups are able to influence the behaviour of corporate actors and the factors that shape how corporate actors view CSR and respond to activist campaigns. These literatures also allow for an understanding of why states may respond favourably or unfavourably to demands made by activists.

Insights from the literatures reviewed are incorporated into the theoretical framework utilized in this thesis: a political economic opportunity structure. The concept of a political economic opportunity structure incorporates insights from the concepts of political opportunity structure and industry opportunity structure, emphasizing how political and economic interests interact to shape the outcome of activist campaigns. The political economic opportunity structure concept is useful because it emphasizes the important role of corporate actors in shaping activist campaigns while also recognizing the continuing importance of the state as an activist target and the state's role in shaping the outcome of corporate campaigns.

This chapter outlines the factors that have led activists to increasingly target corporate actors in addition to or instead of states before reviewing the literature on which this thesis draws. Subsequently, this chapter introduces the concept of a political economic opportunity structure. Finally, the research methods used in this thesis are discussed.

Globalization and increased corporate targeting

There is a long history of instances in which civil society groups have targeted private actors. For example, from the late 18th century to the mid 19th century, members of the abolitionist movement boycotted goods produced by slaves (Spar and La Mure

2003, 80). In the early 1960s the Civil Rights movement in the U.S. targeted businesses for discriminatory practices (Walker, Martin and McCarthy 2008). In the 1970s, many universities, unions, pension funds and municipalities in the U.S. boycotted companies doing business in South Africa unless they adopted the Sullivan principles, a corporate code of conduct for the equal treatment of workers under apartheid (Seidman 2007).

Since the 1990s, corporate campaigns have become increasingly prevalent and visible. In the past, targeting the state allowed activists to avoid having to directly confront opponents, using policymakers to mediate conflicts and in many cases implement policies supported by activists (Trumpy 2008, 482). However, neoliberal globalization and the Washington consensus of the 1980s and 1990s curbed the willingness and/or ability of many states to regulate the behaviour of TNCs. The discourse of neoliberalism and its disciplinary policies implemented through international organizations, such as the International Monetary Fund (IMF), the World Bank and the WTO, have constrained the policy options available to governments. This is particularly the case in many developing countries where structural adjustment policies implemented by the IMF and the World Bank since the 1980s resulted in the liberalization of markets and the rollback of state regulation.

Technological change and the deregulation of financial markets facilitated the growth of capital flows across borders and enabled corporations to expand their operations across the globe. In the mid-1970s, corporations began to implement more flexible production techniques. Rather than having a single subsidiary producing for a national market, corporations began to rely on subcontractors around the globe competing

to produce components at the lowest cost. National and regional economies compete for foreign direct investment (FDI), offering incentives such as low taxes and cheap and flexible labour forces, often at the expense of social programs, human rights and the environment. As a result of political, economic and technological globalization, states became less willing and/or able to implement environmental and social regulations fearing that the imposition of such regulations would make them less attractive destinations for FDI and could lead to job loss and capital flight (O'Brien and Williams 2004; Seidman 2007).[1]

In response, activists have shifted their attention to corporate targets, whose actions are the source of many of their grievances. Technology has also made it possible for activists to operate transnationally and target a variety of actors (although this capability varies depending on the different resources available to civil society organizations). Information technologies such as the internet and fax machine, and the declining costs of long distance telephone calls and air travel, along with events such as the Global Social Forums and various United Nations (UN) conferences, have allowed activists to network globally (Keck and Sikkink 1998). Activist networks function at multiple levels (local, regional, national and transnational) and organizations in networks exhibit differing degrees of transnational engagement. Many problems activists are concerned about, such as climate change or labour conditions in the apparel industry, span international borders and cannot be effectively addressed by a single state. Transnational networks and the use of information technologies, allow activists to target

[1] The willingness and/or ability of states to implement strong environmental and social regulations varies considerably amongst states.

the most vulnerable points in global production chains, and demand solutions that can potentially have a transnational impact. The location of these vulnerable points (e.g. retailers in the Global North) often differs from the location of harmful corporate activities (e.g. production processes in the Global South). Therefore, while globalization has increased the power and influence of TNCs relative to many states, activists have also been able to utilize the processes of globalization to pressure TNCs.

Successful corporate campaigns targeting highly visible companies, such as Nike, Home Depot or Apple, have increased the sensitivity of corporations to activist tactics. As many corporations outsourced their production to subcontractors across the globe, their value became less tied to the material goods they produce and more closely tied to intrinsic factors such as brand and reputation. Activists see corporate brand and reputation as vulnerabilities they can exploit to alter corporate behaviour (Conroy 2007; Klein 2000). Indeed, a focus on undermining the reputation of companies is what distinguishes corporate campaigns that have occurred since the 1990s from historical examples of corporate campaigns (O'Callaghan 2007, 98).

The success of corporate campaigns has made CSR more attractive to corporate management as a way to protect and promote corporate reputation.[2] As Doh and Guay state, "…the emergence of NGOs that seek to promote what they perceive to be more ethical and socially responsible business practices is beginning to generate substantial changes in corporate management, strategy, and governance" (2006, 52; see also

[2] Pederson defines CSR as "company activities—voluntary by definition—demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders (2006, 139-140).

Campbell 2006; O'Callaghan 2007). CSR initiatives range from the superficial to those which seek to create significant environmental or social benefits. Engagement with a variety of stakeholders (e.g. employees, customers, activists) may be part of a company's approach to CSR. As corporate campaigns have evolved, activists and corporations increasingly communicate and in some cases even work cooperatively with each other when they share common interests.

However, while many activists view corporate campaigns as effective, this strategy has also been criticised by some activists and scholars. Critics argue that focussing on corporations as a source of social and environmental change may lead to the privatization of protest or the increased privatization of regulation. As Pellow argues, "that strategy ultimately runs the risk of ignoring the crucial role of the state, which is ultimately necessary for ensuring democratic processes and the protection of public welfare" (2007, 64). Some sceptics of corporate campaigns argue they create small modifications to the project of neoliberal globalization, while deflecting from the substantive changes necessary to create a more humane and democratic globalization (Lipshutz and Rowe 2005). Furthermore, while CSR policies enacted by corporate actors in response to corporate campaigns may address activists' concerns, they generally suffer from an accountability and transparency deficit. Companies are free to discontinue 'progressive' policies as they see fit, and may do so if they no longer perceive reputational or economic benefits from these policies. As such, this thesis argues the most effective strategy for activists is a two-prong strategy of targeting states and corporations

simultaneously, exploiting the vulnerabilities of each type of actor and using these two actors to pressure one another and potentially create opportunities for legislative change.

Perspectives on global civil society and corporate actors

In seeking to better understand the relationship between corporate actors and global civil society this thesis draws on a variety of literatures: the literature on global governance and global civil society, the literature on private authority and private certification systems, the literature on business and CSR, and the social movement literature. I will address how this study draws on and expands upon each of these literatures in turn. While this literature review will address each body of literature separately, there is considerable overlap between them.

The global governance and global civil society literature

The literature on global governance and global civil society draws on both the social movement literature and the IR literature. Scholars from a variety of disciplines have contributed to the literature on global governance and global civil society. This thesis will focus mainly on the literature written by IR scholars, who have drawn on the social movement literature as well as IR theory to explain the emergence and influence of global civil society.[3]

IR has traditionally focussed on states as the primary actor in the international system. In the past, attempts have been made to incorporate various types of non-state actors into IR, such as the transnational relations research agenda of the 1970s (Keohane

[3] Scholte defines civil society "as a political space, or arena, where self-generated associations of citizens seek from outside political parties, to shape the rules that govern social life. Civil society groups bring citizens together non-coercively in deliberate attempts to mold the formal laws and informal norms that regulate social relations" (2005, 218).

and Nye 1972). However, such explanations tended to focus on the role of non-state actors in altering the preferences of states, rather than on non-state actors as agents in their own right. As a result, critics of the transnational relations research agenda only had to demonstrate the superiority of the state to dismiss or undermine the transnationalist approach (Wapner 1995, 318). This research agenda also tended to group different types of non-state actors (TNCs, civil society and international organizations) into a single monolithic category, thereby ignoring their different motivations and resources.

Until the study of transnational relations was revived in the 1990s, the discipline of IR had generally avoided examination of civil society and its impact on the international system. Rather, IR chose to view civil society and other non-state actors as located primarily in the domestic sphere and acting as a type of interest group that attempts to alter the policy preferences of domestic governments (e.g. Milner 1997; Putnam 1988). Civil society falls outside the rationalist focus of established IR theories such as realism or liberalism. IR has been slow to recognize the significance of civil society actors because they are motivated by both altruistic values and material concerns and the difficulty of tracing their effects on the international system. As Eschle states,

> Movements have traditionally been seen as located not in the international but in the domestic, and not in the political but in the social….they disrupt the usual categories of state-centric, pluralist or structuralist IR and are difficult to assess through the dominant IR methodologies of empiricist quantification, analysis of historical continuities or Marxist materialism (2005, 17).

However, the end of the Cold War called into question the dominant neorealist and neoliberal perspectives in IR as globalization and the emergence of the constructivist perspective combined to create a more positive atmosphere for the study of non-state

actors (Lipshutz 2001, 321-322; O'Brien 2005a, 168). This renewed focus on non-state actors in IR created a greater emphasis on norms, experts (through the epistemic communities approach), and civil society groups. The literature on global civil society stresses the growth of transnationally oriented civil society organizations, their increasing role in international organizations such as the UN and World Bank, their role in promoting norms and ideas in the international realm, and a blurring of the distinction between the domestic and international spheres (e.g. Keck and Sikkink 1998; Khagram, Riker and Sikkink 2002a; O'Brien et al. 2000; Price 2003).

The emergence of the constructivist approach in IR in the 1980s was particularly significant in drawing attention to the study of global civil society. Constructivism views knowledge and action as socially constructed and argues they can be shaped to different purposes. Finnemore and Sikkink describe constructivism as focussing "on the role of ideas, norms, knowledge, culture, and argument in politics, stressing in particular the role of collectively held or 'intersubjective' ideas and understandings on social life" (2001, 392). A number of constructivist scholars have focussed on the purposive efforts of individuals and groups to change social understandings and have sought to understand how these groups operate and the conditions that might contribute to their success (Finnemore and Sikkink 2001; Price 1998).

Much of the literature on global civil society written by constructivist IR scholars focuses on the role of norms in changing ideas and interests. Norms are defined as "shared expectations or standards of appropriate behaviour that can be applied to states, intergovernmental organizations, and/or non-state actors of various kinds" (Khagram,

Riker and Sikkink 2002b, 14). Many norms serve the economic and political interests of states, but some do not. Civil society groups can draw on norms to develop collective beliefs and can also frame their collective beliefs within the purview of existing norms (Khagram, Riker and Sikkink 2002b). Norm entrepreneurs, such as civil society groups, are integral to the adoption of norms because "new norms never enter a normative vacuum but instead emerge in a highly contested normative space where they must compete with other norms and perceptions of interest" (Finnemore and Sikkink 1998, 898).

The literature on norms has been criticised on several fronts. It has been criticized for focussing on norms that are altruistic or "good." The focus on altruistic norms can partially be seen as a response to the dominance of rational approaches in IR prior to the emergence of constructivism. As Finnemore and Sikkink argue,

> Neorealist and neoliberal theories that flowed from economic approaches to social analysis tended to understand interests consistently as self-interest; other regarding behaviour was an anomaly to be explained. Consequently, social construction projects that were not obviously self-interested…were difficult for dominant theories to explain and opened space for a constructivist alternative (2001, 403).

The conceptualization of norms as altruistic is problematic because it limits understandings of civil society groups to those that are 'progressive' in a normative sense and underplays how civil society groups are also motivated by strategic and instrumental interests (Sell and Prakash 2004). Constructivist accounts of the spread of norms have generally neglected the material characteristics of norms, which may play an important role in determining whether or not a norm is adopted. Material characteristics and the impact that norms have on industry actors play an important role in determining whether

or not activist campaigns to spread certain norms are successful (Clapp and Swanston 2009). Constructivist accounts of the spread of norms also tend to focus on efforts by norm promoters to entrench norms within states and international organizations, but neglect efforts by norm promoters to entrench norms within private actors.

Constructivism has also been criticised for the lack of attention it has paid to the role of power relations in determining the ability of actors to alter intersubjective ideas and understandings. As O'Brien states,

> Not all groups are equally capable of constructing their own reality and power relations must be confronted and dealt with in any attempt to build different socio-political arrangements. Many civil society studies would thus be more realistic than constructivism by acknowledging the importance of material capabilities and power in the struggle over ideas and norms (2005b, 227).

Civil society groups examined in this thesis have advanced particular norms to create change in issue areas. However, while this thesis will draw on the literature on norms, it will also draw on the social movement literature, which highlights both the material and altruistic motivations of activists. By focussing on the actions of corporate actors and the differing strategies and resources they utilize to pursue their interests, this thesis will draw attention to the power relations between corporate actors and activist networks.

Finally, the literature on globalization and global civil society has paid little attention to the relationship between civil society groups and TNCs. While the end of the Cold War drew attention to the importance of non-state actors, IR scholars have mainly focussed on the relationship between various types of non-state actors and the state or on the relationship between non-state actors and intergovernmental organizations. Due to the

state-centric tendencies of IR, scholars have shown less interest in focussing on relationships between different types of non-state actors, such as civil society organizations and corporate actors.

The private authority literature

In addition to paying increased attention to the impact of global civil society on the international system, scholars have also focussed on role of private actors in global governance. The role of private actors in global governance extends beyond advocacy and lobbying to the creation of governance mechanisms through the provision of private authority. Private authority occurs when firms exercise decision-making power over a particular issue area and are viewed as exercising that power legitimately (Cutler, Haufler, and Porter 1999, 5; Hall and Biersteker 2002).

One reason for the growth of private authority is the state's shift away from command and control policies to a greater emphasis on more innovative policy approaches, including voluntary approaches. In the realm of environmental policy, in the 1970s, command and control policies were implemented to address environmental problems, which prescribed required actions for businesses to undertake. However, by the 1980s, command and control had begun to fall out of favour and businesses began to complain about the high compliance costs of these types of policies. Command and control policies prescribe the approach firms must take to reduce pollution during production and thereby constrain firms from implementing other approaches that may be more efficient at reducing pollution. Command and control approaches also focus on end-of-pipe outcomes rather than encouraging companies to avoid environmentally damaging

practices in the first place. Furthermore, in the neoliberal era of smaller, less interventionist governments and declining government agency budgets, enforcement-intensive command and control policies became less attractive to policymakers (Prakash and Potoski 2006). Thus, both regulators and business have emphasized voluntary initiatives. While in some instances corporate actors may develop private authority schemes to avoid regulation, in other instances states may support such schemes or even play an active role in encouraging and establishing them. In this environment, "the boundaries between voluntary and mandatory regulations, state and non-state regulations, private and public law, and hard and soft law cannot always be sharply drawn" (Vogel 2008, 265).

Of particular relevance to this thesis is the literature on industry self-regulation and multi-stakeholder certification systems. These systems range from industry generated programs with little or no third-party auditing to multi-stakeholder initiatives where codes of conduct are developed by a variety of stakeholders and require third-party audits. Haufler attributes industry self-regulation to two major forces: "the risk that governments will intervene, either nationally or internationally, to enforce rules on industry; and the risk that activists will mobilize locally and transnationally, organizing a campaign among consumers, investors, and shareholders and putting pressure on governments to take action against companies" (2001, 105-106). Haufler highlights three other factors important in pushing industry to adopt self-regulation: reputation, economic competition and learning. The literature on industry self-regulation and multi-stakeholder initiatives illustrates how the same activist tactics that have been used to pressure TNCs have also

led to increased ties between TNCs and NGOs. Activists have pushed for industry self-regulation in response to a lack of government regulation. Through multi-stakeholder initiatives NGOs have formed partnerships with corporations and industry organizations, and have assisted in the design of corporate codes and voluntary programs (Cashore, Auld and Newsom 2004; Conroy 2007; Domask 2003).

Some scholars are very optimistic about the potential of private authority initiatives to address social and environmental problems. For example, referring to multi-stakeholder initiatives, Conroy argues "What the certification revolution has achieved, contrary to most expectations…is a profound transformation of the social and environmental practices of global corporations representing significant portions of the industries on which they focus" (2007, xiii; see also Ruggie 2004; Zadek 2007). However, others are sceptical or critical of the ability of industry self-regulation or multi-stakeholder initiatives to adequately address social and environmental problems and the accountability and transparency of such schemes (Lipshutz and Rowe 2005; Richter 2001). Haufler argues that industry self-regulation and multi-stakeholder initiatives;

> …both suffer from the fact that they do not rest on any system of accountability, democratic or otherwise. The participants in creating and enforcing should be responsive to some public interest, which is not the case in these alternative forms of regulation—especially not internationally. Executives are responsive to their shareholders and boards of directors, and not to the general public. Activist groups may be responsive to their membership, but their membership by definition represents a narrow interest. International organizations suffer from a "democratic deficit," since member states themselves are not always democratically elected. All of this undermines the legitimacy of even the most reasonable standards, rules, and enforcement procedures (2006, 101).

Therefore, while multi-stakeholder initiatives and industry self-regulation may seek to address concerns about corporate behaviour, the accountability of these forms of

governance remains problematic. However, Vogel notes that multi-stakeholder initiatives and other forms of private authority with greater accountability have grown relative to company and industry initiatives with no external oversight. He states, "The growth in the number of such codes stems from three factors: the lack of credibility of industry self-regulation, the increase in consumer and NGO influence and activism, and the influence of norms of 'good governance' that emphasize the importance of collaboration and partnership" (Vogel 2008, 270).

The literature on industry self-regulation and multi-stakeholder initiatives is helpful because it explores the circumstances under which these forms of governance are likely to emerge and their implications for social and environmental issues as well as democracy. This literature highlights the role the state has played in enabling these forms of governance through an inability and/or unwillingness to introduce environmental and social regulations. However, much of the literature on private authority examines broad, macro-level explanations for firm participation in private regimes, while under specifying why firms' behaviour varies in response to external pressures (Sasser et al. 2006).

The literature on business and corporate social responsibility

This thesis also draws on the literature on business and CSR. The business literature has examined how corporations can avoid becoming activist targets as well as the costs and benefits of CSR for companies (Eccles, Newquist and Schatz 2007; Gregory and Wiechmann 2002). There is a general consensus within the business literature that companies can no longer ignore the concerns of activists, but there is a lack of understanding about how companies should interact with activists.

The business literature largely emphasizes strategic reasons for the adoption of CSR policies. The Porter Hypothesis made the influential argument that firms could be more competitive and benefit financially by employing more environmentally friendly production processes that create greater efficiencies and innovations (Porter and van der Linde 1995). However, many scholars and corporate managers have since pointed out that these types of profit enhancing opportunities may be limited and represent one time gains (Orts 2004). Greater financial benefits may accrue from CSR polices that enhance a company's reputation as socially and environmentally responsible (Porter and Kramer 2006; Reinhardt 2004). CSR policies are seen as creating goodwill for companies amongst regulators, local communities and NGOs (Prakash 2000, 68; Prakash and Potoski 2006).

Within the business literature there is considerable emphasis on the need for companies, particularly those selling to consumers, to develop strong brands to be successful. However, strong, widely recognized brands are also more likely to be targeted by activists (Gregory and Wiechmann 2002; Kay 2006). The role of CSR in protecting the brand and reputation of a company has become a crucial aspect of the business case for CSR. As stated by Palazza and Basu, "The view that business integrity cannot be outsourced has led to business integrity becoming part of a brand, demanding that brands possess 'ethical robustness'—a growing requirement that a successful brand be supported by an ethical corporation" (2007, 340).

The business literature has generally viewed the relationship between civil society groups and corporate actors from a stakeholder perspective. The stakeholder literature has

focussed on defining important stakeholders, highlighting how they have legitimate claims on corporations, advocating stakeholder management practices and studying the relationship between stakeholder engagement and financial performance (Campbell 2006; Den Hond 2010). However as Campbell notes, "It does not generally examine the conditions under which corporations are likely to act in socially responsible ways vis-à-vis their stakeholders" (2006, 928). The business literature and stakeholder analysis generally does not explain why firms within a single industry may respond differently to activist demands and vary in their adoption of CSR policies (Herremans, Herschovis, and Bertels 2009, 449). Furthermore, as the business literature generally focuses on the interests and motivations of business it largely fails to examine the impact of particular activist tactics and strategies on corporations and their CSR policies. Kourula and Laasonen (2010) note the social movement literature has rarely been used in the business literature to understand the relationship between civil society groups and corporations.

In addition, much of the literature on CSR (especially the business literature) is written from a viewpoint that supports the capitalist goals of free enterprise, economic growth and private property, thereby trivializing or marginalizing those activists whose goals do not fit within this economic paradigm (Jonker and Marberg 2007, 113). Moreover, while much of the CSR literature addresses reasons why corporations adopt CSR policies, less attention has been paid to the effectiveness of these policies, which are voluntary and often lack third-party verification. Unlike the literature on private authority, the business literature generally neglects questions of accountability.

This is problematic because within the business and CSR literature, voluntary CSR initiatives are sometimes viewed as defensive mechanisms designed to prevent government regulation while giving corporations greater flexibility than traditional command and control regulation (Eden 1996, 10). As Jonker and Marberg state, "…business has not been able to ignore the public request for more responsible procedures and practices. It appears as if they have found that the best strategy to deal with CSR is to get involved in determining its scope and definition, thereby defeating the call for regulation" (2007, 108).

While some scholars and activists are sceptical of the substantive value of CSR, recently a number of scholars have drawn attention to how norms associated with CSR are changing how companies perceive their interests (Gillies 2010; Kollman 2008; O'Callaghan 2007). Looking at the spread of environmental sustainability norms amongst corporate actors, Kollman observes, "Transnational business actors have engaged with sustainability norms to a far greater extent than the NGO or regulatory threat to their bottom lines would necessitate" (2008, 415). However, as Dashwood states,

> It is harder to establish whether those norms have been 'internalized' by corporations, but it can be argued that many companies are beginning to engage in dialogue and learning around the issue of corporate responsibility. Most companies now have public policies on corporate responsibility, and even though they may be strictly "voluntary", companies can be held to account if their actions are inconsistent with their words (2005, 984; see also Vogel 2008).

Notably, this emphasis on normative change in how many companies view their societal obligations is generally found within the International Political Economy (IPE) and global governance literatures on CSR rather than the business literature.

The social movement literature

Finally, this thesis will draw on the social movement literature, which has focussed exclusively on understanding social movements as an agent of change and the factors that impact their success. The social movement literature has been slow to theorize about the role and impact of social movement activity at the global level, preferring to focus on the domestic level. Until recently, many social movement scholars remained sceptical of the idea of a global civil society. They argued domestic interests continued to dominate the agendas of many social movement organizations and that the impact of these organizations continued to be filtered through the domestic policy process. When social movement scholars have recognized the influence of global social movements they have often been sceptical of their long-term viability and have viewed them as inherently fragile (della Porta and Kriesi 1999; Imig and Tarrow 1999; Tarrow 2005). As Seidman states in a critique of how social movement theory has addressed globalization, "…while activists have often acknowledged the importance of global dynamics in the way they understood and framed issues, academics have generally been more cautious…especially in terms of their views of social movements and collective action. Social movement theories have tended to view the world through a remarkably localized prism…" (2000, 344).

However, recent research on social movements has examined how globalization is altering the form, strategies and tactics utilized by social movements, as well as the ways they have historically been impacted by global connections (Bennett 2005; Pellow 2007; Juris 2008). Social movement scholars recognize the ways in which globalization has

challenged and changed the authority of the state and its ability to intervene in the economy and regulate social conflict (della Porta and Diani 2006, 42-43). Scholars are increasingly focussing on how globalization and new technologies such as the internet are changing the way social movements organize, represent identities and their tactical strategies (Bennett 2005; Juris 2008).

While social movement scholars are incorporating globalization and its effects more thoroughly into their analysis, they continue to largely focus on states and international institutions as the primary social movement targets. This continued emphasis on the state can be partially attributed to the influence of the political opportunity structure literature, which gained prominence in the 1980s. The political opportunity structure literature argues the emergence and effectiveness of a social movement depends largely on factors in its external environment: the relative openness or closure of the institutionalized political system; the stability or instability of a broad set of elite alignments; the presence or absence of elite allies; and the state's capacity and propensity for repression (Marks and McAdam 1999, 99; see also Kriesi 1996).

The political opportunity structure literature made an important contribution to the social movement literature by recognizing the impact of a social movement's external environment on its success. However, as Schurman argues, "it also served to focus attention on the state and the political sphere as the central targets of social movement organizing, thereby eclipsing the significance of other targets and institutional spheres" (2004, 246). Consequently, the concept of a political opportunity structure stymied the ability of social movement theory to address the impact that globalization and the

changing role of the state has had on social movements. In response to a particularly unwelcoming political opportunity structure at the state level, activists may target other actors such as international organizations or corporate actors (Schurman 2004). Scholars of social movements have been slow to examine the relationship between social movements and corporate actors.[4] This lack of attention to the relationship between social movements and corporate actors has led Schurman to argue:

> Scholars of social movements need to follow the course taken by many contemporary movements and activist groups and 'decenter' the state. While states are and will unquestionably remain critical targets of social movements, other societal institutions and arenas need to be examined more closely for the ways in which they may be influencing movement strategies, efficacy, and impacts (2004, 247).

In response to the limitations of the political opportunity structure concept, some social movement scholars have theorized the idea of an opportunity structure focussed on economic actors (e.g. Luders 2006; Pellow 2007; Schurman 2004; Wahlström and Peterson 2006). Referred to as an "industry opportunity structure" or an "economic opportunity structure" this concept examines the characteristics that make corporations or other economic actors vulnerable to activists. This thesis will utilize the concept of a political opportunity structure, as well as build on the concept of an industry opportunity structure. The idea of a political economic opportunity structure, focussing on the vulnerabilities of both political and economic targets, is discussed later in this chapter.

This thesis also utilizes the social movement literature on collective action frames. As Snow et al. state, "By rendering events or occurrences meaningful, frames function to

[4] For exceptions see Bennett and Lagos 2007; Schurman 2004; Seidman 2003; Trumpy 2008.

organize experience and guide action, whether individual or collective" (1986, 464). Snow and Benford explain that:

> …frames serve as accentuating devices that either underscore and embellish the seriousness and injustice of a social condition or redefine as unjust and immoral what was previously seen as unfortunate but perhaps tolerable….[frames also] function as modes of attribution by making diagnostic and prognostic attributions….diagnostic attribution is concerned with problem identification, whereas prognostic attribution addresses problem resolution" (1992, 137).

As della Porta et al. argue the construction of frames is particularly important for globally oriented activist networks or movements because,

> …the set of potential mobilizing structures (NGOs, SMOs [social movement organizations], political parties, trade unions, voluntary associations) is very heterogeneous, coming from different political traditions, holding different ideologies; both the structural and individual mobilization potentials are geographically dispersed (2006, 62).

Frames provide a useful complement to the concept of a political opportunity structure. They align arguments made by activists with the cultural contexts in which they are employed. Frames also highlight the effectiveness of various discursive arguments used by activists when targeting different audiences (i.e. corporations, the general public, states). The concept of a political opportunity structure is highly structural, focussing on the impact of a movement's external environment on its success while neglecting a movement's agency as well as ideational and cultural factors. Gamson and Meyer (1996) argue that framing political opportunity is one of the key elements of collective action frames and that the creation of frames can suggest that the opportunity for change exists. As Benford and Snow state,

> To argue that framing processes and political opportunity are linked interactively is not to suggest that political opportunities are purely socially constructed entities. It is to argue that the extent to which they constrain or facilitate collective

> action is partly contingent on how they are framed by movement actors as well as others (2000, 631).

As della Porta and Diani note, the framing literature has been criticised for placing too much emphasis on frames as a strategic resource and that frames are often conceptualized as a static structure (2006, 86-87). This thesis does not view frames purely as a strategic resource to be utilized by activists. Rather, how frames are constructed is shaped by the experiences and values of activists as well as strategic considerations. Additionally, this thesis will illustrate how frames evolve over time in response to changes in a civil society organization's external environment.

Theoretical framework: political economic opportunity structures

This thesis will utilize the concept of a political economic opportunity structure, which draws on all four of the literatures discussed above and seeks to expand the concept of a political opportunity structure to also encompass the vulnerability of corporate actors to activist tactics. Pellow states that the concept of a political economic opportunity structure,

> …acknowledges the intimate associations between formal political institutions (e.g., states and legislative bodies) and economic institutions (e.g. large corporations and banks) and their engagements with social movements. The political economic opportunity structure stresses the extensive influence of capital over nation-state policymaking, regulation, and politics and views corporations as equally likely to be the targets of social movement campaigns….When we integrate a political economic opportunity structure perspective, the interactions among movements, states, and corporations create additional openings, opportunities, and points of access for activists to exploit, ultimately redefining transnational politics and the transnational public sphere (2007, 62-63).

However, while Pellow acknowledges the importance of economic actors as social movement targets and their role in shaping the responsiveness of policymakers to

activists' demands, he neglects to examine why industries and individual firms may differ in their vulnerability to activist tactics.

Schurman (2004) examines how the characteristics of an industry and individual companies affect their vulnerability to corporate campaigns. To do so she draws on the social movement literature as well as the literature on business and CSR. She uses the term industry opportunity structure and argues that they:

> Confer particular strategic openings and closures on social movements and render firms and industries more or less vulnerable to social movement actions. At any given historical moment, such industry structures will appear as exogenous to social movement challengers, but like all social structures, they are socially constructed and transformed over time as different groups of interested actors, regulatory and normative institutions, and cultural practices interact. Industry structures are thus deeply embedded in existing institutional practices and relationships, the larger political economy, and culture, operating at a variety of levels (e.g. within industries and firms, within regulatory institutions and professional organizations, at the level of the broader society) (2004, 248).

While activists target industries as a whole, they may also specifically target those companies in an industry that they perceive as most vulnerable with the hope of creating divisions between companies and generating openings in both industry and political opportunity structures. Falkner (2008) argues that conflict between business actors can undermine their influence in policy debates to the benefit of other actors. This thesis will highlight how activists can benefit from accentuating divisions within an industry and can use these divisions to strengthen both their corporate and legislative campaigns. In examining the vulnerability of corporate actors using the concept of an industry opportunity structure this thesis will focus on organizational, economic and cultural factors.

The organizational nature of an industry significantly affects its vulnerability to activist tactics. Industries made up of a small number of large firms can be easier for activists to target than industries consisting of a large number of small firms. Activists are able to concentrate their tactics, monitoring and communications on a smaller number of companies, which may be helpful when communicating their messages to the public and the media and allow them to make the best use of their limited resources. Industries with a close connection to consumers are more vulnerable to activist tactics due to their greater public visibility than upstream industries that sell primarily to other firms (Luders 2006; Schurman 2004). Downstream industries selling consumer products can also be pressured to alter their relationship with upstream suppliers whose often anonymous nature makes them less appealing targets for activists (Schurman 2004; Zadek 1998, 1423).

Unsurprisingly, economic factors also have a significant impact on an industry's vulnerability to activist campaigns. Companies can be expected to evaluate the costs associated with ceding to activists' demands. When doing so may involve significant transaction costs, companies may find it too prohibitive to capitulate to activists (Spar and La Mure 2003, 84). In highly competitive industries, companies may adopt CSR policies or cede to activist demands with the goal of increasing their market share or capturing a niche market. Once one company capitulates to activist demands, they illustrate that it is possible to successfully do business as well as address activists' concerns. Other companies in an industry may feel pressure to follow suit or risk alienating customers and losing market share (Schurman 2004; Zadek, Pruzan and Evans 1997; Zadek 2007).

As noted above, corporate brand and reputation also affect the vulnerability of corporate actors. Activists need not impact a company financially for it to feel its reputation and brand are being negatively impacted. As Vogel states, "Although protests rarely affect sales or share prices, the NGO strategy of 'naming and shaming' has often been effective. Many companies now regard it as in their self-interest to be, or at least appear to be, responsive to NGO and media criticism, lest their reputations suffer significant damage" (Vogel 2005, 52). A well-known and highly visible brand can make a company more vulnerable to activist campaigns. As Bennett and Lagos explain,

> Logo politics rely on the corporate target's having already done the difficult and costly work of reaching its consumer audience with branding. The brand is the key because, increasingly, what is being sold by corporations is less the product than the brand image…. A brand's familiarity keeps loyal customers coming back despite growing competition, but it may also make them pay attention when disturbing messages are attached to it (2007, 195-196).

A positive reputation for CSR can also make a company more vulnerable to activist tactics, as it may be viewed as more likely to favourably respond to activists' demands in order to maintain its reputation (Spar and La Mure 2003, 84). A company that changes its policies in response to public and activist pressure may be a more appealing target for corporate campaigns in the future because management appears responsive to activists' concerns (Vogel 2005, 54). The development of programs, such as the Global Compact, has further strengthened the importance of reputation for many global companies that take part in these types of programs. These companies are vulnerable to being exposed as violators of the standards to which they have committed and to being "named and shamed" by activists (King and Pearce 2010, 256).

A company's internal corporate culture also shapes its response to activist campaigns and its approach to CSR. Companies with a reputation for progressive environmental and social commitments often have these beliefs embedded within their corporate cultures. Their CSR policies may be more substantive in nature than other companies because they may adopt these policies largely due to internal factors rather than external pressures (Zadek, Pruzan and Evans 1997, 23).

The views of senior management or a CEO can play an important role in how a company approaches CSR and responds to activist campaigns. Some managers may view themselves as environmentally and/or socially progressive, and believe their company should also be viewed as such. Management may sympathize with arguments made by activists even if they disagree with their tactics. CEOs who personify their company and their brand are also vulnerable, due to a high public profile and a close association with their company. When a particular individual or family dominates a company they may be especially influential in shaping how it approaches CSR (Spar and La Mure 2003, 85).

Employees within a company can also press for more responsible corporate behaviour. Internal pressures from employees can reinforce external pressures, such as if employees become embarrassed to work for a company accused of poor environmental and social behaviour (Vogel 2005, 52). Yaziji and Doh note that while activist campaigns targeting Shell have not had a significant impact on the company financially, they have had a significant impact on employee moral and Shell's ability to attract and retain high-quality employees (2009, 61). In the case of environmental issues, the growth of environmental departments in companies has also helped make companies more

responsive to environmentalists' demands. Environmental departments may be more sympathetic to environmental concerns and seek to advance an environmental agenda that complements activists' demands (Prakash 2000, 66-67).

While a few scholars, such as Schurman, have highlighted how the characteristics of firms or industries shape their vulnerability to activist campaigns, there has been little work comparing corporate campaigns in different issue areas. In addition, while activists in many issue areas have run campaigns that utilize a two-prong strategy in which corporate and legislative campaigns are run concurrently, scholars have devoted less attention to analysing the impact and effectiveness of this two-prong strategy. Analyses of corporate campaigns may note the impacts of regulations and legislation, but generally they do not also analyse legislative campaigns and their impact on corporate campaigns. This is problematic for three reasons. First, if a legislative campaign is able to alter the preferences of policymakers and make regulation more likely, economic actors may alter their behaviour with the aim of circumventing mandatory regulation through voluntary initiatives. Second, a corporate campaign may alter how an industry or particular companies in an industry view legislation. If a company or industry becomes more supportive of legislation partially in response to a corporate campaign this may help activists achieve legislative change which affects a larger number of corporate actors. Third, while some activist campaigns may be satisfied by private regulation which addresses their concerns, for most activists the ultimate goal of any campaign is legislative change.

This thesis examines the dynamics between corporate actors and civil society groups using the concept of a political economic opportunity structure. It examines both legislative campaigns and corporate campaigns through two case studies: the anti-GM network and the e-waste network. This thesis will examine the resonance of activist frames and activist networks' efforts to promote particular norms. It is through tactics, frames, and norm promotion that activist networks act as agents and create openings in opportunity structures where they may have previously been limited or closed.

Data and methods

This thesis examines two case studies of the global environmental movement in order to understand the relationship between civil society groups and corporate actors. In undertaking my case studies I take a multiperspectival orientation. A multiperspectival orientation recognizes that the study of civil society groups must take place within a multiorganizational field which consists of at least three sets of actors: supporters or protagonists, antagonists and bystanders or an audience (Snow and Trom 2002, 154).

This study wishes to go beyond a focus on the state, which has dominated much of the literature reviewed above. As the activities of TNCs and many transnational problems cannot be confined to a single state, and the strategies of activists are increasingly transnational in scope, it does not make sense to restrict analyses of these actors to national boundaries. Rather, this study will focus on the dominant actors and conflicts relevant to the relationship between corporate actors and civil society groups in each case study. While this study does not focus on specific geographic jurisdictions, it will focus on geographic nodes where the interactions between activist networks and corporate

actors have been particularly intense and have had a significant impact on the network's activities elsewhere.

This thesis uses qualitative methods to conduct case studies of GMOs and e-waste. I reviewed relevant documents, such as press releases and reports generated by NGOs and corporations, as well as articles from major newspapers and trade publications. In addition, I conducted 32 open-ended, semi-structured interviews with activists who are involved or have been involved in campaigns against GMOs or e-waste, representatives from TNCs and industry associations, and government regulators.[5] Activists interviewed represent the leading NGOs involved in these issue areas. These NGOs play a key organizational and agenda setting role in the larger networks in which they are a part. Activists were asked about tactics, frames and arguments utilized; the impact of legislation and international agreements on their campaigns; and their general views on corporate campaigns and vulnerabilities of corporate actors. Interviews with industry and company representatives focussed on their company and/or industry's CSR initiatives, how activist campaigns have affected them, and how they have responded to and engaged with activists. Interviews with current and former government representatives focussed on the impact of regulation and the debates that surrounded its passage.[6] Interviews took place in person in Canada (Montreal and Ottawa), Northern California, Brussels and Amsterdam. A number of interviews also took place over the telephone with activists in Canada, the U.S. and the EU. Interviews were conducted between April and December 2009.

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[5] See Appendix A for a list of interviews.
[6] See Appendix B for a list of interview questions.

Conclusion

The global governance and global civil society literature, the literature on private authority, the business and CSR literature, and the social movement literature all contribute to understanding corporate campaigns. The increased prevalence and visibility of corporate campaigns is the result of a number of political, economic and technological changes associated with globalization. However, while activists now devote considerable energy to targeting corporate actors, the state also remains an important focal point for activist tactics. In many issue areas activist networks conduct legislative and corporate campaigns simultaneously. This two-prong strategy strengthens the influence of activist networks by creating greater opportunities for them to create change in an issue area. It allows them to exploit and/or create vulnerabilities in both political opportunity structures and industry opportunity structures, and play the vulnerabilities in one opportunity structure off the other.

Through case studies of the anti-GM network and the e-waste network this thesis examines this two-prong strategy as well as the role of strategic decisions made by activist networks in creating opportunities for change is these issue areas. This thesis also examines how the relationship between corporate actors and civil society groups has evolved over time. As activists are increasingly choosing to target corporations in addition to and instead of states in many jurisdictions, this project can make a useful contribution to the study of new and emerging forms of governance.

CHAPTER TWO
THE ANTI-GM NETWORK

In the early 1990s, the general public had little awareness of GMOs and the agbiotech industry faced few regulatory hurdles bringing its products to market in both the U.S. and EU. By the late 1990s, public awareness of GMOs had considerably increased and the agbiotech industry experienced a steep decline in profitability. Public opposition to GMOs and the development of a less favourable regulatory climate for the agbiotech industry can be attributed to the efforts of a network of activists opposed to GMOs. Activists raised awareness of GMOs amongst the public and pressured policymakers to enact stricter regulations for agbiotech. Activists also targeted the agbiotech industry to undermine its reputation, as well as pressuring food processors and retailers to exclude GMOs from their products.

While the anti-GM network gained widespread visibility in the mid-1990s, the network has been active since the advent of biotechnology in the late 1970s. As biotechnology has advanced, the network has evolved in response to changing political economic opportunity structures. The frames utilized by the network and their resonance with the public and policymakers have varied. During its early years, the network was largely expert-oriented and activists relied mainly on environmental and ethical arguments. As agbiotech products were introduced onto the market in the mid-1990s, the anti-GM network's membership broadened and the frames it utilized diversified. Food safety concerns about GMOs were especially prominent in the late 1990s and early 2000s. When no health problems from the consumption of GM food emerged, the food safety

frame lost resonance and diminished the credibility of the network. Since the mid-2000s, the network has placed greater emphasis on expert-oriented strategies in many regions.

The anti-GM network's success has been mixed. The network successfully opposed GMOs in many regions, most significantly the EU, where consumers continue to be resistant to consuming GM food. However, the amount of GM crops planted worldwide increases each year and the European Commission has approved several GM crops for cultivation and/or consumption. GM crops are widely grown in the U.S. and Canada, and activists generally regard North America as a lost cause for the network. While the network has had mixed success stopping the spread of GMOs, it played an important role in creating a broader cultural shift in how food is viewed. The network helped facilitate greater public interest in how food is produced and the consequences of the agro-industrial food system, particularly in North America. Consumer concerns about the safety of GM food helped increase the market for natural and organic foods.

The anti-GM network's strategic use of frames was a major factor in the successes it achieved in the late 1990s and early 2000s. The network's use of frames and accompanying attention generating tactics helped to create awareness of GMOs amongst the public, put GMOs on the political agenda, and created market opportunities for companies to sell non-GM products. This chapter discusses the network's origins and growth and composition in the mid-1990s and early 2000s. The frames that have been utilized by the anti-GM network are examined in depth: the corporate control frame, the environmental frame, the food safety and consumer choice frames, and the sustainable agriculture frame. The tactics utilized by the network are also discussed. Finally, this

chapter reflects on the long-term effectiveness of the network's frames and its evolution since the mid-2000s.

The early history of the anti-GM network

The anti-GM network's origins date back to the emergence of biotechnology in the 1970s. The network initially developed in the United States. Early anti-GM activists opposed biotechnology for social and ethical reasons.[7] They stressed ethical concerns about the genetic manipulation of humans, plants, and animals as well as the negative socio-economic impacts the technology could have on farmers due to further corporate concentration in the agricultural sector (Buttel 2005, 314; Schurman and Munro 2006).[8]

Until the 1990s, the anti-GM network's activities primarily consisted of individual experts setting up and working within a few NGOs. In both the Global North and South, the network consisted of a small group of counter-experts, such as natural and social scientists, policy analysts and lawyers. The network focussed on questioning the adequacy of the science used to make regulatory decisions about the GMOs, using scientific and legal channels to pressure governments to better regulate GMOs and

[7] Since its early history the anti-GM network has strategically chosen not to oppose GM technology used for medical purposes. Members of the network felt a decision to oppose technology that could improve people's health would face greater resistance from the general public than a decision to oppose GM food which offered no consumer benefits when it was first marketed and had potential detrimental environmental impacts. Furthermore, individuals make a conscious choice to ingest pharmaceuticals. Until recently, GM technology for medical purposes has also been confined to laboratory settings. However, a recent exception to the network's decision not to oppose GMOs for medical purposes is its opposition to pharma crops, agricultural crops engineered to include pharmaceuticals. The network has opposed this technology because these crops are grown in the open and could contaminate non-pharma crops.

[8] During the early 1980s, the anti-GM network also began to establish itself in the Global South. While actors in the network in the North and the South have always exhibited strong linkages, the history of the network highlights differences in their use of collective action frames. In the South, the predominant concern of the network in the 1980s was that GM crops would primarily benefit rich peasants and agribusiness interests and would further undermine and destabilize small-scale farmers and peasants (Buttel 2005, 314). This thesis will largely focus on the actions of the network in the EU and North America.

challenging the extension of intellectual property rights to life forms. The main tactic utilized by the network at this time was lawsuits against government and the agbiotech industry (Schurman and Munro 2006, 30). The focus on the provision of counter-expertise during this period can be attributed to the skills of the individuals in the network, who were better suited to lobbying than grassroots organizing, and to the difficulty of generating widespread public opposition to GMOs when their threat was largely hypothetical (Purdue 2000, 59-63; Schurman and Munro 2006). However, the lack of public opposition to GMOs limited the network's influence, which was further circumscribed by substantial support for the agbiotech industry from policymakers in both the U.S. and EU. With a few exceptions, the network had little impact on the actual development of policies governing agbiotech during this period (Charles 2001; Toke 2004, 16).[9] However, Schurman and Munro (2006) argue early members of the network played a pivotal role in establishing the oppositional ideas that would help form the foundation of the network's subsequent successes in the late 1990s and early 2000s.

At the end of the 1980s, GM food was becoming a commercial reality as GM products began to gain regulatory approval in the U.S. The first GM products approved by the U.S. Food and Drug Administration (FDA) were chymosin, a GM bacteria used to make cheese, followed by bovine somatropin, the growth hormone to make cows produce more milk, and the Flavr Savr tomato. However, it was the development and regulatory

[9] One exception occurred in 1987 when Jeremy Rifkin, one of the founders of the anti-GM network, sued the U.S. government to halt the release of a bacteria genetically engineered to prevent the formation of ice crystals on crops. Rifkin argued the bacteria could impact weather patterns if they multiplied and escaped into the upper atmosphere. Rifkin gained a temporary moratorium on the field release of the bacteria. When the bacteria was later approved for field testing, company representatives and government officials found the crop the bacteria was to be tested on had been pulled up, the same tactic utilized by the network in the late 1990s and early 2000s to prevent GM field trials in the EU (Weasel 2008).

approval of crops genetically engineered to produce a natural insecticide, *Bacillus thuringiensis* (Bt), and herbicide tolerant (Ht) crops that had a significant impact on the adoption of GM crops. Bt crops are genetically altered to contain a naturally occurring toxin rendering them insect resistant. Ht crops have been genetically altered to resist the toxic effects of an herbicide (Buttel 2005, 310-311; Schurman 2003, 5).

As GM crops were commercialized, the anti-GM network began to expand and attract an increasing number and variety of participants.[10] With the marketing of GM products in the mid-1990s, the threat posed by GMOs was no longer hypothetical. Members of the network sensed the opportunity to mobilize grassroots opposition to the technology (Purdue 2000, 93). For example, Bernauer and Meins note how the European Commission's authorization of Roundup Ready soybeans and Bt corn in 1996 was utilized by the network to create public opposition to GMOs. They argue "…outcry over the marketing of GM food helped NGOs to mobilize their membership and the wider public against GMOs and to launch major anti-GMO campaigns against producers. Thus, the 1996 authorizations acted as a trigger for NGO anti-GMO campaigns" (2003, 654). The network also altered its frames in response to this new organizing context, illustrating its agency. As Schurman states, "Organizations that had been broadly focussing on issues of sustainable agriculture, the environment, plant patenting, and the loss of biodiversity

[10] For example, in 1989, in the U.S., an anti-biotechnology coalition named the Biotechnology Working Group (BWG) emerged. This group included representatives from the Wisconsin Family Farm Defence Fund, the Pesticide Action Network, the National Wildlife Federation, the Consumers Union, the Committee for Responsible Genetics, the Environmental Defence Fund, the Department of Ecology at the University of Minnesota, and the United Methodist Church. Andŕee argues "The emergence of the BWG was the consolidation of the first wave of a North American (and even international) GE [GM] movement and the beginning of a second" (Andŕee 2007, 50; see also Charles 2001).

fixed their attention more fully on GM food, attracted in part by opportunities for an increased flow of resources" (2004, 252).

Increased grassroots involvement greatly amplified the influence of the anti-GM network. The newly expanded network generated concern amongst the public about the safety of GMOs and became characterized by colourful, mass protests. The early history of the network suggests that when policy networks are dominated by cohesive industry interests, a small group of experts representing opposing interests will be largely ineffective. However, grassroots mobilization can alter the policy preferences of government officials to the benefit of civil society groups and the detriment of industry. This thesis will mainly focus on the anti-GM network's activities during this period of grassroots mobilization (from the mid-1990s to early 2000s) and the subsequent consequences of its campaign.

Actors in the anti-GM network

Since the 1990s, the anti-GM network has grown to encompass a broad range of actors (see Table 1 for NGOs active in the anti-GM network during its peak period from the mid 1990s to the early 2000s). In the early to mid 1990s, a number of NGOs established new anti-GMO campaigns and began working together in coalitions. Organizations that joined the network include: Friends of the Earth (FoE) Europe, Greenpeace International, the British Soil Association, and Confédération Paysannes (Schurman 2004, 252). During this period private foundations in North America and Europe also began funding NGOs working on issues related to GMOs (Purdue 2000; Schurman and Munroe 2006). The diverse group of actors in the anti-GM network utilize

Table 1: Members of the Anti-GM Network[11]		
TYPE OF ORGANIZATION	GEOGRAPHIC FOCUS	NAME OF ORGANIZATION
Environmental Organizations	Transnational	Greenpeace International*
	Transnational	World Wildlife Organization
	Regional (EU)	Greenpeace European Unit*
	Regional (EU)	Friends of the Earth Europe*
	National (Varies EU Member States)	Greenpeace European Offices (Germany, France, UK, etc.)*
	National (UK)	UK Green Alliance
	National (UK)	English Nature*
	National (US)	Greenpeace USA*
	National (US)	Sierra Club USA*
	National (US)	Center for Environmental Health
	National (US)	Center for Food Safety*
Farming Organizations and Peasant Organizations	Transnational	Pesticide Action Network International*
	Transnational	Via Campesina*
	Transnational	GRAIN
	National (France)	Confédération Paysannes*
	National (UK)	UK Soil Association*
	National (US)	Organic Consumers Association*
Consumers' Organizations	Transnational (U.S. and EU)	Trans Atlantic Consumer Dialogue
	Transnational	Consumers International*
	Regional (EU)	BEUC*
	National (US)	Public Citizen
	National (various EU Member States)	National consumers' organizations
Social Justice Organizations and Anti-TNC Organizations	Transnational	ETC Group (formally RAFI)*
	Regional	A SEED Europe
Other Groups	National (Canada)	Canadian Biotechnology Action Network (CBAN)
	National (US)	Union of Concerned Scientists
	National (US)	Foundation on Economic Trends
* Node in the anti-GM network during 1995-2005		

a variety of tactics and frames to influence policymakers, international organizations, and corporate actors.

The largest group of actors in the anti-GM network consists of environmental NGOs (ENGOS) (Reisner 2001, 1394). In the 1990s, numerous ENGOs became involved

[11] Table 1 largely does not list NGOs active in developing countries. It also does not list the numerous grassroots, local groups that were active in campaigns against GMOs.

in the network, including transnational ENGOs such as FoE, Greenpeace International and the World Wildlife Federation (WWF), as well as regional and national organizations such as English Nature, the UK Green Alliance, Sierra Club USA, the Earth Island Institute and numerous local groups. The network includes both radical and mainstream environmental organizations. The environmental movement represented an existing structure with considerable resources that could be added to the campaign against GMOs. Many ENGOs, such as Greenpeace, have substantial experience running international campaigns and utilizing highly symbolic and visible tactics to attract media attention and generate public support. The environmental movement also brought financial resources into the anti-GM network. For example, in 1996, Greenpeace launched its anti-GM campaign with fifteen full-time campaigners and a highly dynamic campaign coordinator. The large memberships of many ENGOs allowed the network to connect with large numbers of potential supporters who could be utilized for tactics such as letter writing campaigns and consumer boycotts (Schurman 2004, 252).

Food and agricultural groups focussed on the promotion of organic and sustainable agriculture are active in the anti-GM network. Groups such as the Soil Association in the UK, the Organic Consumers Association in the U.S., and Confédération Paysanne (the French Farmers Association) are part of the network. They are critical of industrial agriculture and its social and environmental impacts. These groups generally argue GM food has unknown risks and GM crops will undermine small family farms and make organic agriculture untenable due to cross pollination and contamination of non-GM crops (Reisner 2001). The anti-GM network also includes

farming and peasant organizations from the Global South, which focus on the threat TNCs pose to small-scale farmers and their right to save seeds. The involvement of natural and organic food and agricultural groups benefitted the network because these groups offer an alternative solution to the dominant agro-industrial food system which the network opposes. Increases in the consumption of organic food have also increased the resources and political influence of these organizations (Reed 2002).

The anti-GM network also includes consumers' organizations such as: the Trans Atlantic Consumer Dialogue, a forum of U.S. and EU consumer organizations; the European Bureau of Consumers' Unions (BEUC), a Brussels based federation of independent national consumers' organizations; Consumers International; and Ralph Nader's Public Citizen. The public views consumers' organizations as knowledgeable and reliable information providers whose primary concern is public welfare, unlike commercial interests. Consumers' organizations have a general distrust of large corporate interests, such as those that dominate the agbiotech sector and argue profit-oriented actors cannot be expected to act in the public interest (Reisner 2001, 1395). Consumers' organizations active in the anti-GM network have primarily been concerned about the lack of regulations governing GMOs and potential health problems they pose. They have been strong proponents of labels on GM food to ensure consumer choice. Some consumers' organizations, such as the Consumers' Union in the U.S., have primarily been concerned with labelling, rather than issues such as the environmental impacts of GMOs (Bernauer and Meins 2003; Smythe 2009). In recent years, consumers' organizations

have largely disengaged from the anti-GM network, particularly in the EU where more stringent regulations for GMOs and mandatory labelling for GM food were enacted.

In addition, the anti-GM network includes a number of groups opposed to the power and influence of TNCs, such as the Corporate Europe Observatory (CEO) and A SEED Europe (Action for Solidarity, Environment, Equality and Diversity). These organizations range from anti-corporate to anti-capitalist. They believe corporate control of the seed supply threatens the global food supply and agricultural biodiversity, as well as the livelihoods of small farmers. Anti-corporate groups continue to be fairly active in the anti-GM network today. However, many of them operate at a distance from the rest of the network, due in part to their strong opposition to the existence of TNCs in general. These groups are also part of the global justice movement.

The anti-GM network consists of a diverse group of actors, who share common concerns about the social, health and environmental implications of GMOs. Reflective of its diversity, the network has used a wide variety of tactics and frames to oppose GMOs.

Strategic frames utilized by the anti-GM network

The anti-GM network's membership has used a variety of strategic action frames to advance its arguments and the dominance of particular frames has shifted over time (see Table 2). The network has "expended enormous energy constructing and communicating alternative frames though which people would interpret and apprehend these new biotechnologies" (Schurman 2004, 254). The frames employed by the network have varied depending on their intended audience (the general public, regulators, elected

Table 2: Frames and Arguments Utilized by the Anti-GM Network		
FRAME/ARGUMENT	PRIMARY TARGET AUDIENCE	RESONANCE
Moral objections to biotechnology	Policymakers, media, public	Low
Corporate control of the food supply (includes terminator technology)	Policymakers, media, public, farmers	Moderate to high (varies depending on national context)
Lack of publically funded scientific research on GMOs	Policymakers, media, public	Moderate
Environmental	Policymakers, media, public, farmers	Moderate
Consumer choice (labelling)	Policymakers, media, public, food manufacturers and retailers	Moderate to high
Food safety	Policymakers, media, public, food manufacturers and retailers	High (from mid-1990s to mid-2000s; now largely discredited)
Sustainable agriculture	Media, public, farmers, food manufacturers and retailers	Moderate

officials, farmers, food manufacturers and retailers, etc.) and the context in which frames have been employed (i.e. the Global South or North).

The corporate control frame

Since it first formed in the 1970s, the anti-GM network has focused on the consequences of corporate control of the food supply and the commodification of nature through practices such as patents on living organisms. In 1980, in the case Diamond v. Chakrabarty, the U.S. Supreme Court ruled genetically engineered microorganisms could be legally patented. As Schurman and Munro state:

> As critics quickly realized, this meant that life itself could now be subject to exclusive monopoly patents, so long as the intervention met the standard criteria of patentability: novelty, utility, and non-obviousness….The Chakrabarty decision was seen by these individuals as an "enclosure of the commons" and an extension of the capitalist commodification process into a qualitatively new realm (2006, 12).

Since the 1990s, the anti-GM network has used the corporate control frame to draw attention to the practices of the agbiotech industry. Purchases of numerous seed

companies by agbiotech companies in the late 1990s and early 2000s strengthened activists' arguments that agbiotech companies aimed to control the food supply at the expense of small farmers. These arguments were further strengthened by the NGO Rural Advancement Foundation International's (RAFI) discovery and publicization of terminator technology in 1998.[12] The terminator gene allows for the production of seeds incapable of germination. The network feels the release of terminator would undermine traditional seed saving practices and further solidify corporate control over the agriculture. As stated by Rafael Aleria of the NGO Via Campesina, "Terminator is a direct assault on farmers and indigenous cultures and on food sovereignty. It threatens the well-being of all rural people, primarily the very poorest" (as quoted on the Ban Terminator website, 2010). The conspiratorial nature of terminator created negative publicity about GMOs and angry opposition towards Monsanto and the agbiotech industry (Charles 2001). In 1999, in response to strong public opposition, Monsanto and AstraZeneca publicly vowed not to commercialize terminator seeds. In 2000, the UN Convention on Biological Diversity (CBD) adopted a de facto moratorium on terminator seeds. The anti-GM network continues to campaign to ensure terminator is not commercialized, in part through a transnational NGO coalition, the Ban Terminator Campaign.

The terminator gene gave the anti-GM network a common concern around which to mobilize transnationally. Unlike many of the other issues surrounding GMOs (such as potential environmental effects), terminator is a relatively simplistic issue. The success of

[12] RAFI changed its name to the ETC Group (Action Group on Erosion, Technology and Concetration) in 2001.

the terminator campaign and its role in drawing together a diversity of NGOs illustrates how single-issue campaigns can function as nodes that tie activist groups together with a common and clearly defined purpose. This is particularly important in the case of activist networks focussed on complex issues. As is the case with the anti-GM network, the members of many globalized activist networks function in a diversity of conditions and the campaign strategies and frames utilized by activists vary depending on the context in which they are situated (e.g. della Porta et al. 2006). Global campaigns focussed on a narrow issue around which there is broad consensus can strengthen ties between members of a network.

The agbiotech industry has attempted to reframe the discussion surrounding terminator technology. The industry opposes the use of the name "terminator" and refers to it as genetic use restriction technologies (GURTs). The industry argues GURTs have been unfairly demonized and can be used for a variety of purposes (e.g. as a switch that can be built into a plant to turn disease resistance on or off) (Interview with representative from Croplife Canada, May 8, 2009). However, the network's arguments against terminator have largely dominated the discourse surrounding this issue, such that the agbiotech industry has been unable to reassert control over the discourse surrounding terminator.

During the late 1990s and early 2000s the efforts of the agbiotech industry to gain control over the discourse surrounding GMOs and terminator technology was further limited because the anti-GM network's focus on the power of agbiotech companies, particularly Monsanto, paralleled the global justice movement's opposition to neoliberal

globalization and the power of TNCs. della Porta et al. (2006) argue opposition to neoliberal globalization has emerged as a master frame. Benford and Snow (2000) define master frames as frames that are broad in scope and can be utilized by a number of social movements. They argue only a small number of frames are sufficiently broad in interpretative scope, inclusivity, flexibility and cultural resonance to function as master frames. The neoliberal globalization master frame views neoliberalism and TNCs as the cause of numerous social and environmental problems and stresses that "another world is possible" through the principles of environmental and social justice. While the anti-GM network has been concerned about the power of TNCs since the 1970s, the emergence of neoliberalism as a master frame increased the resonance of the network's arguments about the power of agbiotech companies. The neoliberal globalization frame allowed the network to connect its specific concerns to broader societal concerns and a larger movement thereby mobilizing additional supporters. The connection between the anti-GM network and the global justice movement also meant concerns about GMOs and the power of agbiotech industry were articulated in the global justice movement's protests.

Members of the anti-GM network have also drawn attention to the lack of publically funded scientific research on GMOs and the influence of privately funded research. The agbiotech industry also funds a significant amount of university-based research on GMOs and controls which researchers have access to GM seeds. Members of the network view the lack of public science as undermining democracy, transparency and accountability as well as GMO regulations generally due to inadequate risk assessments (Phone interview with representative from Center for Food Safety, May 7, 2009;

Confidential interview with Canadian NGO, April 14, 2009). However, these concerns have had limited resonance within the general public and the media.[13] When these concerns have resonated there have been visible divisions amongst scientists over the safety of GM crops. Together with food safety scares such as mad cow, divisions in the scientific community have undermined public confidence in scientific knowledge.

The environmental frame

As the anti-GM network gained prominence in the mid-1990s, it placed greater emphasis on environmental and health concerns. Activists found it strategically effective to focus on the environmental impacts of GMOs and food safety rather than focussing on the socio-economic impacts of GMOs or moral objections to the commodification of nature (although these concerns continued to have greater resonance in the global South) (Kleinman and Kinchy 2003, 380; Buttel 2005). Environmental concerns associated with GM crops include pollen drift and contamination of non-GM crops, the detrimental impacts of monoculture agriculture, weed and insect resistance to pesticides, invasive species type effects, and the absence of long term testing for the environmental and health consequences of GMOs (Buttel 2005, 313; Myhr 2007).

The importance of biodiversity in both the natural environment and agriculture is a theme throughout environmental arguments about GMOs. Members of the anti-GM network argue agricultural biodiversity allows plants to better adapt to changing environmental conditions such as weather, pests, and weeds (Purdue 2000, 4). For NGOs

[13] An exception is the case of Árpád Pusztai, a biochemist and nutritionist at the Rowett Research Institute in Scotland. In 1998, Pustzai publicized research findings that showed feeding GM potatoes to rats had negative effects on their stomach lining and immune system. Pustzai was subsequently suspended from the institute. Pusztai's research and his suspension for publicizing his research attracted attention to the potential hazards of consuming GMOs and the lack of independent scientific research on GMOs.

involved in wildlife conservation, such as English Nature, the impact monoculture GM crops bred to contain naturally occurring pesticides could have on wildlife, particularly birds and insects, is a major concern (Toke 2004, 83). Activists have drawn attention to the failure of the Green Revolution and its role in facilitating increased pesticide usage and monoculture agriculture to highlight how new agricultural technologies can have unforeseen negative consequences.

Another environmental argument focuses on "genetic pollution"; the contamination of non-GM crops by GM crops. The anti-GM network has drawn attention to the negative impact GM contamination has had on non-GM and organic farmers. For example, in the late 1990s, the contamination of organic farms by GM crops made headlines across Europe when an organic farmer in the UK lost his organic certification because his harvest was contaminated by pollen from neighbouring fields where GM crops were test grown (Schweiger 2001, 367). The network has also publicized the case of Percy Schmeiser, a Saskatchewan canola farmer who was sued by Monsanto for patent infringement after Roundup Ready canola was found in his fields. Schmeiser argued the presence of Roundup Ready canola in his crops was due to contamination from neighbouring GM crops.[14]

Schmeiser and other farmers whose non-GM crops have been contaminated by GMOs are a powerful symbol for the anti-GM network worldwide—an innocent farmer

[14] Monsanto's lawsuit against Schmeiser on patent rights for biotechnology went to the Supreme Court of Canada. The court heard the question of whether growing GM crops constituted use of the patented plant cells. In 2004, by a narrow 5-4 majority, the court ruled in favour of Monsanto. However, Schmeiser received a partial victory. The court ruled because he had not made any profits on the crops that were attributed to the GM plants he did not have to pay Monsanto the profits from his 1998 crop (just under $20,000). This also prevented Schmeiser from having to pay Monsanto's significant legal bills (CBC News Online 2004).

who was unfairly bullied by a large TNC. This can be seen in the framing of the Schmeiser case, which has been referred to as a David vs. Goliath battle by both the network and the media (e.g. CBC News Online 2004; Elias 2004; Montreal Gazette 2008; Schubert 2005).[15] By publicizing stories about farmers such as Schmeiser, the network has invoked an "injustice frame." By drawing attention to injustices activists can mobilize support for their cause. Injustice frames are most effective when they have a clearly defined actor to blame and easily identified solutions (Tarrow 1998, 111; Benford and Snow 2000). As Monsanto spokesperson Trish Jordan stated about the Schmeiser case, "For Monsanto, it is a bit of a no-win situation. It's pretty easy to paint this as the multinational beating up on the poor little farmer" (as quoted in Scoffield 2001).

Consumers of organic food have been particularly sympathetic to arguments made by the anti-GM network about the threat GMOs pose to non-GM crops, including organic crops (Schweiger 2001, 367). The network has highlighted how contamination undermines consumers' ability to choose between non-GM and GM foods. However, proponents of GMOs have framed the issue of contamination as a farm management issue rather than an environmental issue. In doing so, proponents of GMOs have shaped the debate around issues such as buffer zones between GM and non-GM crops into a largely expert centered discourse (Toke 2004, 75). This framing of the issue of GM contamination also moves the debate away from whether GM crops should be permitted to how to allow for the co-existence of GM and non-GM crops, which is viewed as infeasible by most members of the anti-GM network.

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[15] Schmieser is also the subject of a 2009 documentary, *Percy Schmeiser: David versus Monsanto.*

The food safety and consumer choice frames

The issue of contamination of conventional crops by GMOs is closely tied to the food safety frame, which emphasizes potential health hazards from the consumption of GMOs and consumers' right to choose what they eat. Risks that have been posited to potentially occur from the consumption of GM food include: allergic reactions, nutritional changes in food, and antibiotic resistance from GMOs with antibiotic resistant genes (Myhr 2007). While health problems linked to the consumption of GM food have not been documented, the food safety frame had strong resonance for the anti-GM network in the 1990s. Tabloid newspapers in the UK initially suggested the potential risks posed by the consumption of GM food. The network benefitted from news stories about the health hazards of GM food, such as the UK Daily Mail's 'Frankenstein Food' campaign that began in February 1999 (Toke and March 2003, 245). Stories that GM food could be harmful if consumed resonated particularly strongly in EU, where there had been recent food scares such as Bovine Spongiform Encephalopathy (BSE) and beef hormones. While other frames utilized by the network highlighted the broad, long-term consequences of GMOs, the food safety frame emphasized the direct consequences GMOs posed for individual consumers.

Members of the anti-GM network argue GM food should be labelled to allow for consumer choice. When arguing in favour of labels on GM products, members of the network have drawn on the norm of transparency (see Smyth 2009). Labelling serves as recognition of autonomous, "democratic" choice in that power is vested within the individual consumer's purchasing decisions. Labelling can force food manufacturers to be

more selective in sourcing ingredients and can pressure suppliers to avoid the use of GMOs. The EU passed regulations requiring labels on GM food in response to public opposition. Labels on GM food in the EU were a key factor behind the successes the anti-GM network achieved in Europe because they allowed GM food to be easily boycotted.

However, arguments in favour of labels on GM food also make risk management a matter of consumer choice and effectively privatize broader societal decisions. Socioeconomic inequalities mean the consumer choice associated with labelling is not equally distributed, and threaten to make non-GM food a niche market like organic food (Guthman 2003, 131; Wales and Mythen 2002, 136). The labelling argument indirectly undermines a broader critique of industrial agriculture and corporate power made by many members of the network. Labels also do not educate consumers about the social and environmental impacts of GM crops. The extent to which labels on GM food will benefit the network's campaign depends on the network's ongoing ability to sustain opposition to GM food. As GM crops continue to be grown and consumed in much of the world with no evidence of negative health effects, consumers who were primarily concerned about the health effects of GM food may become more willing to consume it. As Guthman has stated, "…labelling could take the sights off direct state regulatory action, such as a moratorium or an outright ban, thus making the labelling law a Pyrrhic victory" (2003, 137).

Agbiotech companies are likely hoping this will be the case. When the EU's de facto moratorium on GMOs was in place the industry supported labelling as a way to end the moratorium. Currently, the agbiotech industry in the EU is supportive of labelling for

products containing GMOs when labels are used for consumer information purposes. However, the industry does not support labels for food safety purposes as it maintains GM food is safe for consumption (Interview with agbiotech industry representative, October 21, 2009). The industry has also stated labels should only apply to those products where the DNA of an ingredient used in a product has GM traits. Many products made with GM crops do not contain DNA from GMOs once they are processed.[16] As stated by the European biotechnology industry association, EuropaBio, "In the case of highly refined foods and feeds, the genetic modification cannot be detected or verified as neither protein nor DNA is present in the final product. Therefore, such products should not be subjected to discriminatory or misleading mandatory labelling requirements concerning the use of GM technology" (EuropaBio 2003; see also Croplife International 2010a). In contrast, the anti-GM network supports process based labels. Labels based on DNA would negate the ability of consumers to use labels to avoid GM food for social or environmental reasons. They would also allow products (e.g. oil and sugar) processed from a number of staple crops containing GMOs to avoid labelling.

In the media and amongst the public, the food safety frame dominated the discourse surrounding GMOs in the late 1990s and early 2000s. However, the environmental frame was the dominant frame used in the anti-GM network's interactions with policymakers due to its less sensationalist nature and the stronger scientific evidence of environmental threats posed by GM crops. The role of the media in creating and

[16] Sugar is defined by a chemical formula, so GM and non-GM sugar are equivalent. Oils are refined at high temperatures where there is no DNA or protein trace so oil refined from a GM crop is not distinguishable from oil refined from a non-GM crop.

emphasizing the food safety frame highlights how the media will frame issues in a manner which is likely to attract an audience, rather than focussing on the key arguments to which activists may wish to draw attention (Tarrow 1998, 116). Several members of the anti-GM network noted that in the long term the health frame has been detrimental to the network. The lack of health problems attributable to GM food has largely discredited this frame, to the detriment of the network as a whole (Interview with Charles Margulis, CEH, April 23, 2009; interview with Canadian NGO, April 14, 2009). Representatives of the agbiotech industry have stated that while the food safety frame was initially very effective for the network, as time has passed and no health problems have been attributed to GMOs, the publics' acceptance of GMOs has increased (Interview with Jill Maase, Croplife Canada, May 8, 2009).

The sustainable agriculture frame

Finally, the anti-GM network has focussed on issues related to the sustainability of the food system. As Roff states, "The elimination of genetically engineered food is intimately tied to the re-envisioned agro-ecological and political-economic futures that form the core of contemporary alternative food politics" (2007, 513). The food sustainability frame incorporates a variety of the network's concerns and is a reaction to the detrimental social and environmental consequences of industrial agriculture. Individuals concerned about industrial agriculture are a natural constituency for the network's arguments. At the network's peak concerns about the industrialization of the food system and its impact on national food cultures were strong in the EU, and opposition to the industrialized food system has also risen in North America. A growing

alternative foods movement has developed in the last ten to fifteen years, which supports organic, "natural", and/or local agriculture over processed, mass produced food. The food sustainability frame has been successful in generating media coverage about industrial agriculture, and has increased awareness and support for the alternative foods movement.

Today, the anti-GM network has largely been subsumed into this broader movement for more sustainable food production. NGOs such as the Center for Food Safety (CFS), the Organic Consumers Association, and FoE focus on the detriments of large-scale industrial agricultural systems and advocate for more sustainable agricultural practices. In 2009, Greenpeace International shifted the focus of its successful anti-GM campaign to a campaign focussed on sustainable agriculture. The shift allows Greenpeace to focus on a wider range of environmental issues related to industrial agricultural practices, such as pesticide usage and the impact of large scale monoculture. By focusing on promoting sustainable agriculture, rather than simply opposing GMOs, Greenpeace is also able to offer solutions to the problems of GMOs and industrial agriculture rather than simply opposition (Interview with Glen Tyler, Greenpeace International, October 28, 2009; Tirado 2009). Thus, the debate surrounding GMOs has evolved into a wider debate about how food is best produced.

Tactics utilized by the anti-GM network

In advancing its arguments and frames, the anti-GM network has utilized a variety of tactics when targeting states and corporate actors. When the first U.S. ships carrying GM soy arrived in the EU in 1996, they were met by a flotilla of Greenpeace activists, who prevented the ships from docking and unfurled banners demanding a ban on GM

food imports. In another protest, a group of activists dressed themselves up as "Super Heroes against Genetics" and took over the headquarters of Monsanto UK. Activists have also destroyed GM crops by cutting them down or uprooting them (Charles 2001). In both Europe and North America, the network has revealed weaknesses in existing regulatory structures for GMOs by exposing questionable government practices or regulatory failures. For example, in May 2000, activists in the UK revealed that a Canadian company had inadvertently and illegally sold conventional canola contaminated with GM canola to UK farmers who unknowingly planted it on more than ten thousand acres of farmland. The network used the incident to claim GMOs are uncontrollable and government regulation was ineffective (Schurman and Munro 2003, 117). The network's tactics have been effective in generating media attention. Particularly in the EU, media coverage played an important role in helping to generate grassroots opposition to GMOs. As Schurman states, "organized social activism has moved the issue of agricultural biotechnology out of relative obscurity, and out of the hands of a small number of corporate and state actors, into the public arena, where it is being debated by a broader spectrum of society" (2003, 112). While the anti-GM network has utilized a variety of highly visible protest tactics, the network's activities have also involved lobbying, litigation, and consumer boycotts. Both conventional and unconventional tactics have been important in influencing policies governing GMOs.

Conclusion

The anti-GM network's history can be traced to the emergence of biotechnology in the 1970s. However, the network did not gain widespread visibility and achieve

significant success until the 1990s. While the growth of the network in the 1990s can be attributed in part to the marketing of GM crops, it was the frames employed by the network that attracted the media attention and grassroots support it needed to achieve significant successes. From the mid-1990s to the early 2000s, the food safety frame, the environmental frame, and concerns about corporate control were the dominant frames employed by activists. At the network's peak, its more professionalized elements, such as lobbyists, policy analysts and various experts largely focussed on the environmental threats posed by GM crops. The use of this internal frame may be partially attributed to the relative openness of government environmental agencies to the issue and the stronger evidence about the potential harm GM crops posed for biodiversity. In contrast, the food safety frame largely dominated media coverage of GMOs and played an important role in generating grassroots opposition. The use of audience specific frames highlights the strategic nature of the anti-GM network.

However, no negative health consequences have been attributed to GMOs. The food safety frame has lost most of its resonance and undermined the anti-GM network's reputation. Concerns about the environmental impacts of GMOs, corporate control, and the detrimental impacts of industrial agriculture have once again become the primary frames utilized by the network. In recent years, the network has assumed a more expert-oriented form, particularly in North America. Activists must be weary of easily communicated frames that over time can be easily discredited by opponents and also used to discredit activist networks themselves. Furthermore, the frames utilized by activists must evolve in response to changing political economic opportunity structures.

CHAPTER THREE
THE ANTI-GM NETWORK AND REGULATIONS GOVERNING GMOS

The anti-GM network has pressured policymakers in a variety of states to ban GMOs or implement more stringent regulations to govern the cultivation and consumption of GMOs. The impact of the network's legislative campaigns has varied significantly depending on the political opportunity structure where they have taken place. The EU has taken a precautionary approach to the regulation of GMOs. It has approved only a small number of GM crops for cultivation and requires GM food to be labelled. The U.S. regulatory system for GMOs favours industry interests. It emphasizes the competitiveness of the industry at the expense of the precautionary principle. As such, the EU and U.S. represent two opposing approaches to the regulation of GMOs. The different approaches to the regulation of GMOs are a reflection of political, economic and cultural differences. Given the size of both the European and U.S. markets, these differing regulatory approaches have considerable impact worldwide. The U.S. and EU's approaches to the regulation of GMOs came into conflict at the WTO and during the negotiations for the Cartagena Protocol on Biosafety.

When targeting states and international institutions, the anti-GM network has focussed on the need for a stringent regulatory framework that takes a strong precautionary approach. The network has advanced the precautionary principle as a key norm in the governance of GMOs. As Christoforou explains,

> The precautionary principle applies to scientific uncertainty and risk regulation. It permits regulatory authorities to take action or adopt measures in order to avoid, eliminate, or reduce risks to health, the environment, or in the workplace. The

> precautionary principle may also oblige regulatory authorities to take action when this is necessary to avoid exceeding the acceptable level of risk (2004, 17).

The anti-GM network's success at advancing a precautionary approach to GMOs has varied depending on this norm's resonance in different jurisdictions and the extent to which the precautionary norm has been institutionalized within the policymaking process.

This chapter argues the anti-GM network has sought to advance its arguments regarding the regulation of GMOs in a variety of fora with varying levels of success depending on the political opportunity structure. While the willingness of regulators to implement stricter regulations for agbiotech has varied, the network's actions in the mid 1990s to early 2000s caused regulators to either strengthen their regulatory systems for GMOs or justify the regulations they had in place. This chapter will outline the regulations governing GMOs in the EU and the U.S. It will first discuss the evolution of the EU's regulatory framework for GMOs and the influence of the anti-GM network. The U.S. regulatory system for GMOs and the factors that made the political opportunity structure in the U.S. unwelcoming to the network are then analysed. In addition, the WTO dispute over GMOs in which the U.S., Canada and Argentina challenged the EU's regulatory framework will be discussed. Finally, this chapter examines the negotiations for the Cartagena Protocol on Biosafety, where differing approaches to the regulation of GMOs also came into conflict and the anti-GM network was a key agent in shaping the outcome of the negotiations.

The European Union's regulatory framework for GMOs

The EU passed its first regulations specifically governing GMOs in 1990. However, the EU's regulatory framework for GMOs was significantly modified in the

late 1990s and early 2000s in response to opposition to GMOs from the public and a number of EU Member States. The anti-GM network was the key actor responsible for generating opposition to GMOs in the EU. The network's success at pressuring the European Commission to introduce more stringent regulations for GMOs can be attributed to the political opportunity structure in the EU, the ability of the network's frames to exploit vulnerabilities in the political opportunity structure, and the emphasis the EU places on the precautionary principle.

Directive 90/220/EC was passed in 1990 and was the first European level regulation to address GMOs. Under Directive 90/220/EC the European Commission approved 18 GMOs for import or cultivation and allowed thousands of research trials to occur (Falkner 2007; Skogstad 2003, 327). Falkner (2007) argues the EU's early biotechnology regulations were driven by economic concerns. The Commission sought to harmonize existing national regulations for biotechnology (which were generally weak at the time) to make its industry more competitive with the U.S. and Japan. While the Commission succeeded in creating EU-wide regulations, the creation of those regulations entailed considerable compromise for supporters of biotechnology. Falkner notes "the regulations established for the first time a horizontal, process-oriented approach to regulating biotechnology in Europe, in sharp contrast to the more limited approach in the United States that presumed substantial equivalence between biotech and conventional products" (Falkner 2007, 515). The regulations also introduced a precautionary approach to the authorization of GMOs, although the precautionary principle was not explicitly mentioned in the Directive and was not utilized until after 1998 (Andrée 2007, 102;

Falkner 2007, 515). In the early to mid-1990s, the biotechnology industry lobbied the European Commission for a less restrictive regulatory environment. The industry argued the EU's regulations unfairly disadvantaged European biotechnology companies and threatened to move biotechnology R&D to North America. The industry's arguments benefitted from a growing perception in the EU that its high tech industries were falling behind other countries (Falkner 2007, 516-517; Rosendal 2005).

However, despite the efforts of the industry, by the late 1990s it was clear the European GMO regulatory framework, based on a combination of state-centered and expert authority, had lost credibility and legitimacy with the public. Largely due to the actions of the anti-GM network, the European public strongly opposed GMOs. Although the EU and most of its Member States had viewed agbiotech favourably in the early 1990s, many Member States began to oppose GMOs in the mid-1990s. In response, the EU began to re-evaluate its regulatory framework. In 1997, the Novel Foods and Novel Food Ingredients Regulation (258/97/EC) was enacted, which took a precautionary approach to GM food, presuming it was unsafe unless proven otherwise. However, the regulation did little to reassure the public about the safety GMOs. In response to continued public opposition, in 1997, the EU also passed mandatory labelling laws for any food with GMO content above a 1% threshold (Regulation 1139/98/EC Labelling of Foods Containing Genetically Modified Maize and Soya) (Herrick 2003, 289-290).

These regulations failed to appease the anti-GM network, many EU Member States, and citizens concerned about GMOs. In 1998 the Commission proposed new GMO regulations to replace Directive 90/220. In June 1999 the governments of France,

Denmark, Greece, Italy and Luxembourg announced they had suspended new authorizations of GMOs pending the adoption of a revised regulatory procedure. This blocked approvals of GMOs by the Commission. In addition, the governments of Austria, Belgium, Finland, Germany, the Netherlands, Spain and Sweden announced a more moderate declaration stating the need for a "thoroughly precautionary approach in dealing with notifications and authorizations for the placing on the market of GMOs" (as quoted in Lieberman and Gray 2006, 599). In response, later that June, the Council of Environmental Ministers, consisting of EU Environment Ministers, agreed to strengthen the regulations for GMOs including labelling and the inclusion of the precautionary principle in the regulation. They also agreed no new GMOs would be authorized until the new regulations were enacted (Lieberman and Gray 2006, 598-599).

Directive 2001/18 entered into force on 14 April 2001 as the central piece of GMO legislation in the EU. The Directive introduced more stringent assessment procedures, mandatory public consultations, amendments on labelling and stated the authorization of GM products is valid for a fixed time period (Skogstad 2003, 327-328; Christoforou 2007). While the agbiotech industry successfully avoided strong regulatory language regarding liability in the legislation, other aspects of the legislation reflected the demands of the anti-GM network and its supporters. Christoforou outlines the strong emphasis the Directive places on the precautionary principle:

> [It] requires member states to ensure 'all appropriate measures are taken to avoid adverse effects on human health and the environment which might arise from the deliberate release or the placing on the market of GMOs'. The use of the terms 'to avoid' and 'might arise' in this context imply that there is no tolerance of identified risk (2007, 202).

The Commission subsequently enacted two further regulations on GMOs, one on mandatory labelling and traceability (Regulation No 1830/2003) and one on GM food and feed (Regulation No 1829/2003).[17] These regulations give a tolerance threshold of .05% for the accidental presence of GMOs in food and a minimum threshold of 0.9% below which there is an exemption for labelling. Food and feed produced from GMOs must be traceable throughout the product chain (Rosendal 2005, 85-86). The regulations emphasized a broad application of the precautionary principle. For example, Regulation 1829/2003 states, "It is recognized that, in some cases, scientific risk assessment alone cannot provide all the information on which a risk management decision should be based, and that other legitimate factors relevant to the matter under consideration may be taken into account" (as quoted in Christoforou 2007, 209). Due to opposition from Member States and the new regulations, from 1998 until 2004 there were no approvals of GM crops in the EU, creating a de facto moratorium on GMOs.[18]

Explaining the European Union's regulatory framework for GMOs

The EU's approach to the regulation of GMOs can be attributed to the strength of the precautionary norm in the EU as well as the political opportunity structure which was vulnerable to the anti-GM network's tactics and frames. The precautionary principle carries particular weight in the EU because it is explicitly mentioned in Article 174 (2) of the European Community Treaty, thereby giving it constitutional status. It is also firmly

[17] Following the enactment of these regulations, the clauses of Regulation 258/97 that applied to GMOs were repealed.

[18] In May 2004, the EU ended its six year de facto moratorium when it approved Syngenta's Bt 11 maize for food use in the EU. As of August 2010 only two GM crops have been approved for cultivation in the EU: BASF's Amflora potato and a type of corn produced by Monsanto. A number of GM crops have been approved by the EU for use in food and animal feed (European Commission 2010a).

enshrined in implementing legislation and case law. The precautionary principle is binding on the institutions of the EU and can be used to ensure health and environmental regulations reflect societal values and acceptable levels of risk. The emphasis on the precautionary principle is also evident in the domestic legal systems of most Member States. In contrast, while the precautionary principle is recognized within U.S. policy networks, it does not enjoy the same legal status that it does in the EU (Christoforou 2004, 40-41). The strength of the precautionary principle in the EU gave the anti-GM network a widely accepted norm on which to graft its arguments. Numerous scholars have highlighted that one important factor in norm development is how well a new norm resonates with those already in existence (Keck and Sikkink 1998; Price 1998). Within policy circles the anti-GM network highlighted the potential negative health and environmental consequences of GMOs to argue for a strict application of the precautionary principle.

In the late 1990s, the precautionary norm had particularly strong resonance in the EU due to the BSE crisis and several other food crises that had occurred in the region, such as the use of growth hormones in beef production and the discovery of dioxin in Belgian chicken feed. The BSE crisis in the UK highlighted both the fallacy of expert advice and the shortcomings of government regulations. For nearly a decade during the BSE crisis, government ministers and senior policy officials repeatedly assured the public British beef was safe. When government regulators suddenly acknowledged BSE posed serious risks to humans the public felt it had been deliberately misled. In addressing BSE the UK government chose to subordinate consumer protection and public health to the

interests of the agricultural and food industries (Gerodimos 2004; Van Zwanenberg and Millstone 2003). Together with other food crises during this period, public trust in EU food safety authorities and the scientists whose advice had been followed significantly declined and the public became more risk adverse towards food (Caduff and Bernauer 2006; Skogstad and Moore 2004, 47). As Caduff and Bernauer state, "successive food-related incidents have hampered the credibility of regulators to the extent that they have challenged the legitimacy of the institutional status quo. This has motivated strict forms of precautionary-type legislation" (2006, 154-155).

These food crises created public unease about industrial farming methods and increased the resonance of the anti-GM network's frames that questioned the safety of GMOs and the adequacy of the regulations governing them. The network also benefitted from the European Commission's decision to announce the approval of Roundup Ready soy two weeks after the deaths of a number of people in the UK were linked to BSE (Andrée 2007, 149-150; Skogstad and Moore 2004, 47). The network's success in linking the issue of GMOs to existing food safety concerns and declining public confidence in regulatory authorities, illustrates how activists can advance an issue by latching on to an existing policy crisis. As Sell and Prakash highlight, "Crises may lead to a demand for policy changes. To bring about such changes agents need to link their private concerns to broader societal concerns" (2004, 154). Strong public opposition was particularly important to network's campaign because biotechnology and farming interests are well resourced and powerful groups in the EU and typically have a privileged place in the policy process (Toke and Marsh 2003, 244). As Bernauer and Meins state, "Persistently

negative public perceptions of GMOs and campaigns by NGOs have neutralized virtually every attempt by European biotechnology firms and EuropaBio (the European Association of Bioindustries) to lobby for a relaxation of approval regulations and to prevent the introduction of mandatory labelling" (2003, 656-7).

The anti-GM network also benefitted from the wide range of factors the EU takes into account when formulating health and environmental regulations. The European approval process for GMOs provides much greater scope than the U.S. regulatory process for the consideration of non-scientific factors. The EU's regulations permit the consideration of societal, economic, traditional, ethical and environmental factors in risk management decisions (Young 2003, 464). In addition, the European Parliament has substantial influence over GMO policy and has emphasized the "need to evaluate the social, economic, ecological, ethical, and health dimensions of biotechnology, stressed its risks and urged caution" (Skogstad and Moore 2004, 44). The EU places considerable emphasis on the democratic norms of accountability, transparency and public participation. The unelected European Commission is often criticized for its "democratic deficit" (Scharpf 1999). Therefore, it must go to greater lengths to legitimize its policy decisions than elected governments, particularly when it comes to contentious issues such as GMOs. This increases opportunities for public input into the policymaking process. The EU's GMO regulations provide for transparency through labelling requirements and the requirement that the Commission publish the results of EU scientific risk assessments. Public participation is ensured through mandatory public consultations on experimental and commercial releases of GMOs (Skogstad and Moore 2004).

EU Member States' opposition to GMOs was also a key factor in shaping the regulatory framework for GMOs. The EU's approval process for GMOs allows small groups of governments to block the approval of any GM crop or food. By the late 1990s the anti-GM network had created significant public opposition to GMOs in many Member States, which filtered up to official government positions on GMOs. In the late 1990s, France shifted from being a sympathetic supporter of the agbiotech industry to a position of extreme regulatory caution. The UK also substantially altered its formally liberal approval policies for GM crops (Lieberman and Gray 2006). The shift in the positions of influential Member States put considerable pressure on the European Commission to adopt more stringent regulations.

The continuing evolution of the European Union's regulatory framework for GMOs

While the EU's de facto moratorium on GMOs ended in 2004, its regulatory framework for GM crops has been continued to be criticized by the agbiotech industry, members of the anti-GM network, and many EU Member States. The network has criticized the EU's approval process for being biased in favour of GMOs and for failing to properly consider other available evidence, socio-economic implications, and scientific uncertainty (Interview with representative from Greenpeace European Unit, October 26, 2009; Greenpeace European Unit 2008; Cotter and Mueller 2009). The agbiotech industry has criticized the EU's regulatory framework for being slow and unpredictable.

A number of EU Member States, including Austria, Hungary, France and Greece, continue to strongly oppose GMOs, which has created blockages in the EU's regulatory approval process. The European Food Safety Authority (EFSA) (the scientific body that

reviews authorizations for GM crops) has recommended approving a GM crop, only to have some Member States oppose authorization.[19] This has forced the Commission to make decisions on GM product authorizations, with politically detrimental consequences.[20] To overcome the continuing deadlocks in the GMO authorization system, in July 2010, the Commission proposed permitting Member States to allow, restrict or ban the cultivation of GMOs on all or part of their territory (European Commission 2010b). Anti-GM activists have criticised the Commission's proposal as an attempt to open up the EU to GM crops (Greenpeace 2010). The agbiotech industry has criticised the proposal saying it undermines the scientific basis of the approval system and creates further regulatory uncertainty (EuropeaBio 2010).

At the beginning of the 2000s, it appeared the anti-GM network's legislative campaign in the EU had been successful. However, the European Commission is now approving some GM crops for cultivation and consumption under its new regulatory framework that places greater emphasis on "science" in the approval of GM crops. The network must continue to pressure the Commission to ensure GMOs do not become widespread throughout the EU. The ongoing efforts of the network are challenged by the agbiotech industry's considerable resources and influence.

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[19] Six Member States (Austria, Hungary, France, Greece, Germany and Luxembourg) have prohibited the cultivation of GM maize MON 810 in their territory, which was approved by the EU. Austria, Luxembourg and Hungary have notified the Commission that they will prohibit the cultivation of the Amflora potato. Poland forbids the marketing of all GM seeds (European Commission 2010a). The Commission has attempted to remove the Member States' safeguard measures, but has not been successful in doing so (CBAN 2009; Winham 2009).

[20] For example, in March 2010 after continuing deadlock between Member States over the approval of B.A.S.F.'s Amflora potato, the EU Health Commissioner approved it for cultivation (Kanter 2010).

Regulating GMOs in the United States

The U.S. is the largest producer of GM crops in the world.[21] The U.S. is a major player in the biotechnology industry; it is home to about 53.5% of all enterprises and 61.6% of industry revenue (IBISWorld 2011). U.S. government and business leaders have generally been willing to embrace new technologies and this has been the case with agbiotech (Boyd 2003, 25). The U.S. political opportunity structure has favoured the agbiotech industry at the expense of the anti-GM network. While the EU's GMO regulations have been influenced by the precautionary principle, economic competitiveness and technological innovation have been the dominant norms that have shaped regulations governing GMOs in the United States.

In the U.S. responsibility for the regulation of GMOs lies with the Department of Agriculture (USDA), the FDA, and the Environmental Protection Agency (EPA). The USDA, which has a reputation for being business friendly, is the lead regulatory agency for GMOs. The USDA is responsible for ensuring GM crops are safe to grow and also approves field trials of GM crops. The USDA has been a key proponent of GMOs and actively undertakes agbiotech research (Prakash and Kollman 2003, 624; USDA 2010b). The FDA is responsible for ensuring GMOs are safe to eat. The agbiotech industry has benefitted from the FDA's decision to define products made from GM crops as substantially equivalent to products made from non-GM crops. In contrast, the EU views GM and non-GM products as fundamentally different due to different production

[21] In 2008, the global area of approved GM crops grown was 309 million acres. In 2007, the U.S. grew 142.6 million acres of GM crops, Argentina, the second largest grower of GM crops had 47.2 million acres (IBISWorld 2011). In 2010, 93% of cotton, 93% of soybeans, and 86% of corn grown in the U.S. were GM (USDA 2010a).

methods. Therefore, GM products in the U.S. are not subject to any special regulations or testing, such as labelling or pre-market safety studies, before being released onto the market (Prakash and Kollman 2003, 625). The EPA is responsible for ensuring GMOs can be safely released into the environment. The EPA regulates pesticides and sets tolerance levels for pesticide residues in food. Because many GM crops contain pesticides or herbicides they require the EPA's approval (Young 2003, 463).

Explaining the United States' regulatory framework for GMOs

Concerns about declining national competitiveness led U.S. government leaders to embrace biotechnology (both agricultural and medical) as a competitive advantage. In the neoliberal political climate of the 1980s, biotechnology was framed as a race between U.S. and European corporations, in which a stringent regulatory framework would be a serious handicap (Andrée 2007, 91). As Guthman states,

> It does not seem accidental that the appearance of commercial possibilities for these technologies coincided with the economic crises of the 1970s and early 1980s, which were partially attributable to the United States' failure to keep pace with technological innovation in other countries, particularly in electronics. Both the Carter and Reagan administrations were strongly committed to rapid technological investment as a vehicle for economic recovery, and they provided substantial tax incentives for investment in biotechnology (2003, 135).

Braithwaite and Drahos (2000) suggest countries with a competitive advantage in a particular industry, such as the U.S. in agbiotech, may be the most resistant to consumer opposition as they have the most to gain from the growth of the industry. The U.S. government has generally taken a hands-off approach to the regulation of agbiotech. In the 1980s, when regulations for GM products were first being discussed, it was the agbiotech industry that pushed for the development of a regulatory framework to assure

the public about the safety of GMOs, while the U.S. federal government preferred a more deregulatory approach.[22]

While the precautionary principle was included in many early environmental and health laws in the U.S., such as the Clean Water Act, there has been a substantial erosion of the precautionary norm in U.S. environmental law beginning with the Reagan Administration in the 1980s. The U.S. government has generally been unwilling to embrace a strong understanding of the precautionary principle, especially when it threatens U.S. economic interests. Ashford (2007) argues that in seeking to ensure regulation in general is not too burdensome for industry, the U.S. has emphasized cost-benefit analysis when evaluating the risks of new technologies. Since the 1980s the U.S. has placed greater emphasis on technical analysis as justification for regulation. The U.S. Administrative Procedure Act requires regulations to be based on science. This emphasis on technical analysis can also be attributed to the U.S. political system where groups can challenge environmental regulations by pressuring members of Congress to demand hearings, place riders in the budget process that limit an agency from carrying out its mandate, or draft new legislation. Environmental regulations can also be challenged in court. Tickner and Wright argue:

[22] In response to the industry's requests for regulatory oversight, the FDA argued the larger agbiotech companies wanted regulation to keep out smaller competitors by making it more expensive to bring a product to market due to regulatory hurdles. The agbiotech industry argued the regulatory system should have four characteristics: it should give government approval to biotech products thereby ensuring the public they are safe; it should not cause significant delays to the commercialization of biotech research or require onerous new research; the products of agbiotech should not be differentiated from non-agbiotech products, and should be treated the same as other non-agbiotech foods; finally, the industry wished to avoid labels for GM foods, which it felt could stigmatize its products. The resulting framework for the regulation of GMOs met all the requirements set out by the agbiotech industry (Andrée 2007, 54-55; Charles 2001).

> The threat of judicial scrutiny has had a profound effect on how environmental agencies examine environmental threats and the amounts and type of evidence needed before acting. Rather than risk remand, agencies prefer to develop evidence as fully as possible from the outset. This leads to protracted rulemaking periods and a reliance on formal 'expert-driven' quantitative procedures, such as risk assessment, that systematize the assessment of scientific information. Under this paradigm, science is viewed as rational, value-neutral, and separable from policy (risk management) (2003, 216; see also Skogstad and Moore 2004, 39).

The U.S. regulatory system lacks recognition of the role of scientific uncertainty and accompanying risks, particularly regarding the regulation of new technologies. This has led to an application of the precautionary principle where there is acceptance of the existence of some risk to human health and the environment.

Business interests in the U.S. have supported this "scientific" approach to policymaking. Corporations have considerable financial resources and have conducted scientific studies and even established "scientific" institutions which support their interests (Tickner and Wright 2003, 217). The agbiotech industry in the U.S. has created and funded groups such as the National Center for Food and Agriculture Policy (NCFAP), which describes itself as a non-profit organization and releases studies in support of agbiotech (Center for Food Safety 2005). The anti-GM network has fewer resources to generate its own scientific studies to counter those funded by the agbiotech industry. The emphasis on "science" to justify regulation has also marginalized the social and ethical concerns articulated by the network (Skogstad and Moore 2004, 40-41). This contrasts with the EU, where health and environmental regulations take into account a broad range of factors. Thus, the policymaking process in the U.S. favours industry at the expense of civil society groups. The faith the U.S. public and media place in scientific or expert knowledge further benefits industry interests at the expense of civil society groups.

The agbiotech industry also has considerable influence within U.S. government agencies responsible for regulating GMOs. The USDA and the FDA are particularly supportive of the agbiotech industry. Individuals often will move back and forth between the FDA, EPA, USDA, and agbiotech companies throughout their careers. As Bernauer and Meins state, "Industry views of biotechnology, notably with regard to economic competitiveness and pressure for fast commercialization to recoup research and development costs, have thus quickly found their way to biotechnology regulators….This pattern of policy making is the most susceptible to regulatory capture by industry" (2003, 669). Federal policies have also favoured the agbiotech industry by leaving the resolution of many technical issues to industry or government regulatory agencies with sharply curtailed mandates. Private corporations are responsible for providing data about GMOs to appropriate regulatory bodies. In some situations the government has allowed the agbiotech industry to provide data or implement safety measures on a voluntary basis. More problematic, regulatory agencies have failed to conduct their own studies or sponsor independent research on GM food products (Kelso 2003, 242). As Buttel states, "The U.S. regulatory process contradicts the essence of the PP [precautionary principle] in that in a PP regime the burden of proof lies entirely on the corporation, and the absence of adverse environmental impacts is not a primary evidentiary requirement" (2003, 165).

Finally, in the U.S. GM food is not required to be labelled because GM and non-GM food is seen as substantially equivalent. Unlike the EU, where the agbiotech industry supports labels for consumer information purposes, in the U.S. the industry opposes labels. It argues they will generate unnecessary consumer concern and undermine the

profitability of GM food. As Monsanto (2009a) states, "Requiring labelling for ingredients that don't pose a health issue would undermine both our labelling laws and consumer confidence." The agbiotech industry argues North American consumers can avoid GM food by purchasing organic food (organic standards prohibit the use of GMOs). Despite these challenges the network continues to oppose GMOs in the U.S. using a variety of tactics.

The anti-GM network and the U.S. regulatory framework for GMOs

The anti-GM network has had limited success pressuring U.S. policymakers to strengthen GMO regulations due to a political opportunity structure which favours the agbiotech industry's interests. Unlike in the EU, concerns about GMOs are not widespread amongst the U.S. public. In addition, as will be discussed in Chapter 4, in the EU the network benefitted from decisions made by food retailers and manufacturers to exclude GMOs from their products. Food retailers and manufacturers in the U.S. have generally supported the interests of the agbiotech industry as have many major farming associations. In the U.S. the anti-GM network has mainly focussed on undermining the credibility of government regulatory bodies by exposing their low levels of knowledge, weak regulations, and tendency to take industry claims at face value. Activists have stressed the difficultly of controlling GMOs and have attempted to highlight the state's responsibility to do so (Schurman and Munro 2003, 117).

The anti-GM network has achieved some small successes in pushing for stricter GMO regulations. In 1999, when opposition to GMOs was at its peak, a number of initiatives were introduced to strengthen the U.S. regulatory process and ensure consumer

confidence: a review by the National Academy of Sciences of the USDA's approval process; a review to reinforce the separation between the USDA's regulatory and promotional functions; and the creation of an advisory committee on agbiotech to address its social and economic implications. Regulatory bodies attempted to strengthen their arms' length status. The FDA expanded its research on current and future safety issues associated with GMOs and now requires mandatory notification before GM crops or products are introduced into the food supply (Young 2003, 471-473).

The network's influence is also evident in the debate that occurred over the creation of organic food standards in the late 1990s. In December 1997, the USDA announced it would set federal standards for organic food. Despite opposition from the organics industry, the USDA considered allowing certified organic food to contain GM ingredients and invited public comment on the issue. The anti-GM network and the organics industry raised public awareness of the issue and generated over 275,000 public comments to the USDA, the vast majority opposed to GMOs in organic food. In May 1998, the USDA announced it would not allow food labelled "organic" to contain GMOs (Interview with Charles Margulis, CEH, April 23, 2009; The Economist 1999; Pear 1998). However, despite these achievements by the anti-GM network, the U.S. regulatory framework for GMOs remains weak and favours the agbiotech industry. As Skogstad and Moore argue, "None of these reforms jeopardises the core principle of American biotechnology regulation: namely, regulation should not impede market forces and should promote development of the biotechnology industry" (2004, 43).

Like the e-waste network in the U.S. (discussed in Chapter 6), the anti-GM network has tried to overcome an unwelcoming political opportunity structure at the federal level through state level action.[23] Laws have been proposed in several states that would impose moratoriums on at least some GM crops and/or require mandatory labelling of GM food. Maryland adopted a five year ban on the release of GM fish in 2001, and North Dakota and Maine have laws requiring manufacturers of GM plants or seeds to provide guidelines on how to minimize cross-contamination (The Campaign 2006; Young 2003, 474). In 2008, California passed its first GMO bill (AB 541), which protects farmers unknowingly contaminated by GM crops. This bill was sponsored by a coalition of 13 organizations from the anti-GM network. Indiana, North Dakota, and South Dakota also have bills that address farmer liability protections for GM crops (The Center for Food Safety 2008).

However, the agbiotech industry has strongly opposed any legislation that would more stringently regulate GMOs.[24] Agbiotech companies are major campaign contributors at both the federal and state levels in the U.S. and most bills dealing with agbiotech are supportive of the industry.[25] In recent years, legislative initiatives detrimental to the agbiotech industry's interests have been further curtailed by the federal

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[23] Bills calling for the mandatory labelling of GM food and instructing the FDA to treat GMOs as a food additive (thereby creating stricter regulatory controls) were introduced in the House and Senate in 1999 and 2000. While this suggests that the network has had some influence over federal legislative proposals, the network has had greater influence at the state level.

[24] Activists at the local level have also faced considerable opposition from the agbiotech industry. For example, in 2004, activists in California's Mendocino County aimed to make it the first county to ban GM crops through a referendum. The agbiotech industry spent more than 700,000 USD or nearly 60 USD for every person in the county, to convince residents of the benefits of GM crops. Nonetheless, local residents approved the proposal, spurring similar bans in other counties (Doyle 2005; Garcia 2004).

[25] For example, in 2003, legislators in 32 states introduced 130 bills and resolutions related to agbiotech. Only 27 pieces of legislation passed, of those that did 70% sided with industry interests (Lee and Lau 2004).

government, which has used its authority over inter-state commerce to stop state, county, and municipal governments from implementing environmental and social regulations. For example, the 2005 National Uniformity for Food Act requires state or local government laws to have the same language as the Federal Food, Drug and Cosmetic Act and to ensure any differences in language do not result in the imposition of different regulatory requirements. In 2006, 15 pre-emption bills were also introduced across the U.S. which transferred the jurisdiction over seeds and nursery stock from local governments to state legislatures. These bills curtailed the ability of local governments to enact GM Free Zones, a tactic utilized by the anti-GM network (Roff 2009, 355). While EU Member States were able to challenge the European Commission to implement a more stringent regulatory framework for GMOs, the U.S. federal government has impeded the ability of state and local governments to pass legislation contrary to the interests of the agbiotech industry.

While the anti-GM network in the U.S. has always utilized both legal and legislative action, as grassroots opposition to GMOs has largely dissipated in the U.S. and legislative roadblocks have been created, bills favouring the network's interests have largely disappeared. Litigation has become a key tactic for the network. Activist groups often utilize the courts as a venue in which to present their views because of the centrality of the courts to U.S. politics (Keck and Sikkink 1998, 24). As Schurman and Munro state, "Court action is a powerful tool for raising the stakes of public accountability in the food regulation regime because it enables activists to frame specific and sometimes technical questions in terms of the state's responsibility to the public" (2003, 118).

For example, in 1999, members of the anti-GM network filed a lawsuit against the FDA for neither labelling GM foods nor subjecting them to independent testing. The lawsuit claimed the FDA's policy violated the Federal Food, Drug, and Cosmetic Act, the agency's primary regulatory instrument. It argued the FDA had failed to ensure the safety of GMOs because the tests carried out favoured the agbiotech industry. The lawsuit publicly raised questions about the adequacy and accountability of regulatory procedures, and forced the government to make information about internal disagreements, decision making procedures, and the basis of its scientific findings public. This information undermined the objective, apolitical stance of the FDA (Schurman and Munro 2003, 118).

More recently, the anti-GM network has used litigation to oppose the release of new types of GM crops. In 2007, the CFS used legal action against the release of GM alfalfa (Pollack 2010a). In 2009, the CFS and the Sierra Club USA filed a similar lawsuit against the FDA's approval of GM sugar beets (Center for Food Safety 2010; Pollack 2010b).[26] The network has had some success with its use of legal action to stop the spread of new GM crops as court rulings have halted or slowed the planting of these crops. The network has argued that regulators failed to conduct adequate environmental impact assessments, taking advantage of the emphasis placed on scientific justification for regulation in the U.S. regulatory system. However, the successes the network has achieved with this strategy may be temporary. Once adequate environmental impact assessments are deemed to have been conducted the planting of these GM crops is likely to go ahead (Kilman 2010). The reliance on litigation as a key tactic highlights how the

[26] For a list of the lawsuits related to GMOs filed by the Center for Food Safety see: http://truefoodnow.org/category/legal-actions/.

anti-GM network in the U.S. is mainly expert-based and lacks grassroots involvement. The network's activities in the U.S. suggest that while grassroots support may not always a necessary component of activist success, grassroots support is an important resource activists can draw on to counter an unwelcoming regulatory climate and the considerable financial resources and influence of corporate actors.

The anti-GM network's use of litigation in the U.S. and its focus on creating legislative change at the state and local levels illustrates how when a political opportunity structure is particularly unwelcoming to activist networks they will look to other targets and levels of government to create change (i.e. through venue shifting). While the network has achieved some minor successes by varying the actors it targeted within the U.S., the political opportunity structure remains largely closed to the network. The U.S. is a strong supporter of the agbiotech industry and it has also sought to promote the industry's interests internationally.

GMOs and the World Trade Organization

The different approaches taken to the regulation of GMOs by the U.S. and EU came to a head at the WTO. In 2003, the U.S., Canada and Argentina filed a complaint against the EU arguing its framework for regulating GMOs discriminated against GM food and was not based on adequate scientific evidence, thereby constituting an unfair trade barrier. They also argued six EU Member States (Austria, France, Germany, Greece, Italy and Luxembourg) violated trade rules by banning GM crops that had been approved by the European Commission. The Commission argued it had never had a moratorium on GM crops; rather, it took a precautionary approach that took time to weigh

the possible risks of GMOs to health and the environment (Pollack 2006; Rosenthal 2004).

On 29 September 2006, the WTO Dispute Settlement Panel (DSP) released its final report, which found several of the EU's measures were not in compliance with the WTO. The DSP was largely unsympathetic to the EU's arguments in favour of the precautionary principle. However, the DSP declined to address the question of whether GM products are safe, thereby failing to endorse the U.S. principle of substantial equivalence. The panel also did not rule on the EU's labelling and traceability requirements for GMOs. Therefore, the ruling was a limited victory for the complainants, especially since the EU's de facto moratorium had ended when the DSP ruled (Lieberman and Gray 2008; Winham 2009). The EU stated it would comply with the WTO ruling, but asked for a reasonable amount of time in which to do so. The EU has since asked for numerous extensions in which to comply with the ruling and has failed to get several Member States to cease their opposition to GMOs. As predicted by commentators when the dispute was filed, the ruling largely failed to open the EU market to GMOs (Lieberman and Gray 2008; Winham 2009). The complainants launched the trade dispute because they felt GMOs were being harmfully portrayed in the EU and elsewhere. They hoped the ruling would serve as a warning to other countries (especially developing countries) that were considering implementing regulations similar to the EU (McAfee 2003b; see also Clapp 2005).

The WTO ruling did not have a significant impact on the anti-GM network's campaign in the EU because the unofficial moratorium had already ended when the DSP

ruled (Interview with representative from Greenpeace European Unit, October 26, 2009). However, the filing of the dispute increased global linkages amongst the members of the network. FoE International, Greenpeace International, Public Citizen, Confédération Paysanne, the International Gender and Trade Network, and the Indian Research Foundation for Science, Technology and Ecology along with over 745 other organizations launched a campaign entitled "Bite Back: WTO Hands off Our Food" in response to the trade dispute (Friends of the Earth Europe 2006). The dispute also raised awareness of GMOs in the U.S. As Young states, "Officials of the U.S. government and the European Commission and representatives of industry associations and civic interest organizations attribute the greater mobilization of civic interest groups in the U.S. at least in part to the publicity surrounding the EU-U.S. trade dispute. The impact seems to have been most pronounced on U.S. consumer organizations" (2003, 474).

A global regulatory framework for GMOs: The Cartagena Protocol on Biosafety

Internationally, GMOs are regulated by the Cartagena Protocol on Biosafety. The Protocol was adopted in January 2000 as a supplementary agreement to the Convention on Biological Diversity and seeks to protect biological diversity from the potential risks posed by GMOs (termed living modified organisms in the Protocol). It endorses the precautionary principle and uses an Advance Informed Agreement procedure to ensure states have necessary information before agreeing to import GMOs. The Protocol also established a Biosafety Clearing House to facilitate the exchange of information on GMOs and assist countries in the implementation of the Protocol. The Protocol entered into force in September 2003. As of August 2010, it has been ratified by 159 states and

the European Commission. However, three of the world's major producers of GM crops (the U.S., Canada and Argentina) have not ratified the Protocol (Cartagena Protocol on Biosafety 2010).

The idea for an international agreement on biosafety emerged in 1992 during the negotiations for the CBD. During the negotiations, participants from the Global South voiced concerns that their rich resources in biological diversity were threatened by the introduction of GMOs. They argued for the creation of a global body to oversee agbiotech. Activist pressure reinforced concerns about GMOs in both the Global South and other regions such as the EU. As Nijar states, "…intervention by the Third World Network, GRAIN [Genetic Resources Action International], RAFI and Greenpeace is widely credited to have led to the call by the G-77 and China for work to begin on an internationally binding protocol and for the Conference of the Parties to endorse their request" (2002, 264). Many governments found themselves confronted with a new technology and a suspicious public, and wanted assurance they would be able to regulate GMOs without challenge, even if regulatory decisions responded to consumer fears or economic considerations, as opposed to scientifically established health or environmental risks (Safrin 2002, 615).

When talks for a Biosafety Protocol began in the early 1990s, the EU did not have significant concerns about GMOs or see the need for an international agreement. The anti-GM network's activities and public opposition to GMOs in the EU in the late 1990s played an important role in altering the EU's negotiating position and shaping the Protocol's outcome. The EU came to favour a strong and successful agreement that

included a precautionary approach (Andrée 2007, 141). As Bail, Decaestecker, and Jorgensen note, "it was necessary for the EU to be seen as actively advocating global action for safety in biotechnology in order to respond to domestic civil society/NGO concerns and to reassure a public extremely concerned about food safety…and increasingly sceptical towards biotechnology" (2002, 167).

The anti-GM network was closely involved in the Biosafety Protocol negotiations. NGOs provided negotiators with scientific, legal, technical and political information. Many government representatives regularly consulted with NGOs to gage their reactions to proposed compromises and seek ideas for alternative solutions. This was especially helpful to delegates from the Global South who supported a strong agreement but lacked sufficient resources to fully engage in the negotiations (Nijar 2002, 267). The anti-GM network had significant influence over the inclusion of the precautionary principle in the agreement, issues regarding socio-economic concerns, and increasing awareness of the Protocol, a factor essential in ensuring a positive outcome to the negotiations (Bail, Decaestecker, and Jorgensen 2002, 173; Gale 2002, 259). Andrée argues the role of NGOs, some scientists, and government officials in advocating for the precautionary principle was significant in the negotiating process, because it allowed a larger group of states to support this negotiating position than if NGOs had advocated a ban or moratorium on GMOs (2007, 141-142).

The primary opponent of a strong Biosafety Protocol was the Miami Group that consisted of Argentina, Australia, Canada, Chile, Uruguay, and the U.S.[27] The Miami Group argued the Protocol should not restrict trade unnecessarily or create transnational food safety regulations (Andrée 2007, 162; Ballhorn 2002). Closely allied with the Miami Group was the biotechnology industry. During the initial years of the negotiations, the biotechnology industry's activities were limited and disorganized. The industry became more active in the negotiating process as it progressed. However, the industry's activities were not particularly well co-ordinated because there was considerable turnover in industry representatives. In 1998, the biotechnology industry attempted to increase its influence over the negotiations by formally organizing into the Global Industry Coalition (GIC) (Reifschneider 2002, 275). Initially, the industry lobbied for the concept of substantial equivalence and argued scientific evidence of harm should be required to restrict trade in GMOs. As the negotiations progressed and the precautionary approach gained support, the industry sought to ensure the Protocol would not be overly trade restrictive (Andrée 2007, 143-144). The biotechnology industry had significant influence over commodities and the exclusion of pharmaceuticals from the agreement, as well as the contained use of GMOs, but otherwise had a limited impact on the outcome of the Protocol. When the Biosafety Protocol negotiations concluded the industry felt it had lost out to the anti-GM network's interests. As a GIC representative stated, "It was perhaps our biggest disappointment… delegates felt so constrained by politics and unrelenting

[27] The U.S. cannot become a Party to the Biosafety Protocol unless it ratifies its parent convention, the CBD. The U.S. participated in the Biosafety Protocol negotiations as an observer, which created further tensions between the Miami Group and other negotiating blocs (Safrin 2002, 609).

activist pressure that they were inhibited from asserting or even expressing their own points of view in the negotiations" (Reifschneider 2002, 276).

Falkner (2009) argues the failure of the agbiotech industry to significantly shape the Biosafety Protocol can be attributed to divisions within the industry itself. There were some regional differences in how industry representatives approached the negotiations. European biotechnology firms were more open to some form of regulatory agreement than their U.S. counterparts who were more confrontational in advocating an anti-regulatory position. However, differences in the lobbying styles of industry representatives were attenuated by the internationalization of the industry, especially in the late 1990s following several mergers and acquisitions. More significant were divisions between the agbiotech and pharmaceutical industries. In response to growing public opposition to GMOs, pharmaceutical companies focussed on ensuring pharmaceutical products were excluded from the Protocol, rather than remaining united with the agbiotech industry. Falkner argues, "…the growing disengagement between the agricultural and medical sectors was to have a lasting effect on the strength of the business lobby in the international negotiations" (2009, 244).

However, while divisions within the industry undoubtedly undermined its position, had it not been for the counter-arguments and public opposition created by the anti-GM network, it is likely that the industry would have had greater influence, and would not have been as divided. The EU used NGOs to put public pressure on the Miami Group to negotiate an agreement. Members of the Miami Group became the target of

considerable criticism, and the group began to develop proposals to create consensus for the agreement with the other negotiating parties (Ballhorn 2002, 109).

The precautionary approach taken towards GMOs in the Biosafety Protocol can be attributed to three factors: public opposition to GMOs in many states (especially the EU); the success of the anti-GM network in advancing the precautionary principle as a key norm both during the negotiations and in many states; and divisions within the biotechnology industry. The inclusion of the precautionary principle in the Protocol cemented it as an important norm in the governance of GMOs and further legitimized the network's arguments. However, the significance of the Protocol and its potential impact is still unclear, especially if the Protocol comes into conflict with the WTO. Eckersley (2004) suggests the WTO has already impacted the outcome of the Cartagena Protocol because its existence and the potential for conflict between the two regimes made its trade restrictive provisions less forceful and extensive than they might otherwise have been.

Conclusion

The anti-GM network has pressured policymakers to take a precautionary approach to the regulation of GMOs. However, the network's ability to shape GMO regulations has been mediated by the impact of political opportunity structures. In the EU, the network generated significant public opposition to GMOs that put pressure on policymakers to adopt a stronger regulatory framework. The political opportunity structure in the EU benefitted the network: the emphasis placed on the precautionary principle in EU policymaking as well as democratic norms of transparency,

accountability, and public participation; opposition to GMOs from key Member States; and food safety crises that decreased public confidence in regulators.

In contrast, U.S. regulatory agencies have been difficult for the anti-GM network to penetrate. The precautionary norm did not have the same resonance in the U.S. that it did in the EU because the U.S. regulatory system has a higher threshold of proof to establish the need to protect against potential harm. The emphasis the U.S. regulatory system places on "science" at the expense social and ethical factors and the confidence the U.S. public had in regulatory agencies meant the network's frames did not have the same resonance that they did in the EU. Due to a lack of strong public opposition to GMOs, regulators did not face significant public pressure to strengthen regulations governing GMOs. The lack of grassroots support for the network in the U.S. has led the network to utilize more expert-oriented tactics such as litigation. While the network has had some success with this strategy, the network's impact continues to be limited by the influence of the agbiotech industry in the United States.

The differing approaches to the regulation of GMOs taken by the U.S. and EU came to a head at both the WTO and the negotiations for the Cartagena Protocol. While the U.S., Canada and Argentina are seen to have largely won the WTO dispute, continued public opposition to GMOs in the EU has meant that the dispute has not significantly opened the European market up to GMOs. During the Cartagena Protocol negotiations, the anti-GM network pressured states to negotiate a Protocol with a strong application of the precautionary principle and supported representatives from the Global South. The

network's efforts both in the negotiations as well as its various domestic campaigns against GMOs helped determine the outcome of the Protocol.

The success of the anti-GM network's legislative campaigns has been mixed. While the network's impact was mitigated by the political opportunity structures where it operated, if the network had not raised public awareness of GMOs and countered the influence of the agbiotech industry, regulations governing GMOs would likely be much weaker. The network's savvy use of frames and tactics helped create openings within political opportunity structures. The network's corporate campaigns also played an important role in strengthening its influence over regulators. This thesis will now turn to an analysis of the network's corporate campaigns in the EU and U.S.

CHAPTER FOUR
THE ANTI-GM NETWORK AND CORPORATE ACTORS

The anti-GM network's legislative campaigns have been complemented by its corporate campaigns. The use of consumer resistance has been one of the most effective tactics utilized by the network. In several instances the network has successfully altered the behaviour of corporate actors even when government regulators were resistant or slow in enacting more stringent regulations for GMOs. The anti-GM network has focussed on two types of corporate targets: agbiotech companies and food manufacturers and retailers.

The anti-GM network's motivations for targeting these two types of corporate actors are distinct because they are located at separate ends of the production chain. The position of a company in a production chain plays a significant role in shaping how a company responds to activist campaigns. At the producer end of the GM production chain are the agbiotech companies responsible for developing GMOs. In targeting the agbiotech industry, particularly Monsanto, the network has sought to draw attention to the safety and necessity of GMOs and the questionable motives and practices of the industry. However, like producers in other industries at this end of the production chain, such as the chemicals industry, agbiotech companies cannot feasibly capitulate to activists' demands because their business is oriented around the production and sale of GMOs. In many instances, including the campaign against agbiotech companies, activists recognize capitulation to their demands may not be possible for the industry in question. Nonetheless, activists may target an industry or company in order to undermine the profitability and reputation of a particular product or practice as well as a firm or

industry's influence over government regulators and other companies in a supply chain. The anti-GM network has also targeted food manufacturers and retailers whose position at the consumer end of the production chain made them much more vulnerable to the network's demands. The network pressured food manufacturers and retailers to exclude GMOs from their products in order to undermine the market for GMOs. This tactic was very successful in the EU, but had only limited success in the U.S. The differing levels of success are due to differences in the industry opportunity structures in the EU and U.S.

Despite its varied impact, the anti-GM network's corporate campaign significantly slowed the spread of GM crops and helped close the European market to GMOs. The network's activities also altered how the agbiotech industry approaches CSR and stakeholder engagement. The success of the network in targeting food retailers and manufacturers demonstrates how activists can create change in an issue area by targeting vulnerable points in a production chain. However, while corporate campaigns were an effective strategy for the network, the long term effectiveness of this strategy is uncertain, especially if public opposition to GMOs considerably decreases. The most significant impact of the network may be in sensitizing the public to the social, environmental, and health consequences of industrial agriculture and helping to encourage the growth of the market for natural and organic foods.

This chapter will first discuss the anti-GM network's campaign directly targeting the agbiotech industry. It will examine the factors that made Monsanto an appealing target for the network. This chapter then analyses the network's campaign against food manufacturers and retailers in the EU and U.S. It analyses why European food

manufacturers and retailers were more vulnerable to the network than U.S. food manufacturers and retailers. Efforts by some members of the network in the U.S. to work with the natural and organic foods industry to develop a private certification system for foods that do not contain GMOs will also be discussed. Finally, this chapter will reflect on the anti-GM network's evolution and long term impact.

The anti-GM network and the agricultural biotechnology industry

When GM crops first became commercially available in 1996, the agbiotech industry was widely viewed as a technological leader with a bright and profitable future. The anti-GM network targeted the agbiotech industry to undermine its reputation and create opposition to GMOs. The network has portrayed the industry as irresponsible, unscrupulous, greedy, and out to gain control of the food supply. Monsanto was an attractive target for the network because it is the industry's most visible face and the market share leader in GM seeds. One activist noted their organization targeted Monsanto despite knowing it would resist their demands because it is by far the largest agbiotech company. The public equates Monsanto with GMOs and the agbiotech industry as a whole (Interview with Canadian NGO, April 14, 2009).

However, the position of agbiotech companies in the product chain made them impervious to the anti-GM network's tactics. Agbiotech is an upstream industry and does not sell directly to consumers. Once the industry's products reach the consumer (as food) they are anonymous unless they are labelled to differentiate between GM and non-GM foods. Activists are aware they are unlikely to change the agbiotech industry's products, but they have caused extensive harm to the industry's reputation and forced it to publicly

defend its products and practices. In targeting the agbiotech industry, the network has sought to draw attention to the unknown effects of GMOs. Yazji and Doh argue companies or industries that utilize new technologies such as GM are vulnerable targets for activist campaigns because "new technologies can raise new questions about whether the associated processes and products are legitimate and appropriate" (2009, 64).

In seeking to negatively impact the reputation of the agbiotech industry and Monsanto, the anti-GM network has drawn attention to Monsanto's history. Monsanto was founded in 1901 as a chemical company and is responsible for the development and marketing of products such as Agent Orange, DDT, Aspartame, and bovine growth hormone. These products have had their safety called into question or have been shown to have extremely detrimental consequences for humans and the environment. The anti-GM network worked to generate public awareness of Monsanto's history. Popular books and documentaries have been released about Monsanto's past and present behaviour and products.[28] Monsanto's history of producing harmful and controversial products meant it was already lacking in positive reputational capital before it was targeted by the network.

For the European arm of the anti-GM network, Monsanto was an appealing target because it possessed features many Europeans associate negatively with the U.S.: arrogance, cultural insensitivity, and superiority. Yaziji and Doh argue companies that are representative of controversial institutions, such as globalization and American culture, are more likely to be targeted by activist campaigns "because they are exemplary representatives of an institution, whose own legitimacy is being challenged by NGOs"

[28] See for example the documentaries and accompanying books The Corporation (2003), The World According to Monsanto (2008), and Food Inc. (2008).

(2009, 64). When GM crops were first marketed and sold, Monsanto dismissed Europeans' concerns about GMOs. This attitude was exemplified in 1996 when Monsanto shipped GM soy to Europe unannounced and unlabeled, despite warnings from European agbiotech executives that this would create future problems for the industry. The anti-GM network was outraged when it discovered Monsanto had purposely flaunted Europeans' right to know what they were eating. The network used this and other incidents to generate public distrust of agbiotech companies and the safety of GM food (Schurman 2004; Charles 2001). Companies viewed as particularly brazen in their behaviour, especially compared to their competitors, are more likely to be the targets of corporate campaigns because activists are more likely to be dissatisfied with their behaviour (Yaziji and Doh 2009, 65-66). These companies are also easier to vilify in the media.

The highly internationalized nature of the agbiotech industry also made it an appealing target for the anti-GM network. Since the mid-1990s, the industry has undergone numerous mergers and acquisitions that saw a handful of large agbiotech companies come to dominate the industry (Falkner 2008, 143-144). Food retailers are highly regionalized; therefore, the network conducted numerous regional campaigns when targeting these actors. In targeting the agbiotech industry, particularly Monsanto, the network gave its numerous regional campaigns a common enemy or target.

The growth of agbiotech has also led to consolidation of the biotechnology and agricultural industries. Agbiotech companies have acquired seed companies to distribute their products. Between 1996 and 1999, approximately 15 billion USD worth of mergers occurred within the global seed industry (whose global market was worth 25 billion

USD). These mergers were largely driven by the agbiotech industry's desire to acquire high quality germplasm, which could further the distribution and development of GM seeds. By 1999, the top three global seed companies were all chemical companies that had moved into agbiotech in the 1990s (Boyd 2003, 26-27; Falkner 2008, 144). Falkner argues the agbiotech industry has "achieved near-oligopolistic, and in some cases monopolistic, control over the supply of seeds such as GM soybeans and cotton in North America. This has become a key source of power for biotech firms, vis-à-vis farmers and regulators" (2008, 144).[29]

Monsanto was particularly active in mergers and acquisitions in the mid to late 1990s. While Monsanto has been involved in the development of agbiotech since the early 1980s, in 1996 the company began to prioritize agbiotech. Monsanto sold off its main chemicals business and used the money to finance further ventures into agbiotech. It aggressively bought up smaller agbiotech companies that had expertise or patents of value to Monsanto. In addition, between 1996 and 1998, Monsanto went heavily into debt financing eight billion USD worth of acquisitions in seed companies. Monsanto's heavy investment in agbiotech made it particularly vulnerable to changes in the fortunes of the agbiotech industry, and the anti-GM network exploited this weakness. As Lord Peter Melchett, a former head of Greenpeace UK's campaign against GMOs stated, "Of all the

[29] Clapp (2007) argues the agbiotech industry's acquisition of seed companies is due in part to structural changes in the agrochemical industry. First, patents on pesticides owned by agrochemical companies have been expiring, allowing for the use of generic versions of these products. By developing GM seeds, whose pesticide resistance was tied to these products and which require farmers to continue to utilize these products as part of usage contracts, agbiotech companies have helped guarantee a future market for their pesticides. Second, it takes longer to develop a new pesticide than a GM seed and it is more expensive to bring a new pesticide to the market as the regulations governing the introduction of new chemical pesticides have become increasingly stringent. While GMOs continue to struggle to gain regulatory approval in the EU, it is easier to gain approval for GM seeds than new pesticides, particularly in the U.S. and Canada where the regulatory systems governing GMOs are less strict than in the EU.

companies in this business, Monsanto is the most committed to agricultural biotechnology. They are no worse than Dupont. But Dupont can survive without GMOs, and I don't think Monsanto can. So we…had an opportunity with them that we did not have with anyone else" (as quoted in Schurman 2004, 257).

The anti-GM network viewed Monsanto's aggressive acquisition of seed companies as evidence Monsanto was attempting to seize control of the world's food supply by gaining control of seeds and preventing farmers from engaging in the age-old practice of seed saving and replanting. Concerns expressed by the network were further legitimized by the industry's practice of having farmers who plant GM seeds sign contracts stating they will not reuse GM seed, will only use specified herbicides, and will be subject the stringent penalties if they do not obey the terms of the contracts. These contracts undermine traditional agricultural practices and integrate farmers into vertical supply chains controlled by large agbiotech corporations (Boyd 2003, 50-51). The anti-GM network's suspicions that the agbiotech industry was attempting to gain control of the seed supply received further confirmation in 1998 when "terminator" technology that prevents plants from reproducing was discovered.

By the late 1990s, the anti-GM network had generated considerable public opposition towards GMOs and the agbiotech industry. The industry countered this negative publicity through a number of initiatives. It sought to shift the discussion about agbiotech away from the environmental and health frames utilized by activists and towards issues such as the potential benefits of biotechnology for food security and the development of new medications. For example, advertising campaigns by companies such

as Hoechst and Novartis focussed on the role of science in the improvement of nature and gaining control over nature in the future (Hellsten 2002, 475; Rosendal 2005, 87).

In the 1990s the agbiotech industry also formed a number of associations to increase its influence over government regulators and better coordinate public relations campaigns. In November 1999, seven of the largest agbiotech companies, including Bayer, Monsanto, Dupont, and Syngenta, formed the Council for Biotechnology Information to publicize positive information about agbiotech. The industry also formed CropLife International in 2002, which is based in Brussels and membership consists of eight of the largest agbiotech companies.[30] In the EU, the largest biotechnology industry organization is the European Association for Bioindustries (Europabio), which also represents the agbiotech sector (Newell 2003, 63, Rosendal 2005, 86).

Monsanto utilized a variety of strategies to repair its damaged reputation. In June 1998, Monsanto invested five million USD in an advertising campaign to inform Europeans about the benefits of GMOs. The advertising campaign was deliberately understated with the message that moral and humanitarian concerns were driving the company's engagement in agbiotech. However, the network had already succeeded in branding both GMOs and Monsanto as reckless and dangerous entities with no benefits for consumers. Activists responded strongly to the ad campaign, utilizing examples such as the terminator gene and farmers who were victims of GM contamination to argue Monsanto was a self-interested and greedy corporation (Charles 2001, 221-223; Rosendal

[30] CropLife International's members are: BASF, Bayer CropScience, Dow AgroSciences, DuPont, FMC, Monsanto, Sumitomo, and Syngenta. CropLife has a number of regional associations including: CropLife Africa Middle East, CropLife Canada, CropLife America, CropLife Asia, CropLife Latin America, European Crop Protection Association, Israel Crop Protection Association, and Japan Crop Protection Association (Croplife International 2010b).

2005, 99). In both the EU and North America, Monsanto also conducted stakeholder dialogues and "listening sessions" with its critics. Monsanto executives publicly admitted the company's actions had been blind, arrogant, and insensitive and pledged to do better in the future (Vidal 2000, 7). Speaking at a Greenpeace Europe conference via satellite in 1999, then Monsanto CEO Robert Shapiro admitted the company must bear responsibility for the strong public opposition to GMOs in the EU. Shapiro stated, "We are now publicly committed to dialogue with people and groups who have a stake in this issue. We are listening." Shapiro went on to state that "Our confidence in this technology and our enthusiasm for it has, I think, widely been seen—and understandably so—as condescension, or indeed, arrogance" (as quoted in Lambrecht 1999). However, by the time the agbiotech industry responded to the anti-GM network, the network's negative portrayal of the industry had come to dominate public opinion, particularly in the EU. The agbiotech industry has been unable to significantly repair its reputation.

The anti-GM network's targeting of the agbiotech industry benefitted both its corporate and legislative campaigns. The network's targeting of the agbiotech industry strengthened its legislative campaign by underscoring the need for effective regulation to govern GMOs. The network's targeting of the agbiotech industry also helped to create public opposition to GM food, putting pressure on food manufacturers and retailers to remove GMOs from their products.

Consumer resistance to GMOs: Targeting food manufacturers and retailers

The anti-GM network has organized consumer campaigns worldwide to persuade food retailers and manufacturers to stop selling GM food. The network hoped pressure

generated through these campaigns would travel up the supply chain to farmers and exporters of GM foods thereby undermining the market for GM crops (Schurman and Munro 2003, 123). As the food manufacturing and retailing sectors are regionally oriented, the network ran a number of separate but connected nationally or regionally oriented campaigns. While the success of the anti-GM network's campaigns against food manufacturers and retailers varied significantly between the U.S. and the EU, corporate campaigns were crucial to the successes the network achieved.

In both Europe and North America, food retailers and manufacturers have experienced increasing competition and corporate consolidation and are fighting for small increases in market share in an already saturated market.[31] In the U.S. the entry of non-traditional food retailers, such as Wal-Mart and Costco, has further increased competition in the food retailing industry (Kopylovsky 2010). Food retailers are extremely sensitive to consumer concerns that might create even small increases and decreases in their market share (Falkner 2008, 180; Roberts 2008). Furthermore, food retailing in the developed world is a low growth industry where sales increases are generally linked to increases in population (Kaufman 2000).[32]

In the food and beverage industry there is high brand awareness amongst consumers, making companies in this industry particularly vulnerable to activist campaigns (Yaziji and Doh 2009, 63-64). Industries where brand names and reputations are important are more vulnerable to activist tactics than industries composed of multiple,

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[31] For example, more than half of the U.S. retail grocery market is controlled by just six retailers: Wal-Mart, Kroger, Albertsons, Safeway, Costco and Ahold. In the early to mid 1980s the top six grocery retailers controlled 20% of the U.S. market (Roberts 2008; Lang and Heasman 2004).

[32] For example, the EU food and drink industry grew by an average of only 1.8% annually from 1995 to 2005 (Kurzer and Cooper 2007, 115).

anonymous firms producing generic products (Schurman 2004, 248). Unlike the agbiotech industry that does not sell directly to consumers, food manufacturers and retailers depend heavily on their brands and reputations. Without brand differentiation, their products have minimal or no distinguishable differences. In the food manufacturing and retailing industry a company's brand and reputation are one of its most valuable assets and its assurance of quality and safety.

Consumers are also particularly sensitive to food safety concerns due to the potential direct health impacts of these products. The salience of food safety concerns in the media in the late 1990s and early 2000s benefitted the anti-GM network's campaigns against food retailers and manufacturers by sensitizing consumers to the potential health threats of GM food. One member of the network who was active in organizing campaigns against food retailers and manufacturers in the U.S. in the late 1990s and early 2000s observed that if consumers were concerned about the environment at all, it was secondary to concerns about what they were eating and feeding their children (Interview with Charles Margulis, CEH, April 23, 2009).

Therefore, the characteristics of the food retailing and manufacturing industries and their close relationship with consumers made them the weakest link in the GMO supply chain. As Schurman and Munro argue,

> …a market can potentially be disrupted by creating a significant problem at any link in the chain. For producers of a particular commodity (or some input in a commodity), this means that it will be impossible to realize the value of a firm's investment unless every other set of actors in the chain—including consumers, who are the final link—cooperates" (2009, 163).

While food manufacturers and retailers were the weakest link in the GMO supply chain, the vulnerability of these actors to the anti-GM network varied depending on economic and cultural circumstances in the various regions where the network conducted its corporate campaigns.

Corporate campaigns against food retailers and manufacturers in the European Union

The success the anti-GM network had targeting food manufacturers and retailers in the EU established this tactic as a key strategy for the network worldwide. In the EU, the network targeted large food retailers and manufacturers and attempted to play one off another in that competitive industry. Activists distributed pamphlets about the dangers of GM foods and stickered foods in stores that contained GMOs. Activists also undertook attention-getting, media-friendly tactics such as filling grocery carts with food, taking them to the checkout, and refusing to pay until the store manager would guarantee that all foods were GM free. Activists dressed up as mutant cows or corn and labelled food containing GMOs as biohazards (Lynas 2004; Thomas 2001). FoE conducted and published surveys that showed the majority of consumers did not want GM food (Schurman and Munro 2009, 172). Shareholder actions were instigated against publicly owned corporations in North America and the EU, demanding that they discontinue their use of GM food (Cox 2000; Maiman 2000, 40). NGOs active in the network also published guides in many countries or regions ranking food retailers and manufacturers on their GM food policies, in order to praise companies that were industry leaders and ostracize industry laggards. As public hostiliy to GMOs grew in the 1990s, consumers also began contacting managers of grocery stores to express their opposition to GMOs

(Schurman and Munro 2009, 174). Once food retailers and manufacturers began to capitulate to the network's demands, representatives from NGOs appeared in the media congratulating companies that excluded GMOs from their products and chastising companies that refused (Schurman 2004, 259).

In summer 1997, in response to public opposition to GMOs, European food retailers requested that U.S. commodity suppliers create separate distribution channels for GM and non-GM food. Commodity suppliers refused retailers' requests due to the cost of segregating GM and non-GM food. Consequently, in November 1997, UK food manufacturers and retailers introduced voluntary labels for products containing GMOs (Falkner 2008, 180-181; Nunn 2000). However, public opposition to GM food continued to increase. Labels aided the anti-GM network's campaign by making it easier for the network to single out foods containing GMOs. As Schurman and Munro state about the introduction of a voluntary labelling scheme by European food retailers:

> Once they decided to label their GM food products, they made themselves vulnerable to losing market share, since the evidence suggested that when given the choice, many customers would prefer not to buy genetically engineered food. Furthermore, labelling their products as genetically modified could make them into direct targets for activists, who would no doubt suggest that the foods they were selling were insufficiently tested and dangerous. Put in this position and highly reluctant to have consumers stop buying their private-label products, many firms decided it was preferable to go GMO free…(2009, 181-182).

In 1998, Iceland Foods, a small food retailer in the UK, announced it would exclude GMOs from all its store-brand products.[33] While Iceland had experienced broad public opposition to GMOs, it was not specifically targeted by the anti-GM network. Rather, the views of company management seem to have been an important factor in

[33] In 1998 Iceland had only 1.6 percent of total UK grocery sales (Falkner 2008, 181).

Iceland's decision. Iceland's CEO Malcolm Walker appears to have had personal reservations about GM food and was sympathetic to the network's concerns. Walker stated he had been motivated by the "terror" of GMOs (BBC 1998). In addition, Iceland gained a first mover advantage from being the first food retailer in the UK to exclude GMOs from its products. In competitive industries a company may choose to capitulate to activist demands in order to differentiate itself from its competitors and gain new customers. Iceland's strategy of going GM free to increase its market share appears to have been successful. One year after Iceland announced it would exclude GMOs from its products the company experienced a 10% rise in sales (Jardine 1999; Phelps 2000, 21). Iceland used its decision to go GM free to market itself as more responsive to consumer concerns. Along with other environmental initiatives, such as installing "green" fridges and freezers in its stores, Iceland bolstered its reputation as an environmentally progressive company and gained new customers. The company's first mover status also allowed it to capitalize on praise from NGOs, such as FoE, for its decision (Jardine 1999; Schurman 2004, 260).

When a company adopts policies advocated by activists, they demonstrate that activists' demands are achievable and substantially weaken arguments by other companies in an industry that activists' demands are infeasible. In response to public opposition to GMOs and Iceland's decision to exclude GMOs from its products, other major European food manufacturers and retailers also announced decisions to go GM free. Between February and April 1999, food retailers including Carrefour, ASDA, Mark's and Spencer, Sainsbury's, Waitrose and Tesco all announced they would no

longer use GM ingredients in their store brand products (Schurman 2004, 256). By 2005, 27 of the largest EU food retailers had excluded GM ingredients from their products in their European or main markets (Falkner 2008, 182).

Leading grocery stores in the UK, Ireland, France, and Italy coordinated their efforts to exclude GMOs from their products. These retailers formed a consortium to increase their leverage over soya producers. They also worked together to put pressure on their suppliers to exclude GMOs from their products, or at least identify GMOs in their production and distribution chains (Falkner 2008, 181). While the anti-GM network aggressively targeted food retailers and manufacturers in the EU, in some instances the network also worked with them to exclude GMOs from their products. In the UK, Greenpeace worked with representatives from major food retailers to locate sources for non-GM ingredients (Interview with Jim Thomas, ETC Group, October 5, 2009). Engagement and in some cases cooperation with companies is an overlooked characteristic of many corporate campaigns, which has become more commonplace as corporate campaigning has evolved over time. By engaging with the companies they are targeting, activists can get a better sense of the challenges facing companies and may be able to help them overcome those challenges.

When European food retailers announced they would exclude GM ingredients from their store brand products, they indirectly pressured food manufacturers to do the same. While food retailers are oriented towards national or regional markets, food manufacturers generally produce for multiple markets using several manufacturing facilities. Consequently, excluding GM ingredients was more difficult and costly for

manufacturers who either had to exclude GMOs from all their products or satisfy different market demands regarding GMOs, both options that would increase production costs for manufacturers. Food manufacturers are also larger buyers of ingredients than retailers; therefore, ensuring a steady supply of non-GM ingredients was potentially more difficult (Kalaitzandonakes and Bijman 2003, 367-368).[34]

Since 1999, major food manufacturers in the EU have committed not to use GM ingredients in their products. Unilever pledged to no longer use GMOs in its products and also only accepts pigs for sausage that have been raised on GM-free feed. Anheuser-Busch, Heinz, Kraft Foods, McVitie's, Nestlé's, Cadbury-Schweppes, RHM, Northern Foods, Pepsi, and Coca-Cola also exclude GMOs from their products sold in Europe. In 2000, Novartis, part of the agbiotech company Syngenta, announced it was eliminating GMOs from all its food products, effectively refusing to provide a market for its own brand of products (Kurzer and Cooper 2007, 116; Schurman 2004, 256).

The anti-GM network's campaign against food retailers and manufacturers played an important role in closing the European market to GMOs. The success of the anti-GM network's campaign targeting food manufacturers and retailers encouraged activists to diffuse this tactic to other regions of the world where the network was active.

Corporate campaigns against food retailers and manufacturers in the United States

Motivated by the success of their campaigns against food retailers and manufacturers in the EU, in the late 1990s, European activists exported this strategy to

[34] Kalaitzandonakes and Bijman note food retailers would not have faced the same expenses or challenges in phasing GMOs out of their store brand products. Retailers do little of their own manufacturing, but large retailers in concentrated markets do have significant buying power. Retailers would have been better able to pass the costs of phasing GMOs out of their products on to their ingredient suppliers and manufacturers (2003, 368).

U.S. activists campaigning against GMOs. The success of the anti-GM network's corporate campaigns in the EU drew more resources into the U.S. arm of the network. At the urging of European activists, U.S. activists targeted several major food manufacturers (Kellogg, Kraft and Gerber), demanding they exclude GM ingredients from their products. All three manufacturers were well known brands with high reputational capital. The network utilized tactics similar to those used by European activists such as protesting at company headquarters dressed in costumes (such as Franken Tony the Tiger) and hanging large banners on company headquarters. The U.S. arm of the anti-GM network also pioneered a new tactic, testing products for the presence of GMOs.

In September 2000, FoE USA discovered taco shells sold by Kraft Foods in the U.S. contained traces of Starlink corn, which had been approved for animal feed but not for human consumption. Several additional brands of taco shells were subsequently found to have traces of Starlink corn. After urging from the EPA, Aventis, the company marketing the corn, voluntarily cancelled its licence for Starlink, but not before product recalls cost food companies over one billion USD (Friends of the Earth USA 2001; Knudson, Lau and Lee 2004). The Starlink incident generated considerable publicity for the network, with stories on GMOs appearing in the *New York Times*, *The Washington Post*, *USA Today* and on CBS news (Prakash and Kollman 2003, 634). However, despite the publicity generated by the Starlink incident and other tactics utilized by the anti-GM network, the network's efforts to target food manufacturers in the U.S. had limited success. Kellogg and Kraft refused to acquiesce to the network's demands and faced little

negative publicity for their decision (Interview with Charles Margulis, CEH, April 23, 2009; Schurman and Munro 2009, 178).

The anti-GM network had more success targeting Gerber. Gerber was targeted because it was a well known company that produces baby food. Companies that market products to babies and children are particularly vulnerable to activist campaigns because consumers are very risk adverse towards these products. Gerber was also an attractive target because it has a large majority of the U.S. baby food market (Interview with Charles Margulis, CEH, April 23, 2009).[35] In May 1999, Greenpeace USA sent a letter to Gerber and other major baby food companies asking them not to use GM ingredients in their products.[36] Shortly after Greenpeace sent the letter to Gerber, Greenpeace was contacted by a reporter from the *Wall Street Journal* writing a story about GMOs in baby food. The reporter was informed of Greenpeace's letter and contacted Gerber for a comment on their GMO policy. Gerber informed the reporter it had received Greenpeace's letter and did not intend to exclude GMOs from its' products. In response, Greenpeace threatened to protest at Gerber headquarters. In July 1999, Greenpeace was informed by the same journalist that Gerber had notified their headquarters in Switzerland of the activists' demands and had decided to exclude GMOs from their products (Interview with Charles Margulis, CEH, April 23, 2009). While Gerber maintained the

[35] In 2007 Gerber had a 79% share of the U.S. baby food market (MSNBC.com 2007).

[36] In spring 1999, Greenpeace also bought samples of dry and jarred baby foods made by Gerber and other baby food companies and tested them for GMOs. The tests showed Gerber's jarred baby food did not contain GM ingredients, but its dry cereal products did. Greenpeace was aware of the test results when it sent its letter to Gerber. When Gerber did not respond to the letter, Greenpeace held a news conference on June 18, 1999 to disclose the results of the tests (CNN 1999).

decision had been pending prior to Greenpeace's actions, it appears Greenpeace's tactics shaped the company's decision.

While the characteristics of Gerber's products made it vulnerable to the anti-GM network, the attitudes of company management and potential media fallout were also likely key factors in the company's decision. Gerber's management in Switzerland had already witnessed public opposition to GMOs in the EU and was concerned about similar opposition occurring in the U.S., especially since the company had been specifically targeted by European activists (CNN 1999). Gerber may have also felt some pressure to phase GMOs out of its products in the U.S. because it had already done so in the EU, making it vulnerable of being accused of a double standard. Additionally, the reporter from the *Wall Street Journal* informed Gerber she was assigned a cover story about GMOs. The network's campaign may have benefited from the potential media coverage, which would likely have been detrimental to Gerber's reputation. As a former Greenpeace USA campaigner stated, "…if we had just targeted Gerber headquarters with a Greenpeace style action, and got coverage on the local TV, I think they would have ignored us. But getting coverage on the front page of one of the two or three national newspapers…they were scared about" (Interview with Charles Margulis, CEH, April 23, 2009).

Food retailers in the U.S. have varied significantly in how they have approached the issue of GMOs. In late 1999, Whole Foods and Wild Oats were the first U.S. retailers to announce they would exclude GMOs from their store brand products. Due in part to the activities of the anti-GM network both companies' customers had expressed concerns

about GMOs (Cox 2000). However, neither company was directly targeted by the network and public opposition to GMOs in the U.S. was never as strong or widespread as in the EU. Rather, these companies' decisions to avoid GMOs in their store brand products can be primarily attributed to their unique position in the food retailing industry.

Both Whole Foods and Wild Oats focus on natural and organic foods. They generally sell to health conscious consumers with disposable income and focus on product quality rather than price. Consumers who shop at these stores generally have an interest in how food is produced, and will pay a premium for natural and organic products. These companies' commitment to offering premium products and their progressive environmental policies relative to the rest of the industry have allowed them to market themselves as a niche food retailer and capture increased market share in the competitive grocery retailing sector. Producers and retailers of luxury goods may be more willing to adopt progressive CSR policies because they are better able to pass added costs on to the consumer than producers and retailers of mass market discount goods that focus primarily on price (Seidman 2003, 384; Zadek 2007, 131).[37] The willingness of these retailers to pre-emptively go GM free illustrates how activist campaigns can create new market opportunities for companies (King and Pearce 2010, 260; Sine and Lee 2009). If the anti-GM network had not raised consumer awareness of GMOs, it is unlikely these companies would have gone GM free.

[37] For example, Seidman argues boycotts against brand-reliant clothing stores, such as the Gap, have been much more effective than boycotts against stores such as Wal-Mart, where consumers are more price sensitive and less informed (2003, 384).

Following the decisions by Whole Foods and Wild Oats, the anti-GM network targeted Trader Joe's. Trader Joe's is a niche market retailer that focuses on natural foods. Activists felt Trader Joe's customers would be sensitive to concerns about GMOs, because they are generally more health conscious than regular consumers. Trader Joe's is also unique in the U.S. food retailing market because of its emphasis on store brand products. About 80% of the products sold by Trader Joe's are store brand (Kowitt 2010). This differentiated the company from other major grocery stores in the U.S., which claimed they were simply "shelves" for products sold by major food manufacturers, such as Kellogg and Kraft (Interview with Charles Margulis, CEH, April 23, 2009). The anti-GM network campaigned against Trader Joe's for most of 2001. The network had consumers email store managers and staged protests at store locations. Activists generated enough emails from consumers to crash the company's internal email system. Activists also protested outside the home of one of the company's executives. In November 2001, Trader Joe's announced it would exclude GMOs from its store brand products (Interview with Charles Margulis, CEH, April 23, 2009; Aoki 2001). Along with brand and reputational sensitivity, corporate culture and the influence of company executives may have played a role in Trader Joe's decision. Trader Joe's was founded as a U.S. company, but since 1979 has been privately owned by one of the two founders of the German grocery retailer Aldi (Kowitt 2010). Aldi had a policy of excluding GMOs from their store brand products in Germany, so the network drew attention to this double standard in the Trader Joe's policies (Interview with Charles Margulis, CEH, April 23, 2009).

Following this success the anti-GM network pressured other food retailers and manufacturers in the U.S., hoping that announcements by their competitors would force them to go GM free. The network targeted retailers such as Safeway and Shaw's, as well as threatening fast food chains such as McDonald's with consumer boycotts. The network had mixed success targeting these companies. Fearing a boycott, in 1999, McDonald's opted not to use GM potatoes for its fries. Similar decisions were then announced by Burger King and Wendy's. Consequently, the three major potato processors, J.R. Simplot, McCain Foods and Lamb-Weston, advised farmers they would no longer buy Monsanto's GM NewLeaf potatoes. As a result, Monsanto pulled the potato from the market. Frito-Lay also announced it would not use GM ingredients in its products (Schurman and Munro 2003, 124; Schurman and Munro 2009, 178; Spears 2001).[38]

However, other food manufacturers and retailers targeted by the anti-GM network refused to exclude GM ingredients from their products. Mainstream grocery retailers were highly resistant to the network's tactics, as were many major food manufacturers. Unlike the EU, where food retailers and manufacturers were surprised by opposition to GMOs, food retailers and manufacturers in the U.S. were prepared to respond to the public's concerns. Mainstream food manufacturers and retailers in the U.S. were also beginning to offer organic products during this period. They argued organic products offered an alternative for consumers concerned about GM food because they do not contain GMOs. Public concerns about GMOs may have helped to create a larger market for organic

[38] Frito-Lay may have been more willing to acquiesce to the demands of the anti-GM network than other food manufacturers because of the company's long-standing farmer network that supplied its manufacturing facilities and allowed the company to control the corn varieties planted by its suppliers (Kalaitzandonakes and Bijman 2003, 368).

foods, and encouraged U.S. food manufacturers and retailers to increase the range of organic products they offer (Interview with Charles Margulis, CEH, April 23, 1999).

Private certification and GM food in North America

In recent years some members of the anti-GM network have shifted their attention to the creation of a private certification standard for non-GM products in response to the resistance of most major food retailers and manufactures in the U.S. to excluding GMOs from their products and the increasing challenge of locating non-GM ingredients. The Non-GMO Project was officially launched in 2009 and aims to ensure the continuing availability of non-GM food choices, particularly in North America.[39] The non-profit Non-GMO Project is a process based standard that uses third party certification to ensure the best practices of GMO avoidance. It requires third party testing of all ingredients that have a GM version, but does not require the testing of finished products (Phone interview with representative from the Non-GMO Project, September 10, 2009; Non-GMO Project 2010). The certification process ensures less than 0.9% of an ingredient contains GMOs (in alignment with labelling laws in the EU). Products that have undergone third party certification can place a Non-GMO Project label on their product. The use of the language "non-GMO" is deliberate because of the difficulty of ensuring any food, even organic, is completely free of GMOs, particularly in North America.

North American activists, many located in small, independent, natural and organic foods retailers, have worked towards the creation of a certification standard for non-GM ingredients since 2003. Activists were motivated to create a private certification standard

[39] While the project was officially launched in 2009, the launch of the "Non-GMO Project Verified" seal on retail products occurred in October 2010.

because of the lack of labelling legislation in the U.S. and the need to ensure consumer choice and information. Activists also originally hoped the creation of a non-GMO standard would help confirm consumer opposition to GMOs in North America and perhaps increase it (Roff 2009).

Due to resource constraints, in 2006, activists united with a number of corporate interests to create a non-GMO certification standard. As Roff (2009) details, this led some activists, including the original director of the Non-GMO Project, to discontinue their work on the standard. As industry has come to dominate the standard, the standard has become explicitly designed by and for food manufacturers as opposed to consumers (as originally envisioned by activists) (Roff 2009). This suggests that while at times activists may benefit from working with sympathetic companies that share common aims, they must also be careful to avoid co-optation by industry. Co-optation can divide activists and may weaken activist networks. Activists may be particularly vulnerable to cooptation in instances where they lack financial resources, significant influence through policy networks, and strong grassroots support.

Food manufacturers and retailers who want to exclude GMOs from their products have pursued the creation of a private certification standard because of the challenges of sourcing non-GM ingredients. For example, Whole Foods is a founding member and major source of funding for the Non-GMO Project.[40] Whole Foods has been active in the initiative due to the difficulty it has had ensuring its store brand products exclude GM ingredients. The company chose to work with other food manufacturers and retailers in

[40] Prior to becoming involved with the Non-GMO Project, Whole Foods had explored the possibility of creating a company specific non-GMO certification process.

the natural and organic foods industry to establish the standard because it felt this would increase its influence sourcing and encouraging the growth of non-GM ingredients (Phone interview with Joe Dickson, Whole Foods, July 22, 2009). Some organic and natural foods retailers and manufacturers have also seen a potential competitive advantage in marketing their products with a non-GM seal, particularly as the organic and natural foods market becomes more crowded. While characteristics such as convenience, service, and quality are important for the food industry as a whole, quality is particularly important for natural and organic foods companies that differentiate themselves from conventional retailers through their product characteristics.

The Non-GMO Project could potentially help create greater consumer awareness of GMOs in North America, just as labelling benefitted the anti-GM network's corporate campaign in the EU. However, the standard does not currently aim to generate greater opposition to GMOs, but rather aims to ensure the continuing availability of non-GM ingredients (Phone interview with representative from the Non-GMO Project, September 10, 2009). Furthermore, the use of the standard is currently limited to natural and organic food manufacturers and retailers.[41] The standard is less likely to be adopted by mainstream retailers, particularly those specializing in low-cost or discount products. The standard will not raise any of the broader social or environmental concerns articulated by the anti-GM network. Roff (2009) argues that because the standard allows for the presence of GMOs below a certain threshold, it legitimates the coexistence of GM and

[41] As of October 2010 nearly 900 products had been verified by the Non-GMO Project. In addition to Whole Foods, retailers and manufacturers utilizing the label for some or all of their products include: Moveable Feast, Earth Balance, Earth's Best Organic, Eden, Grimmway Farms, Kettle Foods, Napa Valley Naturals, Nature's Path, Pacific Natural Foods, Silk and Sunridge Farms (Non-GMO Project 2010).

non-GM crops, which many members of the network argue is unfeasible. The standard could also reduce what pressure there is on U.S. regulators to introduce mandatory labels for GM food. Therefore, the Non-GMO Project's impact is likely to be limited and could even be detrimental to the anti-GM network.

The Non-GMO Project illustrates how the conflict over GMOs in North America has largely become a private consumer conflict. The creation of the standard shows how in an unwelcoming regulatory climate activists may look beyond state-based regulatory action to create change in an issue area. However, these changes may not contribute significantly to activists' broader policy goals and can even undermine the principles on which activists' campaigns are based, particularly if initiatives are co-opted by industry.

The anti-GM network failed to achieve the same level of success in the U.S. that it did in the EU. Since 2003, campaigns against GMOs in the U.S. have been discontinued or dramatically scaled back. Many activists in the network regard the U.S. as a lost cause.

Explaining variations in the anti-GM network's corporate campaigns

The different impacts of the anti-GM network's corporate campaigns targeting food retailers and manufacturers in the EU and the U.S. can be attributed to differences in the industry opportunity structures in the two regions as well as the lack of public opposition to GMOs in the U.S. As noted above, the food retailing industries in the U.S. and EU are extremely competitive. However, food retailers are less concentrated in the U.S. than in much of the EU (Schurman and Munro 2009, 185).[42] Markets where

[42] For example, in the 2000, the four largest grocery retailers in the U.S. accounted for 27% of grocery sales, while the four largest grocery retailers in the UK accounted for 70% of sales. In 1997, the top ten food retailers in Germany had a combined market share of 81% (Cooper 2009, 547; Schurman and Munro 2009, 185).

companies have swiftly adopted policies to exclude GM ingredients following announcements by their competitors are those where food retailing is most highly concentrated (Kalaitzandonakes and Bijman 2003). U.S. food retailers also tend to be regionally oriented. The regional orientation of U.S. food retailers, as opposed to the EU where most countries are dominated by a few national retailers, meant the network had to conduct several regional campaigns against retailers, requiring more time and resources than a single national campaign.

U.S. food retailers also generally place less emphasis on store brand products than European retailers (Interview with Charles Margulis, CEH, April 23, 2009; Kalaitzandonakes and Bijman 2003). European retailers have used store brands to differentiate themselves from their competitors. They have marketed their store brand products as an extension of their brand image, emphasizing high-quality and trustworthiness. In response to the food safety scandals of the 1990s, European food retailers and manufacturers also emphasized the safety of their products. When the public came to regard GMOs as unsafe, retailers felt pressure to ban GMOs so as to not undermine their reputations.[43] As Kurzer and Cooper explain,

> Since customers question the utility and safety of GM foods, and labels help guide their purchasing decisions, retailers use GM-free foods to communicate their commitment to safe foods. Food safety has become a source of branding and retailers employ strategies such as 'house brands' to enhance food trust. The firm becomes associated with the brand, which puts a great burden on the retail chain to guarantee the quality and safety of the brand. There is an added bonus that quality and safety appeal to consumers across different jurisdictions and markets and thus is a relatively cost effective branding tool (2007, 115-116).

[43] In addition, in the mid-1990s, many European retailers were introducing store brand organic and ethical food product lines through marketing campaigns. The use of GM ingredients in their store brands could have undermined the marketing of these products (Kalaitzandonakes and Bijman 2003, 367).

European retailers that were early adopters of policies to exclude GMOs from their products were those that were market leaders in store brand sales (Kalaitzandonakes and Bijman 2003).[44]

In contrast, in the U.S. store brands have generally been marketed as low-cost, value products; therefore, they are less vulnerable to activist campaigns.[45] As Schurman and Munro state, "This rendered the U.S. supermarket industry invulnerable to the kind of tactics that had worked so well in Europe, in which activists helped to create a strong association between high-quality supermarket brands and products that were GMO free" (2009, 185). Additionally, while in the EU it was mainstream companies that first capitulated to the anti-GM network's demands, in the U.S. the niche market nature of Trader Joe's, Whole Foods and Wild Oats allowed mainstream retailers to argue these companies and their customer bases were different.

Food retailers and manufacturers in the U.S. also largely worked together to thwart the efforts of the anti-GM network, supporting Falkner's (2008) argument that business will be less vulnerable to activist tactics when it is united around the same position. Companies in the U.S. may have been more resistant to the demands of the anti-GM network because of confidence that the U.S. regulatory system was not vulnerable to

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[44] Countries with high concentrations in food retailing and significant store brand label sales (the UK, Switzerland, Belgium, France and Germany) saw retailers announce bans on GM ingredients in their store brand products shortly after initial announcements by first movers. Countries with lower food retailing market concentrations and lower private label sales have been less likely to see retailers adopting bans on GM ingredients in their products (Kalaitzandonakes and Bijman 2003, 368).

[45] Interestingly, while store brand sales were generally not significant in the U.S. in the early 1990s and late 2000s, private store brands have become a significant trend within the industry in recent years. Store brands are expected to account for 11% of total supermarket sales in 2010. However, these store brands continue to compete largely on price (Kopylovsky 2010).

the anti-GM network's legislative campaign. In addition, in the U.S., Monsanto would not have been viewed as an "ugly American" corporation and it may have had closer relationships with U.S. food manufacturers and retailers. U.S. food manufacturers and retailers may have been more willing to defend GMOs because they did not want to be excluded from the benefits of future GM crops, which the agbiotech industry promised would have consumer benefits (Interview with Charles Margulis, CEH, April 23, 2009). The Grocery Manufacturers of Association (GMA), an industry lobby group representing food and beverage manufacturers in the U.S., publicly supports GMOs. The GMA submitted numerous comments, letters, and testimonies to state and government agencies and the media in support of GMOs between 1998 and 2008.

While GM food labels were supported by the majority of the U.S. public, the GMA lobbied against labels on GM food (Schurman and Munro 2009). In contrast, European retailers pushed for labels on GM food to reassure consumers. The lack of labels on GM food severely hindered the anti-GM network's U.S. corporate campaign. Frank (2003) highlights how historically labels have played an important role in consumer resistance campaigns by separating out specific products and simplifying participation in boycotts for consumers. Because GM food is not labelled in the U.S. it was more difficult for U.S. consumers to boycott. Boycotts were an extremely effective tactic for the anti-GM network in the EU.

While the industry opportunity structure in the U.S. was less vulnerable to the actions of the anti-GM network, the lack of public opposition and concern about GMOs in the U.S. was also an impediment to the network's success. Support for GMOs is

positively linked to citizens' trust in government to protect the public and the environment from potential harm. U.S. consumers had greater confidence in government regulators than European consumers who had recently experienced numerous food scares.

Furthermore, the anti-GM network's arguments may not have resonated with consumers in the U.S. to the same extent that they did in the EU, due to the differing cultural significance of food in these two regions. In the EU, the issue of GM food is connected to the powerful cultural significance of food and agriculture for many Europeans (Finucane 2002). As Schurman states, "National cuisines in many Western European countries are a rich source of pride for people, and form a critical part of their histories, cultures and identities" (2004, 261). Food generally has less cultural resonance in the U.S. where greater emphasis is placed on convenience and price (Toke 2004, 185; Schurman and Munro 2009, 186).

Within the EU the role of the family farm in agricultural production is also viewed as culturally significant. The lack of large tracts of wilderness in much of the EU, make the family farm an important repository of biodiversity that would be wiped out by the further expansion of large scale monoculture (Prakash and Kollman 2003, 628).[46] While European ENGOs have long been concerned about the impact of agriculture on wildlife, the main environmental groups in the U.S. are primarily concerned about the protection of wilderness areas (Toke 2004, 184). However, while cultural factors may have contributed to the differing levels of success the network experienced in the EU and U.S.,

[46] These arguments had particular resonance in the UK, where a key frame utilized by the anti-GM network has focused on the threat that GM crops pose to birds, and the potential of GM crops to reduce the variety of birds (Kurzer and Cooper 2007, 107).

it is important not to overstate cultural differences (e.g. Toke 2004), especially given the cultural diversity of both the U.S. and EU. Rather, political, economic and cultural factors combined to create an unwelcoming political economic opportunity structure for the network's campaigns in the U.S. While the network was not as successful in the U.S. as it was in the EU, it did have a discernable impact on the fortunes of the agbiotech industry worldwide.

Evaluating the impact of the anti-GM network's corporate campaign

At its peak, the anti-GM network had a significant impact on the agbiotech industry. A fear of losing their export markets led many farmers to choose not to grow GM crops. In the late 1990s, U.S. sugar refiners asked U.S. farmers not to grow GM sugar beets and the Flax Council of Canada prevented GM flax from being grown commercially (International Herald Tribune 2005; Young 2003, 467-469).[47] In 2004, Monsanto abandoned its plans to introduce GM wheat due to strong opposition from North American farmers. Monsanto spent seven years and hundreds of millions of dollars developing Roundup resistant wheat. However, farmers feared consumer resistance to GMOs in the EU and Japan would significantly hurt wheat exports if cross pollination or mixing during storage and transport occurred between GM and non-GM wheat (Brown 2004). Concerns about the loss of export markets for GM wheat were compounded by the nature of global wheat production. Wheat is grown primarily for human consumption, unlike crops such as soy and canola that are primarily processed into animal feed or

[47] In recent years North American farmers have been willing to grow GM flax and GM sugar beets.

intermediate products such as oil. Therefore, wheat is more susceptible to consumer opposition (Falkner 2008, 184).

Producers of GM crops also sought to mitigate the impact of the EU's GMO regulations and Europeans' opposition to GMOs by separating GM crops from non-GM crops for export, despite the refusal of U.S. commodity suppliers to do so a few years earlier. U.S. corn refiners and the American Soybean Association worked to ensure GM and non-GM crops were kept separate. However, this strategy was difficult to implement in the U.S. commodity-based agricultural system where crops are gathered from farms and transported in bulk to grain elevators for distribution. The commodity-based agricultural system means the possible presence of GM crops that are banned in the EU can threaten the export potential of an entire crop (International Herald Tribune 2005; Young 2003, 467-469).

Monsanto and the rest of the agbiotech industry underestimated the powerful impact public opposition to GMOs would have on their markets. The industry lacked an understanding of the distribution of power throughout its supply chain. Agbiotech companies viewed farmers as their customers, rather than recognizing that their ultimate customer was the consumer, and that it was consumers and food retailers and manufacturers who dictated the terms of the supply chain. These factors were exacerbated because the characteristics of the first GM crops (BT and HT resistance) were attractive to farmers, but did not provide any direct benefits for food manufacturers and retailers or consumers. Food manufacturers and retailers, particularly in the EU, felt they were taking

on the risks of marketing this new technology to consumers without experiencing any commercial gains. [48]

The reduction in markets for GM crops had a significant financial impact on the agbiotech industry in the late 1990s and early 2000s. Much of the venture capital flowing into agbiotech began to dry up in the late 1990s. Many leading companies in the industry were bought out, spun off to preserve corporate profitability, or forced to merge with other TNCs. In December 1999, two major biotechnology companies, Astra Zeneca and Novartis AG, announced plans to merge into Syngenta and shed their agricultural divisions. Aventis announced plans to sell its agricultural division, Aventis CropScience, in a deal negotiated with Bayer AG in October 2001. Pioneer Hi-Bred was bought out by Dupont in 1999 (Buttel 2003, 169; Morrow 1999; Wassener 2001).

Monsanto also experienced financial challenges in the late 1990s and early 2000s. The company had significant debt due to its three year, eight billion USD acquisition spree of agricultural companies and small agbiotech firms and its share price plunged in late 1998 and 1999. Monsanto was forced to seek out a buyer. In March 2000 it merged with Pharmacia and Upjohn in a deal motivated by its pharmaceutical assets rather than agbiotech assets. The newly merged company then spun off its agbiotech component so it could be sold to raise the company's share price. In 2002, Pharmacia divested itself entirely of Monsanto (Boyd 2003, 52, Gilbert 2002). As Boyd states, "For a company that

[48] In recent years the agibiotech industry has introduced products that do benefit consumers and food retailers and manufacturers. For example, Monsanto's Vistive soybeans can reduce or virtually eliminate trans fats in processed soybean oil and are being utilized by companies such as Kellogg and KFC. Vistive Gold soybeans make oil that is trans fat free, has reduced saturated fat, and can be used for a range of baking and frying applications (unlike Vistive soybeans). They are currently undergoing regulatory approval and are expected to be approved in North America in 2011 (Barrionuevo 2005; Monsanto 2010).

seemed to be making all the right moves as far as Wall Street was concerned the turnaround in Monsanto's fortunes has been stunning" (2003, 52).

Thus, in the early to mid-2000s it looked as though by targeting weaknesses in the agbiotech industry's supply chain and closing the European market to GM crops, the anti-GM network had severely impacted the profitability of the agbiotech industry and slowed or halted the spread of GM crops worldwide. While the network was far less successful in the U.S., the size of the European market meant the EU's rejection of GM crops had global repercussions. However, the successes achieved by the anti-GM network appear more limited today and the long term impact of the network is unclear.

The percentage of crops grown globally that are GM continues to rise. Additionally, the new generation of GM crops offer health benefits for consumers (such as lower transfats), which may increase public acceptance of the technology and make food manufacturers more willing to utilize GM ingredients. Contamination of non-GM crops by GM crops is also an ongoing problem.[49] As increasing numbers of farmers adopt GM crops, it will become more difficult for food retailers and manufacturers in the EU and elsewhere to locate non-GM ingredients at a reasonable cost. Kurzer and Cooper (2007) note that in the future European consumers may see a discernable rise in the cost of non-GM food compared to GM food. This may make European consumers more willing to purchase GM food (especially as there have been no major health scares associated with GMOs), and make it more difficult for the anti-GM network to sustain public opposition to the technology. As the European Commission no longer has a de

[49] It is estimated GMOs are now present in more than 80% of packaged food products in the average U.S. or Canadian grocery store (Non-GMO Project 2010).

facto moratorium on GM crops, consumer resistance remains key to ensuring the EU market for GMOs remains limited. Furthermore, since about 2003, the anti-GM network has become smaller and less active and visible, especially in North America. The mainstream media in North America now devote little or no attention to GMOs because they view the issue as stale. This has made it difficult for the network to sustain public interest in GMOs (Interview with Canadian NGO, April 14, 2009; interview with Charles Margulis, CEH, April 23, 2009).

Perhaps the most lasting impact of the anti-GM network has been to create greater awareness amongst the public about how food is produced and the social and environmental impacts of industrial agriculture. However, the corporate campaign tactics utilized by the network such as boycotts and private labelling schemes have also offered implicit support for the neoliberal market and the importance of the individual consumer. The anti-GM network and the sustainable foods movement have altered markets for food production, but have not substantially reshaped them. Roff argues that, "…if the entrance of Wal-Mart and other big-box retailers into the alternative foods market is to tell us anything, it is that consumption is not the hammer that will free consumers from the chains of capitalist political economies. There is too much money to be made in niche markets" (2007, 515). Not all consumers have equal ability to participate in the market and ability to purchase natural and organic products. However, it is understandable that the anti-GM network has adopted these market-centric tactics due to their effectiveness. It should also be noted that the network continues to also campaign for stronger regulation to govern GMOs in both North America and the EU. Thus, the corporate component of

the anti-GM network's campaign can be seen as both a stepping-stone to legislative change and a second best outcome to stronger regulatory change.

The Global South will play a significant role in determining the future spread of GM crops. Rising food prices, concerns about the impact that climate change will have on agricultural productivity, and the increasing affluence of populations in countries such as China and India have created new food security concerns for many countries in the Global South. While countries in the Global South advocated for a strong precautionary approach to GMOs during the Cartagena Biosafety negotiations, a number of developing countries have approved GM crops for cultivation including India, China, South Africa, Brazil and Argentina. While some countries, particularly in Africa, remain concerned about the impacts of GMOs, there is now considerable diversity in how countries in the Global South approach GMOs. Countries, such as China, are developing their own domestic agbiotech industries which may make them stronger proponents of GMOs on the international stage (The Economist 2008; 2010; Pollack 2008). Both the anti-GM network and the agbiotech industry are increasingly engaging in debates over GMOs in the Global South, signalling the pivotal role these countries will play in determining the technology's future.

The agbiotech industry has also evolved in how it responds to its critics. One industry representative admitted the industry was naïve in how it approached the introduction of GMOs, but that the industry's attitude towards public engagement and transparency has changed (Interview with Jill Maase, Croplife Canada, May 8, 2009). The industry now strongly emphasizes its CSR activities. The industry's promotion of GM

food focuses on the economic, environmental, and food security benefits it argues the technology offers (see Williams 2009). For example, Monsanto's corporate publications emphasize its "Pledge," which lists the following company guiding principles: integrity, dialogue, transparency, sharing, benefits, respect, act as owners to achieve results, and create a great place to work (Monsanto 2006). Monsanto's website and publications stress its relationship with farmers in various regions of the world and argue farmers choose to grow Monsanto's products because of the benefits they provide. Monsanto has announced a commitment to "sustainable yield." It argues it will help farmers double their yields of corn, cotton, soybeans and spring-planted canola by 2030 (from the base year 2000), while also reducing the soil and water resources used to grow crops and the greenhouse gas (GHG) emissions emitted (Monsanto 2009b, 2; see also Langreth and Herper 2010). Monsanto's CSR initiatives and arguments regarding "sustainable yield" have drawn on public concerns about climate change and the recent food crisis. In drawing on these concerns, Monsanto is portraying itself as providing easy or painless technological fixes to social and environmental problems, especially compared to the alternatives to industrial agriculture advocated by the sustainable food movement and the solutions to address climate change advocated by environmentalists. Monsanto has also rebounded from the financial challenges it faced in the late 1990s, suggesting broadening public acceptance of GMOs and the diminishing influence of the anti-GM network.[50]

[50] Monsanto's sales increased by an annualized 18% from 2004-2009, and its annualized return on capital was 12% over this period (Forbes 2010). However, in October 2010, Monsanto's share price had fallen about 42% since the beginning of the year. The company's share price peaked at $140 a share in mid-2008, but in October 2010 had fallen to $47.77 (Pollack 2010a).

Table 3: Characteristics influencing the vulnerability of corporate actors to the anti-GM network	
CHARACTERISTIC	IMPORTANCE
Organizational Characteristics	
Location in production chain	High
Orientation of markets (i.e. regional or global)	Varies
Economic Characteristics	
Brand name and reputation	High
Product line	Moderate
Competition within an industry	High
Creation of new markets	High
Cultural Characteristics	
Company management	High
Influence of employees	Low
Corporate culture	High
Home state	Moderate

Conclusion

The anti-GM network ran a number of corporate campaigns that targeted the agbiotech industry and food retailers and manufacturers in a variety of markets (see Table 3 for characteristics that impacted the vulnerability of corporate actors to the anti-GM network). The network's corporate campaign directly targeting agbiotech companies, particularly Monsanto, did not have a substantial impact on these companies' behaviour. However, it was effective in demonizing the industry and the technology. More effective were the network's campaigns against food manufacturers and retailers, especially in the EU. The industry opportunity structure in the EU was particularly vulnerable to the network's campaign, and food retailers and manufacturers quickly acquiesced to the network's demands because of strong public opposition to GMOs. In the EU, the success of the network's two-prong strategy of conducting corporate and legislative campaigns severely circumscribed the market for GMOs, and had repercussions around the globe. Buoyed by the anti-GM network's success in the EU, particularly in targeting food retailers and manufacturers, activists had high expectations when they exported these

tactics to the U.S. However, the political economic opportunity structure in the U.S. was much less vulnerable to the network. Strong government support for the agbiotech industry, differences in the food retailing market, and a lack of public opposition to GMOs were significant impediments to the network's success in the U.S.

Thus, while the anti-GM network had a global impact on the spread of GMOs, the extent to which its tactics and frames reverberated depended on the context in which they were employed. Activists must be mindful of differences in industry opportunity structures when diffusing tactics to new contexts. Differing success rates of corporate campaigns against the same industries in different markets will be most pronounced when companies are oriented towards national or regional markets, even if the companies in question are TNCs.

The case of the anti-GM network's corporate campaign suggests corporate campaigns may create only limited change in issue areas when they are not accompanied by legislative change. It is significant that the anti-GM network in the EU achieved successes with both its legislative and corporate campaigns, while both arms of the network's campaigns in the U.S. were largely unsuccessful. In some instances activists may be able to alter how companies view their market opportunities. Companies may respond positively to activist demands because they believe adopting policies in line with those demands may improve or protect their reputational capital and allow them to capture increased market share. However, in situations where companies or industries have significant sunk costs in a specific product, they are likely to resist changes demanded by activists. When governments are also sympathetic to or supportive of the

industry in question, the success of an activist campaign may depend heavily on public opposition. Public opposition is difficult for activists to sustain over the long term, especially if the media comes to regard an issue as old as has been the case with GMOs in North America. While food retailers and manufacturers, particularly in the EU, have perceived economic benefits from responding positively to the anti-GM network's demands, it is unclear how long retailers and manufacturers will continue to exclude GM ingredients from their products, especially if public opposition to GMOs diminishes and non-GM food becomes more expensive. Thus, it is uncertain to what extent the successes achieved by the anti-GM network will be long lasting.

CHAPTER FIVE
THE E-WASTE NETWORK

In recent years the rapid obsolescence of high-tech gadgetry has received increasing attention, as the disposal of electronics such as computers and cell phones have created massive amounts of toxic e-waste. In the mid-1990s, a group of activists formed a network to address the e-waste problem. The e-waste network has raised public awareness worldwide about e-waste. The network has adopted a two-prong strategy that consists of a legislative campaign and a corporate campaign. The legislative campaign has focussed on lobbying for the passage of e-waste take-back laws. The corporate campaign has focussed on getting electronics manufacturers to take-back their products at the end of their useful life for free and make their products more sustainable. The network sees the voluntary phase out of toxic chemicals, such as PVC and BFRs by electronics manufacturers as key to increasing the environmental sustainability of electronics. Policymakers and electronics manufacturers have also been pressured to pass and support regulation that addresses the illegal export of e-waste and to better enforce current regulations prohibiting e-waste exports.

The e-waste network has used a variety of collective action frames to bring attention to the e-waste problem and communicate its arguments. The network's frames have been very effective at generating significant media attention and pressuring electronics manufacturers and policymakers. The e-waste network's frames have created and widened openings in political and industry opportunity structures worldwide. Frames utilized focus on the impacts of mass consumption and waste, emphasize the concept of

environmental justice, and draw further attention to the potential impacts of hazardous chemicals in consumer products. In addition to drawing attention to the e-waste problem, the network has advanced concrete solutions. The network has advanced the norm of individual producer responsibility (IPR), a waste management principle that makes producers responsible for the disposal of their products at the end of their useful life.

This chapter argues the e-waste network's effective use of frames has created widespread awareness of e-waste, placed it on the policy agenda in many states, and created new incentives for corporations to produce greener electronics. If the e-waste network had not created these openings within the political economic opportunity structure it would have failed to create change in the issue area of e-waste. This chapter first describes the e-waste problem and the impacts e-waste has on humans and the environment when not disposed of properly. It then discusses the history of the e-waste network and its membership. This chapter then examines the frames and arguments utilized by the network, including the norm of IPR. Finally, the media's impact on the e-waste network's campaign is discussed.

E-Waste: The dark side of the information revolution

A wide variety of obsolete electronic products are classified as e-waste including: computers; cellular telephones; televisions; small appliances, such as hairdryers, air conditioners, and toasters; and large appliances, such as refrigerators. E-waste is the fastest growing component of the municipal waste stream in both the U.S. and the EU. In 2007, the U.S. generated 3.01 million tons of e-waste; only 410,000 tons or 13.6% of which was recycled. The amount of e-waste generated will continue to grow as

populations in developing countries increasingly adopt new information technologies (ETBC 2010a; Greenpeace 2008a).

The vast amount of e-waste generated is partially due to the rapid obsolescence of electronics, especially high-tech devices, which have a short lifespan and are frequently upgraded. For example, the average lifespan of a computer in developed countries dropped from six years in 1997 to two years in 2005. Cellular telephones have a lifecycle of less than two years in developed countries (Widmer et al. 2005). To increase market share and ensure ongoing growth, software, chip, and hardware manufacturers put a premium on designs that remake product lines every two to three years. Electronics are generally difficult and expensive to upgrade or repair, especially compared to their replacement cost (Iles 2004, 79). This rapid obsolescence can be viewed as 'planned obsolescence,' which the e-waste network has linked to Moore's Law. Moore's Law refers to Intel founder Gordon Moore's 1965 prediction that the computing power of electronics would double every 18 months to two years, which the electronics industry has striven to maintain (Intel 2005). The industry has also endeavoured to ensure electronics are frequently replaced rather than upgraded (Byster and Smith 2006a, 209-10). The frequent replacement of electronics has been further fuelled by consumerism. As Slade argues:

> …modern consumers tend to value whatever is new and original over what is old, traditional, durable, or used. Advertising and other marketing strategies have helped to create this preference by encouraging dissatisfaction with material goods we already have, and emphasizing the allure of goods we do not yet own. When dissatisfaction and desire reach a peak, we acquire the new and discard the old. Electronic waste is simply the most extreme form of this consumer behaviour (2006, 264-265).

While the information revolution and the electronics industry have been praised for bringing the world closer together and making many everyday tasks easier, these innovations have come at a high environmental price. Electronics have adverse environmental consequences at the beginning of their lifecycle when they are produced and at the end of their lifecycle when they are discarded. The negative consequences of the production process for electronics ranges from the environmental degradation and harmful social impacts caused by the mining of materials such as silver, gold, copper, and coltan, to the environmental and human health impacts caused by the production of components for electronics, such as silicon chips. The production of electronics is extremely resource intensive and requires massive amounts of chemicals, water, and energy. The manufacture of a single silicon chip requires 1.7 kilograms of fossil fuels and chemicals and 32 kilograms of water. Many materials used to manufacture electronics are known or suspected carcinogens or reproductive toxins (Byster and Smith 2006a).[51]

Electronics are also highly toxic at end-of-life. E-waste contains over one thousand different substances, many of which are toxic: lead, cadmium, mercury, BFRs, and PVC. Due to a lack of public awareness and limited availability of proper disposal options in many areas, a significant amount of e-waste is disposed of in landfills where it leaches toxic chemicals into soil and groundwater. About 70% of heavy metals (mercury and cadmium) in U.S. landfills come from e-waste. Consumer electronics make up 40% of the lead in landfills (Widmer et al. 2005, 444).

[51] This thesis focuses on the end-of-life impacts of the electronics industry. For more information about the environmental, social, and health impacts of the electronics production process see Grossman 2006; Smith, Sonnenfeld, and Pellow 2006.

The proper disposal of e-waste requires specialized processing because of the toxic substances it contains. Recycling e-waste is a difficult and expensive process that involves both manual labour and sophisticated machines to safely dissemble and separate components of used electronics. To turn e-waste into saleable commodities, plastic and metal scrap must be processed by feeding it into gigantic shredders that cost millions of dollars. Recyclers must also pay for the handling and disposal of toxic components, such as lamps that contain mercury. Therefore, responsible e-waste recyclers must charge a fee for their services to make a profit (U.S. GAO 2008).[52]

Because of the cost of responsibly recycling e-waste, large amounts are transported from developed countries to parts of the Global South. The recycling of electronics has become as globalized as the production process for electronics, with populations in the Global South bearing the majority of the electronics industry's environmental and health costs from both production and disposal. Regions such as the Guiyu area in South China, Bangalore and Delhi in India, Ghana, and Lagos, Nigeria are common destinations for illegal e-waste exports. E-waste shipped to developing regions is purchased by brokers from scrap dealers in the developed world. The export of e-waste is regulated by international law under the Basel Convention, which regulates toxic wastes, as well as national laws in many countries.[53] However, enforcement of e-waste export

[52] The cost of collecting and processing e-waste varies widely depending on the type of product and its age. Some products, such as large servers, can be recycled for a profit because of the raw materials that can be recovered or because they can be refurbished.

[53] The Basel Convention regulates trade in e-waste by requiring exporting countries to notify countries where imports are destined and seek their permission. However, electronics that are labelled for reuse are not defined as hazardous wastes, creating a significant loophole in the Basel Convention. While the Basel Ban would prohibit the export of hazardous waste from industrial to developing countries, it has not yet entered into force due to insufficient ratifications by national governments (Iles 2004, 99-100).

laws is often lax in both exporting and importing countries (Iles 2004, 76; see also BAN 2002). Containers of e-waste shipped to the developing world are often labelled as used computers for reuse to circumvent laws forbidding trade in e-waste; however, the majority of electronics shipped are useless garbage. The illegal export of e-waste is detrimental to legitimate recyclers, who find it hard to compete with the lower costs charged by fraudulent recyclers who export used electronics to buyers in developing countries.

In locations such as Lagos, a small proportion of imported electronics are repaired or refurbished. However, the vast majority of imported electronics are garbage and end up in informal or formal dumps where they leach hazardous substances or are burned in the open air in populated areas (BAN 2005).[54] In other regions such as China and India, e-waste exports are dismantled for materials recovery. Workers sort e-waste and remove valuable materials, such as gold and copper, using primitive methods such as open-air burning and acid baths. E-waste processing zones in these regions are generally indifferent to labour, health, and environmental standards, and are difficult to regulate because they are small, numerous, and straddle the informal sector. Workers are often migrants with limited employment options (Agarwal and Wankhade 2006). As Mundada, Kumar and Shekdar state about India's e-waste industry, "…all the imported e-waste from countries like the U.S. is dismantled and processed in some areas of Delhi…by burning, smashing and tearing apart electronic wastes to scavenge for precious metal. In

[54] Recycling is not as prevalent in West Africa as in Southeast Asia, in part because West Africa is further from markets where recycled commodities are sought (U.S. GAO 2008, 21).

the process, labourers unwittingly expose themselves and their surroundings to toxic hazards including lead poisoning, chemical blindness, etc." (2004, 273).

The emergence of the e-waste network

In response to the negative social, health, and environmental consequences of e-waste, a transnational network of activists has emerged—the e-waste network. The e-waste network can trace its origins to NGOs concerned with the impact of electronics production on human health and the environment, as well as the issue of toxic waste. In the 1980s, activists raised concerns about the impact of the semiconductor industry on the environment and worker health and safety in areas such as Silicon Valley in Northern California and Endicott, New York. These regions were home to the manufacturing operations of major electronics manufacturers, such as Hewlett-Packard (HP) and IBM. They experienced serious groundwater and soil pollution due to the improper disposal of chemicals used in manufacturing processes. For example, soil and groundwater pollution in Santa Clara County (Silicon Valley) from leaky underground chemical storage tanks has led to the greatest concentration of Superfund sites in any county in the U.S. Over 80% of this toxic pollution comes from the high-tech industry (Grossman 2006, 78-79).[55] This pollution has created serious health problems, such as abnormally high cancer rates and reproductive problems. The Silicon Valley Toxics Coalition (SVTC), a founding member of the e-waste network, initially formed to protect the health of workers and their

[55] A Superfund site is any land in the U.S. that has been contaminated by hazardous waste and identified for cleanup by the EPA because it poses a threat to human health and the environment. In Santa Clara County many Superfund sites are in densely populated residential areas (Grossman 2006, 78-79).

communities and hold electronics manufacturers accountable for environmental degradation caused by their production processes.

In the late 1990s, activists concerned with the electronics industry's production processes began to look more closely at the industry's downstream impacts, specifically e-waste. This interest in the downstream impacts of the industry was due to two developments. First, in the 1980s and 1990s, electronics manufacturing began to move out of the U.S. and into lower-cost regions, particularly East Asia. With the increasing globalization of the electronics industry, NGOs, such as SVTC, which had originally formed in response to the local impacts of the industry's production processes, began to look beyond their regions to the broader impacts of the industry, including the problems posed by growing amounts of e-waste. Activists realized that if the toxic substances that made the recycling of e-waste difficult could be eliminated, production processes for electronics would also become more sustainable. Second, in 1997 the EU began to discuss the regulation of e-waste. As will be discussed in Chapter 6 of this thesis, negotiations for the WEEE and RoHS Directives were highly contentious, and many electronics manufacturers were strongly opposed to the regulations. NGOs from the U.S. and EU joined together during the negotiations to counteract the power and influence of the electronics industry (Geiser and Tickner 2006). In response to these developments, NGOs working on issues related to the electronics industry began to strengthen their ties to one another. Members of the network, many of whom had previously mainly focussed on the local level, began to build national and international ties to share information and strategies and conduct campaigns across borders (Raphael and Smith 2006, 247).

Table 4: Members of the E-Waste Network	
GEOGRAPHIC FOCUS	NAME OF ORGANIZATION
Transnational	Greenpeace International*
Transnational	BAN*
Transnational	Clean Production Action
Transnational	ICRT
Regional (EU)	EEB
National (US)	SVTC*
National (US)	ETBC (formally CTBC)*
National (US)	Center for Environmental Health
National (US)	Ecopledge.com
National (US)	Grassroots Recycling Network
National (US)	Friends of the Earth USA
National (China)	Greenpeace China
National (Taiwan)	TEAN
National (India)	Greenpeace India
National (India)	Shristi
National (India)	Toxics Link India*
National (Pakistan)	SCOPE
Sub-National (Texas)	TCE
*Node in the E-Waste Network	

Members of the e-waste network

SVTC played a large role in the e-waste network's formation (see Table 4). In 1982, SVTC was formed in San Jose in response to groundwater contamination caused by electronics manufacturing. The organization has since broadened its scope and is active on a variety of issues related to high-tech, including e-waste. SVTC's e-waste campaign has a duel focus: getting federal and state legislators in the U.S. to pass e-waste legislation and pressuring electronics manufacturers to take back their products at end of life (Smith 2003; SVTC website). In the 1990s SVTC help form the International Campaign for Responsible Technology (ICRT), an international network of environmental and labour activists, attorneys, and scholars from more than 50 countries (Pellow 2007, 76). The ICRT addresses the lifecycle impacts of the electronics industry.

It advocates for corporate and government accountability in the global electronics industry.

In 2001, SVTC joined with more than a dozen U.S. NGOs to form the Computer TakeBack Campaign (CTBC); a key node in the e-waste network. The CTBC was formed to pressure computer manufacturers to take back their products for free at the end of their useful life. In 2007, the CTBC became the Electronics TakeBack Coalition (ETBC) to reflect its focus on a broader range of electronics, particularly televisions. The ETBC has taken a two-prong strategy to addressing the e-waste problem: a legislative campaign and a corporate campaign. Its goals include: producer take-back for old electronics, increasing the environmental sustainability of the electronics industry, and the passage of e-waste legislation in the U.S. (ETBC 2010a; Raphael and Smith 2006).

In addition to SVTC, the coalition partner organizations of the ETBC include: the Basel Action Network (BAN), the Center for Environmental Health (CEH), Clean Production Action (CPA), and the Texas Campaign for the Environment (TCE).[56] While each of these organizations has a campaign related to e-waste, the focus of their e-waste campaign varies depending on their particular organizational strength. BAN focuses primarily on issues related to the Basel Convention and illegal e-waste exports, as well as running a certification program for electronics recyclers. Due to its previous work with hospitals through Health Care without Harm, CEH mainly focuses on getting large institutional purchasers of electronics, including hospitals and health maintenance organizations (HMOs), to purchase the most environmentally sustainable electronics.

[56] The membership of ETBC also includes a number of coalition member organizations. Unlike the ETBC's partner organizations, these member organizations typically do not have active e-waste campaigns.

CPA advocates for producer take-back in the form of individual producer responsibility. CPA also works with companies (in the electronics industry and other industries) to phase toxic chemicals out of their products. TCE's e-waste campaign focuses on getting U.S. policymakers to pass legislation for responsible e-waste recycling and on getting electronics companies to take back their old products for recycling.

NGOs in the EU and Asia are also active in the e-waste network. The European Environmental Bureau (EEB) has looked at e-waste since the late 1990s. The EEB focuses primary on the WEEE and RoHS Directives, as well as advocating for IPR. Toxics Link India focuses on the health and environmental effects of toxic substances and works on a variety of issues related to e-waste. It has offices in Delhi, Mumbai, and Chennai and acts as a node for over 3,000 organizations and individuals in India, as well as networking with other NGOs internationally, such as BAN and SVTC (Toxics Link, 2010). Other organizations in the Global South connected to the e-waste network include Society for Conservation and Protection of Environment (SCOPE) in Pakistan, Shristi in India, and the Taiwan Environmental Action Network (TEAN) (see Pellow 2007).

Greenpeace International also has an active e-waste campaign. Greenpeace was the first NGO to successfully raise widespread public awareness about the broader transnational toxic waste trade (Pellow 2007, 75). Greenpeace focuses on pressuring electronics manufacturers to take back their products at end of life for free and to phase toxic substances out of their products ahead of legislative requirements. Many members of both the anti-GM network and the e-waste network have worked for Greenpeace, making it a significant node in both networks. National Greenpeace organizations, such as

Greenpeace China and Greenpeace India, also have active e-waste campaigns, which have included a focus on domestic e-waste laws. In addition to the groups listed above, a variety of groups at the local, regional and national levels around the world concerned with the environment, health and labour rights have connections to the e-waste network.

Extended producer responsibility

In addition to utilizing a variety of frames to draw attention to the issue of e-waste, the e-waste network has advanced the norm of extended producer responsibility as a solution to the e-waste problem. Arguments in favour of EPR have been central to the e-waste network's legislative and corporate campaigns. The concept of EPR was first used in 1990 and is becoming an increasingly popular approach to waste management in a variety of sectors. Thomas Lindquist, who coined the principle of EPR in 1990, defines it as "a policy principle to promote total life cycle environmental improvements of product systems by extending the responsibilities of the manufacturer of the product to various parts of the entire life cycle of the product, and especially to the take-back, recycling and final disposal of the product" (Lindquist 2000, v). EPR assumes manufacturers are rational economic actors. When manufacturers become responsible for the end-of-life management of their products they should find ways to minimize the costs of proper disposal through changes in product design (both in materials used and the structure of their products). Among actors in the production chain it is manufacturers who have the highest capacity to increase the environmental sustainability of products at source by changing the design of their products or product system. Van Rossem, Tojo and Lindquist argue this "establishment of a feedback loop from the downstream (end-of-life

management) to the upstream (design of products) is the core of the EPR principle that distinguishes EPR from a mere take-back system" (2006, 5).

Among EPR systems, the most effective are those where manufactures are *individually* responsible for the end-of-life management of their products. IPR is a specific type of EPR. IPR occurs when "a producer takes responsibility for the end-of-life management of his/her own-brand products, whereas collective responsibility involves producers sharing the costs of managing end-of-life products regardless of the brand name based on market share" (Thorpe, Kruszewska and McPherson 2004, 13). However, IPR does not require products to be collected individually. Distinctions between products can be made downstream in the waste management system (Van Rossem, Tojo and Lindquist 2006, vii-viii).

IPR appeals to policymakers because it means the cost of product disposal is no longer passed on to the government and consumers. IPR incorporates incentive mechanisms into regulations so companies continuously improve their products and processes. This differs from traditional command and control environmental regulations where there is little or no incentive for companies to exceed minimum regulatory requirements (Van Rossem, Tojo and Lindquist 2006). Furthermore, while governments can pass legislation to phase hazardous substances out of products, it is difficult to enact laws that address: the amount of recycled materials or components in a product; the choice of non-hazardous materials used; the number of materials in a product; avoid mixes of materials; the balance between materials in a product (e.g. steel versus plastic); and the ease of disassembling a product for recycling (Sundberg 2007). The e-waste

network has also argued EPR is fairer for individual taxpayers, because the price of disposal is included in the price of a product; therefore, taxpayers who consume fewer electronics do not have to subsidize individuals who consume more. The network argues that effective product take-back schemes must be IPR schemes. Both the WEEE Directive in the EU and the vast majority of state-level e-waste bills passed in the U.S. include IPR.

Frames utilized by the e-waste network

In addition to advancing IPR as a waste management strategy, the e-waste network has utilized a variety of frames to raise awareness of e-waste (see Table 5). The network has been able to exert significant control over how e-waste has been framed because it has been primarily responsible for creating awareness of e-waste amongst the public. The frames utilized by the network's opponents have often been reactive in nature. The e-waste network's frames and arguments have varied depending on its audience (policymakers, electronics manufacturers, the public, or the media). However, unlike the anti-GM network who found the resonance of its frames differed depending on the cultural context in which they were utilized, the resonance of the e-waste network's

Table 5: Frames and arguments utilized by the e-waste network

FRAME/ARGUMENT	PRIMARY TARGET AUDIENCE	RESONANCE
Growing amounts of e-waste	Media, public, policymakers	Moderate
E-waste is toxic waste	Media, public, policymakers	Moderate to high
Mass consumption	Media, public	Low
IPR	Policymakers, selected electronics manufacturers	High
Environmental justice	Media, public, policymakers, electronics manufacturers, institutional purchasers	High
Prison labour	Media, public, policymakers	Low
Toxic chemicals in electronics	Media, public, institutional purchasers	High
Data security	Media, public, institutional purchasers	Moderate

frames have not varied significantly in different national contexts. While the EU has been more proactive in addressing the e-waste problem than the U.S., the reason is largely due to different political opportunity structures, rather than the different cultural resonance of the e-waste network's frames in the two regions.

One of the first frames the e-waste network utilized to create awareness of e-waste was the waste frame, which emphasized the growing amounts of e-waste and the rapid obsolescence of consumer electronics. E-waste activists Chad Raphael and Ted Smith discuss how the waste frame was utilized: "Early efforts, such as a 1999 SVTC report entitled *Just Say No to E-Waste* featured mounds of junked computers in city dumps awaiting disposal. These pictures symbolized the impending wave of electronics that would hit the waste stream in coming years, dramatizing the problem of producers' commitment to rapid obsolescence and the government's inability to handle the resulting surge of waste" (2006, 254). While the waste frame was somewhat effective for the network, it lacked a clear agent to blame for the e-waste problem. Furthermore, images of piles of broken computers failed to personify the issue of e-waste and its impacts. While members of the network would like to see the problem of mass consumption and its impact on the environment addressed, the network felt these types of arguments would have little impact on policymakers, electronics manufacturers, and consumers, especially given the economic value of the electronics industry in countries such as the U.S. (Interview with Doreen Fedrigo, EEB, October 20, 2009). The network has tried to address the issues of consumption and the mass obsolescence of electronics indirectly through activities such as advocating for IPR legislation.

In the early 2000s, the e-waste network began to place greater emphasis on the impact e-waste has on humans and the environment through a toxic waste frame. The toxic waste frame is one of the most effective frames utilized by the network. It argues e-waste is toxic waste and draws attention to the impact of illegal e-waste exports on vulnerable populations. As Ted Smith, one of the founders of the SVTC, ETBC, and ICRT, stated about the network's frames: "I think the one that is most effective is that electronic waste is toxic waste. That's still, after all these years, that's still shocking to most people….it is the single strongest argument to get people's attention." (Interview with Ted Smith, ETBC, April 21, 2009).

In spreading the message that e-waste is toxic waste, the network has sought to vividly illustrate the impact of e-waste on vulnerable populations. The network has utilized an environmental justice frame to illustrate the human impacts of e-waste.[57] As Pellow states,

> The transnational environmental justice networks that have evolved to track and combat the e-waste epidemic are clear in their framing of the problem as one rooted in inequalities by class, race, and nation and as perpetrated by both corporations and national governments. They articulate a model of global environmental inequality in a political economy that benefits consumers, private industry, and states in the North (2007, 194).

Benford and Snow (2000) characterize environmental justice as a master frame, due to its broad applicability to a number of social movements and its cultural resonance. The environmental justice frame has strong ties to the civil rights movement, which created a

[57] Iles describes environmental justice as: "…a compelling approach to evaluating the distributive and structural effects of human activities on the health and environment of specific populations….The ongoing processes of environmental degradation are driven in part by the existence and creation of inequalities in the resulting impacts….the global environmental politics of defining problems and shaping change may vary greatly depending on whether actors focus on justice or on something else" (2004, 88).

master frame that legitimates the struggle for rights by disenfranchised groups (Čapek 1993). Within the environmental justice movement there is an emphasis on both the racial and economic causes of environmental injustice. As Pellow states, "environmental inequalities are the product of multiple scales and forms of hierarchy that are layered and intersecting" (2007, 81). The environmental justice frame resonates strongly with NGOs at the local level directly impacted by e-waste, while also allowing local problems to have considerable resonance at the national and international levels.

In 2002, BAN and SVTC released the report and accompanying documentary entitled *Exporting Harm: The High-Tech Trashing of Asia.* This report illustrated the severe environmental degradation and health problems caused by illegal e-waste exports to Guiyu, China. The report included photographs of piles of discarded computers and workers dismantling e-waste in primitive conditions without safety equipment. The cover of the report featured a picture of a small child sitting on top of a pile of partially dismantled e-waste. The report included the results of soil and water samples from Guiyu that showed the severe environmental degradation caused by e-waste. *Exporting Harm* was a turning point for the e-waste network because of the media attention it generated and its role in creating greater public awareness of e-waste (Interview with Ted Smith, ETBC, April 21, 2009). Since the release of *Exporting Harm* the network has published several additional reports documenting the impacts of the illegal e-waste trade. Many of these reports have included accompanying videos posted on NGOs' websites.[58]

[58] See *The Digital Dump: Exporting Re-Use and Abuse to Africa* (2005) by BAN, and the Greenpeace reports *Toxic Tech: Pulling the Plug on Dirty Electronics* (2005a); *Recycling of Electronic Wastes in China and India: Workplace and Environmental Contamination* (2005a); *Poisoning the Poor:*

Reports by the e-waste network have framed the illegal e-waste trade as an example of the exploitation of poorer countries and vulnerable populations by richer countries and populations. The use of the environmental justice frame is illustrated by the following passage in the BAN report, *The Digital Dump*:

> Exporting toxic equipment for re-use to the poor equates to "passing the toxic buck" and environmental injustice: If the solution of handing-down toxic technology from rich to poor becomes the norm on this finite planet and very inequitable economic geography…a very convenient world is being created for some where, in effect, the rich northern countries most capable of managing a hazardous waste problem can wash their hands of the global toxic burden for electronic waste by passing it to countries least able to deal with the problem (2005, 31).

Reports by members of the network have also made use of an activist strategy that combines the use of vivid pictures and testimonials with technical information (in this case soil and water samples from areas where e-waste is improperly disposed).[59] As Keck and Sikkink state, "Both technical information and dramatic testimony help to make the need for action more real for ordinary citizens" (1998, 21). Pictures of small children working in e-waste processing zones or sitting amongst piles of broken computers have been important symbols for the e-waste network. Frames and symbols that draw attention to bodily harm caused to vulnerable individuals, especially children, are generally particularly effective at creating public outrage (Keck and Sikkink 1998, 27). As noted previously, drawing attention to injustices is an important component of effective frames.

Electronic Waste in Ghana (2008b); and *Toxic Tech: Not in Our Backyard: Uncovering the Hidden Flows of E-Waste* (2008a).

[59] While the e-waste network has utilized water and soil samples from e-waste dumping grounds, it has been less able to detail the volumes of e-waste being illegally shipped overseas. Because of the amount of e-waste thrown in the garbage and because e-waste exports are illegal there is a lack of information about the volumes of e-waste disposed of and the volume of the e-waste trade.

More recently, members of the network have also tried to go beyond pictures of nameless e-waste workers in developing countries and give these workers a name and a voice. As one e-waste activist stated,

> …in the past it seems like a lot of the video done on these issues kind of had these nameless people. That it's like these poor people in this developing country. What we've really tried to do is give these people a name, kind of interview the people who are actually impacted so they have a voice, so they are able to talk about the fact that they know that they are dealing, some of them, a few of them, know they are dealing with hazardous chemicals, and how it can impact their children if anything happens to them…we've really tried to frame it in a way where people get to know that these people have aspirations and dreams just like the rest of us do (Interview with lauren Ornelas (sic), SVTC, April 22, 2009).

The e-waste network has singled out actors for blame, particularly unscrupulous e-waste recyclers who claim to safely recycle used electronics, but instead illegally ship them overseas. As Raphael and Smith state,

> *Exporting Harm*…struck a chord because it revealed that much of the equipment delivered to U.S. recyclers was in fact exported overseas. Thus, responsible Americans who made the extra effort to bring their old computers to a recycling centre were in fact the ironic victims of a sham perpetuated by some recyclers (2006, 255).

The network has also utilized photos of illegal e-waste exports that show both electronics manufacturers' logos and ID tags from businesses and governments that owned the computers. Documents such as these photos create a direct linkage between the illegal export of e-waste and these actors and highlight need for them to responsibly recycle e-waste. Attributing blame to specific actors is an essential part of a successful activist campaign. As Keck and Sikkink state, "problems whose causes can be assigned to deliberate (intentional) actions of identifiable individuals are amenable to advocacy

network strategies in ways that problems whose causes are irredeemably structural are not" (1998, 27).

The e-waste network's frames have emphasized the global dimensions of the e-waste problem, as it cannot be fully addressed by a single state. However, the network has also utilized some region specific frames to help create openings in national and regional political economic opportunity structures. In the U.S., the network has at times argued that stopping illegal e-waste exports can create more jobs in U.S. e-waste recycling operations. This argument has commonly been utilized by the network when pressuring policymakers to pass e-waste legislation.[60] The job creation argument counters arguments made by electronics manufacturers that e-waste legislation that includes IPR will lead to financial losses for manufacturers and job losses in regions where IPR is implemented.

The e-waste network has also emphasized the issue of workers' rights in the U.S. In the U.S., the e-waste network has documented the use of prison labour to recycle used electronics. Members of the ETBC investigated e-waste recycling programs run by Federal Prison Industries, a government-owned corporation that does business under the trade name UNICOR. UNICOR is one of the largest electronics recyclers in the U.S. The low cost of prison labour makes the prices UNICOR charges to recycle e-waste extremely low. Prisoners are not protected by labour laws like other workers in the U.S. Prison recycling operations fail to provide adequate safety protection for prisoners dismantling electronics, as well as employees involved in supervising e-waste recycling. The use of

[60] As Ted Smith, Chair of ETBC, testified in 2008 before the House Committee on Science and Technology, "Congress could solve the problem [of e-waste exports to developing countries] by banning the export of these materials to developing countries. This would have the benefit of creating more jobs in this country" (Smith 2008).

prison labour to dismantle used electronics also harms responsible e-waste recyclers in the U.S., who are not able to compete with the prices UNICOR bids for recycling contracts (CEH et al., 2006; SVTC and the CTBC 2003; The Associated Press 2009). The framing of the prison labour issue has been a challenge for the e-waste network, due to many U.S. politicians' desire to appear tough on crime, sensationalist crime coverage in the media, and the political power of prison-related industries (Raphael and Smith 2006, 254). It is likely due to these difficulties that the network has placed less emphasis on the prison labour frame in recent years.

In addition to focussing on environmental justice issues, members of the e-waste network have drawn attention to the chemicals in many consumer products, such as electronics, and their potential health impacts. For example, CPA and ETBC conducted tests on dust swiped from computers and found neurotoxic chemicals on every computer sampled. Chemicals found included polybrominated diphenyl ethers (PBDEs) called deca-BDE, one of the most widely used fire retardant chemicals in electronics. The CPA and ETBC stated the "results indicate that there is exposure to certain brominated flame retardants and that computers are likely to be a significant source of deca-BDE exposure in the dust of homes, offices, schools, and businesses. There is evidence that these chemicals could be hazardous to human health" (McPherson, Thorpe and Blake 2004, 5).

The toxic chemicals frame highlights the potential harm chemicals in electronics pose to individuals, both in developed countries and the Global South. It pressures electronic manufacturers to phase toxic substances out of electronics. Frames that resonate with individual consumers are often effective because they create a personal

connection or outrage about an issue. As Beverly Thorpe of CPA stated with regards to another report sampling household dust:

> …we did something called the dust report and that dust report had huge popular appeal. It was something that consumers could relate to when we did a sampling of vacuum bags from a hundred different houses in the U.S.…And we found that all highly hazardous chemicals we screened for were present in the dust in the vacuum bags.…It was a huge awakening for a lot of people. But then things like, how did I get brominated flame retardants in my home? Well, we pointed out, here are the products that use brominated flame retardants, and if you are buying a sofa or you're buying a carpet, or you're buying electronic products that use brominated flame retardants, they eventually will contaminate the dust in your home and your kid crawling on the floor will be ingesting it more than you the adult. So it was a way again to put pressure on companies (Phone interview with Beverley Thorpe, CPA, October 14, 2009).

Finally, the e-waste network has utilized a data security frame. In documenting e-waste dumped in developing countries, the network found much of the e-waste illegally exported overseas can be traced back to institutional purchasers, including governments at the local, regional, and federal levels (BAN 2002; BAN 2005). In the report *The Digital Dump* (2005), BAN bought a number of hard drives that had been illegally exported to Lagos, Nigeria and had previously belonged to private individuals and U.S. federal and state governments. The report included an appendix with copies of sensitive information recovered from hard drives (with identifying information such as names, addresses, and phone numbers blacked out by BAN). In documenting personal information that can be recovered from hard drives, the e-waste network illustrated that illegal e-waste exports can have detrimental consequences for individuals in developed countries due to identity theft. In documenting information recovered from hard drives previously owned by governments and businesses, the network emphasized that these actors are liable if they do not protect data privacy, and therefore they need to hold the recyclers they use to

stricter standards. However, the network does not emphasize the data security frame to the same extent as the environmental justice frame. This is likely because the data security problem can be separated from the e-waste problem and solved without making the electronics industry more sustainable. Data security issues also do not draw attention to the detrimental health and environmental impacts of e-waste.[61]

E-waste and media exposure

Since the early 2000s, the e-waste problem has received increasing media attention due to the actions of the e-waste network. In particular, the network's documentation of illegal e-waste exports and hazardous chemicals in household products have received considerable media attention. Activists depend on the mass media to communicate messages to a wide audience, as the media offers a space to spread awareness and arguments associated with an activist campaign (della Porta and Diani 2006, 220). Increased public awareness of e-waste was cited by one member of the network as one of the e-waste network's most important successes (Interview with Ted Smith, ETBC, April 21, 2009). As one activist stated, "If you have toxic materials in your computer and TV there isn't a lot you can do. So it is so much more powerful to know that we have the media shining the spotlight on this" (Interview with lauren Ornelas, SVTC, April 22, 2009).

The e-waste network has sought to ensure its frames and tactics resonate in the media. The publication of *Exporting Harm* (2002) was a major breakthrough for the

[61] The fact that the data security problem can be addressed separately from the detrimental social and environmental aspects of e-waste is underscored by the fact that the U.S. has numerous laws dealing with data security, with the first federal law of this nature passed in 1996 (BAN 2005, 28-29).

network in gaining media attention. When SVTC and BAN were writing the *Exporting Harm* report, they realized that if they could get a major story in the news they would increase awareness of e-waste. Through personal contacts members of the network were able to get a story published in the *New York Times* in February 2002 that coincided with the report's publication (see Markoff 2002). Stories about e-waste subsequently appeared in other major U.S. papers including: *The Washington Post*, *The Boston Globe*, *The Chicago Tribune*, the *LA Times*, the *San Jose Mercury*, and the *San Francisco Chronicle* (Interview with Ted Smith, ETBC, April 21, 2009).

The issue of e-waste has also attracted the attention of the television news media. In the U.S., 60 Minutes did a story on illegal e-waste exports in November 2008, and Frontline aired an e-waste story in June 2009. In Canada, CBC News aired a lengthy story on e-waste in December 2008. These news stories documented the illegal export of e-waste from community collection points in Canada and the U.S. to e-waste dumping sites such as Guiyu. The stories also highlighted the work of the e-waste network and interviewed its members. Similar news stories have also appeared in the EU. Television has been a particularly beneficial medium for the e-waste network because the consequences of e-waste illegally dumped in the Global South is easily communicated through pictures. As one representative from an U.S. electronics industry association stated about the impact of television news stories, "I think those types of exposés really help, um, fuel the fire, to incentivize the EPA and then other governments to set tough recycling standards" (Phone interview with U.S. electronics industry association representative, September 16, 2009). In addition, there has also been media coverage of

toxic chemicals in computers and other consumer products. This coverage has aided the network because it has pressured corporations to find alternatives to toxic substances.

The gadget or information technology media has played an important role in generating awareness of e-waste.[62] At times the gadget media has been defensive of criticisms made of the electronics industry and individual electronics manufacturers. However, the gadget media has also provided another outlet where the e-waste network can reach potential supporters, beyond the audiences reached by traditional media (Interview with Tom Dowdall, Greenpeace International, October 28, 2009).

As well as giving greater visibility to the issue of e-waste, and the members of the e-waste network themselves, news stories (both on television and in print) that rely on activists as an expert source have enhanced the network's credibility.[63] This in turn legitimizes the network's goals, such as the principle of IPR. In giving legitimacy and visibility to both the issue of e-waste and the members of the network, the media has increased the network's influence over policymakers and electronics manufacturers.

Conclusion

The e-waste network is a global network of activists who have sought to decrease the detrimental environmental consequences of e-waste. While the network was formed in the late 1990s, its history can be traced back to the activities of activists in the late 1970s and early 1980s concerned about the impacts of the electronics industry's production processes. The network has strong ties to the environmental movement, particularly

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[62] See for example Wired.com, Engadget.com and TechCrunch.com.

[63] The ability of the e-waste network to act as an expert source has likely been bolstered by the previous activities of some members of the network. In particular, SVTC has long links to the media in the Silicon Valley region through its previous work on issues such as underground storage tanks (Interview with lauren (sic) Ornelas, SVTC, April 22, 2009).

campaigns advocating for environmental justice and against chemicals and toxic waste. The success of the network is due in part to its members' past experiences working on issues related to e-waste.

The savvy of activists in the e-waste network is evident in the network's efforts to advance the norm of IPR and its use of a variety of collective action frames. The use of IPR as a key plank in the network's campaigns ensures that in addition to opposing e-waste and attributing blame, the network offers a solution to the e-waste problem. IPR overcomes many of the issues that have posed roadblocks in addressing other environmental problems, such as high costs for governments and taxpayers. Proposing viable solutions is an important part of an activist network's work, in addition to their more visible role in critiquing corporations and policymakers (see Saunders 2011). While providing solutions to the e-waste problem is a key component of the network's activities, the network has also focussed on raising awareness of e-waste. Growing public concern about e-waste has increased the influence of network when pressuring both policymakers and electronics manufacturers. To increase public awareness of e-waste and communicate its arguments, the network has utilized a variety of collective action frames. The environmental justice frame has been particularly significant in the network's work, due to its role as a master frame and the strong personal commitment to environmental justice of many of the activists in the network. The environmental justice frame draws attention to the impact of illegal e-waste exports on vulnerable populations in the Global South. The network has also utilized the hazardous chemicals frame to draw attention to the impact these substances have on humans and the environment. Together with the data

security frame, the hazardous chemicals frame also draws attention to the detrimental consequences the improper disposal of e-waste can have on consumers in developed countries, which are the primary source of illegal e-waste exports.

The e-waste network's effective use of collection action frames and advancement of IPR has been integral to the successes it has achieved. The network's e-waste campaign has consisted of a two prong approach that has targeted both corporate actors (i.e. electronics manufacturers) and policymakers in a variety of jurisdictions. Both types of actors have been vulnerable to the frames and tactics utilized by the e-waste network.

CHAPTER 6
THE REGULATORY FRAMEWORK FOR ELECTRONIC WASTE

Since the early 2000s, numerous regional, national, and sub-national governments have passed legislation addressing e-waste. The passage of e-waste legislation is central to the e-waste network's goals. The network has lobbied governments to pass e-waste legislation which includes IPR, a legislative approach to waste management that requires producers to be responsible for their own products at the end of their useful life. Due largely to the efforts of the e-waste network, IPR has become the predominant legislative approach to e-waste management worldwide. The institutionalization of the IPR norm has faced considerable opposition from electronics manufacturers. Many manufacturers have vigorously lobbied against IPR, arguing it unfairly burdens industry with the responsibility for e-waste disposal and is too costly to implement. Many manufacturers have advanced alternative norms to IPR: shared responsibility for e-waste management and voluntary approaches. By introducing voluntary take-back programs, manufacturers have sought to undermine IPR's legislative approach.

The success of the e-waste network's legislative campaign has varied depending on the power of the electronics industry within different regulatory jurisdictions. In 2002, the EU passed pioneering e-waste legislation, which included IPR. Many electronics manufacturers and the U.S. government strongly opposed the proposed legislation. However, the power of these actors, particularly their discursive power, was undermined by a small group of electronics manufactures. These manufacturers felt their products would give them a competitive advantage if IPR was implemented. These manufacturers

campaigned with members of the e-waste network to advance IPR. The EU's endorsement of IPR legitimated this norm and strengthened the network's efforts to diffuse it to other states. However, the spread of IPR has varied depending on the political opportunity structure in different states. In the U.S., the importance of the electronics industry to the national economy has made the passage of national e-waste IPR legislation unlikely. Instead, the network has focussed on the passage of state-level legislation, where the electronics industry has less influence. Outside the U.S., the network has also had success advancing IPR, especially in countries such as India where the government lacks the infrastructure and financial resources to properly dispose of e-waste.

The diffusion of the IPR norm raises a number of insights about how activists promote norms and create legislative change in an issue area. Much of the IR literature on norms and activist networks focuses on efforts to institutionalize norms in international agreements or organizations (e.g. Price 1998; Keck and Sikkink 1998). The Basel Convention is an international agreement that governs toxic waste including e-waste. However, members of the e-waste network have not focussed significant energy on promoting IPR in the Basel Convention. The network has looked to more welcoming political opportunity structures at the national and sub-national levels due to the weakness of the Convention and the need for IPR to be implemented by national or subnational governments.

The case of e-waste and IPR supports Clapp and Swanston's (2009) argument about the significant role industry actors and material interests play in norm diffusion. While material factors are generally overlooked by the constructivist literature on norms,

the diffusion of IPR illustrates the significant role material interests can play in norm diffusion. The economic benefits IPR offers governments and some electronics manufacturers have been a key factor in the spread of this norm.

Norms can also alter how industry actors perceive their material interests. While material interests are likely to be the most significant factor that leads industry interests to promote particular norms, an increasing number of scholars have drawn attention to the fact that business interests cannot be solely defined by material terms (e.g. Sell and Prakash 2004; Kollman 2008). Looking at the spread of environmental sustainability norms amongst corporate actors, Kollman observes that, "Transnational business actors have engaged with sustainability norms to a far greater extent than the NGO or regulatory threat to their bottom lines would necessitate" (2008, 415). Thus, while material interests play an important role in shaping how business interests approach and internalize norms, more intangible factors can also play an important role in shaping how business actors approach particular norms. As companies have become increasingly concerned about their reputations and as consumers have come to increasingly expect that corporate actors act in a socially responsible manner, certain norms associated with themes such as CSR and sustainable development have become increasingly important (Kollman 2008, Gillies 2010). The e-waste network's arguments and frames have changed how many electronics manufacturers view the e-waste problem; manufacturers are now much more willing to endorse IPR, implement voluntary take-back programs, and voluntarily phase hazardous substances out of their products. While normative concerns can influence the actions of

corporate actors, the case of e-waste illustrates that norms are much more likely to be adopted by market actors if they incorporate material incentives.

This chapter focuses on the e-waste network's legislative campaign and its efforts to advance the IPR norm. It argues the success of the network's legislative campaign has varied depending on the political opportunity structure where it has operated. This chapter will first discuss the passage of the EU's e-waste regulations. The network's legislative campaign in the U.S. is then examined. This chapter will also touch on e-waste legislation passed by other states and sub-national governments. Finally, it briefly discusses the Basel Convention and its impact on the network's legislative campaign.

E-Waste regulations in the European Union

The EU is a leader in e-waste management due to its passage of two pioneering pieces of e-waste legislation on January 27, 2003: the WEEE and RoHS Directives. The WEEE Directive aims to prevent e-waste and promote its re-use, recycling, and other forms of recovery. It is based on the polluter pays principle and institutionalizes the IPR norm. As stated by the European Commission, "The producers of equipment used by private households are responsible for providing financing for the collection, treatment, recovery and environmentally-sound disposal of WEEE deposited at collection facilities" (2008a, 1). Effective July 2006, the RoHS Directive restricted the use of six hazardous substances in electrical and electronic equipment.[64] RoHS aims to make electrical and electronic equipment less hazardous for consumers and easier and safer to recycle.

[64] RoHS bans the use of four heavy metals (lead, cadmium, mercury, and hexavalent chromium) and two brominated flame retardants (PBBs and PBDEs). A few applications of these substances were temporarily exempted until their substitution became scientifically and technically feasible (European Commission 2008b).

The WEEE and RoHS Directives are part of a new type of environmental policy called environmental product policy or integrated product policy, which has been developed in the EU since the late 1990s. This type of environmental policy views products from a lifecycle perspective and shifts the focus of environmental policy and management from cleaner production processes to greener products (Kautto 2009; van Rossem and Dalhammar 2010). The pioneering nature of the WEEE and RoHS Directives can be attributed to the EU's progressive approach to environmental policy and waste management, and the efforts of the e-waste network and a small number of electronics manufacturers who actively supported IPR.

The negotiation of the WEEE and RoHS Directives

The negotiations surrounding the WEEE and RoHS Directives were extremely contentious. In the late 1990s, the European Commission began discussions for the proposed WEEE Directive, which would require electronics manufacturers to take back their products for recycling at end of life. On 21 April 1998, a first draft of the WEEE Directive was released, which proposed that electronics manufacturers be responsible for the cost of collecting used electronics from households (Anscombe 1998). A second draft of the WEEE Directive was released on 27 July 1998, which also called for six hazardous substances to be phased out of electronics by January 2004. Manufacturers opposed the drafts, particularly the proposal to make manufacturers responsible for product take back and the phase-out of hazardous substances (Ziegler 2010). After intensive lobbying by manufacturers, the Commission released a third draft of the WEEE Directive on 5 July 1999 that included several changes amenable to industry's concerns. While the draft

made manufacturers responsible for collecting used electronics, it no longer required them to provide guarantees for financing collection schemes. Rather, the new draft required Member States to ensure the costs of collection and recycling were met by producers. The draft also relaxed the phase out dates for the six hazardous substances (Electronics Times 1999). On 13 June 2000 the Commission released another draft which split the proposed legislation into two Directives: the WEEE and RoHS Directives. This draft extended the timeline for the phase-out of hazardous substances to July 2006 (two and a half years later than the original proposal) (Business Wire 2000).

The electronics industry and the European Union's proposed e-waste legislation

With some significant exceptions electronics manufacturers were opposed to the proposed WEEE and RoHS Directives. In particular, many U.S. electronics manufacturers strongly opposed the proposed legislation. The Electronic Industries Alliance (EIA), an alliance of trade associations for U.S. electronics manufacturers, opposed the legislation.[65] The American Electronics Association (AEA) was also a strong critic of the proposed legislation.[66] The industry criticised the proposed legislation for making manufacturers solely responsible for the recycling of their products and argued consumers and municipalities should share the cost of e-waste disposal. The industry disapproved of the proposed chemicals restrictions and argued the hazards associated with the various heavy metals and organic substances were exaggerated and ignored science and a balanced approach to risk. They also argued mandated phase outs of toxic

[65] Associations that formed the EIA include: the Telecommunications Industry Association, Consumer Electronics Association (CEA), Electronic Components, Assemblies and Materials Association, and American Electronics Association.

[66] During the WEEE negotiations the AEA's membership included over 3,000 electronics companies of various sizes, including Microsoft, Intel, IBM, and Motorola.

substances would undermine the functionality, safety, and reliability of their products, impede the development of new technologies, increase costs, and restrict global trade (Raphael and Smith 2006, 248; Raymond 2001). The EIA also promoted voluntary e-waste recycling programs (Geiser and Tickner 2006, 266-267), with the intention of undermining the need for the IPR norm.

The TransAtlantic Business Dialogue (TABD) also opposed the proposed e-waste legislation. The TABD was founded in 1995 and promotes the closer economic integration and the liberalization of markets between the U.S. and the EU. The TABD lobbied European policymakers and argued the proposed legislation could generate a trade dispute between the EU and the U.S. (Ziegler 2010). The threat that the proposed legislation could initiate a trade dispute was underscored by the activities of the United States Trade Representative (USTR). The AEA convinced the USTR to actively oppose the proposed e-waste legislation. In a January 1999 position paper, the U.S. Diplomatic Mission in Brussels argued the proposed legislation could become a trade barrier and threatened to bring the issue before the WTO. The assertion that the WEEE Directive was 'illegal' under international trade law was also frequently made by the AEA (Creed 1999; Business Wire 1999).[67]

However, European electronics manufacturers were less critical of the proposed e-waste legislation because they generally felt the WEEE and RoHS Directives would inevitably be enacted in some form. Leading European trade associations met with

[67] Japanese electronics manufacturers also opposed the EU's proposed e-waste legislation. The Japanese Business Council in Europe (JBCE) and officials from the Japanese government expressed concerns that the legislation would be a non-tariff trade barrier if it were too strict. The JBCE coordinated with its European and American counterparts, such as the AEA, on issues related to the WEEE negotiations (Japan Economic Newswire 1999; Japan Economic Newswire 2000).

government counterparts, offered technical input on regulations, provided some criticisms, and followed the negotiations closely. As discussed below, a number of European manufacturers also joined with members of the e-waste network to lobby in support of the legislation and IPR.

The e-waste network and the European Union's e-waste regulations

The lobbying activities of the U.S. electronics industry and the USTR were a pivotal force in bringing together members of the e-waste network from the U.S. and EU. In May 1999, a number of activists from the U.S. and EU involved in issues related to the electronics industry met in the EU and formed the Trans-Atlantic Network for Clean Production, to defend the proposed legislation (Raphael and Smith 2006, 249). By joining with European NGOs, U.S. NGOs hoped to counter the influence of the U.S. electronics industry and show the European Commission that U.S. environmental groups supported the proposed legislation. U.S. activists also "recognized that by raising standards for the production and disposal of electronics in Europe, the EU Directives offered the best tool for raising standards in the United States without sweeping its toxic waste under developing countries' rugs" (Raphael and Smith 2006, 247-8).

The e-waste network's campaign in support of the EU's proposed legislation stressed the importance of the IPR principle and opposed any weakening of chemical substances regulations. The network advocated CSR norms, and the themes of sovereignty and democracy to frame the debate surrounding the proposed regulations (Raphael and Smith 2006, 249). Members of the network in the U.S. countered the lobbying efforts of the USTR and electronics manufacturers by: writing letters to the EU

Environment Commissioner; meeting with the USTR to voice concern about the U.S. government's interference in internal matters of the EU; and writing a public letter to then U.S. Vice-President Al Gore asking the USTR to cease opposition to the EU's proposed e-waste legislation (Geiser and Tickner 2006, 267; Business Wire 1999).[68]

In the U.S., members of the e-waste network, such as the SVTC and the ICRT, also protested at the WTO meetings in Seattle in 1999. The network used the WTO meetings to draw linkages between the proposed e-waste legislation and other U.S.-EU trade disputes such as beef hormones and the impending conflict over GMOs. The network linked U.S. opposition to the WEEE Directive to concerns being expressed about neoliberal globalization and argued this was another example of the WTO being used to undermine the precautionary principle (Knight 1999). Members of the network also protested at the Microsoft Headquarters during the WTO meetings. Activists targeted Microsoft because it was a co-host at the WTO meetings and its frequent software upgrades contributed to the rapid obsolescence of computer hardware (Nguyen 1999; Raphael and Smith 2006, 249-250). European NGOs were also actively involved in the WEEE negotiations and worked with a variety of stakeholders, including some electronics manufacturers, to support and strengthen the proposed legislation.

[68] This letter included signatures from a number of influential ENGOs in the U.S.: FoE USA, the Sierra Club, Greenpeace, Public Citizen, the Rainforest Action Network and the Center for International Environmental Law. The involvement of these ENGOs was helpful for the e-waste network because it illustrated to policymakers that the e-waste campaign was not just an issue being advocated by a locally based NGO (i.e. SVTC), and that there was a broad coalition of NGOs who were concerned about e-waste and the activities of the USTR. The larger, Washington, D.C. based environmental groups were also able to undertake certain activities such as getting meetings with the USTR and EPA (Geiser and Tickner 2006, 267).

Electrolux, IPR Works and the negotiations for the EU's e-waste regulations

While many electronics manufacturers were opposed to the EU's proposed e-waste legislation, a small number of manufactures actively lobbied in favour of IPR and the proposed legislation. In particular, Electrolux was an early supporter of the EU's proposed legislation. Electrolux has a reputation as an environmentally progressive company and took an early interest in the concept of IPR, in part because of its Swedish heritage. Thomas Lindquist at Lund University in Sweden coined the term IPR; he had contacts at Electrolux and encouraged the company to explore the concept (Phone interview with e-waste activist, November 6, 2009). Electrolux's CEO during the 1990s was also strongly committed to environmental sustainability and has had a lasting influence on the company's corporate culture. The corporate cultures of environmentally or socially progressive companies are often embedded with progressive environmental and/or social commitments. Their CSR policies may be more substantive in nature than other companies because internal factors may be a significant source of motivation rather than external pressures (Zadek, Pruzan, and Evans 1997). Electrolux has been interested in eco-design since the 1990s, and has been a pioneer in phasing toxic substances, such as lead, out of its products. In the 1990s Electrolux attempted to market a line of 'green' appliances in Sweden that were extremely energy efficient and did not contain several toxic substances. However, Electrolux was not able to successfully market the appliances due to the prohibitive costs involved in producing the appliances and a lack of consumer

awareness (Interview with electronics industry representative, October 27, 2009; see also Bernauer and Caduff 2004).[69]

Electrolux believed the EU's proposed e-waste legislation and IPR would allow the company to benefit in two ways. First, it would allow Electrolux to sell products which exclude a number of hazardous substances because its competitors would be forced to do the same once the RoHS Directive came into force. Second, because Electrolux had already invested considerably in eco-design it would have a competitive advantage if IPR and RoHS were implemented; Electrolux had a head start in phasing out toxics and its products would be easier and cheaper to recycle (Interview with electronics industry representative, October 27, 2009; see also Bernauer and Caduff 2004, 114). As Falkner notes, divisions in how firms view regulations can occur between technological leaders and laggards in an industry:

> If market leaders can hope to lower their compliance costs relative to their competitors, then an increase in regulatory standards and compliance costs may shift the competitive balance in their favour, thus making regulation more acceptable to them. The degree to which companies can respond to new environmental regulations through technological innovation will thus be an important factor in determining their overall political strategy. In some cases, regulation can produce new markets based on technological innovation that would otherwise not have been commercially viable, and technological leaders can therefore use regulatory politics to create new business models and achieve competitive advantage (2008, 34).

Therefore, Electrolux's support for the IPR norm was motivated by both material and altruistic concerns. While altruistic concerns may have influenced the Electrolux's

[69] Nokia was also an early supporter of IPR due to its pioneering environmental policies, although it does not seem to have had the influence that Electrolux had during the WEEE and RoHS negotiations. For more information about Nokia's environmental policies see Kautto 2009.

willingness to explore the concept of IPR, had it not been for material benefits the company would not have actively lobbied in favour of the concept.

During the late stages of the EU's e-waste legislation negotiations, Electrolux approached other like-minded electronics manufacturers and NGOs to lobby together in support of IPR. In 2002, the IPR Works coalition (now the IPR Works alliance) was formed. It is a group of electronics manufacturers and NGOs that actively lobby in support of IPR in the EU. During the WEEE Directive negotiations, IPR Works' corporate membership included Electrolux, HP, Braun, Nokia and Sony. Currently IPR Works' membership includes manufacturers such as: Electrolux, Sony, HP and Dell. NGOs active in IPR Works include Greenpeace International and the EEB. The EU consumer organization BEUC was also active in IPR Works during the WEEE negotiations (IPR Works 2009).[70] IPR Works continues to meet regularly today.

Coen (2005) argues corporations have increasingly facilitated the creation of ad hoc alliances with NGOs to increase their credibility and access to EU policy forums. However, IPR Works is unique because it has allowed for long-lasting collaboration between NGOs and electronics manufacturers. IPR Works is informal in nature and focuses narrowly on issues related to IPR to avoid conflict between NGOs and manufacturers. While IPR Works has facilitated cooperation between NGOs and manufacturers, the actors within the alliance maintain individual identities and positions. NGOs in the alliance continue to target manufacturers that take part in IPR Works to improve their environmental practices.

[70] Due to the informal nature of IPR Works, it does not have a formal membership structure.

The corporate members of IPR Works are largely leaders in ecodesign and many operated recycling schemes prior to the passage of the WEEE Directive. Corporate members of the alliance wanted IPR included in the WEEE Directive because they felt their product designs would make their products easier and cheaper to recycle; therefore, they would benefit financially if companies were individually responsible for recycling their products. Corporate members of IPR Works also felt they would have to subsidize other manufacturers who had not invested in eco-design if manufacturers were collectively responsible for e-waste under the WEEE Directive (Interview with Doreen Fedrigo, Policy Director, EEB, October 20, 2009; phone interview with e-waste activist, November 6, 2009).

Explaining the passage of the WEEE and RoHS Directives

While the e-waste network did initiate some grassroots actions during the WEEE and RoHS negotiations, public concern about e-waste is not the primary reason why many electronics manufacturers and the USTR failed to undermine the Directives. During the negotiations there was little media coverage of the e-waste problem and the proposed legislation. Political and economic factors better explain the successful passage of the WEEE and RoHS Directives.

Waste management is an important policy concern for the EU. The Commission's pioneering role in e-waste management is partly due to a shortage of landfill capacity in the EU. In May 1990, the European Council adopted a resolution on Waste Management Policy, which asked the Commission to create action programs for particular types of waste. Subsequently, in its Fifth Environmental Action Program the European

Community announced "Management of waste generated within the Community will be a key task of the 1990s. Current upward trends in waste must be halted and reversed in terms of both volumes and environmental hazards and damage" (European Communities 1993; as quoted in Ziegler 2010).[71]

The multi-level European policymaking process also offers numerous channels where stakeholders can influence policy (Keim 2003, 25; van der Heijden 2006, 34-35).[72] van der Heijden (2006) notes the European Parliament is particularly open to political action because it lacks strong party organizations and the different transnational factions in the Parliament are relatively loose organizations with little control over the voting of their members. NGOs that campaigned in support of the EU's e-waste legislation included the EEB, BEUC, and Greenpeace, which all represent large constituencies and are influential within the EU policymaking process. During the WEEE Directive negotiations, the European Parliament also received support for maintaining its position in favour of IPR from IPR Works (Bernauer and Carduff 2004, 115). The WEEE and RoHS Directives were also spearheaded by the Commission's Environment Directorate. Industry interests have less influence over policymakers in environmental ministries than in industry and trade ministries. Environment ministries tend to be more open to a plurality of different interests, particularly environmental groups (Falkner 2008, 29).

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[71] The EU implemented several other Directives in the 1990s to address waste management issues: batteries (91/157/EEC), packaging (94/62/EC), and end-of-life vehicles (2000/53/EC) (Ziegler 2010, 7-8).

[72] della Porta and Diani point out that the decentralization of power in institutions such as the EU does not always work in activists' favour as it also increases the chances of access not just for activists but for all political actors, including those opposed to activists' aims (2006, 205).

Prior to the passage of the WEEE and RoHS Directives, a number of EU Member States had passed e-waste legislation.[73] This suggests many Member States likely supported the EU's efforts to regulate e-waste. The existence of national e-waste legislation may have made some electronics manufacturers more inclined to support European level e-waste legislation, so that they did not have to deal with a patchwork of national legislation (Geiser and Tickner 2006, 266). Corporate actors that operate in multiple jurisdictions may be willing to support international regulations (particularly those pertaining to the environment) that harmonize a variety of differing national standards if they are not unnecessarily restrictive (Haufler 2001, 106-107).

Divisions in the electronics industry played an important role in weakening the influence of electronics manufacturers opposed to the EU's proposed e-waste legislation. The role of IPR Works in promoting IPR highlights the role market actors can play in norm promotion, particularly when they can achieve material benefits from the institutionalization of a particular norm (Gillies 2010; Sell and Prakash 2004). The desire of a small number of electronics manufacturers to see IPR implemented undermined arguments by other companies that IPR was too costly and difficult to implement. Having allies within the electronics industry strengthened and legitimated the e-waste network's arguments and made it harder for industry opponents to dismiss their claims. The activities of IPR Works have created divisions amongst electronics manufacturers in the EU and tensions within their industry associations (Interview with European electronics industry representative, October 22, 2009). As one representative of a major electronics

[73] Belgium, Denmark, the Netherlands, and Sweden all had adopted domestic e-waste legislation prior to the passage of the WEEE Directive (Selin and VanDeveer 2006).

manufacturer noted, companies are generally seen as taking a reactive stance towards environmental regulations while ENGOs are seen as proactive: "…if you make a coalition with an NGO that seems surprising because by nature people think that NGOs and industry should have different views. And that's a great strength of such a coalition, that then, you know, institutions, politicians, and legislators get your point" (Phone interview with major electronics manufacturer representative, December 3, 2009).

The impacts of the WEEE and RoHS Directives

The e-waste network and IPR Works played a key role in institutionalizing the IPR norm within European e-waste legislation.[74] The WEEE and RoHS Directives, and the inclusion of IPR, represented a major victory for the network that activists have carried forward to other campaigns. Khagram, Riker and Sikkink note that once international norms promoted by civil society groups are adopted by states or international organizations they serve to empower and legitimate the civil society groups that promoted them (2002b, 16). The EU is often seen as a leader in environmental policy and its adoption of IPR set an important precedent for the regulation of e-waste elsewhere. Globally, the WEEE and RoHS Directives have helped ratchet up e-waste legislation through what Vogel (1995) terms the process of "trading-up." Selin and VanDeveer (2006) argue that along with the Registration, Evaluation, Authorization, and Restriction of Chemical Substances (REACH) Directive, which addresses chemicals and their safe use, the WEEE and RoHS Directives, are part of a broader shift in chemicals

[74] The WEEE and RoHS Directives are currently undergoing a mandated recast process. As part of the recast the e-waste network has been lobbying to strengthen the e-waste legislation and ensure it is not weakened in response to industry concerns. IPR Works and its corporate members have also been actively lobbying to ensure that IPR is properly transposed at the national level, as collection programs in some Member States do not properly implement IPR.

policy, where the EU has replaced the U.S. as the global standard-setter (Selin and VanDeveer 2006, 14). As part of its approach to chemicals policy the EU has institutionalized the norms of both the precautionary principle and IPR.

The WEEE and RoHS Directives have had a significant impact on the electronics industry. In 2003, the AEA stated that the passage of the Directives "resulted in the most far-reaching environmental policy requirements for high-tech products established by any government in the rest of the world. It is clear that European environmental policy is setting a pattern for the rest of the world." For leaders in eco-design, such as the IPR Works members, the WEEE Directive is viewed positively. Electrolux states that, "WEEE is creating new opportunities for Electrolux, both in product design and operational efficiency" (Electrolux 2010). The RoHS Directive has had a particularly far-reaching impact on the design of electronic products. Electronics manufacturers produce their products for a global market as opposed to regional markets. If manufacturers produced different product lines for different regions, depending on which regions banned certain hazardous substances, they would be vulnerable to criticism from the public and regulators, as well as potentially liable for employing an environmental double standard that poses greater risks to some customers and regions (Raphael and Smith 2006).

E-Waste regulations in the United States

The passage of the WEEE and RoHS Directives benefitted the e-waste network's U.S. legislative campaign. As Raphael and Smith state, "The EU directives offered the CTBC a model long-term solution to the problem of e-waste and enabled the CTBC to pursue a proactive strategy rather than a reactive strategy" (2006, 256). The network has

contrasted the EU's e-waste regulations with the lack of regulations in the United States. Activists have appealed to national interests by drawing attention to how U.S. companies are demanding lower environmental standards in their home country than in the EU (Raphael and Smith 2006; Raymond 2001). Members of the network in the U.S. hoped that "Rather than exerting downward pressure on environmental and labour protections globalization could be turned into a force that conditioned access to major world markets on meeting more stringent norms for design and disposal" (Raphael and Smith 2006, 248).

However, the political opportunity structure at the federal level in the U.S. has been viewed as particularly unwelcoming to the e-waste network due to the anti-environmental and deregulatory rhetoric of the George W. Bush Administration (2000-2008), as well as the recent economic downturn and the focus on climate change as the major environmental issue of concern. Renckens (2008) suggests the lack of federal legislative action in the U.S. is also due to an emphasis on extended *product* responsibility or product stewardship as opposed to extended *producer* responsibility. Extended product responsibility is an approach under which a variety of stakeholders including manufacturers, suppliers, users, and disposers of products share responsibility for their environmental impacts, while extended producer responsibility places the onus for product disposal on the producer. Extended product responsibility or product stewardship implies a voluntary rather than legislative approach to waste management, and an emphasis on the product rather than the producer. These characteristics have allowed extended product responsibility to gain greater acceptance in the U.S. than

producer responsibility (Renckens 2008). This emphasis on a voluntary approach can be attributed to the shift away from command and control environmental policies in the U.S. and elsewhere. As part of this shift the EPA now advocates voluntary approaches to pollution prevention rather than legislative approaches.

Unlike the EU, where both progressive electronics manufacturers and the e-waste network jointly promoted the IPR norm, the U.S. has generally not seen industry interests acting as IPR norm promoters. Rather the electronics industry in the U.S. has largely chosen to advance competing norms for e-waste management. Shared responsibility for e-waste management and voluntary industry approaches are the primary norms for e-waste management that have been advanced at the federal level in the U.S. Due to an inability to successfully gain sufficient support for the IPR norm at the federal level and concerns that any federal e-waste legislation passed would institutionalize competing norms, the e-waste network in the U.S. has instead focussed on the passage of state-level e-waste legislation.

State-level e-waste legislation in the United States

As of February 2011, state-level e-waste legislation has been passed in 24 U.S. states and several additional states are currently considering legislation (ETBC 2011).[75] The e-waste network is targeting policymakers at the state-level as a way to build towards federal e-waste legislation. State-level e-waste bills all differ slightly in their product scope, collection requirements, financing systems, etc. Members of the network have

[75] The following states have passed e-waste legislation: California, Connecticut, Hawaii, Illinois, Indiana, Maine, Maryland, Michigan, Minnesota, Missouri, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin (ETBC 2011).

noted how electronics manufacturers strongly dislike this patchwork of legislation. The creation of this legislative patchwork has been a conscious strategy for the network (Interview with Ted Smith, ETBC, 21 April 2009; interview with lauren Ornelas, SVTC, 22 April 2009). As stated by Ted Smith in 2000, "Industry can't stand to have everybody dealing with their products in different kinds of ways, so it's going to have to get harmonized at some point. But in the meantime, our strategy is just to do as much local work as possible" (Smith 2003, 124).

California passed the first state-level e-waste recycling bill in 2003. California's bill does not include IPR; rather, consumers pay a fee to cover recycling costs when they purchase new products. While California has often taken a leadership role in environmental policy in the U.S., the electronics industry is also important to the state's economy and has considerable political influence. The electronics industry strongly opposed the passage of California's e-waste bill. However, HP (which is headquartered in California) supported the e-waste bill, despite playing a significant role in lobbying against a similar bill in 2002 that failed to pass. HP reportedly changed its position on the e-waste bill due to press reports documenting the consequences of illegal e-waste exports (Schoenberger 2002). HP's changing position on e-waste legislation, and its support for an advanced recycling fee, illustrates how it was influenced by e-waste network's activities, but in response promoted a competing waste disposal norm. Clapp and Swanston note that industry can play a significant role in determining how a norm is translated into policy (2009, 323). Since the passage of California's e-waste bill, HP has

publicly declared its support for IPR, a shift that again can largely be attributed the activities of the e-waste network.

However, with the exception of California, all other state-level e-waste bills incorporate IPR. This is likely because electronics manufacturers are not as economically significant in most other states. The e-waste network also has promoted the financial benefits of IPR, which includes taxpayer relief for local governments and lower disposal costs for high-volume institutional purchasers. These characteristics appeal to state and local governments with increasingly constrained budgets. IPR also facilitates recycling, which is more popular than arguments for reuse or reduction in the United States' high consumption society (Raphael and Smith 2006, 253-4).

As an increasing number of states have passed e-waste legislation and public awareness of e-waste has grown, electronics manufacturers in the U.S. have altered how they approach e-waste management. When states first began passing electronics take-back legislation manufacturers invested significant resources in lobbying against legislation and IPR (Grossman 2006).[76] Since that time the industry has altered its position and no longer opposes e-waste legislation as strongly as it once did.

Interestingly, while many electronics companies, including several that are headquartered in the U.S., now actively lobby in support of IPR in the EU, the U.S. has not experienced the same level of support for IPR from manufacturers. However, the industry has shifted its position on e-waste. As a representative from a U.S. electronics

[76] For example, Maine was the first state to pass an e-waste bill that included producer responsibility in 2004. Electronics manufacturers vehemently opposed the proposed legislation, and with the exception of HP and Dell all major electronics manufacturers and numerous industry associations travelled to Maine to oppose the bill. Maine's population is only 1.3 million people (Grossman 2006, 179-180).

manufacturers industry association stated, "The policy that we are promoting here and that we revised significantly over the last couple of years is a producer responsibility policy….And there are a number of our members who have been espousing that for some time and others who have only recently come around to that point of view" (Phone interview with electronics industry representative, September 3, 2009). However, the e-waste network and the electronics industry continue to differ on the type of producer responsibility policy they would like to see implemented, as well as other details of e-waste collection schemes. The same industry representative stated that while the industry supports 'producer responsibility,' it supports a shared approach in terms of how products are collected from consumers. The financing of e-waste recycling schemes also continues to be a significant point of contention between members of the network and much of the industry, as are collection targets (Phone interview with electronics industry representative, September 3, 2009). The CEA states that "End-of-use frameworks should apportion responsibility among all of the stakeholders and ensure a level-playing field, while promoting a widespread and adequately financed electronics recycling solution" (CEA 2009). The shift in how the U.S. electronics industry approaches e-waste illustrates the influence of the e-waste network. However, the case of e-waste suggests that rather than adopting environmental norms espoused by activists, corporate actors may instead attempt to reshape them into similar norms that better suit their interests.

While the WEEE Directive helped facilitate the passage of electronics take back laws in the U.S., the EU's RoHS Directive has had less of a legislative impact in the U.S. As noted above, this is largely because major electronics manufacturers produce their

products for a global market and have implemented the RoHS requirements across their entire product lines. However, California has taken a lead in the U.S. in passing toxics legislation, including a version of the RoHS Directive, partly due to a lack of action at the federal level (Keating 2009). California's RoHS legislation is extremely similar to that of the EU. While the legislation does not restrict the two flame retardants banned in the EU, it restricts the same heavy metal substances and its exemptions mirror the EU legislation. The legislation also automatically adopts all future amendments made to the EU's legislation (Mondaq Business Briefing 2007). This is what the electronics industry lobbied the California government for when it became apparent the state would pass chemicals restrictions for electronics (Phone interview with representative from electronics industry, September 16, 2009).

The electronics industry is concerned that if numerous governments pass legislation with requirements that differ from the RoHS Directive requirements, they will have to abide by different chemicals restrictions in different markets, which would be difficult and expensive for the industry. The CEA's position on RoHS-type legislation is: "Governments need not act given activity underway by industry to comply with existing materials restrictions" and that "Those governments that feel the need to act should coordinate new or amended requirements with other established regulations—on the regulated materials themselves as well as on internationally-recognized standards for testing and implementation" (Brugge 2008). Beyond this, the industry did not object to California's RoHS legislation, especially compared to industry opposition to California's e-waste take back legislation. This is likely because electronics manufacturers largely

expected to comply with the RoHS Directive, so the California legislation would have little impact on their activities. Other U.S. states have shown little interest in passing RoHS-type legislation, likely in part because the California requirements can be expected to be implemented by manufacturers on electronics sold across U.S.

Federal e-waste legislation in the United States

Due to the success of the e-waste network's state-level e-waste legislative campaign, electronics manufacturers in the U.S. would like to see a federal e-waste bill passed so they no longer have to contend with 24 different e-waste take-back laws. As stated by the CEA,

> We strongly believe that a successful national electronics recycling framework should be established to address the management of this issue domestically. The current de facto approach is an evolving patchwork of state-by-state legislation. This conflicting, ad hoc pattern of regulation imposes unnecessary burdens on global technology companies and creates significant confusion for consumers (CEA 2009).

However, members of the e-waste network do not want federal e-waste take back legislation passed at this time because they feel it would be weak and ineffective.[77] This is partly due to the influence of the electronics industry in the U.S. Like the biotech industry, the electronics industry is viewed as a sector in which the U.S. has a competitive advantage relative to other states. The industry has a culture of not being regulated and of resisting regulation and has significant influence due to its economic clout (Grossman 2006, 161). The industry has had less influence at the state level partly because it provides few jobs in most U.S. states, especially compared to major big box retailers who

[77] However, most members of the network do feel that to adequately address the e-waste problem federal legislation will be necessary at some point.

have lobbied to ensure state-level e-waste legislation does not make them primarily responsible for e-waste recycling (Phone interview with electronics industry representative, September 3, 2009). Thus, the vulnerability of industry actors at different points in a production chain varies depending on the political opportunity structure in different states and at different levels of government. In their discussion of efforts to ban plastic shopping bags, Clapp and Swanston (2009) similarly found that due to the strong position of the plastics industry in the U.S. economy, there has been little discussion about plastic bags as a national environmental policy concern. Rather, initiatives against plastic bags in the U.S. have occurred in municipalities where the plastics industry is not a significant local employer.

However, some federal legislators in the U.S. have expressed support for a federal e-waste law. In 2002, a bill was introduced in the House of Representatives that proposed charging an advanced recycling fee of no more than $10 on a variety of electronic products. The same bill, with minor modifications, has been introduced several additional times, but has failed to pass. The e-waste network has criticized the proposed bills for being weak and for failing to adequately address the e-waste problem (Grossman 2006, 162; Renckens 2008, 291). Rather than IPR, the bills have embraced the shared responsibility norm for e-waste disposal, illustrating the influence of the electronics industry at the federal level.

The U.S. government has also sought to address the e-waste problem through voluntary initiatives, which supports the approach to e-waste management advocated by electronics manufacturers. One notable federal voluntary initiative is the National

Electronic Product Stewardship Initiative (NEPSI), which ran from 2001 to 2004 and sought to create a national system to handle e-waste that would be acceptable to a variety of stakeholders.[78] NEPSI included over 40 stakeholders: manufacturers, representatives from federal, state and local governments, recyclers, environmental NGOs, consumer groups, retailers, and for two and a half years the EPA.[79] NEPSI ended with a number of recommendations, but generated no final plan for addressing the e-waste problem (Grossman 2006, 162-166; Renckens 2008, 292-293).

Members of the e-waste network, including the CTBC, participated in NEPSI and successfully defeated the electronics industry's argument in favour of a recycling programme financed by a consumer fee. During the NEPSI discussions divisions within the electronics industry became evident to members of the network. Raphael and Smith explain that:

> …following the defeat of the industry's "back-end financing" scheme, it became clear that the industry participants were split between two different "front-end financing" positions. The majority view advocated for a small consumer fee on new equipment to pay for recycling, without any additional obligations on manufacturers. The television industry and IBM supported this plan, largely because they are the major producers of historic waste, for which they would not

[78] The EPA has started three other voluntary initiatives to address e-waste. The Plug-In to eCycling programme was launched in 2003. It is a partnership between the EPA, local and state governments, electronics manufacturers, retailers, and service providers. The programme promotes initiatives for individuals to donate or recycle their old electronics. It was originally designed to be a national voluntary programme that would pre-empt state legislation, as well as acting as a precursor to a national mandatory e-waste disposal programme. The EPA is also involved in the development of certification standards for electronics recyclers, called the Responsible Recycler (R2) practices. The Electronic Product Environmental Assessment Tool (EPEAT) was created in 2003 by the EPA. It is a multi-stakeholder process that uses environmental criteria to grade electronics, similar to the Energy Star program (Renckens 2008). R2 and EPEAT will be discussed in Chapter 7.

[79] NEPSI initially aimed to develop a national voluntary take-back system for electronics. After California announced its e-waste legislation in 2003, NEPSI shifted to the development of a proposal for federal legislation to prevent the creation of numerous state-level e-waste laws. Due to the focus on developing federal legislation the EPA had to pull out of NEPSI as this new direction was pushing the agency beyond its legal mandate (Renckens 2008, 293).

> have borne significant financial responsibility. The minority view—supported by Hewlett-Packard, as well as environmental NGOs—advocated for producers assuming responsibility for taking back and recycling their own obsolete products (2006, 251).

HP felt it could gain a competitive advantage from a producer responsibility approach because it was an early investor in building a recycling infrastructure for its own products. HP's recycling facilities also process electronics from other manufacturers.[80] Thus, as previously noted, at times a company may support regulation because it feels the regulation gives it a competitive advantage. A company may become an early adopter of voluntary environmental policies, despite increased costs, because it perceives the future passage of legislation and competitive advantages. After NEPSI concluded, the e-waste network also helped persuade Dell to endorse IPR (Raphael and Smith 2006, 251).

Rather than focussing on lobbying for electronics take-back legislation at the federal level, the e-waste network is focussing on the passage of legislation to restrict the export of e-waste (Interview with Ted Smith, ETBC, April 21, 2009). The electronics industry supports export restrictions because documentation by the network and the media of illegal e-waste exports and their effects has damaged the industry's reputation. Furthermore, obsolete electronics that are collected by the industry in the U.S. are generally recycled in North America, so a ban on exports would not significantly impact the industry's recycling programs. However, the industry wishes to export used electronics abroad for refurbishment, and opposes any legislation that would make it illegal to do so (Phone interview with electronics industry representative, September 3,

[80] In 1997 HP became the first computer manufacturer to operate its own recycling facility. The facility is located in Roseville, California and is jointly operated by HP and the Micro Metallics Corporation, a subsidiary of Noranda. In 2001, HP opened a second recycling facility in Lavergne, Tennessee with Noranda (Canada Newswire 2001; Truini 2006).

2009). This is strongly opposed by the e-waste network. While the network agrees in principle with reselling used electronics to new users, it feels export for refurbishment must occur under very strict conditions so damaged and obsolete components are not dumped in developing countries (BAN 2005).[81]

The need for federal legislation addressing e-waste exports was further underscored in August 2008, when the U.S. Government Accountability Office (GAO) released a report entitled, *Electronic Waste: EPA Needs to Better Control Harmful U.S. Exports through Stronger Enforcement and More Comprehensive Regulation*. The report strongly criticized the EPA for failing to address the issue of e-waste exports. It recommended the EPA: broaden its regulations to address used electronics that are not prohibited for export; improve its enforcement of regulations prohibiting export; and submit a legislative package to Congress for the ratification of the Basel Convention (U.S. GAO 2008, 40-41). The EPA disagreed with the conclusions of the GAO report and argued it should "pursue nonregulatory, voluntary approaches" (U.S. GAO 2008, 43). Despite the EPA's opposition, the strong wording of the GAO report brought attention to the issue of e-waste exports from the U.S. and strengthened arguments in favour of federal legislation prohibiting exports (see Biello 2008; Cooney 2008).

In 2008, a bill was introduced in the U.S. Congress to ban e-waste exports. The bill failed to pass, but the issue continues to be discussed by legislators. However, the refurbishment and reuse issue remains a major stumbling block (Schmit 2008; US Fed

[81] For example, BAN states that electronics exported for refurbishment or repair should also be tested prior to export to ensure they are in proper working order without further repair. For those electronics that do require repair "there will then be a need to determine whether or not the repair is likely to involve the replacement of an exported hazardous part. The equipment will, accordingly, need to be certified as to the testing results and labelled for ease of processing by customs officials" (BAN 2005, 37).

News 2008). In September 2010, a bill prohibiting the export of e-waste was introduced in the House, which was supported by members of the e-waste network and Apple, Dell and Samsung. The bill restricts e-waste from export, but tested and working electronic parts would not be restricted (ETBC 2010b).

Thus, particularly on the export issue, there has been some movement towards greater consensus between the electronics industry and the e-waste network. However, due to continuing legislative blockages at the federal level, it appears state-level legislative campaigns and corporate campaigns remain the most effective strategies for the network in the U.S. at this time. If the network continues to have success with this approach, which appears likely, there may be a greater likelihood that federal e-waste legislation acceptable to the e-waste network may be passed in the future.

E-Waste legislation around the world

Numerous other governments have also passed e-waste legislation addressing product take-back and chemicals restrictions. Norway and Switzerland have enacted e-waste legislation similar to the EU's WEEE Directive (Nnorom and Osibanjo 2008; StEP 2009, 5). While Canada does not have federal e-waste legislation, provincial governments in British Columbia, Alberta, Saskatchewan, Ontario and Nova Scotia have enacted take back laws. With the exception of Alberta, all take-back schemes have included IPR.

A number of Asian countries have enacted or are in the process of enacting e-waste laws. Japan was an early adopter of e-waste legislation. It passed legislation for the take-back of household appliances and televisions in 2001 and legislation for the take-back of computers in 2003 (Chung and Murakami-Suzuki 2008; Nnorom and Osibanjo

2008). Taiwan and South Korea have developed mandatory e-waste collection laws (StEP 2009). While legislation in all these states encompasses elements of EPR, they are not effective IPR schemes. South Korea has also introduced RoHS-type legislation, with substance restrictions essentially the same as the EU. However, the legislation is weaker than the EU's as it applies to a limited range of products (Goodman 2008; Schneiderman 2009).

China and India both receive large flows of illegal e-waste. Both countries have banned e-waste imports, but have struggled to enforce the bans due to the jobs, revenue, and the raw materials e-waste creates (Johnson 2008). India also does not ban the import of used electronics for reuse, creating a loophole for importers of e-waste to exploit (Iles 2004, 84). These states lack the resources to effectively monitor incoming shipments of illegal e-waste (Grossman 2006). They must also address growing amounts of domestically generated e-waste; a challenge for both governments as they lack the infrastructure to properly recycle electronics. China has passed take-back legislation to address domestically generated e-waste which went into effect in January 2011. It stipulates a shared responsibility approach to e-waste recycling, although producers and importers of electronics have special responsibility for proper e-waste disposal (Yu et al. 2010).

India has not passed e-waste take-back or RoHS-type legislation. However, in spring 2010 the Indian government announced draft legislation, the E-waste (Management and Handling) Rules, which would make electronics manufacturers responsible for the collection and appropriate disposal of electronics at end of life

(Ribeiro 2010). Prior to the announcement of this proposed legislation, members of the e-waste network such as Greenpeace International and SVTC worked with domestic NGOs in India, such as ToxicsLink India and Greenpeace India, as well as labour organizations and the Manufacturers' Association of Information Technology (MAIT), to increase public awareness of e-waste and pressure the Indian government to enact legislation. The alliance between Indian NGOs and the industry organization MAIT arose after several years of campaigning by NGOs such as Greenpeace India and ToxicsLink. These campaigns targeted policymakers and electronics manufacturers, and employed tactics utilized by the network elsewhere, such as the creation of an India-specific Greenpeace Guide to Greener Electronics, which ranks Indian electronics manufactures and TNCs on their environmental policies. While environmental NGOs aggressively targeted the Indian electronics industry, labour organizations have taken a more cooperative approach in dealing with electronics manufacturers. Through this 'good cop, bad cop' strategy, the network gained the industry's support for e-waste legislation (Phone interview with e-waste activist, November 6, 2009). Activists have also involved informal sector workers in their campaign, and seek to ensure any formal e-waste recycling programs that are created utilize these workers (Interview with lauren Ornelas, SVTC, April 22, 2009).

The involvement of information sector workers in the e-waste network's activities in India is significant because effective take-back legislation will be difficult to implement in many countries in the Global South due to the dominance of the informal sector in e-waste recycling (Greenpeace 2008a; Yu et al. 2010). Legislation restricting toxic substances in electronics may have a greater impact in countries such as China and

India (Greenpeace 2008a), where illegal e-waste recycling operations will continue to exist despite the passage of legislation. China has introduced RoHS-type legislation. It restricts the use of the same hazardous substances as the EU's RoHS Directive and has requirements for eco-design. However, it is unknown when the legislation will be fully implemented. Furthermore, products will only be covered by China's RoHS restrictions if they can be replaced by a mature technology at a reasonable price, even if the product contains hazardous substances (AeA no date; Cutillo 2010; Yu et al. 2010).[82]

In Argentina, Greenpeace has worked with local NGOs to pressure the government to implement WEEE and RoHS-type legislation. Argentina has drafted an e-waste law. If the law is passed the network hopes it will be a model for the region, where no states have passed e-waste legislation. Integral to the network's campaigns in both India and Argentina is ensuring that any legislation passed includes the IPR principle. Greenpeace International hopes that if IPR e-waste legislation is enacted in India and Argentina it will serve as a model for those regions (Phone interview with e-waste activist, November 6, 2009).

The e-waste network has pressured governments worldwide to enact e-waste legislation. The network has utilized a variety of common tactics across different states. However, it has also tailored its campaigns to local circumstances, by working with locally based NGOs, and in the case of India, an industry association. The network hopes that by continuing to target key states to implement e-waste take-back legislation and chemicals restrictions, it can diffuse the principle of IPR worldwide.

[82] China has passed a variety of other laws that address e-waste (many indirectly). For more information see Yu et al. 2010.

The Basel Convention

E-waste is also governed by an international agreement, the Basel Convention, which was negotiated in 1992. The Convention has three main objectives: to minimize the generation of hazardous wastes; encourage the disposal of wastes as close to their source of generation as possible; and reduce the global transport of hazardous wastes (Geiser and Tickner 2006). The Convention does not specifically list e-waste as a targeted waste, but it regulates materials that include lead, mercury, chromium, cadmium or any compound of those elements. Since these materials are found in most electronics, the Convention covers e-waste. Countries that have ratified the Convention must ensure they get written, informed consent from recipient Convention countries prior to exporting hazardous wastes, and that any imported hazardous waste is handled in an environmentally sound manner following Convention guidelines (Grossman 2006; Puckett 2006). The Basel Ban was added to the Basel Convention in 1995. It prohibits the export of hazardous waste from countries that have ratified the Convention and are members of the EU or OECD to any non-OECD/EU countries. The Ban aims to prevent the export of hazardous waste, including e-waste, from wealthy countries to developing ones (Grossman 2006). As of March 2011, 69 countries have ratified the Basel Ban, including all EU Member States. The Ban lacks the ratifications needed to enter into force (Basel Convention 2011).

The Convention has been ineffective in halting the flow of e-waste exports. The U.S. has not ratified the Convention or the Basel Ban, which significantly undermines its

effectiveness.[83] The Convention has not improved inspections of containers of illegal e-waste exports in ports in North America and the EU and has not increased the ability of developing countries to address illegal exports. While many studies of norms and the efforts of activist networks to promote them have focussed on efforts to create international agreements or work within international organizations, the Basel Convention's ineffectiveness has caused the e-waste network to primarily focus on other targets. While members of the network have sought to strengthen the Convention and promote the Basel Ban, the network has focussed more energy on pressuring national and sub-national governments to pass e-waste legislation and on pressuring electronics manufacturers to enact more effective environmental policies. Despite the Convention's weakness, its existence has helped bolster and legitimate the network's arguments. The network has tried to shame the U.S. into ratifying the Convention by framing it as an irresponsible member of the international community. Activists have also tried to draw attention to and shame countries such as Canada that are signatories to the Convention, but have failed to effectively enforce it (e.g. BAN 2002).

Conclusion

The e-waste network has pressured governments around the globe to pass e-waste legislation and has promoted the norm of IPR. The IPR norm has successfully been institutionalized within the e-waste legislation of multiple states due to its material characteristics which offer benefits to both governments and some electronics manufacturers. In the EU, the e-waste network and a small number of electronics

[83] The only two other countries that have not ratified the Basel Convention are Haiti and Afghanistan.

manufacturers who felt they would gain a competitive advantage from the passage of IPR legislation helped ensure the passage of the WEEE and RoHS Directives. The success of the network's legislative campaign in the EU is due to the strategic actions of the e-waste network, divisions in the electronics industry as well as the political opportunity structure in the EU, which is generally relatively open to environmental concerns and has prioritized waste policy. The EU's pioneering e-waste legislation and its inclusion of the IPR norm are a model the network has been able to point to in its' legislative campaigns in other jurisdictions.

In the U.S., due to the strong political influence of the electronics industry at the federal level, activists have primarily focussed on the passage of state-level e-waste legislation that includes IPR. The success of the network's state-level campaign is due to the material characteristics of the IPR norm (i.e. a cost-effective waste management strategy), the reduced economic influence of the electronics industry at the state-level, and the effectiveness of the e-waste network's tactics and frames. However, while the network has been able to institutionalize the IPR norm at the state level, the electronics industry has continued to use its discursive power to promote the competing norm of shared responsibility for e-waste management and voluntary programs, particularly at the federal level where the industry has greater influence and instrumental power. The industry's efforts to promote shared responsibility and voluntary approaches to e-waste management as a counter to the IPR norm illustrate how the network's arguments have gained legitimacy and reshaped how the industry approaches or frames the e-waste problem.

The e-waste network now lobbies for e-waste legislation and IPR in a variety of states around the world. While the network has utilized some common strategies in advocating for e-waste legislation across jurisdictions, it has also altered its campaign tactics in response to the political opportunity structures in various states. While the vulnerability of political opportunity structures to the network have varied, the national and sub-national levels have been more effective arenas for the network to target than the Basel Convention at the international level.

The e-waste network's legislative campaign has been complemented and strengthened by the network's corporate campaign targeting electronics manufacturers. The network's corporate campaign has helped to gradually shift how manufacturers view e-waste and their role in addressing the problem. The first electronics manufacturers to support IPR legislation were those that felt they would gain a competitive advantage if IPR were implemented. However, since the mid 2000s, an increasing number of manufacturers have introduced voluntary take-back programs, publically endorsed IPR, and phased additional toxic chemicals out of their products. This suggests a shift how electronics manufacturers perceive their interests. While there has been a perceptible shift within the industry as a whole, there remains considerable variation in how electronics manufacturers approach the problem of e-waste depending on individual company characteristics. This thesis will now turn to a discussion of the network's corporate campaigns targeting electronics manufacturers.

CHAPTER 7
THE E-WASTE NETWORK AND CORPORATE ACTORS

The e-waste network has pressured major electronics manufacturers worldwide to take back their products at end of life, endorse the principle of IPR, and phase toxic substances such as PVC and BFRs out of their products. The success of the network's legislative campaign can only be understood in relation to its highly successful corporate campaign. The network's legislative and corporate campaigns have been run concurrently, and have complemented and strengthened one another. The network views its corporate campaign as a potential stepping stone to legislative change. By getting major corporations to change their policies in response to activist demands, civil society organizations can gain valuable allies when lobbying for legislative change. If civil society organizations can successfully alter corporate behaviour, they can show legislators and other corporations that the changes they are demanding are technologically possible and economically feasible. By altering the behaviour of one or a few corporations, activists can potentially divide an industry and diminish its influence. In the case of e-waste, activists have viewed the electronics industry as more vulnerable than the political opportunity structure in many states. As one e-waste activist stated, "The ultimate goal is stricter environmental regulation because it is the only way to bring all companies up to the same level. But it is a much easier road to stronger environmental regulation to have some companies leading the way and willing to tell some politicians that they are leading the way and also want legislation. Rather than giving the business

community one voice against regulations" (Interview with Tom Dowdall, Greenpeace International, October 28, 2009).

This chapter will discuss both the 'outside' and the 'inside' strategies the e-waste network has used to pressure the electronics industry. The network's 'outside' strategy has targeted the electronics industry and individual electronics manufacturers using a variety of protest tactics. As part of an 'inside' strategy, the network has engaged in a dialogue with electronics manufacturers and collaborated with them in forums, such as the IPR Works alliance, when the two types of actors have shared similar positions on issues related to e-waste.

The e-waste network has created a general acceptance amongst the electronics industry that electronics manufacturers have role to play in addressing the e-waste problem. However, the voluntary environmental policies enacted by electronics manufacturers vary widely. This chapter will explain variations in how manufacturers approach e-waste and environmental sustainability using the concept of an industry opportunity structure.

In addition to targeting electronics manufacturers, the e-waste network has also pressured institutional purchasers to buy "greener" electronics, thereby creating incentives for electronics manufacturers to produce more environmentally sustainable products. The EPA's electronics certification program, EPEAT, has been an important component of the network's efforts to pressure institutional purchasers. The e-waste network has also created a certification standard for responsible electronics recyclers. The

concept of an industry opportunity structure is used to explain how institutional purchasers and electronics recyclers engage with the network.

This chapter discusses why the e-waste network chose to target the electronics industry and the tactics and frames utilized by the network. It analyses campaigns the network has conducted against individual electronics manufacturers (particularly Dell and Apple), the network's campaign against television manufacturers, and the characteristics that made these companies attractive targets for the network. This chapter then examines the network's 'inside' strategy and the continuing development of a dialogue between the network and electronic manufacturers. It examines the EPEAT certification system for electronics and the use of institutional purchasers to create a market for more environmentally sustainable electronics. Finally, the network's development of a certification system for e-waste recyclers is discussed.

The e-waste network's corporate campaign: Targeting the electronics industry

Unlike many other corporate campaigns that have targeted retailers, the e-waste network has targeted electronics manufacturers. This is partly because of the network's strong commitment to IPR. The CTBC felt that "In a campaign pushing for EPR and end-of-life take-back, a focus on retailers would divert attention from the entities with the greatest control over the problem and the solution—the producers and the brand owners" (Wood and Schneider 2006, 287). Furthermore, a campaign which focussed solely on retailers would not impact Dell, which is one of the largest electronics manufacturers and until recently did not have any retail sales due to its direct sales model.

For Greenpeace International, which is a transnational NGO, the global nature of the electronics industry also made it an appealing target. It has allowed Greenpeace to run a global campaign, while a campaign that targeted electronics retailers would need to be country or region specific (Interview with Tom Dowdall, Greenpeace International, October 28, 2009). As noted in Chapter 6, electronics manufacturers generally produce their products for a global market rather than regional markets. Therefore, if the e-waste network's corporate campaign was successful and manufacturers produced more sustainable products these changes would be implemented globally as opposed to regionally. One of the downsides of focussing on corporate actors who operate in national or regional markets can be seen in the anti-GM network's targeting of food retailers and manufacturers. Food retailers and manufacturers largely produce their products for regional markets and their reaction and vulnerability to the demands of the anti-GM network has varied greatly around the globe. However, the regional nature of the anti-GM network's campaign did allow it to organize highly visible local protests outside food retailers. In contrast, the e-waste network has organized public protests on a limited basis at corporate headquarters and industry events. The e-waste network lacks the grassroots base of the anti-GM network, and the public protests it has organized have not had the same visibility as those organized by the anti-GM network. However, the e-waste network's success in generating media interest in e-waste has greatly increased public awareness of e-waste, and this has placed increased pressure on electronic manufacturers.

The electronics industry consists of a relatively small number of companies, which increased its appeal as a target for the e-waste network. In targeting industries

consisting of a small number of firms activists are able to concentrate their tactics, monitoring, and communications on a smaller number of actors, which may be helpful in communicating their messages to the public and the media and make the best use of their limited resources. As Conroy notes, "Successful campaigns involve extraordinary efforts to gather intelligence about the companies and industries targeted, including their business strategies, products, supply chains, and financial situations" (2007, 51). The electronics industry also appealed to the e-waste network as a target because it is a well-organized industry with strong industry organizations. While this may positively contribute to the ability of electronics manufacturers to resist the demands of the network, it also helps facilitate the network's ability to communicate with the industry and allows for good communication across the industry (Phone interview with e-waste activist, November 6, 2009).

The electronics industry is highly competitive and electronics manufacturers' market shares change regularly (e.g. Olenick 2010). This makes companies more susceptible to consumer pressure and creates incentives for companies to compete to go green to gain new customers and/or establish themselves in a niche market (Schurman 2004; Spar and La Mure 2003). The major electronics manufacturers are all well-known brands, which sell directly to consumers. As Schurman states, "firms that have invested heavily in establishing their reputations and brand names place great value on safeguarding those investments, and perceive the cost of threats to these investments as being very high" (2004, 249).

In addition, the electronics industry's innovative nature made it an attractive target for the e-waste network. While the industry's rapid obsolescence is closely linked to e-waste, members of the network felt the innovative nature of the electronics industry could be harnessed to incorporate environmental principles into product design. As electronics manufacturers are continually designing new products, members of the network thought the industry could more readily include environmental considerations in product design, and would be able to implement design changes relatively quickly, unlike an industry with longer lead times for product design, such as the auto industry. The electronics industry is also an ideal industry in which to implement IPR, as its short timeline for design changes enables it to redesign new products in response to feedback from product take back (Phone interview with Beverley Thorpe, CPA, October 14, 2009).

NGOs, such as Greenpeace and CPA, have targeted the electronics industry because it allows the chemicals industry to be indirectly targeted for its use of toxic substances, such as PVC and BFRs. Greenpeace has a long history of targeting the chemicals industry, in part because of its focus on the oceans and the impact that halogenated substances, such as PVC, have on marine life. Greenpeace has had limited success targeting the chemicals industry because it is powerful and well organized, relatively anonymous, and does not sell directly to consumers. As was illustrated by the anti-GM network's campaign directly targeting the agbiotech industry, upstream suppliers are likely to be highly resistant to activist tactics as their profits often depend on the targeted product. In targeting the electronics industry, the e-waste network hopes to pressure electronics manufacturers' supply chain to develop alternatives to hazardous

chemical substances used in electronics. Electronics manufacturers no longer directly produce their products, but rely on subcontractors in their supply chain. Various electronics manufacturers utilize many of the same subcontractors to manufacture their products. Companies are able to exert significant control over their supply chain because the number of electronics manufacturers is relatively small, and each has a sizable market share (Interview with Tom Dowdall, Greenpeace International, October 28, 2009; phone interview with e-waste activist, November 6, 2009). If one electronics manufacturer puts pressure on its suppliers to develop greener alternatives to toxic substances used in its products, other manufacturers will potentially be able to demand the same from their suppliers, thus helping to diffuse the phase-out of specific toxic materials throughout the industry.[84] As a Greenpeace campaigner stated regarding the decision to target electronics manufacturers, "They're the ones with the ultimate decision making ability in the supply chain. They're also the ones that we all know as brands and companies. So they have that public exposure which means they have that incentive to improve" (Interview with Tom Dowdall, Greenpeace International, October 28, 2009).

Comparing leaders and laggards: Ranking electronics manufacturers

In targeting the electronics industry, the e-waste network has highlighted environmental leaders and laggards in the industry by ranking electronics manufacturers

[84] However, because electronics manufacturers no longer manufacture their own products, they also no longer have as direct control over their production processes as they once did. This is problematic when it comes to addressing issues such as the mining of coltan and its role in funding conflict and human rights abuses in the Democratic Republic of the Congo. Coltan is widely used in a variety of electronics, particularly cell phones. While major electronics manufacturers agree that the use of coltan from conflict areas is a serious problem, they have struggled to address it as there is no certification system for the mineral and coltan from conflict areas is mixed with coltan from non-conflict areas. Because of the lack of coltan that can be verified as coming from non-conflict sources, activists have also had difficulty campaigning on this issue, as there is a lack of alternatives for consumers and manufacturers. See Delevingne 2009; Grossman 2006, 45-52; RESOLVE 2010.

on a variety of environmental criteria. As stated by Wood and Schneider, "Identifying and publicizing levels of environmental performance by companies in the personal computer sector are at the core of the CTBC's market campaign strategy. This helps focus areas of praise and criticism for companies that are setting high and low performance standards and draws attention to where differences exist on a global scale" (2006, 288).

In 2001, the CTBC released the first *Computer Report Card* which compared and contrasted electronics manufacturers on the sustainability of their products. The CTBC subsequently released several updated versions of the report card (Business Wire 2001; Konrad 2003a; Wood and Schneider 2006). Since 2006, Greenpeace has also published its *Guide to Greener Electronics* several times a year (the CTBC has ceased publication of its Computer Report Card). The *Greener Electronics* guide ranks major electronics manufacturers on a variety of criteria including: endorsement of IPR, the voluntary phase out of PVC and BFRs, the energy efficiency of their products, the availability of free take-back programs for old products, the amount of their electronics recycled, and their commitment to reducing GHGs.[85]

These reports have put pressure on companies to be more environmentally sustainable. They have drawn attention to companies that fail to live up to their environmental claims and/or lag behind the rest of the industry. The rankings use well-documented information, including information from electronics manufacturers' websites, which makes it difficult for companies to refute the rankings. The rankings undermine arguments by lagging companies about the difficultly of adopting policies

[85] For an example of the *Guide to Greener Electronics* see Greenpeace 2010b.

such as chemicals phase-outs and raise the bar for companies in the industry to the highest dominator, or leading company. As electronics manufacturers have gradually met an increasing amount of the criteria in the *Guide to Greener Electronics,* Greenpeace has introduced new criteria and pushed the industry to ratchet up its standards and meet it. In response to the *Guide to Greener Electronics*, some electronics manufacturers have changed the wording on their company websites to ensure they endorse criteria in the guide and their company receives a higher score (Phone interview with electronics manufacturer representative, December 1, 2009). Many manufacturers, particularly those that rank poorly, communicate with Greenpeace regarding their scores and how they can improve. Manufacturers try to deflect criticism from Greenpeace when they fall behind on their commitments and impact the rankings of their competitors by 'tattling' to Greenpeace when other companies are failing to meet their commitments (Interview with Tom Dowdall, Greenpeace International, October 28, 2009).

The rankings have helped create greater awareness about the environmental impact of electronics. They have given consumers a method of considering environmental factors when purchasing electronics.[86] The *Guide to Greener Electronics* has received a significant amount of media coverage, particularly in the gadget media. As one Greenpeace campaigner stated, "…for the media it also makes a good story to have someone comparing and contrasting, giving [electronics manufacturers] a score out of ten, rather than them having to do that themselves" (Interview with Tom Dowdall,

[86] Guides ranking the environmental impacts of consumer products have been utilized by Greenpeace for a number of other campaigns including GMOs, sustainable seafood, and forest products. The success of these product guides has encouraged Greenpeace to continue to utilize this tactic.

Greenpeace International, October 28, 2009). The e-waste network has predominantly targeted electronics manufacturers in the U.S. because of the disproportionate influence that U.S. media coverage appears to have on electronics manufacturers due in part to the size of the U.S. market (Phone interview with e-waste activist, November 6, 2009).

However, members of both the e-waste network and some major electronics manufacturers, note that consumers are not putting significant pressure on manufacturers to adopt more environmentally progressive policies (Phone interview with e-waste activist, November 6, 2009; phone interview with electronics manufacturer representative, December 3, 2009). Nonetheless, many manufacturers feel the rankings have impacted on their public image and try to increase their rank in the guide through actions such as publicly endorsing IPR. This appears to support Cashore, Auld and Newsom's (2004) observation in the forestry sector that individual consumer demand has not played a significant role in influencing decisions by logging companies to adopt more environmentally sustainable practices. They observe that forest products retailers have made choices in response to direct action campaigns by environmental organizations, but that these campaigns have received only indirect societal support, in terms of tacit public support for environmental groups. They note that "recognition of this is important because it may be that some forms of 'political consumerism' fit outside traditional understandings in which the individual is thought to matter most as a consumer—it may be that they matter more as supporters of environmental groups" (Cashore, Auld and Newsom 2004, 239).

However, while direct consumer action has not been significant in the case of e-waste, electronics manufacturers have noted that increased awareness of e-waste amongst the public and policymakers (and the accompanying threat of regulation) has played an important role in influencing their environmental policies. This suggests indirect consumer influence goes beyond tacit public support for environmental groups, and also includes whether activists are successful in changing how the general public views a particular issue and the reputation of an industry. The impact that activist tactics, such as rankings of electronics manufacturers, have on a company's reputation and its environmental image, as well as how a company views its own environmental image can have a significant impact on a company's response to activist demands. This supports arguments that corporations are becoming increasing concerned with long-term damage to their reputations from activist campaigns even if a campaign does not visibly impact its sales and shareholder price (Conroy 2007; Micheletti 2003; Vogel 2005).

The Dell campaign

Rankings of electronics manufacturers have also helped the e-waste network determine which manufacturers to individually target. In March 2002, the CTBC launched a campaign against Dell, which had scored poorly on the 2001 CTBC Computer Report Card and lagged far behind HP, its main competitor (ETBC 2007a; Wood and Schneider 2006, 288). The CTBC viewed Dell as a vulnerable target for several additional reasons. First, unlike other electronics manufacturers that sold their products through retailers, at the time of the Dell campaign, the company solely utilized a direct sales model. This direct sales model would allow Dell to develop and implement a

comprehensive take back system because it had the names, addresses, and specifications of the products purchased by all its customers. The CTBC felt Dell could appeal to customer loyalty by pairing product take back with the purchase of a new Dell product (Wood and Schneider 2006, 287). Second, in 2001, Dell was the market share leader for personal computer (PC) sales. In 2002, Dell was also the market share leader in sales to institutional purchasers, such as universities and government agencies, who make up a significant percentage of PC sales (Wood and Schneider 2006, 287; Zehr 2004). Additionally, the 2001 merger of Compaq and HP created renewed competition for market share leadership within the computer industry.[87]

Third, Dell was targeted because of its brand and reputation. As Schneider and Wood state, "Dell is not so much a manufacturing company as it is a marketing company. Dell assembles made-to-order computers from parts supplied to it and attaches its logo. The CTBC believed that Dell was particularly susceptible to a strategy and associated tactics that attacked its brand name" (2006, 287). The CTBC also felt because Dell bears the name of its founder and CEO Michael Dell, he might be especially sensitive to attempts to undermine the company's brand name and reputation. Fourth, Dell is not an innovator in the electronics industry; rather, it waits for other companies to innovate and then focuses on reducing the price of products. Because of the company's large market share and its ability to cut costs, activists felt that Dell was well positioned to pressure its supply chain to produce 'greener' products and that this would pressure other companies

[87] Following the merger of Compaq and HP, Dell and HP regularly alternated as market share leaders. Since 2009 Dell and Acer have competed for second place in the PC market, while HP has remained the market share leader (Olenick 2010).

in the industry to follow its lead (O'Rourke 2005, 123; Wood and Schneider 2006, 287-288).

The CTBC's Dell campaign demanded that the company take back its products for free and responsibly recycle them (Konrad 2003b; Wood and Schneider 2006). The CTBC utilized a variety of tactics to pressure Dell. The Dell campaign began with student organizing on a number of U.S. college and university campuses. The CTBC drew on Dell's position as the leading seller of computers to colleges and universities, along with alter-globalization and anti-corporate sentiment on campuses at that time. To conduct its campus campaign against Dell, the CTBC joined with Ecopledge.com, a national student organization focussed on corporate accountability with a network of campus chapters, as well as the Grassroots Recycling Network. By late spring 2003, the CTBC had coordinated actions against Dell at university and college campuses in 20 states (ETBC 2007a; Wood and Schneider 2006, 290).

As part of its campus organizing efforts, in March 2002, the CTBC released a guide for university activists entitled, *Dude, Why Won't They Take Back My Old Dell,* with information and solutions to the e-waste problem and resources students could use to join the campaign (CTBC 2002). The report parodied Dell's advertising campaign at that time, which featured a character named Steven, 'the Dell Dude.' The network also organized a postcard campaign directed at Michael Dell, and used petitions, posters, and stickers with Michael Dell's image at a variety of campus and community events. In September 2002, the CTBC launched a website (www.toxicdude.com) parodying Dell's

advertising campaign with information about Dell's poor environmental record and the CTBC's demands (ETBC 2007a; Wood and Schneider 2006, 290-291).

In May 2002, in response to the e-waste network's campaign, Dell announced a new recycling program. Dell contracted UNICOR to be its primary recycling partner and required consumers to pay $30-60 USD to send their used computers back to Dell (Wood and Schneider 2006). UNICOR's use of prison labour to recycle electronics allowed the CTBC to draw attention to the need for electronics manufacturers to not only take back their products but to also ensure they responsibly recycle them. Dell's use of prison labour also illustrated a need for the network to frame the issue of e-waste as one of responsible recycling rather than simply product take back.

Activists from the CTBC attended Dell's 2002 and 2003 annual shareholder meetings in Austin to raise the issue of product take back, as well as protesting outside the meetings with piles of obsolete computers (Wood and Schneider 2006; Nichols 2002). In January 2003, the CTBC attended the International Consumer Electronics Show in Las Vegas, the main electronics industry trade show. Activists from the CTBC dressed as a prison chain gang and protested outside the trade show before Michael Dell's keynote speech. They were able to gain the attention of the international media (ETBC 2007a; Wagner 2003; Zehr 2004). In spring 2003, Dell held one day only collection events for used electronics in a number of U.S. cities. The CTBC used these collection events as an opportunity to distribute flyers with information about Dell's poor recycling practices and the importance of responsible electronics recycling that does not utilize prison labour. During this period Dell also began to actively market asset recovery to institutional

purchasers; however, these recycling programs also used prison labour. In spring 2003, Dell expanded its recycling program when it began selling its own brand of printers and offered to take back any printer with the purchase of a new Dell printer (Wood and Schneider 2006, 294).

While the Dell campaign was a national campaign, the CTBC also targeted Dell in its hometown of Austin, Texas. The TCE, a grassroots environmental organization based in Austin, joined the CTBC in 2002. Dell is the largest private employer in the Austin area, and Dell and its executives have a high philanthropic profile in the region. The TCE protested at local events involving Dell and public appearances made by Michael Dell. In May 2003, the TCE held an e-waste prison fashion show outside a dress shop owned by Michael Dell's wife, which generated the attention of the local media. These tactics, which personally targeted Michael Dell and sought to embarrass him for his company's poor environmental policies benefitted the e-waste network's campaign. They indicate it can be effective for activists running a corporate campaign to target high-profile members of a company. One activist involved in the Dell campaign stated that, "I was later told by one of Dell's lobbyists that that was what sent him over the edge. The use of personal tactics, picketing the store. I mean pretty over the top stuff" (Interview with Ted Smith, ETBC, April 21, 2009).

In response to Dell's use of prison labour in its recycling operations, the CTBC released a report entitled, *A Tale of Two Systems*, which compared Dell's use of prison labour with HP's recycling facility (SVTC and CTBC 2003). HP's facility had high health and safety standards and HP allowed members of the CTBC to test its health and

safety. UNICOR refused to allow the CTBC to test its facilities. The report comparing the recycling practices of Dell and HP was published in June 2003. By July 2003 Dell had agreed to stop using prison labour in its operations (ETBC 2007a; Flynn 2003). The success of contrasting the recycling operations of Dell and HP and reports ranking the environmental policies of electronics manufacturers, illustrates the effectiveness of the strategy of comparing leaders and laggards within an industry.

Subsequently, in October 2003, senior Dell and HP executives voiced their support for producer responsibility at an industry conference. A spokesperson from Dell acknowledged the important role played by the CTBC in altering the company's position on e-waste and even encouraged institutional purchasers to include producer take back in their contracts. Following this announcement, Dell conducted a dialogue with activists from the CTBC about the goals of the campaign and the economic challenges facing Dell. In February 2004, both Dell and HP publicly supported producer take back legislation proposed in Minnesota at that time (ETBC 2007a; Wood and Schneider 2006, 294). In May 2004, the CTBC released a "Statement of Principles on Producer Responsibility for Electronic Waste," which was endorsed by both Dell and HP. In July 2004, Dell and HP became the first electronics manufacturers to offer free computer take back in the U.S. In the 2004 Computer Report Card, Dell ranked second due to the changes it had made to its environmental policy (Carmody 2004).[88]

[88] In the 2002 computer Report Card Dell was ranked 13th out of 26 electronics manufacturers. In the 2003 Computer Report Card Dell ranked 14th out of 28 manufacturers. In the 2004 Computer Report Card HP was ranked first, while Dell was ranked second and recognized for "most improved performance" (Wood and Schneider 2006).

The role of the CTBC in altering Dell's position on producer responsibility illustrates the close relationship between the e-waste network's corporate and legislative campaigns and role that corporate campaigns can play in supporting legislative change. Dell and HP's support for producer responsibility in the U.S. divided the electronics industry, which had been opposed to mandatory producer take back. This helped facilitate the passage of e-waste take back bills in Minnesota and elsewhere. As Wood and Schneider state, "With Dell and HP—the two market leaders in PCs—supporting key elements of CTBC's program, the CTBC had much more leverage in state and national policy discussions" (2006, 294).

Dell now offers free product take back worldwide for all Dell products and will also take back another brand of computer with the purchase of a new Dell computer (Dell 2010a). In 2007, Michael Dell publically stated in an op ed piece in the San Francisco Chronicle:

> Free global recycling and recovery programs, where businesses take responsibility for what they make and sell, require little effort on the part of consumers, and they pay off….We also should make a commitment to maintain responsibility throughout a product's entire life cycle. This starts with design and ends when the product is no longer wanted. We should then recover it, and provide updates to customers and the public on our progress on accomplishing these steps (Dell, M. 2007).

In 2007, Dell also announced a goal to become the "greenest technology company" (Dell 2007). This has given the e-waste network leverage in further pressuring Dell to improve its environmental commitments since the network is able to contrast areas where Dell lags behind its competitors with Dell's goal of being the "greenest." As stated by a member of the network regarding Dell and the Greener Electronics rankings,

"…if the company claims it is the greenest and then you have a ranking in which it is not at the top, then its self-created greenness is seriously in question because it trumped up that claim very loudly" (Phone interview with e-waste activist November 6, 2009). As Schurman (2004) argues, to the extent that activist campaigns can raise questions about the gap between a company's public proclamations and its actual behaviour, they can cast doubt on a company's legitimacy. Dell also regularly communicates with members of the e-waste network about its environmental policies. As Mark Newton, Dell Senior Consultant for Environmental Policy and Global Requirements stated about the CTBC's criticisms of Dell's initial take-back program and its use of prison labour:

> At first, we didn't listen closely enough to the input of all stakeholders. When we realized that this input could help improve the solutions we were trying to bring to the marketplace, our environmental momentum increased. People throughout the company realized the benefits of developing an open and transparent dialogue with environmental advocates just like we do with customers and investors (as quoted in Greiner et al. 2006, 41).

While the CTBC's Dell campaign was very successful, and gave momentum to the e-waste network's broader campaign, the network has continued to target Dell when the company's environmental policies have lagged behind the rest of the industry. In 2006, Dell's chemicals policy made it an industry leader when it pledged to eliminate PVC and BFRs from all its products by the end of 2009 (Dell 2010b; Greenpeace 2006a). While Dell has placed some products that do not contain BFRs and PVC on the market, it failed to meet this deadline for its entire product line and revised its deadline for a phase-out of PVC and BFRs to the end of 2011. Greenpeace feels Dell is unlikely to meet its 2011 commitment and in spring 2010 began protesting against Dell (Greenpeace 2010c; 2010d).

Dell's changing position on the phase-out of BFRs and PVC illustrates a downside of corporate campaigns. While Greenpeace has protested against Dell worldwide for backtracking on its commitment to phase out PVC and BFRs, beyond increased activist pressure, the company does not face a penalty for failing to meet its deadline. Dell is an electronics manufacturer that primarily markets its products based on price, value, and functionality (Charles 2007; Smith 2007; Wright, Millman and Martin 2007). The company may feel the majority of its customers are unlikely to be concerned if it fails to meet its commitments to phase-out chemicals, especially if a phase-out would increase the price of its products. In the absence of legislative change and consumer demand, corporate campaigns may have to continually pressure companies to ensure they do not backtrack on commitments made in response to activist demands. Those companies whose products compete primarily on price may be more prone to back-tracking. This highlights the need for activists to also focus on legislative change to 'lock-in' commitments made by companies in response to corporate campaigns.

The "Greener Apple" campaign

Following the success of the Dell campaign, in January 2005, the CTBC launched a campaign against Apple at the MacWorld Convention in San Francisco (Chmielewski 2005; Schoenberger 2005). Subsequently, in summer 2006, Greenpeace launched its "Green My Apple" campaign, which called on Apple to become an environmental leader in the electronics industry. Activists felt Apple would be a vulnerable target for a variety of reasons. Just as Dell had scored poorly on the CTBC's Computer Report Card, Apple's environmental policies also lagged behind the rest of the electronics industry. Apple

scored poorly in Greenpeace's *Guide to Greener Electronics* when the "Green My Apple" campaign was launched (Interview with Tom Dowdall, Greenpeace International, October 28, 2009; Greenpeace 2007).

Apple also made an appealing target for the e-waste network because of its well-known brand and image as 'hip,' 'progressive,' and 'alternative' (Belk and Tumbat 2005; Kahney 2002; Klein 2000). These characteristics contrasted with Apple's lack of environmental leadership. In addition, Apple customers are extremely loyal to the company (Belk and Tumbat 2005; Kahney 2002). Apple's customer loyalty makes it unique in the electronics industry, where despite strong brand recognition consumers often treat electronics as commodity items and have little brand loyalty towards specific companies. The e-waste network felt that if they could get Apple's customers to call on the company to do better, then Apple would be forced to listen. The network also personally targeted Apple's CEO Steve Jobs because he is the company's public face. Furthermore, within the electronics industry Apple is a leader in design and innovation and its products are often copied by other electronics manufacturers. The network felt that if it successfully pressured Apple to become an environmental leader other companies in the industry might feel pressure to follow suit. The Apple campaign also benefitted from coverage in Apple specific media such as blogs and magazines (Interview with Tom Dowdall, Greenpeace International, October 28, 2009).

The e-waste network utilized a variety of tactics to target Apple. The CTBC initiated a postcard campaign against Apple, showed up at the company's annual shareholder meeting in 2005, and staged creative protests at events where CEO Steve

Jobs was present (Chmielewski 2005). For example, at Jobs' June 2005 commencement address at Stanford University, the CTBC flew a plane over the university campus with a banner which read, "Steve, Don't Be a Mini-Player: Recycle all E-Waste" (ETBC 2007b). Greenpeace launched a Green my Apple website in September 2006, which mimicked Apple's website. The Greenpeace website was designed to appeal to Apple's loyal customers and prominently featured the campaign phrase "I love my Mac. I just wish it came in green." The website offered a number of ways Apple users could become involved in the campaign ranging from sending an email to Apple CEO Jobs to offering videos and graphics consumers could use to create their own Greener Apple images. As Greenpeace stated to Apple customers at the beginning of the Greener Apple campaign, "We want you to run this campaign. We want you to create the campaign t-shirt, pen the speech in which Steve Jobs announces the Greening of Apple, shoot the Apple ad that sets Cupertino talking about clean production and take-back schemes. The Green my Apple website has all the information and raw materials you need to get you started" (Greenpeace 2007). In addition to its online activities, Greenpeace protested at the 2006 MacExpos in London and San Francisco (Greenpeace 2006b). Activists also visited Apple stores in London, Amsterdam, Austin, and New York where they handed out leaflets and used showroom computers to display Green my Apple messages (Greenpeace 2007).

The Greener Apple campaign differs from other corporate campaigns targeting well-known brands because Greenpeace did not attempt to initiate a boycott against Apple as has been the case with other corporate campaigns against companies such as

Nike, Nestle, and Home Depot. While strong brands have provided ammunition for activists targeting corporations, consumer loyalty can also be a challenge for corporate campaigns to overcome when attempting to initiate a consumer boycott. While Apple's extremely loyal customer base acted as a resource for the e-waste network, the network also experienced some backlash from Apple customers who were offended that 'their' company was being targeted (Interview with Ted Smith, ETBC, April 21, 2009). As Friedman states, "With huge increases in recent years in advertising expenditures, many consumer products have now acquired strong consumer loyalties that are not easy to break, and have…become part of an individualized lifestyle" (2004, 51). Thus, the Greener Apple campaign played on the strength of the bond between Apple consumers and the company, telling Apple fans they could help to make 'their' company even better.

Despite the publicity the e-waste network's tactics generated, Apple largely remained silent throughout the duration of the network's campaign.[89] Then on May 2, 2007, the words "A Greener Apple" appeared on the front page of Apple's website and a message from Steve Jobs announced the company was changing its environmental policies. Apple stated it would phase BFRs and PVC out of its products by 2008 and offer free take back for its products in the U.S. (Apple 2007; Greenpeace 2007). Apple has since expanded its voluntary take back program and has phased PVC and BFRs out of its products (except in countries where certification of PVC-free power cords is still ongoing).[90] Since its initial announcement of "A Greener Apple," Apple has continued to

[89] Although Apple CEO Jobs did accuse Greenpeace of being 'unfair' in singling out Apple for its campaign (interview with Tom Dowdall, Greenpeace International, October 28, 2009).

[90] While Apple has expanded its take back programs, outside the U.S. it still lags industry leaders in take back for used electronics.

ratchet up its environmental standards and has emerged as an industry leader in the voluntary phase-out of toxic substances. Apple lobbied for a ban on PVC, chlorinated flame retardants, and BFRs in the revision of the EU's RoHS Directive (Apple 2008). Apple has also taken steps to be a corporate leader on the issue of climate change, releasing its annual corporate carbon emissions in September 2009 (Burrows 2009a). In October 2007, Apple left the U.S. Chamber of Congress, the largest lobby group in the U.S., in objection to the Chamber's opposition to the EPA's efforts to limit GHGs (Apple 2009; Greenpeace 2009a). These changes in Apple's environmental policy are notable because the company rarely takes a position on public policy issues, and its employees seldom speak or attend industry conferences (Burrows 2009b).

Significantly, Apple's changing approach to environmental issues did not come about because the e-waste network impacted the company financially. Instead the network appears to have threatened or impacted the company's reputational capital. While environmental concerns may still play a limited role in determining the electronics purchasing decisions of many consumers, many electronics manufacturers have the impression that environmental concerns have increased in salience amongst the public and shape the purchasing decisions of some groups of consumers. As Apple's products do not compete largely on price, and the company is able to charge a premium for its products due to its innovative designs, Apple's customers may be more open to concerns about the environmental impact of electronics than other consumers. The network illustrated to Apple that as part of its reputation as "cool" and "hip," its customers expected it to be an environmental leader. Apple may have also felt that it could gain a

competitive advantage by marketing itself as 'green' and staying ahead of future legislation, such as chemicals restrictions. Former Apple CEO Jobs has admitted that criticism from Greenpeace and other ENGOs motivated the company to improve its environmental policies (Burrows 2009a). The case of the network's Apple campaign suggests that while initially a company may alter its environmental or social policies as a strategic response to an activist campaign; over time these ideas may take root within a company, thereby shifting how a corporation views itself and its interests.[91] This supports O'Callaghan's (2007) argument that risk management practices in TNCs are motivated by both public relations concerns and the protection of shareholder value as well as ideational change amongst TNC management elites (see also Kollman 2008).

The e-waste network and toxic televisions

In recent years the e-waste network's corporate campaign has broadened its focus beyond computers to a wider range of consumer electronics. In the U.S. the ETBC has targeted television manufacturers. The introduction of flat screen televisions and high definition televisions has increased the number of CRT televisions discarded. Additionally, on June 12, 2009, U.S. television stations were required to stop broadcasting analog signals and to only broadcast digital signals.[92] This technological shift made analog televisions obsolete without the purchase of a converter box. As part of its "Take-Back My TV" campaign the ETBC pressured television manufacturers to take

[91] For example, when the Montreal Protocol banned CFCs, IBM was unprepared. The company used CFCs as a cooling agent in many of its large servers and faced considerable expense in phasing them out. That experience underscored the benefits of a more proactive environmental policy for the company and shaped how it viewed future CSR initiatives (Phone interview with Diana Lyon, IBM, November 6, 2009).

[92] The digital switch-over in the U.S. was originally supposed to occur on February 17, 2009, but was delayed due to a lack of consumer awareness and converter boxes. Canada's digital switch-over occurred on August 31, 2011. Digital switch-overs are occurring globally.

back obsolete televisions for recycling. It argued manufacturers benefitted from the increased obsolescence of televisions due to the introduction of new technologies such as flat panels. The ETBC also released a "TV Recycling Report Card," which ranked major manufacturers on their national take back programs.

When the ETBC launched its television campaign in 2007, no television manufacturer in the U.S. had a national take back and recycling program and manufacturers actively lobbied against state recycling laws. Today seven television manufacturers and two retailers have national take back programs.[93] However, television manufacturers have been less vulnerable to the e-waste network than PC manufacturers. While the market for PCs is dominated by a small number of recognizable brand names, the market for televisions comprises considerably more manufacturers. While manufacturers such as Sony, Panasonic and Sharp once dominated the market for TVs, they now face strong competition from Korean companies such as Samsung and LG, as well as from a growing number of Chinese and Taiwanese companies who manufacture house brands for major electronics retailers in the U.S. such as Best Buy, Wal-Mart, Target, and Radio Shack (ETBC 2010d). The large number of manufacturers, and the

[93] Sony was the first television manufacturer to launch a national take back program in September 2007. LG and Samsung launched national take back programs in summer 2008, while Panasonic, Sharp and Toshiba expanded their take back program into a national program in February 2009. In January 2010, Vizio announced it would offer a national take back service for its televisions. The announcement by Vizio was significant as the company consistently has the number one or two market share for flat-panel televisions in the U.S. As retailers in the U.S. also have a significant share of television sales through their house brand televisions, the ETBC has also pressured large television retailers. Wal-Mart joined Samsung's take back program for its house brands in November 2008. In February 2009, Best Buy announced it would take back any brand of television up to 32 inches for a 10 USD fee. Despite charging a fee, the ETBC viewed this program as significant because it would cover all brands of televisions. However, while these programs are national in scope, none of the manufacturers have a robust network of collection points and many have just a few locations in single states. Those states that have laws mandating e-waste recycling have far more collection points than states that lack take back laws (ETBC 2009; ETBC 2010c).

number of anonymous manufacturers who produce for retailers, have made it harder for activists to pressure television manufacturers.

In addition, while PCs have a lifespan of a few years, the lifespan of a television is typically much longer, approximately fifteen years. Due to their longer lifespan and the increasing obsolescence of televisions because of new technologies, television manufacturers potentially face responsibility for a much larger amount of historical waste than PC manufacturers. Televisions are also typically larger and heavier than other electronics, making them more difficult and expensive to collect. Thus, the physical characteristics of a product can impact how companies respond to corporate campaigns.

The responsiveness of electronics manufacturers to the e-waste network

While the entire electronics industry has shifted its position on e-waste in response to the e-waste network's campaign, some companies have been more responsive than others. Some electronics manufacturers have been industry leaders in environmental issues since the network's corporate campaign began. Others, such as Apple and Dell, have recently emerged as industry leaders due in part to the network's activities as well as a growing environmental awareness amongst the industry and consumers.

As was suggested by the case of televisions, the products a company produces may significantly impact how it approaches environmental concerns. In early 2008 Greenpeace began targeting Philips for its position on e-waste. Unlike many other electronics manufacturers, Philips did not have a voluntary take back programme for its products. It also actively lobbied against IPR, and funded research against the concept

(Greenpeace 2009b).[94] Philips' resistance to IPR may have been partially due to the broad scope of products it produces, which range from compact fluorescent (CFL) light bulbs that require specialized disposal because they contain small amounts of mercury, to televisions, telephones, and medical equipment. In contrast, disposal is an easier issue to address for a company with a more limited product range, such as Nokia. Nokia focuses on cellular telephones which are small and lightweight, and therefore are relatively easy and inexpensive to collect for disposal. Companies with large product scopes may also be reluctant to commit to phasing out toxic substances across their product lines because of the large variety of products they manufacture and the difficulty in doing so in all their products, especially highly specialized equipment that does not have large sales volumes.[95]

A company's failure to meet its' commitments may make a manufacturer more vulnerable to activist tactics. An e-waste activist noted that when the *Guide to Greener Electronics* was basing its rankings on public commitments to chemicals phase-outs one electronics manufacturer was very quick to publicly commit to voluntarily phasing out toxic substances and included this commitment in its' marketing campaign. However, the company failed to meet its commitments to phase-out chemicals. When the rankings expanded beyond public commitments to concrete actions, the company lost its position

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[94] In February 2009, Philips announced it would take back its products and assume financial responsibility for recycling them. In 2009 Philips also joined the IPR Works coalition to lobby in favour of IPR in the EU.

[95] For example, one representative from a major electronics manufacturer stated that while his company supports the idea of phasing BFRs and PVC out of products it has been reluctant to publicly commit to doing so because of the company's broad product scope. As the company's products range from consumer electronics to professional audio-visual equipment it would be more difficult for them to achieve a company-wide phase out (Phone interview with electronics manufacturer representative, December 3, 2009).

as a leader within the industry, and was vulnerable to the e-waste network's campaign (Phone interview with e-waste activist, November 6, 2009). Companies may be weary of making commitments they cannot meet, as this may consequently make them more vulnerable to activist tactics. NGO rankings of companies based on public commitments rather than concrete action may also inadvertently assist corporations in greenwashing exercises.

Perceptions of competitive advantage are also important in shaping how firms respond to activists. Nokia has consistently ranked at or near the top of the *Greener Electronics Guide* since it was first published. Kautto (2009) notes one of the factors that has motivated Nokia's proactive environmental approach has been its desire to maintain a competitive advantage over its competitors. This has also been the case with other electronics manufacturers. For example, when the CTBC was producing its "Computer Report Card," ACER contacted the CTBC and asked to be included in the rankings. At the time, ACER was strategizing how to increase its North American sales and felt it would do well in the rankings, which could potentially increase the company's market share.[96]

Companies may also hope that by becoming industry leaders and implementing voluntary regulations they can avoid the threat of government regulation. King and Pearce outline how government regulation and voluntary CSR programs are fundamentally interactive. They note that "The threat of public regulation may cause firms to seek private solutions to a perceived social [or environmental] injustice, and this

[96] The CTBC did include ACER in its environmental rankings and the company did not rank highly (Interview with Ted Smith, ETBC, April 21, 2009).

may be especially likely when social movements apply pressure" (2010, 257). Prakash and Potoski (2006) note that companies with brand names known for progressive environmental commitments may receive preferential treatment from government regulators. Dell CEO Michael Dell has attributed his company's environmental committments to several factors: consumer demand, the recognition that e-waste is a significant problem, and a desire to stay ahead of take back regulation (Gunther 2007).

Corporate culture also shapes how companies respond to activist campaigns. The e-waste network has periodically targeted HP. In addition, to its well known brand and consistently being the number one or two market share leader for PC sales, the network felt HP's corporate culture and history made it vulnerable to activist tactics. One activist noted the lasting impact HP's founders, David Packard and Bill Hewlett had on the company and its commitment to the surrounding community (Interview with Ted Smith, ETBC, April 21, 2009). A company's nationality may also shape how it approaches CSR (see Mikler 2007). Japanese electronics manufacturers operate according to multi-year plans and targets and may be reluctant to make commitments that are not part of their plans or they may fail to meet. However, while Japanese electronics manufacturers may be more reluctant to make public commitments in response to activist demands, they are also much more likely to meet the commitments they do make (Phone interview with e-waste activist, November 6, 2009; interview with major electronics manufacturer, December 3, 2009).

Spar and La Mure (2003) note that some upper level managers may internalize a commitment to social and environmental issues, which goes beyond cost-benefit

considerations. For example, while Electrolux is currently viewed as an environmental leader within the appliance industry, in the early 1990s Electrolux was seen as an environmental laggard. At that time Greenpeace protested against Electrolux for using ozone depleting substances in its products (specifically chlorofluorocarbons (CFCs) used as a coolant in refrigerators). In response Electrolux decided to take a proactive stance on ozone depleting substances. This decision was due to the influence of the company's former CEO Leif Johansson, who made the decision to implement and embed environmental principles throughout the company (Interview with electronics manufacturer representative, October 27, 2009; Zadek 2007). Nokia's relatively progressive environmental policies can also be partially attributed to the views of the company's senior management (Kautto 2009, 121). Thus, the views of a company's senior management can play an important role in shaping its environmental policies, and its response and receptivity to activists. This chapter will now turn to a discussion of how electronics manufacturers and the e-waste network have engaged with one another as part of the network's 'inside' strategy.

The e-waste network's 'inside' strategy: Engaging electronics manufacturers

While the e-waste network has received considerable attention for its 'outside' strategy that utilizes protest tactics to target major electronics manufacturers, the network has also engaged in an 'inside' strategy consisting of a dialogue with electronics manufacturers about their environmental policies. As O'Rourke states:

> Market campaigns also attempt to promote solutions. NGOs work with multiple stakeholders (including progressive firms and government agencies) to identify and support the adoption of alternative production practices. Activists no longer simply decry problems and demand that the government regulate them more

> effectively. They are now engaged in finding and promoting solutions in the marketplace. This often entails both an 'outside' strategy of external pressure on firms and an 'inside' strategy of negotiations to help firms identify solutions that are implementable (2005, 124).

The e-waste network's dialogue with electronics manufacturers has allowed it to develop a better understanding of electronics manufacturers' economic and technological limitations as well as their goals and motivations. As one member of the e-waste network stated, "I continue to think that it is important to be able to play both inside and outside. I think a strategy that is purely outside or a strategy that is purely inside loses some of its power, some of its effectiveness" (Interview with Ted Smith, ETBC, April 21, 2009). Trumpy (2008) argues that the institutional tactics activists utilize as part of an inside strategy are effective because they are similar to those used in business and politics. However, institutional strategies work best when paired with tactics such as protests and boycotts as this demonstrates the power of an activist network.

Members of the e-waste network communicate regularly with representatives from most major electronics manufacturers about their environmental policies. The dialogue between the network and electronics manufacturers ranges from sporadic meetings with company representatives in response to protests by the network to long-running cooperative relationships where these two types of actors collaborate and work towards common goals, such as the IPR Works alliance. While this inside/outside strategy is a conscious strategy on the part of members of the network, the recognition of a need for a dialogue with electronics manufacturers has also strengthened as the network's corporate campaign has progressed. Several members of the network noted that while they would once attack a corporation without warning, they now first try to communicate

their concerns to a company before publicly attacking it (Interview with lauren Ornelas, SVTC, April 22, 2009; Interview with Ted Smith, ETBC, April 21, 2009).

The e-waste network's inside strategy has allowed it to generate contacts and potential allies within electronics manufacturers, who at times may subtlety strategize with activists about how the rest of their company can be convinced of the need to implement particular environmental policies (Phone interview with e-waste activist, November 6, 2009). By connecting to potential allies within the electronics industry, activists are able to gain another method through which they can communicate their ideas and arguments. Weber, Rao and Thomas (2009) argue the success of activist campaigns involving corporate actors is shaped by the existence or lack of elite allies within corporations. Activist campaigns targeting corporate targets can weaken or strengthen the role of potential allies within organizations, as can the characteristics of management within companies. Individuals within corporations can be affected by threats activist campaigns pose to their status within a company. The growth and increased influence of environmental departments in many TNCs has been especially helpful for the environmental movement in this respect. Members of environmental departments may be more sympathetic to the concerns of the environmental movement than other staff members in a company. Staff in environmental departments may strategize with activists about how their company's position on an issue can be altered.

The dialogue that has developed between many electronics manufacturers and members of the e-waste network also represents a growing awareness amongst corporations of the need to engage with activists. The business literature has recognized

the role NGOs have played in creating a new type of corporate citizenship, which acknowledges the need for practices such as stakeholder dialogue and social auditing. By engaging with activists, corporations can anticipate future risks and conflicts (Zadek 2007). Corporate culture and management styles are helpful in explaining why and how corporations choose to engage with activists. For example, Apple is often described as a closed and secretive organization and the company continues to have little to no interaction with members of the network. In contrast, Dell engages with members of the network through a variety of stakeholder initiatives (Dell 2010c).[97]

The IPR Works alliance has been an important component of the e-waste network's inside strategy.[98] As discussed in chapter 6, this coalition of representatives from several major electronics manufacturers and NGOs has played a key role in advancing IPR in the EU. IPR Works has also allowed members of the e-waste network to communicate with major electronics manufacturers about a variety of other issues related to e-waste, particularly chemical phase-outs. Through IPR Works, activists and representatives from electronics manufacturers have been able to establish areas where they have common goals and interests. This industry-NGO coalition gives representatives

[97] The following organizations are part of the e-waste network and are also listed on Dell's website as taking part in the company's stakeholder initiatives: BAN, ChemSec, CPA, ETBC, Good Electronics, Greenpeace, SVTC, and TCE.

[98] Another example of an "inside" strategy utilized by the e-waste network is CPA's activities related to green chemistry. This includes the Green Screen for Safer Chemicals, a chemical screening method to help move towards the use of greener and safer chemicals. HP has adopted the Green Screen as its primary tool for the assessment of alternatives to harmful chemicals. It is also championing wider acceptance of the Green Screen within the electronics industry. Since 2006, CPA has also coordinated the U.S. based Business-NGO Working Group for Safer Chemicals and Sustainable Materials. The Business-NGO Working Group includes representatives from companies in a variety of industries. Its members include HP and Dell as well as representatives from several organizations active in the e-waste network. Multi-stakeholder groups such as these also help electronics manufacturers to stay ahead of the curve on chemicals regulations, potentially saving them money in the long run and serving as a competitive advantage.

from NGOs an opportunity to communicate their demands to the electronics industry, increase their knowledge of both industry limitations and vulnerabilities, and ally with sympathetic individuals in TNCs.

In order for initiatives such as IPR Works to function effectively, there is a need for trust to be established amongst the various stakeholders, which can be a challenge when activists have chosen to pursue an inside/outside strategy. To overcome this challenge the network has at times differentiated between those individuals conducting actions and those dialoguing with industry. In some NGOs active in the e-waste network, specific individuals have participated with industry in multi-stakeholder initiatives while other individuals in those organizations have coordinated actions against electronics manufacturers. There is also a division of roles between NGOs within the network, with some organizations taking a more active role in working with industry while others largely focus on "outside" strategies. Despite the tensions an inside/outside strategy creates, one representative from a major electronics manufacturer that has been targeted by Greenpeace stated that the Greenpeace protests did not have a detrimental effect on the ability of the company and Greenpeace to work together in IPR Works (interview with representative from major electronics manufacturer, December 1, 2009).

While the e-waste network has benefitted from its use of an inside/outside strategy, there are several potential disadvantages to this strategy. NGOs campaigning against corporations can potentially be co-opted and alter or soften their goals as a result of their interactions with corporate actors. With regards to corporate campaigns generally, a distinction needs to be made between those NGOs that pursue an inside/outside strategy

of corporate engagement and those who can be viewed as 'co-opted' and serve to legitimate corporate behaviour and CSR activities. Members of the e-waste network noted that they have softened some of their demands in response to information they have gained through their 'inside' strategy. However, members of the network also see a need to continue to press some goals, which the electronics industry may not view as feasible, to ensure the industry's environmental performance continually improves.

It takes considerable resources for even a large NGO, such as Greenpeace, to ensure it is responding both knowledgably and equally to corporations. While electronics manufacturers have considerable resources they can devote to engaging with activists (for example one major electronics manufacturer has a full-time staff member devoted to dealing with Greenpeace's Greener Electronics campaign), NGOs have far fewer resources, making a corporate campaign against a large industry, such as the electronics industry, a considerable commitment for activists to take on. While the e-waste network has been quite successful in recent years, the corporate campaign against electronics manufacturers has been ongoing for about a decade. Thus, while corporate campaigns against large TNCs appear to be an effective way for activists to create change in many issue areas, they are a significant undertaking, especially since corporate campaigns appear most effective when accompanied by complementary legislative campaigns. This chapter will now turn to a brief discussion of the e-waste network's interactions with two other types of private actors involved in e-waste: institutional purchasers of electronics and e-waste recyclers.

The e-waste network and institutional purchasers

In addition to directly targeting electronics manufacturers, the e-waste network has pressured electronics manufacturers by influencing the purchasing decisions of large institutional buyers of electronics. Institutional purchasers are businesses, universities, and government departments and agencies at the federal, regional and local levels that make large bulk purchases of electronic equipment. Institutional purchasers buy a large proportion of electronics sold, especially computers. They also tend to replace their electronics more often than individual consumers. While consumer pressure has not been a major factor in the e-waste network's corporate campaign, the procurement decisions of institutional purchasers have influenced the environmental policies of electronics manufacturers and created incentives for manufacturers to devote greater attention to eco-design (Greenbiz 2004). The actions of institutional purchasers have been especially influential in the U.S. due to its lack of a federal e-waste law.

As awareness of the e-waste problem has grown, and high profile news stories about e-waste have aired in the media, institutional purchasers have become more concerned about e-waste. Just as the e-waste network has highlighted electronics manufacturers' logos on e-waste shipped to developing countries, the network has also drawn attention to institutional purchasers' ID tags on illegal e-waste exports and confidential information recovered from dumped computers (e.g. BAN 2005). Institutional purchasers concern about e-waste is partly a reflection of the success of the e-waste network's data security frame, as some institutional purchasers have been alerted to the potential liabilities they may face if computers and the confidential information

they contain are not disposed of properly. Product take-back has not been a significant issue for institutional purchasers because their sales contracts generally require manufacturers to take back their old products after a specified period of time. Institutional purchasers will generally replace large numbers of computers at once and on a predetermined schedule; therefore, it is easier for manufacturers to take back their products, and it is standard industry practice for them to do so.

Institutional purchasers may see economic benefits from purchasing more environmentally sustainable products. The increased energy efficiency of many "green" products can help off-set increases in their initial purchase price. To help increase the salience of the benefits of "green" products, members of the e-waste network have urged institutional purchasers to view their purchase of computers and other electronics from a life-cycle perspective, taking into consideration the costs associated with running the machines and disposal, in addition to the initial purchase price of a product (Interview with e-waste activist, April 23, 2009). Institutional purchasers can also be motivated by reputational concerns and a desire to be seen as green, as well as the emphasis their internal corporate culture places on environmental concerns. The inclusion of environmental considerations in procurement policies is now often seen as a component of CSR policies and ethical investment portfolios are increasingly screening companies based on their procurement policies (Omelchuck et al. 2006).

The EPEAT certification program plays a key role in assisting institutional purchasers in their procurement of more environmentally sustainable electronics. As Iles (2008) notes, certification programs can play an important role in supporting the

purchasing decisions of institutional purchasers. EPEAT was officially launched in 2006, and is similar to the Energy Star program. It is a procurement tool designed to help the public and private sectors choose more environmentally sustainable electronics, such as laptops and desktop computers. EPEAT received its initial funding from the EPA. Its standards are developed by a multi-stakeholder group that includes electronics manufacturers, electronics recyclers, NGOs, universities, and public and private purchasers (EPEAT 2010; Omelchuck et al. 2006; Renckens 2008).[99] EPEAT is based on existing government regulations or voluntary standards, such as the EU's RoHS Directive. The EPEAT criteria do not go beyond existing technology, although criteria are regularly revised in accordance with new technological developments in the industry.[100]

Like the electronics industry itself, EPEAT is a global program. It is emerging as the dominant certification standard for 'greener' electronics. As Omelchuck et al. state, "EPEAT has the potential of harmonizing the rapidly proliferating product-based environmental regulatory requirements around the world. This is of immense strategic importance to the electronics industry and is an important reason for the industry's support of EPEAT" (2006, 104). Additionally, the electronics industry positively views

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[99] Products certified under EPEAT are graded according to three levels of environmental performance: Bronze, Silver and Gold. EPEAT evaluates electronic products according to 51 environmental criteria, 23 of which are required and 28 of which are optional.The EPEAT criteria is grouped according to eight categories: reduction/elimination of environmentally sensitive materials; materials selection; design for end of life; product longevity/life-cycle extension; energy conservation; end-of-life management; corporate performance; and packaging. As of June 30, 2010, 50 manufacturers worldwide have registered their products with EPEAT. In the U.S., 34 manufacturers have registered 1730 products with EPEAT (EPEAT 2010).

[100] While EPEAT registered products are not verified at the time of their registration, products are periodically verified to ensure that they meet the criteria. This system of self-declaration with subsequent verification was chosen because it was felt time-consuming verification processes would be of limited utility due to the constant innovation of the electronics industry and the short life-span of computers (EPEAT 2010; Omelchuck et al. 2006; Renckens 2008).

EPEAT as a way of encouraging electronics manufacturers to design more environmentally sustainable products by providing manufacturers with economic incentives in the form of large purchasing contracts. Members of the e-waste network have been divided in their views of EPEAT. While some members of the network feel EPEAT helps incentivize the purchase of electronics which are less harmful to the environment, others feel the EPEAT criteria are not progressive enough. EPEAT has had significant uptake amongst institutional purchasers and is now expanding both the number of products it covers as well as the scope of the program to include individual consumer purchasing (Interview with e-waste activist, April 23, 2009). EPEAT has been utilized by local, state, and federal government agencies across the U.S.

Members of the e-waste network have also actively encouraged institutional purchasers to go beyond EPEAT standards. Together with Health Care without Harm, Hospitals for a Healthy Environment, and the ETBC, the CEH has developed several checklists and guidelines to assist institutional purchasers in going beyond EPEAT guidelines by taking into consideration concerns related to occupational health and safety, labour standards, end-of-life management, packaging and hazardous materials. The desire to go beyond EPEAT is due in part to EPEAT's reliance on existing regulations for its standards. For example, because there are no existing regulations to address labour rights in the electronics industry, EPEAT has not included this issue in its criteria (CEH 2010).

The CEH has focussed its efforts on hospitals and HMOs. While this is partially due to CEH's previous involvement with the organization Healthcare without Harm, it is also due to the characteristics of the healthcare industry. Because of its focus on health

and wellbeing, the healthcare industry is seen as more open to concerns about the health and environmental impacts of products and the potential hazards of the materials they contain. The health industry is vulnerable to activist arguments framed around health risks, as well as patient confidentiality. In particular, the CEH has worked closely with Kaiser Permanente, one of the largest HMOs in the United States. Kaiser is well known for having progressive environmental policies and for a willingness to push its suppliers to produce more environmentally friendly products.[101] Kaiser has therefore been receptive to the e-waste network's arguments. It is often noted that companies that have a reputation as progressive are more vulnerable to activist tactics (e.g. Schurman 2004). The network's work with Kaiser also illustrates how companies with progressive reputations can serve as allies for activists, helping to put pressure on other companies.

The e-waste network has indirectly targeted electronics manufacturers by encouraging institutional purchasers to include environmental criteria in their electronics procurement policies. In utilizing this strategy the network is attempting to at least partially bypass the need for consumer pressure, which has not been a significant factor in its campaign. This supports Seidman's (2007) argument that consumer pressure exercised through individual choices is less effective than organized consumer pressure exercised through institutions such as church groups and universities. However, while it is often noted that institutional purchasers can play an important role in activist campaigns (e.g. Cashore, Auld and Newsom 2006; Conroy 2007), there is little research on why an

[101] For example, in the early 2000s, Kaiser Permanente began looking at the environmental impacts of carpet tiles used in its buildings. Along with ensuring used carpet would be recycled, the company sought a carpet tile that was PVC-free due to hazardous off-gassing. When it discovered there were no PVC-free carpet tiles on the market, Kaiser successfully persuaded a carpet manufacturer to develop one (Cooper 2004).

institutional purchaser may choose to support an activist campaign or issue, the impact they have on other corporations and government regulators, and their relationship to consumer pressure.

The e-waste network and electronics recyclers

While the e-waste network has focussed the bulk of its corporate campaign on electronics manufacturers, it has also focussed some attention on e-waste recyclers and the need to distinguish between responsible and irresponsible e-waste recyclers. Targeting e-waste recyclers is difficult for the network because they are small, numerous, and generally lack a brand name. Through its work with the media, the network has sought to create awareness about the actions of irresponsible e-waste recyclers.

In late 2008, BAN, a member of the e-waste network, initiated the e-Stewards certification system for electronics manufacturers.[102] The e-Stewards standard includes the following rules: recyclers be ISO 14001 certified; prohibition of the export of e-waste from developed to developing countries; full accountability for the entire downstream recycling chain; prohibition on the use of prison labour; prohibition of disposing of e-waste in a landfill or through incineration; data security requirements; and worker health and safety requirements. The standard also requires a third-party audit. In early 2010 the first certified e-Stewards recyclers and the first three accredited e-Stewards certification bodies were announced. A number of large and small companies are also e-Stewards Enterprises, who commit to ensuring their electronics are responsibly recycled (e-

[102] The e-Stewards certification standard has evolved from BAN's e-Stewards Pledge program. The Pledge was created in 2003 and contains eight criteria for socially and environmentally responsible electronics recycling including prohibitions on: the export of e-waste, the use of prison labour, and the land filling or incineration of e-waste (Auld et al. 2009).

Stewards 2010).[103] While the e-Stewards program is designed to be a global standard, it has been driven by the lack of U.S. federal e-waste legislation. While individual U.S. states have passed electronics take-back laws, they do not have the authority to regulate the export of used electronics. Most recyclers that have approached BAN about participating in the program have done so in response to demands from institutional purchasers and electronics manufacturers who have been affected by take-back laws in many U.S. states (Auld et al. 2009, 28; e-Stewards 2010).

BAN's e-Stewards program directly competes with a less stringent recycling standard developed by the EPA and industry, called R2 (Responsible Recycling). R2 was launched in January 2010 and permits the export of discarded electronic equipment as long as it does not violate the laws of the importing country and facilities in the receiving country meet basic health and safety standards. The R2 standard also permits the use of prison labour in e-waste recycling operations. It has so far certified eight facilities operated by six recycling companies (Zeller 2010). Members of the e-waste network, including BAN and ETBC, had originally participated in negotiations for the R2 standard, but withdrew from the negotiations because they felt the standard would be weak and ineffective (Auld et al. 2009; Greener Computing 2010; Smith-Teutsch 2010).

Due to the recent release of both the R2 and e-Stewards standards for electronics recyclers it is not yet possible to determine which standard will be more widely adopted by the recycling industry. It is also difficult to know if individual consumers, institutional purchasers, retailers, and electronics manufacturers will differentiate between the

[103] E-Stewards Enterprises include: Bank of America, Capital One, Samsung, Wells Fargo, and the Natural Resources Defence Council.

standards. However, it appears BAN is seeking to create support for e-Stewards amongst electronics manufacturers and institutional purchasers through its "enterprise" designation for companies that promise to give preferential access to e-Stewards recyclers.

Conclusion

This chapter has detailed the e-waste network's efforts to make the electronics industry more sustainable through interactions with a variety of corporate actors. The network has pursued an inside/outside strategy in its interactions with electronics manufacturers. The network has contrasted leaders and laggards in the industry and has also targeted individual electronics manufacturers, such as Apple and Dell, that were perceived to be vulnerable to the network's tactics. This chapter utilized the concept of an industry opportunity structure to explain why some manufacturers were more vulnerable to the tactics of the network than others, as well as the manner in which manufactures chose to respond to and interact with the network (see Table 6). Brand and reputation have been key factors affecting the vulnerability of individual manufacturers as well as how they have chosen to engage with members of the network. However, economic

Table 6: Characteristics influencing the vulnerability of corporate actors to the e-waste network

CHARACTERISTIC	IMPORTANCE
Organizational Characteristics	
Location in production chain	High
Orientation of markets (i.e. regional or global)	Varies
Economic Characteristics	
Brand name and reputation	High
Product line	Moderate
Competition within an industry	High
Creation of new markets	High
Cultural Characteristics	
Company management	High
Influence of employees	Moderate
Corporate culture	High
Home state	Low

factors, company management and corporate culture, as well as the nature of the products a company produces also impact the vulnerability of an industry and the companies within it. While the e-waste network has aggressively targeted electronics manufacturers, as its corporate campaign has evolved it has also found it beneficial to engage and dialogue with manufacturers about their environmental strategies.

In addition to targeting electronics manufacturers, the e-waste network has also targeted institutional purchasers and electronics recyclers as part of its broader corporate campaign. Interestingly, while consumer pressure has not played a significant role in the network's corporate campaign, institutional purchasers have played an important role in pressuring electronics manufacturers to better address the problem of e-waste and ensure they properly recycle electronics. The importance of institutional purchasers to the network's corporate campaign, suggests a need for further understanding of the role these actors play in shaping the success of a corporate campaign.

While the e-waste network's corporate campaign has been very successful, there are also numerous challenges involved in running this type of campaign, especially when it involves an inside/outside strategy. Communicating in a meaningful manner with numerous policymakers and electronics manufacturers requires considerable resources and is a challenge for even a large NGO such as Greenpeace. When dialoguing and cooperating with representatives from the electronics industry, members of the e-waste network must possess technical knowledge of the challenges facing the industry, but must also maintain their separation from the industry, so they do not threaten their legitimacy and risk accusations they have been co-opted.

The lack of mass protest and consumer engagement in the e-waste network's corporate campaign is also problematic, because it raises questions about the democratic legitimacy of these types of campaigns. The NGOs involved in the network are all highly professionalized and do not make significant use of mass protest. While public awareness of the e-waste problem has grown, there has been less public interest in actively pressuring the electronics industry and individual manufacturers. Electronics manufacturers generally do not feel environmental considerations have a major impact on the purchasing decisions of individual consumers. Dell's backtracking on its commitment to phase toxic substances out of its products, illustrates another potential downside to the corporate campaigns; the difficultly of holding companies accountable for promises they may make in response to activist demands. Holding companies accountable and monitoring their behaviour also involves continued efforts on the part of NGOs, and companies are not required to be transparent in their adoption and implementation of environmental policies.

The e-waste network has been successful in creating a dramatic shift in how policymakers, electronics manufacturers, and the general public view electronics and e-waste. The e-waste network's corporate campaign has pushed electronics manufacturers to adopt more progressive environmental policies and design more environmentally friendly electronics and has helped to dampen industry opposition to e-waste legislation. It is largely due to the e-waste network that governments and the electronics industry have begun to address the e-waste problem.

CONCLUSION
CIVIC ACTIVIST NETWORKS AND CORPORATE ACTORS

Due to the political, economic and technological changes brought on by the processes of globalization, civil society groups have increasingly chosen to target corporate actors in addition to and instead of states. This thesis has focussed on the circumstances under which civil society groups are able to alter the behaviour of corporate actors. It examined the relationship between corporate actors and civil society groups, and the influence that other actors, such as states and international organizations, have on this relationship. This thesis consisted of two case studies of activist networks that have utilized corporate campaigns: the anti-GM network and the e-waste network.

After reviewing the relevant literatures drawn on for this thesis and presenting the theoretical framework of a political economic opportunity structure, this thesis analysed the activities of the anti-GM network and the e-waste network. The formation of each activist network and the frames the networks have utilized to present their arguments and create openings in opportunity structures were examined. This thesis discussed the regulatory frameworks for GMOs and e-waste and the efforts of activists to influence the regulations that govern those issue areas, focussing on the EU and U.S. due to their influence in shaping the governance of these issue areas. It examined how the influence and actions of corporate actors played an important role in determining the success of both the e-waste and the anti-GM networks' legislative campaigns. The impact that international organizations (the WTO, the Cartagena Biosafety Protocol, and the Basel Convention) had on the governance of e-waste and GMOs was also discussed. The bulk

of each case study focussed on the corporate campaigns conducted by activists. The analyses of these corporate campaigns drew attention to how the characteristics of particular industries and companies determine their response to the demands made by activists and the way in which they choose to interact with activist networks.

This concluding chapter outlines the main arguments made in this thesis and its theoretical and practical contributions to understanding the relationship between civil society groups and corporate actors. It first discusses the need for a political economic opportunity structure approach to understanding the relationship between civil society groups and corporate actors. It then reflects on what the case studies suggest for the effectiveness of the tactics and frames utilized by activists. It discusses the legislative campaigns examined in this thesis and how activists have navigated various political opportunity structures. The organizational, economic and cultural characteristics that shape the vulnerability of industries and individual firms to activist campaigns are examined. The future of corporate campaigns, their implications for civil society groups and corporate actors, and the accountability challenges they pose for governance are also discussed. This thesis concludes with a summary of its main contributions and suggestions for future research.

Political economic opportunity structures and the creation of opportunities

In the case studies examined in this thesis, activist networks targeted both formal political institutions and a variety of corporate actors. While this thesis focussed on the increasing prevalence of corporate campaigns, it also showed that legislative change remains an important end goal for many activists. However, while activists may have

once directly targeted policymakers to implement regulatory change, they are now also indirectly targeting policymakers via corporate campaigns. Activists hope that by changing the preferences of corporate actors they can gain industry support for legislative change or at least dampen industry opposition to legislation. As one e-waste activist noted, the growing prevalence of corporate campaigns has been driven in part by an understanding that corporations are also part of the legislative process and can play a role in blocking legislation (Phone interview with e-waste activist, November 6, 2009). Activist campaigns in the cases examined in this thesis were most successful when they divided industry or exploited existing divisions within industry. Industry is much more difficult for activist networks to influence when it is united in opposition to the demands made by activists, as in the case of the agbiotech industry and the mainstream grocery industry in the U.S.

The use of this two-prong approach by activists underscores the need for scholars of global civil society to focus on both political opportunity structures as well as industry opportunity structures. Theoretically, this thesis utilized a political economic opportunity structure approach to analyse the relationship between civil society groups and corporate actors. The political economic opportunity structure approach contends that while corporate actors have become a more influential and appealing target for activists, the state also remains important due to its ability to enact (or decline to enact) regulations. The concept of a political economic opportunity structure incorporates the concepts of both political opportunity structure and industry opportunity structure and stresses the interrelationship between formal political institutions and economic actors, such as

corporate actors. A political economic opportunity structure approach also stresses the extensive influence that corporate actors can have over policymaking.

To examine how a political economic opportunity structure affects the relationship between civil society groups and corporate actors, this thesis looked at both the corporate campaigns conducted by civil society groups, as well as the efforts of civil society groups to pressure policymakers through legislative campaigns. While many examinations of corporate campaigns touch on their relationship to states and legislation, there is a tendency within much of the literature on civil society groups to neglect one of these types of campaigns at the expense of the other (e.g. Conroy 2007; Trumpy 2008). In many cases it may not be realistic for scholars to separate legislative and corporate campaigns in their analysis of activist networks, as these two campaigns are often linked as part of a larger campaign for change in an issue area. To understand the relationship between corporate actors, activists, and policymakers it is necessary to understand how these actors impact on the behaviour of each other.

While opportunity structures are highly significant in determining the outcome of activist campaigns, the strategic decisions of activist networks themselves also play a key role in creating openings in both political and industry opportunity structures. A political economic opportunity structure approach must also emphasize the agency of activist networks and their ability to create new opportunities for change that previously may have been limited or may not have existed. Activist networks can draw attention to new issues or problems and create public demand for solutions through the strategic use of frames. Activist networks can also alter the interests of corporate actors by creating new

reputational concerns or market opportunities where none may have previously existed. As has been illustrated by both case studies examined in this thesis, activists are most likely to be successful at creating openings in a political economic opportunity structure when their arguments and frames resonate with the existing political and cultural context.

Table 7 (below) outlines the factors that shape the vulnerability of a political economic opportunity structure to an activist network and the role that the tactics and frames utilized by activist networks play in the creation of opportunities. It notes the importance that each characteristic had in shaping the success of the anti-GM network and the e-waste network.

Table 7: Characteristics shaping the outcome of activist campaigns targeting corporate actors

CHARACTERISTIC	IMPORTANCE: GMOs	IMPORTANCE: E-WASTE
Activist network agency		
Frame resonance	High	High
Mass mobilization	High	Moderate
"Inside" tactics	Moderate	Moderate
"Outside" tactics	High	Moderate to low
Political opportunity structures		
Openness to corporate interests	High	High
Openness to civil society groups	High	High
Federal/state structure	High	High
Openness to particular norms	High	High
Industry opportunity structures: organizational characteristics		
Location in the production chain	High	High
Orientation of markets: i.e. regional or global	Varies	Varies
Industry opportunity structures: economic characteristics		
Brand name and reputation	High	High
Product line	Moderate	Moderate
Competition within an industry	High	High
Creation of new markets	High	High
Industry opportunity structures: cultural characteristics		
Company management	High	High
Influence of employees	Low	Moderate
Corporate culture	High	High
Home state	Moderate	Low
Impact of other actors		
Role of international organizations and agreements	Moderate	Low
Role of the mass media	High	High

Tactics and frames utilized by activist networks

While activists may be driven in part by altruistic concerns, they are highly strategic in how they approach issues. The e-waste and the anti-GM networks strategically employed a variety of frames to draw attention to the issues with which they were concerned and to advance their arguments. The effective use of frames by activist networks can help to create openings in political economic opportunity structures by altering how issues are perceived and the influence particular actors have in policy debates. The activist networks examined varied their framing of particular issues depending on their audience (the public, the media, corporations, policymakers). The frames employed by activists have also varied over time, in response to changing political economic opportunity structures and the continuing evolution of the activist networks examined. "Meaning work," as framing processes are sometimes described, was particularly important in the cases examined in this thesis due to the diversity of NGOs active in both the e-waste network and the anti-GM network. Carefully conceptualized frames bridge the diverse concerns of NGOs active in a network, giving them a common sense of purpose and common targets/enemies. This thesis has underscored previous observations about the need for successful strategic action frames to attribute blame to specific actors for a problem, as well as offer solutions to problems (e.g. Keck and Sikkink 1998; della Porta and Diani 2006).

Frame development is very important in creating support for single issue activist networks and establishing connections to potential supporters. Both the e-waste network and the anti-GM network are single issue networks embedded in larger social movements,

primarily the environmental movement. Both activist networks utilized master frames. In activist networks that consist of a diversity of NGOs master frames can help build a collective identity (della Porta et al. 2006, 67; Juris 2008). The role of master frames in creating a sense of collective identity may be particularly important in the case of activist networks that do not involve the mass mobilization of supporters because a lack of mass mobilization means a network's supporters may not have the same wealth of shared experience or common identity to draw upon as traditional social movements. The e-waste network's arguments have utilized the environmental justice master frame. The anti-GM network benefitted from the emergence of the anti-neoliberal globalization master frame. The use of these master frames allowed both networks to attract a broader range of participants and increased media attention. The use of master frames helped ensure that the issues advanced by these activist networks resonated with the broader cultural context in which they were employed.

The case of the anti-GM network also illustrates how over time certain frames may undermine the credibility and influence of an activist network. The food safety frame utilized by the anti-GM network originated in the UK media and strongly resonated with broader food safety concerns throughout the EU in the late 1990s and early 2000s. The food safety frame's resonance made it one of the anti-GM network's predominant frames until the early 2000s. However, as the food safety issues associated with GMOs failed to materialize, opponents of the anti-GM network have used the food safety frame to discredit the network. The food safety frame has also distracted from the anti-GM network's socio-economic and environmental concerns.

The e-waste network has also garnered significant media attention, but unlike the anti-GM network, the e-waste network has been able to exert much greater control over the framing of e-waste. The problem of e-waste is simpler to present in media stories than the potential problems posed by GM crops and food. The environmental degradation caused by e-waste can easily and compellingly be visually communicated to an audience by the media. In contrast, the environmental and socio-economic consequences of GM crops are more difficult to communicate. Furthermore, while the electronics industry cannot deny the environmental impact of e-waste that has been improperly disposed of due to visual and scientific evidence, the agbiotech industry has been able to undermine the anti-GM network's environmental and social arguments through scientific studies presented as counter evidence. Thus, the nature of an issue, the extent to which it is highly technical, and the extent to which it can be clearly attributed to particular actions and/or actors, will impact how it is portrayed in the media.

One of the key strategies utilized by both the anti-GM network and the e-waste network is comparing and contrasting leaders and laggards within an industry. As was illustrated by the Greenpeace Guide to Greener Electronics and the e-waste network's campaigns against Apple and Dell, corporate actors are very sensitive to this type of tactic. It is unclear to what extent the general public is aware of the rankings of electronics manufacturers and uses them to guide their purchasing decisions. Nonetheless, electronics manufacturers have been sensitive to these rankings and the potential they have to undermine their reputations. The anti-GM network has also produced purchasing guides to assist consumers in avoiding GM products in a variety of countries. Contrasting

leaders and laggards within an industry is an effective activist strategy for a number of reasons: in competitive industries rankings can help to give progressive companies a competitive edge and can penalize laggards; rankings can help enable consumers to support companies with more progressive environmental policies and boycott companies whose practices are especially harmful to the environment; by highlighting industry leaders activists can help to ratchet up the environmental policies in an industry; rankings also facilitate media coverage of industry leaders and laggards by helping to create a story about the environmental and social policies in that industry.

In addition to ranking companies, activists in both networks examined in this thesis utilized a variety of radical and conventional tactics. Lobbying allows activist networks to articulate their arguments and attempt to influence policymakers and corporations, while protest tactics vilify and mobilize support against a target. Both the anti-GM network and the e-waste network lobbied policymakers and provided expert advice during policy debates. Both networks also utilized a variety of colourful tactics to pressure policymakers and corporate actors and generate public interest and media attention. Activists utilized symbols, such as “Franken Tony the Tiger” or an e-waste prison fashion show, to attract media attention.

The role of mass mobilization in shaping the outcome of activist campaigns in the cases examined in this thesis varied greatly. In the case of the anti-GM network it is clear that mass mobilization played an important role in altering the position of the European Commission and many EU Member States on GMOs. In the U.S., the agbiotech industry has significant influence at the federal level, and the lack of mass mobilization generated

by the U.S. arm of the anti-GM network limited the network's ability to counter the industry's influence. The case of the anti-GM network suggests that mass mobilization can act as an important source of power for activists when mobilizing against industry interests that are highly influential within a given jurisdiction. The electronics industry also has considerable influence over policymakers in many states because it is viewed as strategically important. While the e-waste network has not mobilised large scale protests against the electronics industry, the lack of mass mobilization has not been as detrimental to the e-waste network as it has been to the anti-GM network.

Both the e-waste and anti-GM networks also mobilized support via the internet. For example, the anti-GM network mobilized U.S. consumers to email managers at Trader Joe's stores. Greenpeace International used the internet to mobilize Apple customers to pressure the company to go green. Both the Apple campaign and the Trader Joe's campaign were successful. While the networks did not physically mobilize large numbers of customers to protest against Apple or Trader Joe's (although they both held small protests at some locations), or launch large scale boycotts, virtual consumer pressure appears to have been effective in these cases.

Legislative campaigns and political opportunity structures

This thesis underscored previous arguments about the significant role that political opportunity structures play in shaping the outcome of activist campaigns. The influence that corporate actors have over policymakers within a particular jurisdiction is a significant factor that shapes the vulnerability of corporate actors to activist networks. If corporate actors have little influence over policymakers, or activist networks are able to

diminish the power that an industry has within policy debates, than activists are more likely to be able to pressure policy makers to implement regulatory change to address the issues they are concerned about. The case studies examined in this thesis confirmed that when a political opportunity structure is particularly unwelcoming activists may choose to focus on alternative targets. Studies of global civil society have often emphasized that when states are particularly closed to activist networks, activists may engage in "venue shopping" and look beyond the state to advance their goals (e.g. Imig and Tarrow 1999; Keck and Sikkink 1998).

However, in the case of both the e-waste and the anti-GM networks, activists targeted the subnational level in the U.S. to advance their goals. The e-waste network has encouraged U.S. states to pass take-back laws for used electronics. The creation of this legislative patchwork has made the electronics industry more amenable to the passage of federal e-waste legislation in the U.S. The anti-GM network in the U.S. has also advocated for anti-GM legislation, including the passage of GM free zones, at the state and local levels. However, the U.S. federal government has largely been able to pre-empt anti-GM legislation at the state and local levels. The anti-GM network in the EU also campaigned within key EU Member States to block the approval of GM crops by the European Commission. During the late 1990s, opposition within many EU Member States played an important role in shifting the positions of policymakers on GMOs and resulted in the EU's unofficial moratorium on GM crops. Opposition from Member State governments continues to limit the cultivation of GM crops in the EU today. Thus, activists may choose to operate at a variety of political levels depending on the

vulnerability of various political opportunity structures. Activists may choose to target subnational levels of government (or national in the case of the EU), where industry interests are less influential, with the hope of indirectly putting pressure on higher levels of government to implement regulatory change.

While both the e-waste network and the anti-GM network chose to target subnational governments, particularly in the U.S., in response to unwelcoming political opportunity structures, the activist networks examined in this thesis have devoted fewer resources to advancing their arguments within international organizations. While activists were active in the passage of international agreements such as the Basel Convention and the Cartagena Protocol on Biosafety, these agreements have generally not been focal points for their activities in recent years. This is contrary to much of the constructivist literature that focuses on the efforts of advocacy networks to advance norms within international organizations (e.g. Keck and Sikkink 1998, Price 1998).

As both GMOs and e-waste are environmental problems that span international borders, the focus on the national and sub-national levels cannot be attributed to the geographic nature of these environmental problems. Rather, activist networks' focus on key states and subnational governments may be due to disappointment with the lack of effectiveness of many existing international environmental agreements. Since the 1990s, the U.S. has refused to ratify a number of environmental agreements including the Basel Convention, the Biosafety Protocol, the Convention on Biological Diversity, and the Kyoto Protocol. This has severely undermined the effectiveness of these agreements, because the commitment of the U.S. is necessary to effectively address many global

environmental issues due to its size and level of consumption of natural resources. The successful negotiation of these environmental agreements has also involved significant compromise, which has limited the ability of these agreements to effectively address environmental issues. Activists may now feel that in some cases, rather than aiming for an international agreement that codifies a compromise (and in some cases an ineffective) solution to environmental issues, they are better off first building strong support and legislation for their positions at the subnational and national levels and amongst key industry interests to address an environmental problem.

In seeking to create legislative change in the issue areas of e-waste and GMOs activists have also acted as norm promoters. This thesis illustrated the significance of the precautionary principle as a key norm advocated by environmentalists. The anti-GM network utilized the precautionary principle to increase its discursive power when targeting legislators. While the anti-GM network was successful in using the precautionary principle in the EU to advocate for a stronger regulatory approach to GMOs, the U.S. arm of the anti-GM network was not able to successfully advocate for a precautionary approach to GMOs due in part to the dominance of other norms, such as economic competitiveness. The precautionary principle has also been used to justify the phase-out of certain hazardous substances in consumer electronics. The e-waste network has actively promoted the IPR norm to policymakers as a way to address the e-waste problem. The e-waste network has successfully spread the IPR norm to a variety of governments around the world including the EU and a growing number of U.S. states. The spread of the IPR norm illustrates the influential role that the market characteristics

of a particular norm may play in facilitating its spread. IPR has offered an attractive waste management solution to cash-strapped governments. The IPR norm also offers material incentives to a small number of electronics manufacturers, who are leaders in ecodesign. However, those electronics manufacturers that would not benefit from IPR have promoted alternative norms, such as voluntary and shared approaches to e-waste management, in an effort to undermine the IPR norm. Thus, just as activist networks can play an important role as norm promoters, industry can also act as a norm promoter or counter-norm promoter when its interests are threatened.

Understanding the response of corporate actors to activist campaigns

This thesis has devoted considerable attention to understanding how the characteristics of particular industries and individual corporate actors shape how they respond to activist campaigns. Both the e-waste network and the anti-GM network targeted a variety of different corporate actors as part of their campaigns. When choosing to launch a corporate campaign activists expend considerable energy evaluating the strengths and vulnerabilities of particular companies or industries. In conducting corporate campaigns, activists will generally pursue a divide and conquer strategy, which targets the most vulnerable companies to change their behaviour. If this strategy is successful it puts pressure on other companies in an industry to also change their behaviour because it illustrates to the public, policymakers, and other companies in an industry that activist demands are reasonable and achievable. This thesis has analysed the role that organizational, economic and cultural factors play in determining the

vulnerability of corporate actors to activist campaigns and the extent to which company management chooses to engage with activists.

Organizational factors play a significant role in determining the responsiveness of corporate actors to activist campaigns. The case studies examined in this thesis suggest that an industry's position in a production chain is one of the most important factors determining its vulnerability to activist tactics. Companies and industries, such as the chemicals industry or the agbiotech industry, located upstream in production chains are generally less vulnerable to activist campaigns because they do not sell directly to consumers and are relatively anonymous. The difficultly of targeting upstream industries led some members of the e-waste network to target electronics manufacturers as a way of indirectly targeting the chemicals industry. Activist campaigns targeting upstream industries that are reliant on products that have controversial characteristics that cannot be altered, such as the anti-GM network's campaign targeting Monsanto, are extremely unlikely to successfully pressure these companies to institute any meaningful changes in response to their demands. Legislative campaigns may be more effective tools with which to create change in these industries. Campaigns targeting upstream industries, such as the campaign against Monsanto, can help to drive legislative change by creating public opposition towards upstream industries' products and behaviour. Public opposition can be a powerful tool for NGOs when upstream industries have considerable political influence as is the case with both the chemicals industry and the agbiotech industry. The significant role that public opposition can play in advancing legislative campaigns against upstream

industries is illustrated by the different outcomes of the anti-GM network's legislative campaigns in the U.S. and EU.

Companies and industries that sell directly to consumers are more vulnerable to activist campaigns. It is easier to mobilize consumers to boycott these companies. The high visibility and competitive nature of both the food retailing and manufacturing industries and the electronics industry made those companies vulnerable to activist campaigns. By targeting companies that sell directly to consumers, activists can pressure those companies to put pressure on their suppliers (such as agbiotech or chemicals companies) to change their practices or the nature of the products that they produce.

Whether an industry is regionally, nationally, or globally oriented also shapes the outcome of an activist campaign. E-waste is a global problem and the electronics industry is globally oriented. Many of the successes the e-waste network has achieved, particularly with regards to chemicals restrictions, have been implemented globally by major electronics manufacturers. Industries or companies that produce for a global market can be accused of a double standard if they change their products in response to a corporate campaign in one region but not across their entire organization. Several activists interviewed for this thesis noted how companies are very sensitive to being accused of a double standard, and accusations of a double standard can be used to attract media attention.

The food retailing industry in the U.S. is regionally oriented. This made it more difficult for activists in the U.S. to target food retailers because they had to run several regional campaigns targeting retailers as opposed to a single national campaign, as was

the case in the EU where food retailers tend to be nationally oriented. The regional nature of the U.S. food retailing industry also meant that if a regional food retailer in the U.S. had caved to the anti-GM network's demands, it may not have put pressure on retailers in other regional markets to follow suit. The national orientations of food retailers in the EU meant that while the European anti-GM network achieved significant success with its corporate campaign targeting food retailers, this success largely did not translate into changes in the policies of food retailers in other regions of the world.

Economic factors are also highly influential in shaping how corporations and industries respond to corporate campaigns. Studies of corporate campaigns stress that brand and reputation are one of the most significant factors in shaping how a company responds to activists. The case studies examined in this thesis reaffirmed the importance that brand name and reputation play in determining which companies are targeted by activist networks and how they respond. If a company's brand and reputation are well known amongst consumers, than activists do not have to create public awareness about that company and its products and can instead focus on connecting the issue with which they are concerned to a particular company. A company can serve as an important symbol or villain within a particular issue area, such as Monsanto in the case of GMOs.

While companies with highly visible brands are more likely to be targeted by activists, the characteristics of a particular brand also impact how vulnerable a company is to a corporate campaign. This thesis affirmed that brands that represent luxury, niche, or high-end products are more vulnerable to corporate campaigns than brands that are oriented around characteristics such as value and affordability. High-end brands may have

more space within their pricing structure to absorb the costs of responding favourably to activist demands or they may be better able to pass the costs of capitulating with such demands on to consumers. The case of Apple and the e-waste network also suggests consumers of niche or high-end brands may expect more from these companies in terms of their social and environmental commitments. Consumers may be willing to pay a premium for these companies' products because they are "different" and "better" than other companies. Niche market companies, such as Whole Foods, may market their products and differentiate themselves from their competitors based in part on their social and/or environmental commitments. If activists can illustrate that the practices of these companies are no different than their low cost competitors they may feel pressure to capitulate to activist demands because their brand and reputation are being undermined.

The nature of company's product line also affects its vulnerability to an activist network. A number of scholars that have looked at CSR and corporate campaigns have noted how companies that sell consumer-oriented products, particularly those with potential health impacts (i.e. food), are more vulnerable to activist campaigns (e.g. Schurman 2004). However, this thesis also illustrates how a company's entire product line plays an important role in shaping how company management approaches environmental concerns. Companies whose entire product line is centered on a controversial product (i.e. Monsanto and GMOs) are likely to be more resistant to change than companies where controversial products make up only a small component of their overall product line. Companies with diverse product lines may have a more difficult time implementing changes demanded by activists because of the need to do so across a

diversity of different products. This may be particularly true in the case of companies that manufacture more technical products, as the environmental changes demanded by activists may require considerable design changes. For example, one representative from a major electronics company noted that while his company would like to implement voluntary chemicals restrictions it would be difficult for that company to do so due to its broad product range that includes both consumer electronics and highly specialized technical equipment. In addition, Philips may have also been resistant to endorsing IPR due to the large variety of products the company manufacturers and the complexity and cost that may have been involved in implementing product take-back schemes for such a broad range of products.

The competitiveness of particular industries also determines their vulnerability to activist campaigns. Extremely competitive industries are more likely to be vulnerable to activist demands. For example, the competitiveness of the food retailing industry in the EU along with its lack of market growth, made it very responsive to the demands made by activists. Similarly, Dell competes directly with HP for computer sales, and was very sensitive when its recycling practices were directly compared to those of HP. A company may choose to support proposed regulation in some cases because it feels its' products or production processes already meet or nearly meet proposed regulatory requirements and therefore a company would have an advantage over its competitors if regulations were enacted. Members of the IPR Works alliance in the EU supported the inclusion of IPR in the WEEE Directive because they felt that they were ahead of their competitors in eco-design and would gain a competitive advantage if IPR were legislated.

Companies in competitive industries may choose to change their behaviour in response to concerns raised by activists because they perceive that they can gain a first mover advantage by doing so. The company that first changes its policies in response to activist demands is able to differentiate itself from its competitors and potentially gain new customers. Companies that are the first to capitulate to corporate campaigns demonstrate that the demands made by activists are achievable and reasonable. This undermines arguments made by other companies that the changes demanded by activists are not economically or technologically possible. Numerous activists involved in corporate campaigns noted the importance of publicly praising companies when they change their behaviour in response to the demands made by activists, even if companies do not adopt all the changes advocated by a corporate campaign. By praising companies that respond positively to their demands and criticizing those companies that resist change, activists use a carrot and stick approach when pressuring corporate actors. Those companies that move first are most likely to be publicly praised by activists because their actions represent a significant success for the corporate campaign itself. First movers are also most likely to gain media attention when they change their behaviour due to the novelty of their actions.

This thesis has illustrated the role that activist networks and corporate campaigns can play in the creation of new markets and opportunities for companies and industries. Activists can bring media and public attention to the problems or potential hazards of existing products and can create demand for new products. Companies can take advantage of these new market opportunities by responding to the demands made by

activist networks and concerned consumers. For example, the e-waste network has helped generate concern about the existence of toxins in computers, while the environmental movement has helped increase consumer interest in the energy efficiency of electronics and home appliances. The e-waste network has actively pressured institutional purchasers, a major customer for electronics manufacturers, to act on these environmental concerns when purchasing new electronics. This has created greater incentives for electronics manufacturers to invest in designing products that have environmentally beneficial characteristics such as fewer toxins and greater energy efficiency.

The anti-GM network played an important role in helping to increase consumer awareness of food production methods and demand for organic and locally grown foods. However, mainstream North American food retailers and processors also used the introduction of organic products to argue they did not need to exclude GMOs from their products because they were already offering non-GM alternatives. Thus, if companies implement the demands made by corporate campaigns across their product lines (as has been the case with Apple's chemicals restrictions) corporate campaigns can have widespread effects. However, if companies view the concerns voiced by activists as related to a niche market, this can help marginalize the concerns of activists and may deflect attention away from their broader goals.

While material factors are the most important in determining how corporate actors respond to the demands articulated by activist networks, corporate campaigns conducted by activists have not generally had a significant impact on the financial performance of firms. Nonetheless, a growing number of firms are investing in CSR initiatives and

engaging with activists. As companies have become increasingly concerned about their reputations and as consumers have come to expect that corporate actors act in a socially responsible manner, norms associated with CSR and environmental sustainability have increased in importance (e.g. Kollman 2008). Activist networks have played an important role in bringing salience to these norms and pressuring corporate actors to adopt them. Significant variations in how similar firms approach these concerns suggest that the motivating factors behind the adoption of CSR norms are not purely material.

Therefore, this thesis has argued that a company's internal culture plays an important role in determining its vulnerability to being targeted by activists and the manner in which it responds to activists' demands. Differences in how seemingly similar companies in the same industry approach CSR issues can be attributed to cultural factors within individual companies. For example, Electrolux's progressive environmental policies, which can be attributed to the lasting influence of its senior management in the 1990s, differentiate it from the rest of the household appliance industry. While cultural factors are extremely significant to understanding why particular companies vary in their approach to CSR, they are also the most difficult to decipher due to the challenge of extrapolating the impact that the views of individual managers and company culture have on a company's actions. The idea that a company's culture and the views of internal managers shape how a company views CSR runs counter to the emphasis within much of the business literature on rationality and profit maximization. As Spar and La Mure state, "…if firm strategy is determined even in part by individual preference, then standard

models of rational profit maximization may need to be tweaked in a rather unwieldy direction" (2003, 96).

In the cases examined in this thesis, companies that have a history of taking a more progressive approach towards environmental issues than their competitors were more likely to be responsive to the demands made by activist networks. The business literature and the literature on corporate campaigns notes how companies that have a reputation for progressive CSR policies are more likely to be targeted by activists. However, in both the cases examined in this thesis several companies that have an environmentally progressive reputation changed their policies to coincide with activist demands without actually being directly targeted by activists. Electrolux took a leadership role in advocating IPR as a waste management approach and created the IPR Works alliance to lobby in the EU in favour of IPR. In the U.S., Whole Foods announced it would exclude GMOs from its store brand products even though the U.S. arm of the anti-GM network was not particularly influential and never specifically targeted Whole Foods. While economic concerns such as competitive advantage and the ability to gain new customers and markets were undoubtedly major factors in the decisions made by these companies, the individual views of senior company management were also significant. The decision to adopt these environmental policies entailed considerable expense and risk for these companies. It appears that the importance placed on environmental sustainability within these companies sensitized senior management to both the intrinsic and material benefits of implementing progressive environmental policies. However, it is important to emphasize that while corporate actors have internalized norms associated with CSR and

environmental sustainability to an increasing degree, they tend to implement these norms, which are generally voluntary in nature, on their own terms in a way that does not significantly harm their material interests (Gillies 2010). Thus, while the norms of CSR and environmental sustainability appear to have altered how many corporate actors perceive their interests, material interests are still the primary factors motivating the behaviour of these actors.

While the cases examined in this thesis suggest that senior management play an important role in shaping how a company approaches CSR, they also suggest a company's home state does not a play a significant role in shaping how it responds to activist campaigns. European, particularly Scandinavian, companies are often viewed as more environmentally progressive while North American companies are generally viewed as more market oriented and less likely to adopt progressive, voluntary policies without significant financial incentives (Haufler 2001; Mikler 2007). While Nokia and Electrolux are Scandinavian companies and environmental leaders in the electronics industry, U.S. companies such as Apple and Dell have also shown a willingness to introduce progressive environmental policies. In addition, HP and Sony are founding members of the IPR Works alliance. In the electronics industry there is as much variation in environmental policies amongst companies from a particular region as there is worldwide. For example, until recently Philips (also a European company) stood out for being the only electronics manufacturer in the EU to openly lobby against IPR and fund research against the concept. Thus, economic factors and the views of senior managers appear to have greater influence in shaping how a company approaches environmental issues.

Where a company's home state may make a difference is if a company has experience dealing with particular regulations in its home state. If that is the case, the company may be more comfortable implementing those regulatory requirements across its entire organization or may choose not to oppose similar regulations in jurisdictions outside its home state. For example, Electrolux was familiar with the IPR concept because it originated in Sweden and the Swedish government implemented IPR regulations for old cars and electronics prior to the passage of the EU's WEEE Directive.

This thesis has argued that organizational, economic, and cultural factors play an important role in shaping how particular companies and industries respond to corporate campaigns. An industry's place in a supply chain appears to be the most significant factor in shaping how it responds to the arguments articulated by activists. However, within each industry there is considerable differentiation in the vulnerability of individual companies to corporate campaigns. Economic factors such as the competitiveness of a particular industry, reputational considerations, and opportunities for new markets may create incentives for companies to adopt CSR policies and address the environmental concerns voiced by activists. Cultural factors, particularly the influence of senior management, explain why seemingly similar companies may respond very differently to the demands made by activist networks.

The implications of corporate campaigns

Corporate campaigning is likely to continue to increase in prevalence as an activist strategy. Activists interviewed for this thesis from both the anti-GM network and the e-waste network stated that they felt they had achieved significant successes through

corporate campaigning and would continue to utilize this strategy in the future. While many activists noted the significant resources involved in running a corporate campaign, due to the need to monitor company behaviour and communicate with company management, as well as the considerable duration of many corporate campaigns, activists felt that the significant gains achieved using this strategy made it worthwhile. As one e-waste activist stated about corporate campaigns, "…it takes a lot more work and a lot more engagement with companies and it's arguably a longer and more resource intensive route to get where you want to go, but I would definitely say it is probably in most cases a more effective way in the long run to get there" (Interview with Tom Dowdall, Greenpeace International, October 28, 2009)

As corporate campaigning has evolved over time, activist networks and corporate actors have begun to increasingly engage with one another. Activists interviewed for this thesis from both the e-waste network and the anti-GM network noted how when they first started targeting corporate actors in the 1990s, they would show up at a company's headquarters and start protesting or send out press releases about a company's behaviour. However, activists now will generally first try to contact company management to express their concerns, and give company management a chance to respond and address the issue in question.

The manner in which a company chooses to interact with activist networks appears to be largely determined by the cultural factors discussed above. For example, while Apple has emerged as a global environmental leader in the electronics industry for restricting PVCs and BFRs in its products, the company still does not communicate with

the e-waste network. Apple's corporate culture is widely known to be extremely closed and secretive, due in part to the influence of its co-founder and former CEO Steve Jobs, so it is not surprising that the company would choose not to engage with activists. In contrast, since being targeted by the e-waste network, Dell now regularly meets with a variety of stakeholders about its environmental policies.

Many companies interviewed for this thesis also noted that the way in which they approach and engage with activists has changed over time. CSR norms emphasize the importance of stakeholder engagement. While corporate actors were initially reluctant to engage with activist networks, many have become increasingly willing to engage with activist networks. A number of major electronics manufacturers have viewed engagement with activist networks as beneficial. However, while the agbiotech industry initially attempted to dialogue with members of the anti-GM network in the 1990s and early 2000s, the industry no longer attempts to dialogue with these groups. Dialogue between NGOs and corporate actors is only likely to be of value when they can find some common points on which to agree, even if these points of agreement are extremely limited.

It can be a challenge for NGOs to effectively communicate with corporate actors while at the same time ensuring their critical stance is not compromised. One activist noted that when you are regularly communicating and collaborating with a company's staff it is very easy to lose perspective as an environmental NGO:

> It is known as the getting sucked in phenomena and it's probably the biggest challenge….because if you are basically collaborating with people on the basis of trust and you have a lot of information things aren't black and white they are all very grey. So at what point you should take a hard stance on something becomes much more difficult for you because you have a lot more information on what they are doing firstly, secondly, you are also impacted by what you see as the real

> impacts on those companies…through that trust relationship you have with them…you become influenced I think both personally and morally. To some extent you are compromised too, compromised by the amount of information you have about a decision (Interview with e-waste activist, November 6, 2009).

Therefore, it is important that activist networks include a variety of participants with differing political views. While the diversity of NGOs in activist networks such as the e-waste network and the anti-GM network may at times lead to internal conflict, this diversity is also a source of strength. Although activist campaigns may benefit from targeting corporate actors and engaging with company management, it is also important to have NGOs that remain highly critical of industry and its impacts on the environment. As stated by a member of the e-waste network,

> If all the organizations get into corporate campaigning, I think we run the risk of losing the bigger picture and losing the pollution voice…That would be a future challenge I think for NGOs as a whole, to maintain this spectrum…and not to get too unhealthily concentrated into too much corporate campaigning…(Interview with e-waste activist, November 6, 2009).

As corporate actors continue to be mainly motivated by material factors it is important not to view corporate campaigns and associated CSR policies as a primary means to solving many environmental problems. While activists may be able to create significant change in some issue areas through corporate campaigns, the CSR policies implemented by companies remain voluntary. While the factors that motivate companies to adopt CSR policies may not always be motivated purely by material concerns, if a policy goes against a company's profit-oriented objectives they generally will not implement it. For example, it is unclear whether mainstream European food retailers and manufacturers will continue to prohibit GM ingredients in their store brand products if consumer opposition to GMOs decreases and the price of non-GM ingredients rises.

Company management may also not be transparent about a failure meet their voluntary commitments or difficulties they are having achieving those commitments and they may face few consequences for doing so. For example, while Dell and HP committed to phasing BFRs and PVCs out of their products, both companies have delayed their phase out of these substances several times. While the e-waste network has publicly criticised HP and Dell for failing to meet their phase-out deadlines, neither company has faced any significant penalty for failing to meet its commitments. Many activist campaigns garner media attention when they are at their peak; however, once a company acquiesces to the demands made by activists' the media pays much less attention to how a company goes about addressing the issues raised by activists.

Therefore, a two-prong strategy that targets both legislators and corporate actors is a more effective strategy for activist networks to pursue. Companies are more likely to respond favourably to the demands made by activist networks if they perceive the threat of government regulation. Legislative change can help lock in the voluntary policies enacted by companies and ensure that all companies in an industry address an environmental problem, rather than only those companies that perceive benefits from doing so. It is notable that the development of private certification standards for industry played a relatively limited role in both the e-waste and anti-GM networks' campaigns. Where the activist networks examined in this thesis have developed private certification standards, they have come about due to a failure to create legislative change (i.e. the Non-GMO Project).

Corporate campaigns are also unlikely to bring about transformative change in an issue area. This is evident in the case of the anti-GM network. The use of labels on GM food makes opposition to GMOs into a consumer choice, which detracts from the social and environmental concerns of the anti-GM network. This is problematic for opponents of GMOs who feel the technology cannot coexist alongside conventional crops. Corporate campaigns seek to soften the social and environmental impacts of neoliberal policies. However, in doing so, these campaigns lose their transformative potential. Corporate campaigns legitimate the market as a key determinant of social and environmental change and they emphasize the power of TNCs. In some cases they may deflect attention away from the state's responsibility to protect the environment. This is problematic because many environmental concerns cannot be effectively addressed by corporate actors alone.

Corporate campaigns also cannot address one of the key causes of many environmental problems: mass consumption. Many environmental problems are ultimately tied to the global economy's reliance on mass consumption. The mass consumption of consumer electronics and their disposable nature has led to massive amounts of e-waste being generated. However, the e-waste network chose not to strongly emphasize the role of mass consumption in the e-waste crisis because it felt both electronics manufacturers and many policymakers would not be amenable to arguments that threaten profits and economic growth. Instead the e-waste network has been most successful in advancing arguments that fit with existing pro-market norms, such as IPR. In targeting corporate actors for their environmental practices, activists are pressuring

companies to produce "greener" products, but not to produce less, thereby neglecting the root cause of many environmental issues.

While corporate campaigns are unlikely to create transformative environmental change, the growing utilization of corporate campaigns by activist networks is understandable given the declining willingness and/or ability of the state to regulate. Furthermore, legislative campaigns are also unlikely to lead to transformative change given the current political climate. However, corporate campaigns can serve as a stepping stone to significant legislative change by dampening the opposition of corporate actors to particular policies. The most effective strategy for activist networks is to continue to pressure corporate actors and legislators to implement incremental changes in an issue area, with the hope that this will lead to significant change over time.

Key contributions of this thesis

This thesis has made several contributions to the literature on global governance, civil society organizations and TNCs. While this thesis sought to examine the circumstances under which civil society groups are successfully able to pressure corporate actors to change, it also emphasized the continuing importance of the state. Both the corporate campaigns examined in this thesis cannot be disconnected from complementary activist efforts to target the state. While many examinations of civil society organizations focus on legislative or corporate campaigns at the expense of the other, this thesis illustrated how activists often conduct both types of campaigns as two parts of a larger strategy.

Theoretically, this thesis also built on the idea of a political economic opportunity structure. While the social movement literature has focussed considerable attention on the role of political opportunity structures, and scholars have begun to also emphasize the role of industry opportunity structures, less attention has been paid to the ways in which these two types of opportunity structures interact in a political economic opportunity structure. As the activist strategy of targeting both political and economic actors concurrently appears to be increasing in popularity, there is a need for scholars to recognize how political and industry opportunity structures are intertwined.

This thesis also took a multi-level approach to examining the activities of the e-waste and anti-GM networks. This multi-level approach is unique in that many case studies of civil society organizations tend to focus largely on one level of analysis (e.g. a single country or the international sphere). Just as activist networks target states and corporate actors, their campaigns may also be multi-scaler in nature. Both the activist networks examined in this thesis targeted governments in multiple countries and at multiple levels (i.e. local, sub-national, national, regional, international), depending on where they felt policymakers were most open to their concerns. Best practices from campaigns at different levels of government and in different countries or regions were diffused to campaigns at other levels and countries and regions.

Different activist tactics were also evaluated in this thesis. This thesis drew attention to the role that ranking systems can play in successful corporate campaigns, a tactic that has received limited attention within the social movement literature. This thesis also illustrated how activist campaigns and engagements with corporate actors may help

to exacerbate existing divisions between corporations. This thesis built on the existing literature on the circumstances under which corporations are likely to be vulnerable to activist demands. It highlighted how corporate campaigns have evolved since the mid-1990s and activist networks now increasingly pursue an inside/outside strategy when pressuring corporate actors. This focus on an inside/outside strategy is relatively unique within the literature on corporate campaigns, as many analyses of corporate campaigns emphasize 'outside' tactics or suggest that activist networks that engage too closely with corporate actors are co-opted, rather than highly strategic in their interactions with corporate actors (for an exception see Trumpy 2008).

Additionally, this thesis made an empirical contribution to the study of environmental politics and the environmental movement through its study of the e-waste network. The e-waste network's structure, use of frames and tactics, and its corporate and legislative campaigns have received very minimal attention in the academic literature. This thesis offered a novel, in-depth analysis of the e-waste network.

Avenues for further research

This thesis also suggests several avenues for further research. While this thesis offered a detailed analysis of the e-waste network, it predominately focussed on the network's activities in North America and the EU. Greater analysis of the network's activities in the Global South would bring further explanation to how differing political economic opportunity structures shape the outcomes of activist campaigns. An analysis of the e-waste network's activities in the Global South would also highlight the practical challenges involved in building a recycling infrastructure for electronics in a developing

country. It would allow for an examination of the power dynamics between Northern and Southern NGOs in this issue area.

Further in depth studies of the interactions between civil society organizations and corporate actors would help to further underscore what types of activist tactics and frames are most likely to be successful and the circumstances under which corporations are vulnerable to activist pressure. This thesis suggested that while mass mobilization remains a highly effective way for civil society groups to pressure targets, mass mobilization or large scale boycotts may not need to occur in a physical sense for corporate campaigns to be effective, at least under specific circumstances. Further research is needed to understand the role mass mobilization plays in the success of corporate campaigns.

It would be interesting to examine concurrent corporate and legislative activist campaigns in issue areas beyond the environment. It is unclear whether corporations are more or less willing to cooperate and accommodate activist demands in other issue areas, such as human rights, and the reasons why that may be the case. Further research is also needed to examine the extent to which industry/NGO coalitions similar to IPR Works exist in other issue areas and whether this type of coalition is becoming more prevalent or remains unique to the issue of e-waste. Additionally, it is unclear if coalitions like IPR Works are more or less likely to occur in different political jurisdictions or regulatory environments.

In the cases examined in this thesis, the e-waste network was able to have considerable influence despite entrenched industry interests, while the anti-GM network

in the U.S. has not been able to overcome industry influence. This can be at least partially attributed to the lack of influence the electronics industry has in many states and the lack of divisions over the issue of GMOs amongst agbiotech companies and U.S. food retailers and manufacturers. Additional research could further tease out the circumstances under which civil society groups are most likely to overcome entrenched industry interests.

This thesis pointed to the significant role company management and to a lesser extent corporate culture play in determining how a company approaches CSR and responds to activist pressure. Further research could draw out the role that internal corporate dynamics have on a company's approach to CSR. More research is needed to understand the extent to which CSR norms have become internalized within companies as an intrinsic value and the extent to which CSR remains driven by material concerns. It could also increase our understanding of what companies are most likely to internalize CSR norms and the factors driving their adoption. Studies of how companies within particular industries vary in their approach to social and environmental issues would be helpful for understanding the spread of CSR norms.

Conclusion: Activist networks and corporate campaigns

Both the e-waste and anti-GM networks have achieved significant successes by strategically targeting corporate actors. Together with their concurrent legislative campaigns and their strategic use of frames, these activist networks have significantly changed how the issue areas of e-waste and GMOs are governed. In the case of the e-waste network it appears that the gains achieved by activists will be permanent as states increasingly "lock-in" chemicals restrictions and e-waste take-back requirements. In

contrast, it is unclear to what extent the successes achieved by the anti-GM network will be permanent. Thus, while activist networks can achieve significant successes with corporate campaigns, the changes brought about via corporate campaigns are likely to have the greatest impact and permanence when accompanied by legislative change. Activists should continue to target corporate actors to create change in issue areas; however, they must not abandon or neglect the state as a target. A two-prong strategy targeting states and corporate actors is the most effective strategy for activist networks to pursue.

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APPENDIX A: INTERVIEWS CONDUCTED

Name	Organization	Date
Anonymous	Agbiotech industry	14 May 2009
Anonymous	Agbiotech industry	21 October 2009
Anonymous	Canadian NGO	14 April 2009
Anonymous	Electronics Industry	3 September 2009 (telephone)
Anonymous	Electronics Industry	16 September 2009 (telephone)
Anonymous	Electronics industry	20 October 2009
Anonymous	Electronics industry	25 October 2009
Anonymous	Electronics manufacturer	27 October 2009
Anonymous	Electronics manufacturer	10 November 2009 (telephone)
Anonymous	Electronics manufacturer	1 December 2009 (telephone)
Anonymous	Electronics manufacturer	3 December 2009 (telephone)
Anonymous	European Commission-DG Sanco	27 October 2009
Anonymous	E-waste activist	23 April 2009
Anonymous	E-waste activist	6 November 2009 (telephone)
Anonymous	Greenpeace European Unit	26 October 2009
Anonymous	Non-GMO Project	8 September 2009 (telephone)
Coenen, Linda	A SEED Europe	30 October 2009
Dickson, Joe	Whole Foods	22 July 2009 (telephone)
Dowdall, Tom	Greenpeace International	28 October 2009
Fedrigo, Doreen	European Environmental Bureau	20 October 2009
Hanson, Jaydee	Center for Food Safety	7 May 2009 (telephone)
Holland, Nina	Corporate Europe Observatory	22 October 2009
Maase, Jill	Croplife Canada	8 May 2009
Mann, Tim	IBM	12 November 2009 (telephone)
Margulis, Charles	Center for Environmental Health, formally Greenpeace USA	23 April 2009
Lyon, Diana	IBM	6 November 2009 (telephone)
Ornelas, lauren (sic)	Silicon Valley Toxics Coalition	22 April 2009
Smith, Ted	Electronics TakeBack Coalition (founder), Silicon Valley Toxics	21 April 2009

	Coalition (founder and former director)	
Thomas, Jim	ETC Group, formally Greenpeace International	5 October 2009
Thorpe, Beverley	Clean Production Action	14 October 2009 (telephone)
Tyler, Glen	Greenpeace International	28 October 2009
Van der Herten, Kurt	IBM, formally European Commission-DG Environment	21 October 2009

APPENDIX B: SAMPLE INTERVIEW QUESTIONS

E-waste interview questions

Interview questions for NGOs

1. What are the main goals of your organization?
2. What arguments has your organization used to advance the issue of e-waste?
    a. What arguments have been most effective in advancing the issue of e-waste?
3. What tactics and strategies have you used to pursue your organization's goals?
    a. What tactics have been most successful for your organization?
4. What actors has your organization specifically chosen to target? Why has your organization chosen to target these actors?
5. What actors have been most responsive to your tactics and most willing to alter their behaviour in response? Why do you feel this is?
6. Why did your organization choose to target particular corporations in the electronics industry?
    a. What made your organization feel that these corporations would be susceptible to change?
    b. What electronics manufacturers have been most willing to address the issue of e-waste? Why do you think this is?
7. What role should electronics manufacturers play in addressing the issue of e-waste?
8. What impact have government regulations had your organization's ability to create positive change in the issue area of e-waste?
    a. What impact has the lack of federal regulation in the US had on your organization's success? [For U.S. based NGOs only]
    b. How has the passage of local and state regulations to address the problem of e-waste impacted on your organization's success? [For U.S. based NGOs only]
    c. What impact have the EU's WEEE and RoHS regulations had on your organization's success?
9. What impact has the Basel Convention had on your organization's ability to advance the issue of e-waste?
10. What do you feel your organization's main successes have been in addressing e-waste?

11. What do you feel the main challenges have been for your organization in addressing the issue of e-waste?
12. Is there anything else you would like to add?

Interview questions for electronics manufacturers and industry associations

1. How does your company approach corporate social responsibility?
    a. Why has your company chosen to adopt the corporate social responsibility initiatives it has?
2. How does your company feel the issue of e-waste should be addressed?
    a. Should e-waste be regulated by governments? What regulatory approach should be taken to address the issue of e-waste?
3. What programs does your company have in place to address e-waste?
4. Why has your company chosen to address the issue of e-waste in the manner it has?
5. [For electronics manufacturers only] What factors have shaped how your company approaches e-waste and CSR in general? (e.g. company management, competitive advantage, reputation and brand image, corporate culture)
6. To what extent has your company been influenced by arguments made by environmental groups about the issue of e-waste?
7. What activist arguments and tactics do you think have been most effective in advancing their approach to e-waste management?
8. To what extent does your company engage with other stakeholders involved in the issue of e-waste?
9. Has your company's approach to the issue of e-waste changed over time? Why?
10. How has your company been affected by current regulatory approaches to e-waste? Does your company view current regulatory approaches to e-waste as effective?
11. Is there anything else you would like to add?

Interview questions for government regulators

1. What were some of the major factors that motivated the decision by [insert name of government or department here] to regulate e-waste in the manner it has?
2. What are some of the elements that made the decision to regulate e-waste in this manner an attractive policy option?
3. What are some of the challenges involved in regulating e-waste?

4. To what extent was [insert name of government or department here] influenced by the decision of other regulatory jurisdictions to regulate e-waste?
5. To what extent did [insert name of government or department here] consult with other stakeholders when formulating e-waste regulation?
6. Has the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal influenced how [insert name of regulator here] approaches the regulation of e-waste? If so, how has it influenced your regulatory approach?
7. Is there anything else you would like to add?

GMO interview questions

Questions for NGOs

1. What are the main goals of your organization?
2. What arguments has your organization used to advance its position on GMOs?
    a. What arguments have been most effective in advancing your position on GMOs?
3. What tactics and strategies have you used to pursue your organization's goals?
    a. What tactics have been most successful for your organization?
4. What actors has your organization specifically chosen to target? Why has your organization chosen to focus on these actors?
5. What corporations has your organization chosen to target?
    a. What made your organization feel that these corporations would be worthwhile to target? What made your organization feel that these corporations would be susceptible to change?
6. What actors have been most responsive to your arguments?
7. What impact have government regulations had on your organization's ability to create positive change regarding the issue of GMOs?
8. What impact did the EU's moratorium on GM crops have on your organization's anti-GMO campaign?
9. What impact has the Biosafety Protocol had on your organization's anti-GMO campaign?
10. To what extent does your organization work or coordinate with other organizations involved in the issue of GMOs?
11. What do you feel your organization's main successes have been in addressing the issue of GMOs?

12. What do you feel the main challenges have been for your organization in addressing the issue of GMOs?
13. Is there anything else you would like to add?

Interview questions for agricultural biotechnology corporations and industry associations

12. How does your company or industry approach corporate social responsibility?
    a. Why has your company/industry chosen to adopt the corporate social responsibility initiatives it has?
13. How does your company or organization feel GM crops should be regulated?
14. How does your company or organization feel GM food should be regulated?
15. To what extent has your company or organization been impacted by arguments made by activists about the safety of GMOs?
16. What arguments and tactics utilized by activists do you feel have been most effective? Why?
17. How has your company or organization responded to concerns about GM crops and food from activists and the general public?
18. To what extent does your company or organization engage with other stakeholders involved in the issue of GMOs?
19. [For agricultural biotechnology companies only] What factors have shaped how your company approaches e-waste and CSR in general? (e.g. company management, competitive advantage, reputation and brand image, corporate culture)
20. Has your company or organization's approach to GM crops and food changed over time? If so, why?
21. How does your company view the current regulatory climate for GM crops and food?
22. Is there anything else you would like to add?

Interview questions for government regulators

1. What were some of the major factors that motivated the decision by [insert name of regulator here] to regulate GM crops and food in the manner it has?
2. What are some of the elements that made the decision to regulate GM crops and food in this manner an attractive policy option?
3. What are some of the challenges involved in regulating GM crops and food?

4. To what extent was [insert name of government or department here] influenced by the regulatory approaches taken by other government jurisdictions?
5. To what extent did [insert name of regulator here] consult with other stakeholders when formulating regulations concerning GMOs?
6. Did increased public awareness and concern about GMOs alter how your organization approached this issue?
7. Has the Biosafety Protocol influenced how [insert name of regulator here] approaches the regulation of GMOs? If so, how has it influenced your regulatory approach?
8. Did the WTO dispute on the European Union's moratorium on GMOs influence how [insert name of regulator here] approaches the regulation of GMOs? If so, how has it influenced your regulatory approach?
9. Is there anything else you would like to add?