

CLIMATE CHANGE: A STATE-CORPORATE CRIME PERSPECTIVE

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INTRODUCTION

Any consideration of environmental crime and its victims should include an analysis of anthropocentric global warming and associated climate change. Outside of a nuclear war, there is no other form of environmental crime that can produce a wider range of victims. The social and environmental harms caused by climate change have been variously described as an ecological catastrophe, an existential threat and an apocalyptic event. Some scientists have even expressed a more cosmic concern. They assert that Earth, a dynamic planet rich with life, is cosmically rare and invaluable, and that the existence of intelligent life or technological civilization anywhere else in the universe is extremely doubtful. Therefore, these cosmologists argue that since climate change threatens human civilization and intelligent life on Earth, it would constitute a “cosmic” crime (Abrams and Primack 2011, Gribbin 2011).

However one assesses the potential harm and range of victimization, a growing number of criminologists appear to agree with Rob White (2011, p. 36) that, “...present action and lack of action around climate change will most likely constitute the gravest of transnational environmental crimes.” There exists a growing body of literature analyzing global warming and climate change from a criminological perspective (South 2009, White 2009, 2011, 2012, Lynch and Stretesky 2010, Lynch, Burns and Stretesky 2010, Agnew 2011a, Parenti 2011, Kramer 2012, Kramer and Michalowski 2012, Michalowski and Kramer 2013). This paper argues that global warming can best be conceptualized as *state-corporate criminality* (Michalowski and Kramer 2006).

Although the continued emission of greenhouse gases that are widely recognized by the scientific community to cause global warming by energy corporations and state agencies could also be viewed as a criminal act, this analysis focuses on the abject political failure to act to regulate or mitigate these emissions and the socially organized denial of climate change that shapes that failure. These extremely consequential crimes of omission by individual states and the international political community will be examined from the state-corporate crime perspective. Given the devastating effects of climate change, the paper briefly considers the question of how these “blameworthy harms” (Agnew 2011b) might be brought within the boundaries of criminology. Then, after sketching out the state-corporate crime perspective, a theoretical analysis of the crimes of the critical political failure to act to mitigate global

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warming and the socially organized denial of climate change will be presented, drawing on recent social science research concerning these questions.

CLIMATE CHANGE AS A CRIMINOLOGICAL ISSUE

The emission of heat trapping greenhouse gases (GHG) into the atmosphere, primarily through the burning of fossil fuels, causes the Earth to warm. This global warming in turn has a number of very harmful effects on Earth's climate. Scientific research on global warming and climate change demonstrates the catastrophic nature of the harms that are being inflicted on the ecosystem (Hansen 2009, Hamilton 2010, McKibben 2010a, Dow and Downing 2011, Ricardson, Staffan and Liverman 2011, Climate Central 2012, Honisch 2012), harms that are more severe and occurring at a much faster pace than predicted in the 2007 Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. The environmental damage caused by global warming will in turn result in a wide range of social, economic and political harms to human communities and the social systems on which they depend (Dunn 1995, Dyer 2010, Parenti 2011, Climate Central 2012, Klare 2012).

For criminologists concerned with global warming and the environmental and social harms flowing from it, there is currently no established body of international or domestic law that offers a legal framework to bring these harms within the boundaries of criminology. There are some efforts underway to change this situation. The British lawyer Polly Higgins, for instance, has proposed that *ecocide* be recognized by the United Nations as an international crime along with genocide, crimes against humanity, war crimes, and crimes of aggression. Higgins (2010, p. 63) defines ecocide as: "The extensive destruction, damage to or loss of ecosystem(s) of a given territory, whether by human agency or by other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished." If adopted, "ecocide" would constitute a legal definition under which global warming and climate change would become, not just an environmental problem, but also an international crime. However, the likelihood that the United Nations, dominated as it is by the carbon dependent and carbon profiting nations of the global North, would establish ecocide as an international crime is slim.

Another effort to bring harmful greenhouse gas emissions within a legal framework is the ongoing lawsuit brought by a number of U.S. states against the five largest American utilities in an effort to have their emissions defined as a "public nuisance" (Business Green 2011a). If successful, this suit could force the federal government to impose more stringent regulations on the fossil fuel industry (BusinessGreen 2011b). Furthermore, the U.S. Supreme Court (2007) decision in *Massachusetts v. Environmental Protection Agency* that greenhouse gases fit within the Clean Air Act's definition of air pollution, could eventually lead to the greater legal regulation of these gases by the Environmental Protection Agency, although the agency has been very slow to act. Despite these efforts, the emission of carbon dioxide and other greenhouse gases are not currently defined as "crimes" within any legal system.

Internationally with regard to global warming there is still nothing comparable to the Montreal Protocol, which was adopted in 1987 to eliminate aerosols and other chemicals that were responsible for a growing hole in the Earth's protective ozone layer. This Protocol has been successful in eliminating the hydrofluorocarbons (HFCs) that damage the ozone layer.

Consequently, some policy experts have suggested that we should curb global warming by including greenhouse gases under this existing, and demonstrably successful treaty (Broder 2010). To date, the Kyoto Protocol of 1997 is the only major international accord aimed at regulating and reducing greenhouse gas emissions. Unfortunately, this treaty has done little to reduce carbon emissions and in its present form provides little in the way of a legal framework that criminologists can use as a juridical warrant to address anthropogenic global warming as a state-corporate crime (Michalowski and Kramer 2013).

The lack of a legal framework on which criminologists can base their study of the emission of greenhouse gases as crimes should not be seen as a barrier to this inquiry. Indeed, unless criminologists escape the juridical trap that mandates they only study that which states, through their law-making systems, tell them is a crime, the social injuries caused by the most powerful actors in the contemporary world, transnational corporations and national states, will remain forever outside their reach (Michalowski and Kramer 2006; Michalowski 2010). Instead, criminologists concerned with global warming can and should utilize concepts such as *social injury/harm* (Michalowski 1985, Tift and Sullivan 2001, Hillyard, Pantazis, Tombs and Gordon 2004, Pemberton 2007, Agnew 2011b) as the starting point for their inquiries. As White (2011, p. 21) points out: “A basic premise of green criminology is that we need to take environmental harm seriously, and in order to do this we need a conceptualization of harm that goes beyond conventional understandings of crime.” Lynch and Stretesky (2010, pp. 70-71) have also argued that green criminology should study the “harms that directly damage the ecosystem or its parts (direct victimization of the environment), or victimize species through ecosystem damage (indirect victimization).” They note that, insofar as “scientists are continually discovering new ways in which global warming produces harm...it is important for green criminologists to stay abreast of this literature in order to address the varieties of victimization and emerging crimes and harms science identifies.” Given the catastrophic scenarios detailed in the scientific literature on climate change, a green criminology perspective would argue that criminologists should treat the grave harms and forms of victimization, both present and future, resulting from global warming and climate change as serious crimes warranting criminological analysis. As White (2011, p. 36) points out: “Climate change is arguably the most important issue, problem and trend in the world today and a key area of interest to eco-global criminology.”

Agnew (2011b) has recently attempted to develop an integrated definition of crime based on blameworthy harms, public condemnation and state sanctioning. But he recognizes that there exists “unrecognized blameworthy harms” that are not condemned and sanctioned. Climate change appears to fall into this category. Agnew (2011b, p. 43) advocates that a “major mission” of criminologists should be that of “making the public and the state aware of unrecognized blameworthy harms.” Given the catastrophic scenarios detailed in the scientific literature on climate change, criminologists should treat the grave blameworthy harms, both present and future, resulting from global warming and climate change as serious crimes warranting criminological analysis. And part of that analysis should focus on why these blameworthy harms do indeed remain unrecognized or unacknowledged.

THE CONCEPT OF STATE-CORPORATE CRIME

As criminologists take up the issue of climate change, Lynch, Burns and Stretesky (2010, p. 215) argue that the state-corporate crime approach “provides a useful tool for examining” the crimes related to global warming. Likewise, in his analysis of transnational environmental crime, White (2011, p. 13) also notes the importance of investigating the nation state as “...a major facilitator of harm in its own right, either on its own or in conjunction with specific sectional interests (such as particular transnational corporations).”

The concept of state-corporate crime, developed by Kramer and Michalowski (1990, 2006), refers to serious social harms that result from the interaction of political and economic organizations. The idea emerged out of the recognition that some organizational crimes are the collective product of the interaction between a business corporation and a state agency engaged in a joint endeavor. The concept of state-corporate crime seeks to breach the conceptual wall between economic crimes and political crimes in order to create a new lens through which we can examine the ways illegal acts and social injuries often emerge from intersections of economic and political power. As Michalowski and Kramer (2007, p. 201) have noted: “Contemporary social scientists have largely forgotten what our 19th century counterparts knew so well. There is neither economics nor politics; there is only *political-economy*” (emphasis added).

State-corporate crime has been formally defined as “illegal or socially injurious actions that result from a mutually reinforcing interaction between (1) policies and/or practices in pursuit of the goals of one or more institutions of political governance and (2) policies and/or practices in pursuit of the goals of one or more institutions of economic production and distribution (Michalowski and Kramer 2006, p. 15). As this definition makes clear, Michalowski and Kramer also propose to extend the scope of criminology beyond legal definitions, incorporating harmful social actions that violate neither criminal nor regulatory laws at the state level. While the concept of state-corporate crime could be applied to illegal or other socially injurious actions in societies ranging from private production systems to centrally planned political economies, most of the research to date has focused on state-corporate crimes within the private production system of modern capitalism (Michalowski and Kramer 2006). State-corporate crimes within a global capitalist political economy involve the active participation of two or more organizations, at least one of which is in the civil sector and one of which is in the state sector. The time has come to extend this framework to the study of the critical role of corporations and political states in both promoting the release of greenhouse gasses and refusing to seriously address the resulting consequences of global warming and planetary climate change.

As a sensitizing concept the term state-corporate crime has three useful characteristics. First, it directs attention toward the way in which upper-world crime emerges at *organizational intersections*, in this case the intersection of institutions of accumulation and institutions of governance. In doing so, it foregrounds the ways in which many deviant organizational outcomes are not discreet acts of institutional wrongdoing, but rather the product of the relationships between different social institutions pursuing different goals and responding to different sets of pressures.

Second, it approaches the state as a nexus of *relationships* rather than a set of governmental institutional actors (Sassen 1993, Wonders and Solop 1993). This relational model directs us to examine the ways in which horizontal and vertical relationships between economic and political institutions contain powerful potentials for the production of illegal and other socially injurious actions. For example, U.S. legislation designed to address global climate change, or more often the failure to pass legislation to address climate change, cannot be understood simply as a set of decisions taken by legislators pursuing varying political or organizational agendas. Rather, these outcomes are the product of long chains of relationships and conflicts among carbon-intensifying corporations (e.g. petroleum, coal, auto and auto related, highway construction), carbon-reducing industries (e.g. alternative energy, urban mass transit), political organizations of workers and communities dependent on these various industries (e.g. unions, Chambers of Commerce), environmental organizations, lobbying firms, banks and other nodes of finance capital with a stake in environmental policy, along with a complex stew of regulatory bodies, advisory commissions, think tanks and international governance and non-governmental organizations. It is the flows of “information,” data, money and interpersonal linkages along these channels of power that constitutes the real operations of the U.S. capitalist state. This relational approach provides a more nuanced understanding of the processes leading to deviant state actions than approaches that treat governments as closed systems, or locate the wrongdoing within individual decision makers operating within individual institutions.

Third, approaching the state-corporate context as a relational process directs analytic attention to the *vertical relationships* between different levels of organizational action in government and business. It asks us to be alert to three things. First, is the way particular individuals can, by their institutional movements and locations, shape flows of information, data and money through what Mills (1956) called the “circulation of elites.” Second is the way in which standard operating procedures and cultures within institutions can facilitate or inhibit deviant organizational behavior (Vaughn 1996). And third, the way larger-scale political economic arrangements define the particular relationship between capital and the state (e.g. regulatory welfare state, neo-liberal workfare state, state capitalism etc.) and shape the opportunities and rewards for both socially harmful and socially responsible behaviors by individuals and organizations (Jessop 1991).

By examining these three levels we can recognize that political-economic arrangements are more than technical mechanisms for determining the relationship between state and capital. They also reflect and reproduce particular ideologies not just of the relationship between capital and state, but the relationship between capital and individuals and individuals and the state.

THE FAILURE TO MITIGATE GHG EMISSIONS

In *The Politics of Climate Change*, Giddens (2011, p. 94) argues that “the state must be the prime actor” in addressing climate change. If one accepts this premise, then a further argument can be made that the failure by individual states and the international political community (of states) to undertake any serious efforts to regulate or mitigate global warming constitutes negligent state criminality (Friedrichs 2010) or state crimes of omission (Barak

1991, Kauzlarich, Mullins and Matthews 2003). As Friedrichs (2010, p. 140) notes: “The most serious form of negligent state criminality involves the unnecessary and premature loss of life that occurs when the government and its agents fail to act affirmatively in certain situations.” Anthropogenic global warming and its attendant victimization would qualify as one of those situations.

Since global warming stems from the production of heat trapping greenhouse gases, some have argued that the continued high levels of carbon dioxide emissions by energy corporations and by state agencies such as the U.S. military are therefore crimes of corporate and state violence (Hansen 2009, Sanders 2009). In view of the extensive scientific evidence of the environmental and social harm resulting from emission-caused global warming described above, it would be reasonable to expect that the international political community and its member states would move immediately and aggressively to mitigate the production of greenhouse gases. Yet, to the contrary, many of the key corporate and state actors responsible for the greatest production of greenhouse gases have chosen to not only continue their current production practices, but in many cases have supported policies that will expand these emissions. Climate activist Bill McKibben (2012, p. 7) argues that given the massive amount of carbon contained in the proven coal, oil and gas reserves of the fossil-fuel companies (around 2,795 gigatons), fuel that if burned would push us well past the internationally accepted limit of a two degree Celsius rise in the Earth’s temperature, we need to view the fossil-fuel industry as a “rogue industry, reckless like no other force on Earth. It is Public Enemy Number one to the survival of our planetary civilization.”

While structural and cultural forces in the global capitalist political economy shape the ongoing emission of harmful greenhouse gases by the fossil fuel industry (Foster 2009, Lynch and Stretesky 2010, White 2011, Kramer and Michalowski, 2012), it is the failure of state officials, particularly in the United States, to take effective and immediate actions to compel both the private corporate sector and other governmental institutions in the structural ensemble of the state to *reduce* these emissions that is of particular concern here. No other industry is allowed to dump its main waste (carbon dioxide) for free, into what should be considered a “public trust” (the atmosphere) that government has a legal obligation to protect (Morris 2012). Thus, this paper argues that the failure of the United States government to drastically mitigate greenhouse gas emissions that are responsible for the criminal harms related to climate change is a state-corporate crime of omission. As Giddens (2011, p. 89) has pointed out: “At present, the U.S., the country with the greatest responsibility to develop a far-reaching climate change policy, has done nothing at all on a national level. It is almost alone among industrial states in this respect.” And if the U.S. takes no action, there is little hope for any strong and effective international agreement on climate change to be negotiated.

It is not that the international political community has not attempted to address the issue of climate change at all (Michalowski and Kramer 2013). The 1992 U.N. Framework Convention on Climate Change is designed to limit the worldwide emission of greenhouse gases. Because industrialized nations represent the largest source of greenhouse gas emissions, the treaty established different and higher standards for these nations than for developing ones. During treaty negotiations, the United States was the only industrialized nation that refused to accept *binding* rules for the reduction of greenhouse gases, and the U.S. delegation eventually succeeded in obtaining treaty language that made compliance with

greenhouse gas reduction goals voluntary. In 1994, President Clinton reversed the previous Bush administration policy and announced that the United States would comply with the treaty goals of reducing greenhouse gas emissions to 1990 levels.

In December of 1997, delegates from 170 nations met to address the issue at the third Conference of the Parties (COP) to the Framework Convention on Climate Change in Kyoto, Japan. This meeting resulted in the aforementioned Kyoto Protocol; a multilateral agreement on legally binding targets for the reduction of greenhouse gas emissions. The Kyoto Protocol mandated a 5% reduction of greenhouse gases by 2012, with the United States agreeing to cut emissions by 7%, the European Union committed to 8% reductions, and Japan committed to 6% reductions. Achieving these goals would require that the United States and other developed countries reduce pollution and consumption in key areas by as much as thirty percent (Yamin 1998). In recognition of the difficulty developing nations would have in modernizing their economies while simultaneously reducing greenhouse gases, no binding targets or timetables were set for developing nations (Leaf 2001).

The Kyoto Protocol, which included several novel legal mechanisms to facilitate compliance (Michalowski and Kramer 2013), would only become legally binding upon the United States after its ratification by the U.S. Senate. But just prior to the Kyoto conference in 1997, the Senate indicated it would *not* ratify any climate change protocol that failed to impose legally binding standards for reduction of greenhouse gas emissions on the developing world, or that would cause serious economic harm to the United States. Facing rejection of the treaty, the Clinton Administration elected not to submit the protocol to the Senate for ratification. Clinton stated that he would not do so until there was “meaningful participation” in greenhouse gas reductions in “key developing countries” (Leaf 2001, p. 1219).

Due to the political gridlock on this issue, Kyoto was not ratified during the remainder of the Clinton Administration, and in March of 2001, the new administration of George W. Bush formally withdrew the United States from the Protocol. In June of 2001, the administration introduced a series of unilateral initiatives on climate change, which included funding for further research on the issue and several unilateral moves to reduce greenhouse gas emissions, such as selling cleaner burning U.S. technology to the developing world and voluntary energy efficiency programs for U.S. consumers. These initiatives, however, did not include any binding targets or timetables for the reduction of U.S. emissions and were quickly abandoned as the issue of global warming became increasingly polarized in U.S. political discourse (Leaf 2001). The Bush administration itself played a leading role in the politicization of the climate change issue by pursuing a cooperative state-corporate strategy that “...actively attempted to refute the science of global warming and install in its place economic and environmental policies that not only ignore but deny the views of the scientific community on climate change” (Giddens 2011).

Lynch, Burns and Stretesky (2010) have examined the politicization of global warming under the Bush administration as a form of state-corporate crime. They analyzed the coordinated intersection of state and corporate activity and interests that resulted in collusive agreements and arrangements between the fossil fuel industry and the Bush administration with regard to a number of energy and environmental policies related to global warming. They documented how corporate actors from the fossil fuel industry made their interests known to the Bush administration and how they sought to directly influence energy and

environmental policies through lobbying, meetings and the drafting of proposed policy language. The Bush administration in turn adopted the proposed policies, appointed industry executives and leaders to key policy making positions within the government and attempted to muzzle or censure federal climate scientists such as NASA's James Hansen. Thus, Lynch, Burns and Stretesky (2010, p. 227) conclude that the administration was able to "produce domestic policies that contributed to rather than impeded the progress of global warming." Furthermore, they note that, "Because of the immense power the U.S. wields internationally, the Bush Administration was able to forestall implementation of international treaties on global warming."

The election of Barack Obama in 2008 caused some environmental activists and scientists to hope that there would be a change in U.S. climate change policy. President Obama appeared to have a better grasp of the issue of global climate change and be more committed to crafting a stronger policy to mitigate the problem than his predecessor (Derber 2010). Expectations were high for the annual U.N. climate conference (COP 15) held in Copenhagen during December of 2009. Many hoped that Copenhagen would mark a turning point in the climate change debate. The conference however, ended in failure. A minimalist accord was negotiated at the very end that had no emissions targets or timetables. John Sauven, executive director of Greenpeace U.K., invoked the language of criminality to describe the failure: "The city of Copenhagen is a crime scene tonight, with the guilty men and women fleeing to the airport. There are no targets for carbon cuts and no agreement on a legally binding treaty" (BBC 2009, p. 3). Similarly, White (2011, p. 148) contends that the failure at the Copenhagen conference was indeed a state-corporate crime, noting that, "The abject failure of the Copenhagen talks to actually do something about carbon emissions and to address climate change issues in a substantive fashion is a striking example of the fusion of state and corporate interests to the detriment of the majority."

Subsequent U.N. climate conferences at Cancun in 2010 (COP 16), Durbin in 2011 (COP 17) and Rio de Janeiro in 2012 (Rio+ 20: The Conference on Sustainable Development) also failed to produce the strong international accord that environmental activists insist is necessary to head off climate change disaster. The last minute deal arrived at in Durbin in December of 2011 does extend the Kyoto Protocol and launches negotiations on a more comprehensive and ambitious treaty regime (to take effect by 2020); but in the estimation of the Union of Concerned Scientists (2011, p. 1), "...will do little to accelerate near-term emissions reductions." Many hoped that the Rio+20 conference, taking place in the same city twenty years after the UN Framework Convention of Climate Change had been negotiated, would assess why that treaty had been inadequate and take new legally binding steps to deal with the impending ecological catastrophe. But as the renowned environmental leader Vandana Shiva (2012, p. 1) points out, "...the entire energy of the official process was focused on how to avoid any commitment. Rio+20 will be remembered for what it failed to do during a period of severe and multiple crises and not for what it achieved." The failure of these international conferences led some critical commentators, to place the blame squarely on the corrupting relationship between corporations and states. Journalist George Monbiot (2012, p. 1) argued that:

These summits have failed for the same reason that the banks failed. Political systems

that were supposed to represent everyone now return governments of millionaires, financed by and acting on behalf of billionaires. The past twenty years have been a billionaires' banquet. At the behest of corporations and the ultra-rich, governments have removed the constraining decencies-the laws and regulations-which prevent one person from destroying another. To expect governments funded and appointed by this class to protect the biosphere and defend the poor is like expecting a lion to live on gazpacho.

With the failures of Copenhagen, Durbin and Rio+20, the high hopes some had held for the Obama Administration's ability to make a difference on the issue of climate change policy have been dashed (Hertsgaard, 2011, 2012). The failure of the Obama administration to successfully conclude a strong international agreement on climate change, however, must be placed within a broader political and economic context. First, president Obama took office during one of the worst economic crises in American history. The Wall Street financial crash of 2008 and the subsequent global recession, itself a monumental state-corporate crime (Scheer 2010, Barak 2012, Ferguson, 2012), produced a political situation which demanded that the new administration had to first respond to the economic crisis and also severely limited its domestic political options for undertaking any new responses to climate change that might further weaken the economy in the short run. Second, and even more important, President Obama faced a Republican party that obstructed any effort to deal with the issue of global warming in any way (Mooney 2005, 2012, Deans 2012). The administration was fully aware that any climate change treaty it submitted to the U.S. Senate had absolutely no chance to be ratified due to unified Republican opposition.

The current Republican Party not only obstructs any action to mitigate climate change, it also has recently waged an unprecedented legislative assault on environmental regulations and safeguards of any type. After Republicans took control of the U.S. House of Representatives in the 2010 midterm elections, they voted nearly two hundred separate times to block, delay, or weaken foundational environmental laws that protect the air, water, wildlife and lands (Deans 2012). On the issue of global warming, the House voted in 2011 to repeal the EPA's authority to regulate greenhouse gas emissions, an authority that had been confirmed by the U.S. Supreme Court (2007) in *Massachusetts v. Environmental Protection Agency*. Not a single Republican voted against the repeal, which then did not survive in the Senate (Deans 2012). Nonetheless, House Republicans also voted down an amendment that simply stated that climate change is real, caused by human activities, and puts public health at risk. As Bob Deans (2012, p. 16) of the Natural Resources Defense Council observed concerning these votes:

We all have a right to our opinion. Something is badly askew, however, when the weight and consensus of the scientific world can be callously tossed aside by politicians who refuse to face facts and instead insist on blocking every reasonable attempt to begin the vital process of reducing the industrial carbon pollution that is changing our climate and threatening us all. That sorry spectacle was on vivid display in the 2011 House of Representatives.

The corrupting influence of money in the form of corporate campaign contributions (to both major political parties) provides a partial explanation for these Congressional efforts to block climate change and other environmental actions. Lessig (2011) argues that money does indeed corrupt the legislative process and that the current campaign finance system has rendered Congress politically bankrupt. With billions of dollars of profits at stake, corporations in the fossil fuel industry have made a huge investment in lobbying efforts on Capitol Hill and used large campaign contributions to individual legislators to advance their economic interests in the Congress. According to Deans (2012, p. 88), since 1990, the oil and gas industry has contributed some \$239 million in campaign contributions, and he notes that: “Most has gone to Republicans who support industry goals like limiting environmental protections, blocking measures to reduce climate change, and allowing drilling in the Alaska National Wildlife Refuge.”

Another factor responsible for this failure to mitigate climate change in the U.S. is the growing ideological extremism of the Republican Party. Kabaservice (2012) has documented how the current GOP evolved in to one of the most uniformly ideological parties that have ever existed in U.S. history. This ideological extremism has been fueled in recent years by the so-called “tea party,” a right-wing populist movement. Skocpol and Williamson (2012) conclude in their analysis of this movement, that grassroots activism, billionaire industrialist supporters (such as the Koch brothers who made most of their money in hydrocarbons) and a right-wing media machine have combined to create and power the tea party and give it an extraordinary ability (all out of proportion to its numbers) to reshape the Republican Party and the national political discourse. As a result, they argue that the Republican Party has become an obstacle to any policies that might help the U.S. respond to the political and economic challenges of the day, including climate change. Two well-known scholars of Congress concur with this assessment (Mann and Ornstein 2012a, 2012b). As Mann and Ornstein (2012b, p. 1) conclude in a recent study: “The GOP has become an insurgent outlier in American politics. It is ideologically extreme; scornful of compromise; unmoved by conventional understanding of facts, evidence, and science; and dismissive of its political opposition.”

THE IDEOLOGICAL DENIAL OF CLIMATE CHANGE

As Michalowski (2010, p. 26) points out: “...state crime arises not out of the singular actions of institutional actors or particular organizational goals, but out of the relational processes through which institutions of governance and accumulation, aided by ideological processes, ensure that individuals will embrace the goals of accumulation and governance as their own.” The socially organized ideological denial of climate change illustrates this process well. A key factor in the Republican Party’s political obstructionism on the issue of global warming, and in the general failure of the United States to produce any substantive domestic or international policy to mitigate greenhouse gas emissions, is the increasing politicization and polarization of the issue of climate change within American political culture. This politicization is primarily the result of the activities of a rogue fossil fuel industry and a conservative global warming denial countermovement that deserves special examination.

Global warming denial efforts are largely carried out by conservative think tanks, such as the now infamous Heartland Institute (Ward 2012), which are funded for the most part by money from corporations in the fossil fuel industry (Gelbspan 2004, Greenpeace 2011, Jacques, Dunlap, and Freeman 2008, Oreskes and Conway 2010, Powell 2011, Union of Concerned Scientists 2012a, 2012b). For example, Western Fuels, a large coal cooperative, and the giant Exxon Mobil oil company, have each contributed millions of dollars to conservative think tanks and environmental skeptics working to deny global warming (Adams 2009, Jacques 2009, McNall 2011, Powell 2011). Oreskes and Conway (2010, p. 247) note that, “Exxon Mobil’s support for doubt-mongering and disinformation is disturbing but hardly surprising. What is surprising is to discover how extensive, organized, and interconnected these efforts have been, and for how long.”

As the Union of Concerned Scientists (2012a) has documented, corporations have a long history of corrupting science at the public’s expense. The global warming denial counter-movement has taken this effort to a new level in its attempt to influence the U.S. dialogue on climate science and policy (Union of Concerned Scientists 2012b). The denialist movement produces a large amount of ideological propaganda built around lies and deceptions masquerading as science. This corporate friendly propaganda can be viewed as a set of what Norgaard (2011) calls “legitimizing and normalizing narratives.” These cultural narratives, which legitimate and normalize fossil fuel industry practices and cast doubt on climate science, are then disseminated through conservative think tanks, industry trade associations, right-wing opinion leaders, the tea party, the corporate media and by some Republican Party elected officials (Gelbspan 1998, 2004, McCright and Dunlap 2000, 2003, Hoggan 2009, Jacques 2009, Friel 2010, Hamilton 2010, Oreskes and Conway 2010, Powell 2011, Union of Concerned Scientists 2012).

According to Diethelm and McKee (2009), denialist arguments (narratives) fall under the following categories: 1) conspiracy theories, 2) fake experts, 3) cherry picking of data, 4) impossible expectations of what research can deliver and 5) misrepresentation and logical fallacies. Washington and Cook (2011, p. 43) examined these arguments used by climate change denialists and concluded that: “Their goal is to convince the public and the media that there are sufficient grounds not to take the action recommended by the consensus position of mainstream science. To achieve this, the vocal minority employs rhetorical arguments that give the appearance of legitimate debate where there is none.”

The efforts to impede governmental actions that would force the fossil fuel industry to stop dumping their waste into the atmosphere have been very successful. A study of the conservative movement’s impact on U.S. climate change policy by McCright and Dunlop (2003, p. 348): “demonstrates how a powerful countermovement effectively challenged the environmental community’s definition of global warming as a social problem and blocked the passage of any significant climate change policy.” The orchestrated denial of climate change, despite extensive scientific evidence to the contrary, is a state-corporate crime of *commission*. It is not a failure to act, but a deliberate attempt to thwart efforts to respond in an effective and just way to the emerging problems resulting from global warming. And as documented in the extensive research cited above, these efforts have indeed been extremely successful in creating doubt and re-shaping public opinion in a way that has hampered any political action on climate change in the U.S.

A number of factors appear to be related to the success of this climate science disinformation and denial campaign in the U.S. Congress. One is the crucial role the conservative think tanks, in alliance with scientific skeptics, have played in undermining the scientific consensus on global warming among the general public and specific politicians (McCright and Dunlop 2000, Powell 2011). Second is the influence of lobbyists from the coal, oil and gas companies who promote the denialist narratives. Lynch, Burns and Stretesky (2010) documented the impact of these corporate lobbyists with regard to the politicization of climate change under the George W. Bush administration, and these lobbying tactics appear to be equally successful in the Congress. Boeve and Smith (2012, p. 1) point out that oil and gas corporations maintain an army of 786 lobbyists in Washington, D.C., an army that “is bigger than Congress itself which has only 535 members.” A third factor is the promotion of climate change denial narratives by right-wing media such as Fox News and the Rush Limbaugh radio program. Many conservative politicians rely heavily on these “news” sources and are thus exposed to a constant drumbeat of climate change disinformation. In addition to the effect of right-wing media, the “balancing norm” of the mainstream media also allows the views of denialists to be placed on par with the views of climate scientists and thus also has an influence on the broader political culture (Powell 2011, Washington and Cook 2011).

Research shows that conservative white males, whom McCright and Dunlop (2011) call “cool dudes,” are more likely than other adults in the United States to espouse climate change denial. This social group, of course, disproportionately occupies positions of power within the economic system and within the Republican Party. McCright and Dunlop (2011) argue that integrating insights from two separate theories can explain the link between the rejection of climate science and social and economic privilege. First, Kahan et al.’s (2007) identity protection cognition thesis argues that risk perception is shaped by cultural worldviews (hierarchical, individualistic in this case) that are shared by members of salient in-groups. Information threatening to one’s cultural worldview and the beliefs associated with belonging to particular group will be rejected to protect one’s identity and the status and esteem that individuals receive from group membership. Information about climate change provides just such a threat to these conservative white males who hold hierarchical and individualistic cultural worldviews and is therefore likely to be rejected by them. In addition, Jost, Nosek and Gosling (2008) assert that conservatives have stronger system justification tendencies-supporting maintenance of the status quo and resisting attempts to change it. System justification is associated with the denial of problems, such as climate change, that threaten system functioning. McCright and Dunlop’s (2011, p. 1163) data provide additional empirical support for these theories and they conclude that, “the unique views of conservative white males contribute significantly to the high level of climate change denial in the United States.” While this “cultural cognition” approach provides important insights about the phenomenon of climate change denial, it does have its limits. As Klein (2011: 18) astutely points out: “The deniers are doing more than protecting their cultural worldview-they are protecting powerful interests that stand to gain from muddying the waters of the climate debate.”

CONCLUSION

On the podium in Philadelphia in 1939, what Sutherland really said-once the camouflage is removed-is that white-collar crime is wrong-indeed, that often it is despicable-and that sociologists and economists ought to pay close attention to such matters and join with him in a crusade to do something about them (Geis 1982, p. 18).

As the social science research cited above demonstrates, the ties between the fossil fuel industry and conservative think tanks that provide the denialist narratives are well documented, as are the linkages between the think tanks and the Republican Party that obstructs any attempt to deal with climate change in the U.S. and international political arena. The worst effects of climate change and the harms it will impose on its victims cannot be avoided unless there are drastic and quick reductions in global greenhouse gas emissions. The energy corporations and their political and ideological supporters understand all too well that achieving these necessary reductions will require a radical reordering of the economic and political systems at the heart of the global capitalist system. This is what they are desperately fighting to avoid, and they are using every powerful tool available to them to perpetrate this catastrophic environmental state-corporate crime. A crusade, a transformative international social movement that has as its goal the drastic reduction of greenhouse gas emissions is desperately needed. Following the lead of Edwin H. Sutherland, perhaps we criminologists can play a role in provoking this movement by using the conceptual language of *crime* to bring greater attention to these matters and help generate moral outrage at the destructive relationship between the fossil fuel industry and states that allows catastrophic climate change and its victimization to continue unabated.

REFERENCES

- Adams, D., 2009. ExxonMobil continuing to fund climate skeptic groups, records show. *The Guardian* [online], (July 1). Available from: <http://www.guardian.co.uk/environment/2009/jul/01/exxon-mobil-climate-change-sceptics-funding/> [Accessed on 3 May 2012].
- Agnew, R., 2011a. Dire forecast: A theoretical model of the impact of climate change on crime. *Theoretical Criminology*, 16, 21-42.
- Agnew, R., 2011b. *Toward a unified criminology: integrating assumptions about crime, people, and society*. New York: New York University Press.
- Barak, G., ed. 1991. *Crimes by the capitalist state: An introduction to state criminality*. Albany: State University of New York Press.
- Barak, G., 2012. *Theft of a Nation: Wall Street Looting and Federal Regulatory Colluding*. Lanham, MD: Rowman and Littlefield.
- Boeve, M. and Smith, B., 2012. Fossil-fuel subsidies are the real job killers. *Commondreams.org* [online], (April 12). Available from: <http://www.commondreams.org/view/2012/04/13-0> [Accessed 13 April 2012].
- Broder, J., 2010. A novel tactic in climate fight gains some traction. *The New York Times* [online], (November 8). Available from:

- <http://www.nytimes.com/2010/11/09/science/earth/09montreal.html?ref=science&src>
[Accessed 10 March 2011].
- Burbach, R., Nunez, O. and Kagarlitsky, B., 1996. *Globalization and its discontents: The rise of postmodern socialisms*. London: Pluto Press.
- Business Green., 2011a. US states accuse polluting power stations of ‘public nuisance.’ *BusinessGreen* [online]. Available from: <http://www.businessgreen.com/bg/news/2034401/accuse-polluting-power-stations-public-nuisance> [Accessed 20 October 2011].
- BusinessGreen., 2011b. Green groups to sue US government over atmospheric pollution. *BusinessGreen* [online] Available from: <http://www.businessgreen.com/article/bg/news/2068121/green-sue-government-atmospheric-pollution> [Accessed 23 August 2011].
- Carter, J., 1977. *Proposed Energy Policy* [Online]. Available from: <http://www.pbs.org/wgbh/americanexperience/features/primary-resources/carter-energy/> [Accessed 21 March 2012].
- Climate Central, 2012. *Global Weirdness: Severe Storms, Deadly Heat Waves, Relentless Drought, Rising Seas, and the Weather of the Future*. New York: Pantheon Books.
- Deans, B., 2012. *Reckless: The political assault on the American environment*. Lanham, MD: Rowman & Littlefield.
- Derber, C., 2010. *Greed to green: Solving climate change and remaking the economy*. Boulder: Paradigm Publishers.
- Diethelm, P. and McKee, M., 2009. Denialism: What is it and how should scientists respond. *European Journal of Public Health*, 19, 2-4.
- Dow, K. and Downing, T., 2011. *The atlas of climate change: Mapping the world’s greatest challenge*. Third Edition. Berkeley: University of California Press.
- Dunn, T., 1995. *Militarization of the U.S.-Mexico border: Low intensity warfare comes home*. Austin: University of Texas Press.
- Dyer, G., 2010. *Climate wars: The fight for survival as the world overheats*. Oxford, U.K.: Oneworld Publications.
- Engelhardt, T., 2010. Tomgram: Bill McKibben, the enthusiasm gap in the White House. *TomDispatch.com* [online], (September 16). Available from: <http://www.tomdispatch.com/blog/175296/> [Accessed 3 May 2012].
- Ferguson, C., 2012. *Predator nation: Corporate criminals, political corruption, and the hijacking of America*. New York: Crown Business.
- Foster, J. B., 2009. *The ecological revolution: Making peace with the planet*. New York: Monthly Review Press.
- Friel, H., 2010. *The Lomborg deception: Setting the record straight about global warming*. New Haven: Yale University Press.
- Geis, G., 1982. Edwin H. Sutherland: A biographical and analytic commentary. In P. Wickman and T. Dailey, eds. *White-collar and economic crime*. Lexington, MA: Lexington Books, pp. 3-21.
- Gelbspan, R., 1998. *The heat is on: The climate crisis, the cover-up, the prescription*. Updated Edition. Reading, MA: Perseus Books.

- Gelbspan, R., 2004. *Boiling point: How politicians, big oil and coal, journalists, and activists are fueling the climate crisis-and what we can do to avert disaster*. New York: Basic Books.
- Greenpeace., 2011. *Who's holding us back? How carbon intensive industry is preventing effective climate legislation*. Amsterdam: Greenpeace International.
- Giddens, A., 2011. *The politics of climate change*. Second edition. Cambridge, U.K.: Polity Press.
- Hamilton, C., 2010. *Requiem for a species: Why we resist the truth about climate change*. London: Earthscan.
- Hansen, J., 2009. *Storms of my grandchildren: The truth about the coming climate catastrophe and our last chance to save humanity*. New York: Bloomsbury.
- Hertsgaard, M., 2011. Durban: Where the climate deniers-in-chief run the show. *The Nation* [online], (December 14). Available from: <http://www.the-nation.com/article/165155/Durban-where-climate-deniers-chief-run-show> [Accessed 2 February 2012].
- Hertsgaard, M., 2012. Déjà vu at Rio+20. *The Nation* [online], (June 14). Available from: <http://www.the-nation.com/article/168387/deja-vu-rio20> [Accessed 14 June 2012].
- Hillyard, P., Pantazis, C., Tombs, S. and Gordon, D., eds., 2004. *Beyond criminology: Taking harm seriously*. London: Pluto Press.
- Higgins, P., 2010. *Eradicating ecocide: Exposing the corporate and political practices destroying the planet and proposing the laws needed to eradicate ecocide*. London: Shephard-Walwyn Publishers.
- Hoggan, J., 2009. *Climate cover-up*. Vancouver: Greystone Books.
- IPCC., 2007. *Climate change 2007: Climate change impacts, adaptation, and vulnerability*. Geneva: Intergovernmental Panel on Climate Change.
- Honisch, B. et.al., 2012. The geological record of ocean acidification. *Science*, 335, 1058-1063.
- Jacques, P., 2009. *Environmental skepticism: Ecology, power and public life*. Farnham: Ashgate.
- Jacques, P., Dunlap, R. and Freeman, M., 2008. The organization of denial: Conservative think tanks and environmental skepticism. *Environmental Politics*, 17 (June), 349-385.
- Jessop, B., 1991. *State theory: Putting capitalist states in their place*. Philadelphia: University of Pennsylvania Press.
- Jost, J., Nosek, B. and Gosling, S., 2008. Ideology: Its resurgence in social, personality, and political psychology. *Perspectives on Psychological Science*, 3, 126-136.
- Kabaservice, G., 2012. *Rule and ruin: The downfall of moderation and the destruction of the Republican party, from Eisenhower to the tea party*. New York: Oxford University Press.
- Kahan, D., Braman, D., Gastil, J., Slovic, P., and Mertz, C., 2007. Culture and identity-protective cognition: Explaining the white-male effect in risk perception. *Journal of Empirical Legal Studies* 4, 465-505.
- Kauzlarich, D., Mullins, C. and Matthews, R., 2003. A complicity continuum of state crime. *Contemporary Justice Review*, 6, 241-254.

- Klare, M., 2012. *The race for what's left: The global scramble for the world's last resources*. New York: Metropolitan Books.
- Klein, N., 2011. Capitalism vs. the climate. *The Nation* (November 28), 11-21.
- Kramer, R., 2012. Public criminology and the responsibility to speak in the prophetic voice concerning global warming. In E. Stanley and J. McCulloch, eds. *State crime and resistance*. London: Routledge, 41-53.
- Kramer, R. and Michalowski, R., 1990. Toward an integrated theory of state-corporate crime. Paper presented at the *American Society of Criminology Meeting*, Baltimore, MD (November).
- Kramer, R. and Michalowski, R., 2006. The original formulation. In R. Michalowski and R. Kramer, eds. *State-corporate crime: Wrongdoing at the intersection of business and government*. New Brunswick, N.J: Rutgers University Press, 18-26.
- Kramer, R. and Michalowski, R., 2012. Is global warming a state-corporate crime? In R. White, ed. *Climate change from a criminological perspective*. New York: Springer, 71-88.
- Leaf, D., 2001. Managing global atmospheric change: A U.S. policy perspective. *Human and Ecological Risk Assessment*, 7, 1211-1226.
- Lessig, L., 2011. *Republic, lost: How money corrupts Congress-and a plan to stop it*. New York: Grand Central Publishing.
- Lynch, M. and Stretesky, P., 2003. The meaning of green: Contrasting criminological perspectives. *Theoretical Criminology*, 7, 217-238.
- Lynch, M. and Stretesky, P., 2010. Global warming, global crime: A green criminological perspective. In R. White, ed. *Global environmental harm: Criminological perspectives*. Cullompton: Willan Publishing, 62-84.
- Lynch, M., Burns, R. and Stretesky, P., 2010. Global warming and state-corporate crime: The politicization of global warming under the Bush administration. *Crime, Law and Social Change*, 54, 213-239.
- Mann, T. and Ornstein, N., 2012a. *It's even worse than it looks: How the American constitutional system collided with the new politics of extremism*. New York: Basic Books.
- Mann, T. and Ornstein, N., 2012b. Let's just say it: The Republicans are the problem. *Washington Post* [online], (April 27). Available from: <http://www.washingtonpost.com/opinions/lets-just-say-it-the-republicans-are-the-problem/2012/04/27/glQAxCVUIT> [Accessed 5 May 2012].
- McCright, A. and Dunlap, R., 2000. Challenging global warming as a social problem: An analysis of the conservative movement's counter-claims. *Social Problems*, 47, 499-522.
- McCright, A. and Dunlap, R., 2003. Defeating Kyoto: The conservative movement's impact on U.S. climate change policy. *Social Problems*, 50, 348-373.
- McCright, A. and Dunlop, R., 2011. Cool dudes: The denial of climate change among conservative white males in the United States. *Global Environmental Change*, 21, 1163-1172.

- McKibben, B., 2010a. *Eaarth: Making life on a tough new planet*. New York: Times Books.
- McKibben, B., 2010b. Copenhagen: Rallying for next steps. *Mother Jones* [online], (January 19). Available from: <http://motherjones.com/politics/2010/01/copenhagen-next-steps> [Accessed 15 March 2012].
- McKibben, B., 2012. Global warming's terrifying new math: Three simple numbers that add up to global catastrophe-and that make clear who the real enemy is. *Rolling Stone* [online], (August 2). Available from: <http://www.rollingstone.com/politics/news/global-warming-terrifying-new-math> [Accessed 19 July 2012].
- McNall, S., 2011. *Rapid climate change: Causes, consequences, and solutions*. New York: Routledge.
- Michalowski, R., 1985. *Order, law and crime*. New York: Random House.
- Michalowski, R., 2010. In search of 'state and crime' in state crime studies. In W. Chambliss, R. Michalowski and R. Kramer, eds. *State crime in the global age*. Cullompton: Willan Publishing, 13-30
- Michalowski, R. and Kramer, R., 2006. *State-corporate crime: Wrongdoing at the intersection of business and government*. New Brunswick, N.J.: Rutgers University Press.
- Michalowski, R. and Kramer, R., 2007. State-corporate crime and criminological inquiry. In H. Pontell and G. Geis, eds. *International handbook of white-collar and corporate crime*. New York: Springer, 200-219.
- Michalowski, R. and Kramer, R., 2013. Transnational environmental crime. Forthcoming in P. Reichel and J. Albanese, eds. *Transnational crime and justice handbook*. Second edition. Thousand Oaks, CA: Sage Publications.
- Mills, C.W., 1956. *The power elite*. New York: Oxford.
- Monbiot, G., 2012. The Earth cannot be saved by hope and billionaires. *Commondreams.org* [online], (June 19). Available from: <http://www.commondreams.org/view/2012/06/19> [Accessed 19 June 2012].
- Mooney, C., 2005. *The Republican war on science*. New York: Basic Books.
- Mooney, C., 2012. *The Republican brain: The science of why they deny science-and reality*. Hoboken, N.J.: John Wiley & Sons.
- Morris, D., 2012. Texas Judge rules "The sky belongs to everyone. *Common Dreams* [online], (July 26). Available from: <http://www.commondreams.org/view/2012/07/26-2> [Accessed 26 July 2012].
- Norgaard, K. M., 2011. *Living in denial: Climate change, emotions, and everyday life*. Cambridge, MA: The MIT Press.
- Oreskes, N. and Conway, E., 2010. *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco to global warming*. New York: Bloomsbury Press.
- Parenti, C., 2011. *Tropic of chaos: Climate change and the new geography of violence*. New York: Nation Books.
- Pemberton, S., 2007. Social harm future(s): Exploring the potential of the social harm approach. *Crime, Law and Social Change*, 48 (1-2), 27-41.

- Powell, J., 2011. *The Inquisition of Climate Science*. New York: Columbia University Press.
- Richardson, K., Steffan, W., and Liverman, D., 2011. *Climate change: Global risks, challenges and decisions*. New York: Cambridge University Press.
- Sanders, B., 2009. *The green zone: The environmental costs of militarism*. Oakland: AK Press.
- Sassen, S., 1993. *Losing control? Sovereignty in the age of globalization*. New York: Columbia University Press.
- Scheer, R., 2010. *The great American stickup*. New York: Nation Books.
- Shiva, V., 2012. Rio+20: An undesirable U-turn. *The Asian Age* [online], (June 25). Available from: <http://www.asianage.com/columnists/rio20-undesirable-u-turn-649> [Accessed 3 July 2012].
- Skocpol, T. and Williamson, V., 2012. *The tea party and the remaking of Republican conservatism*. New York: Oxford University Press.
- South, N., 2009. Ecocide, conflict and climate change: Challenges for criminology and the research agenda in the 21st century. In K. Kangaspunta and I. H. Marshall, eds. *Eco-crime and justice: Essays on environmental crime*. Turin: UNICRI, 37-53.
- Tift, L. and Sullivan, D., 2001. A needs-based, social harms approach to defining crime. In S. Henry and M. Lanier, eds. *What is crime? Controversies over the nature of crime and what to do about it*. Lanham, MD: Rowman & Littlefield, 179-203
- Union of Concerned Scientists., 2011. Outcome at Durbin climate negotiations offers limited progress. *Commondreams.org* [online], (December 13). Available from: <http://www.commondreams.org/newswire/2011/12/13-8> [Accessed 15 March 2012].
- Union of Concerned Scientists., 2012a. *Heads they win, tails we lose: How corporations corrupt science at the public's expense*. Cambridge, MA: UCS Publications.
- Union of Concerned Scientists., 2012b. *A climate of corporate control: How corporations have influenced the U.S. dialogue on climate science and policy*. Cambridge, MA: UCS Publications.
- U.S. Supreme Court., 2007. *Opinion of the Court in Massachusetts v. Environmental Protection Agency*, 549 U.S. 497.
- Vaughn, D., 1996. *The Challenger launch decision: Risky technology, culture and deviance at NASA*. Chicago: University of Chicago Press.
- Ward, B., 2012. Heartland Institute leak exposes strategies of climate attack machine. *Commondreams.org* [online], (February 21). Available from: <http://www.commondreams.org/view/2012/02/21-9> [Accessed 21 February 2012].
- Washington, H. and Cook, J., 2011. *Climate change denial: Heads in the sand*. London: Earthscan.
- White, R., 2008. *Crimes against nature: Environmental criminology and ecological justice*. Cullompton: Willan Publishing.
- White, R., 2009. Dealing with climate change and social conflict: A research agenda for eco-global criminology. In K. Kangaspunta and I. H. Marshall, eds. *Eco-crime and justice: Essays on environmental crime*. Turin: UNICRI, 14-35
- White, R., ed., 2010. *Global environmental harm: Criminological perspectives*. Cullompton: Willan Publishing.

- White, R., 2011. *Transnational environmental crime: Toward an eco-global criminology*. London: Routledge.
- White, R., ed., 2012. *Climate change from a criminological perspective*. New York: Springer.
- Wonders, N. and Solop, F., 1993. Understanding the emergence of law and public policy: Toward a relational model of the state. In W. Chambliss and M. Zatz, eds. *Making law: The state, the law and structural contradictions*. Bloomington, IN: University of Indiana Press 204-228.
- Yamin, F., 1998. The Kyoto Protocol: Origins, assessment, and future challenges. *Review of European Community and International Law*, 7, 113-128.