

The Clean Development Mechanism: Institutionalizing New Power Relations

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The Clean Development Mechanism: Institutionalizing New Power Relations

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Abstract

The differences in the way climate change mitigation projects are facilitated under the Kyoto Protocol as compared to the financial mechanism of the United Nations Framework Convention on Climate Change (UNFCCC) demonstrate institutional change processes that evolved from global climate change negotiations. Institutional change happens when new practices become accepted and interactions between organizations carry new meanings. Models of the two policy options are presented in this paper depicting organizational interactions to demonstrate the evolution of rule-setting in this arena. A discussion of power implications is provided with the conclusion that countries of the North as well as business corporations have increased their influence in the institutional framework of international climate change mitigation. Institutional theory needs to be further developed to be able to explain the dynamic changes that led to this shift in power potential.

Introduction

Although the sociological roots of institutional theory are clearly intertwined with reflections on power (DiMaggio and Powell, 1983; Giddens, 1984; Jaffee, 2001), a consideration of power inequalities in the process of institutionalization has only recently resurfaced in the arguments of institutional theorists (Greenwood and

Hinings, 1996). Power differentials in an organizational field have to be made explicit and taken into account when describing the process of institutionalization. An organizational field cannot be assumed to operate democratically. Sources of power, symbols of power and types of power (Pfeffer, 1981) have to be considered to make an analysis of institutionalization complete. The notion of power as potential capability to use resources in such a way as to enhance one's own position (Bacharach and Lawler, 1998) needs to be reintegrated into the arguments of institutional theorists. When we explicitly recognize that power struggles occur within the organization as well as across organizations to form institutionalized structures, we can use institutional theory to help explain how power is distributed and utilized in an organizational field and where power struggles occur.

Institutional theorists describe three triggers for institutional change (Greenwood, Hinings and Suddaby, 2002): social upheaval, regulatory change and technological disruptions. This theoretical consideration can be extended to construct three dimensions of the organizational field where power struggles may bring about institutional change: the societal, policy and project arenas. Meyer and Rowan (1977) discuss how organizations may display a legitimizing ceremonial front that represents their formal organization (policy arena) yet act differently within their informal organization on daily activities (project arena) in order to gain efficiency in their operations. Outcomes from both arenas are measured against the beliefs and values developed in the societal dimension of the organizational field.

To portray the functioning of power struggles within the boundaries of the arenas developed in this paper, I draw on the example of the international funding mechanism for climate change mitigation projects, i.e. the way climate-friendly technology is transferred to developing countries. The account details the emergence of a competing proto-institution (Lawrence et al., 2002). The paper examines the shift in power differentials between actors in order to determine

who has an interest in bringing about this institutional change. Interorganizational relations cannot be understood without examining the context in terms of power differentials.

The paper is divided into four main sections. The theoretical context of this study will be outlined, followed by an explanation of why and how the climate change mitigation regime was used to demonstrate power struggles in the policy arena. The empirical study is then discussed and general implications are drawn. The article concludes with a call to research power relations at all three levels in more depth.

Theoretical context

Institutional theorists have been accused of sidestepping a discussion of how institutions change in favour of analyzing how they maintain stability (DiMaggio and Powell, 1991; Greenwood and Hinings, 1996; Oliver, 1991). Clearly, it is paramount to point out that institutions encourage order in a society by shaping human interaction in social, economic and political life (Farjoun, 2002). Nevertheless, fascinating aspects of institutions become apparent once one dispels their taken-for-grantedness and opens the discussion on how institutionalized routines change over time. DiMaggio and Powell's (1991) call for institutional theorists to dedicate more research into issues such as change and power has produced a strong response from the scholastic community. Many authors have since tackled certain aspects of institutional change: institutional entrepreneurship using institutional strategies (Lawrence, 1999; Oliver, 1991) or interorganizational collaboration (Hardy and Phillips, 1998; Lawrence et al., 2002), institutional development in turbulent organizational fields (Farjoun, 2002), and radical organizational change (Greenwood and Hinings, 1996) to name a few. Despite all this effort the examination of change from an institutional theory angle has only just begun (Hensmans, 2003).

Institutions as the central theme have been defined as “procedures, practices, and their accompanied shared meanings enacted and perceived by members” (Zilber, 2002: 234). Although they were created through social interaction of actors, institutions have reached a level of taken-for-grantedness that allows an action within an institution to be much less costly to the actor than an action outside of the institutional framework (Barley and Tolbert, 1997; Lawrence, Hardy and Phillips, 2002; Meyer and Rowan, 1977; Zucker, 1987). Initially, institutional theorists discussed institutional pressures toward conformity that were exerted mainly from the surroundings of an organization (Barley and Tolbert, 1997). Since then, institutionalization has also been examined looking at the organization as the source of institutional pressures (Zucker, 1987). Organizations thus are not only exposed to external pressures, they also exercise power over the institutional framework through institutional strategies (Oliver, 1991; Lawrence, 1999). This balance essentially forms the inherent duality Barley and Tolbert discuss: “institutions [...] both arise from and constrain social action” (1997: 95).

Institutional pressures can be interpreted as power exerted by members of an organizational field on other members. An organizational field is defined by institutional theorists as a “community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside the field” (Scott, 1995: 56). Hoffman (1999) adds to this discussion that the field is formed around a common issue rather than a common product or market. The power structure in such an organizational field cannot be assumed to be democratic but has instead been described as an institutional war (Hoffman, 2001). Although organizations can use entrepreneurial strategies to change their institutional context (Lawrence 1999), institutional practices can also deliberately remain resistant to change when the current environment is beneficial to powerful agents (Beckert, 1999).

Institutionalization is the process that sees a new set of routines and practices become taken-for-granted and entrenched. Lawrence, Hardy and Phillips (2002) call this emerging system a proto-institution. They explain: “These new practices, technologies, and rules are institutions in the making: they have the potential to become full-fledged institutions if social processes develop that entrench them and they are diffused throughout an institutional field.” (2002: 283).

A new set of institutionalized routines will change the organizational landscape. According to Fligstein (1991) institutional change occurs either when power relations shift in an organizational field or when the goals of powerful actors change. Greenwood and Hinings (1996) add to this analysis that those actors in position of power can enable or suppress radical change. Institutional change is intertwined with the notion of power. In order to understand institutional change, power relations have to be made explicit and central in the analysis of interorganizational relations.

Power can be defined as the “capability or potential that may or may not be used by actors and, if used, may or may not be effective” (Bacharach and Lawler, 1998). It is therefore not only merely a resource in itself but rather the utilization of resources. Power is a strategy rather than a property (Foucault, 1979). Resources are the vehicle through which power is exercised to reproduce structures of domination (Giddens, 1979). Organizations in a field can exert power on each other depending on the type and amount of resources they can manipulate and how effective they are in this utilization. This also means that power resides in the relationship between actors rather than within actors themselves (Hatch, 1997).

The distribution of power that exists in an organizational field therefore has to be analyzed within the social relationships of institutional actors. Pfeffer (1981) cautions that the notion of power can become a tautology if it is used to explain

everything. Instead, Pfeffer notes that “A person is not ‘powerful’ or ‘powerless’ in general but only with respect to other social actors in a specific social relationship.” (1981: 3). To establish the existence of power relations and dependencies, the actors have to be studied in the context of the institution that they act within (Greenwood and Hinings, 1996). In the context of the climate change policy regime, power is measured as influence over the policy process.

How power relations affect the dynamics in an organizational field becomes apparent when institutional structures change. When a proto-institution (Lawrence, Hardy and Phillips, 2002) emerges, power dependencies shift and offer a unique opportunity to study the influence of various actors. The discussion surrounding climate change mitigation projects in developing countries governed by international treaties bears witness to the emergence of such a proto-institution. The way renewable energy projects are funded is about to change drastically through the provisions of the Clean Development Mechanism as outlined in the Kyoto Protocol. This context gives us an opportunity to begin to see institutional change in the light of power differentials.

Methodology

The international climate change policy context was chosen to analyse global rule-setting for three distinct reasons. Firstly, choosing this case study is a response to a social concern and of utmost importance in international policy efforts. “Social science should be guided by problems of life and practice rather than by intellectually self-generated conceptions and techniques.” (Selznick, 1996: 270) It is grounded in the economic, social and political life of the global community.

Secondly, the context provides a well-documented, highly-institutionalized interplay of organizations. Documents of official texts and decisions are publicly available in at least three languages (English, French and Spanish), making them

accessible to a wide-ranging audience. Lists of organizations participating in the policy process are also publicly available. Meyer and Rowan discuss the degree to which an organizational environment is institutionalized: “Societies that, through nation building and state formation, have developed rational-legal orders are especially prone to give collective (legal) authority to institutions which legitimate particular organizational structures. [...] The stronger the rational-legal order, the greater the extent to which rationalized rules and procedures and personnel become institutional requirements.” (1977: 347, 348).

Thirdly, the group of actors is particularly diverse, adding to the complexity of the organizational field. Participants include representatives of governments of almost all of the world’s states, members of intergovernmental organizations, corporate managers, environmentalists, and researchers from an array of disciplines. Despite this diversity, however, all actors are grouped into organizations. Every individual who wants to enter the grounds where the negotiations take place has to be a member of an approved organization. Democratically elected or not, country representatives have the legitimate power to set up new institutional arrangements.

The following account demonstrates the emergence of a competing institution in an institutional field. The discussion will focus on the overlap of climate change policy and development: the rules and regulations for climate change mitigation projects in developing countries that are sponsored by industrialized countries. This is a very narrow and specific area covered by the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.

Before investigating specific aspects of the dynamic process that occurs during institutional change, the differing states of structure had to be established. I therefore devised two governance models (1992 and 1997) that define the organizational interactions set up to facilitate the transfer of climate-friendly technology into developing countries. The two models are based on the United

Nations Framework Convention on Climate Change (UNFCCC), signed in 1992, and its Kyoto Protocol, signed in 1997, with their respective official documentation as well as secondary literature. I was able to interpret the structures of technology transfer through my experience as a participant observer at the UNFCCC secretariat in Bonn, Germany, where I assisted in the implementation of the Convention as well as the documentation of rules and regulation during five international climate change conferences between 2000 and 2003. I presented my evolving models to a focus group of United Nations professional staff in 2003 who helped me refine my interpretation of the treaties in respect to the governance of technology transfer. Figure 1 and 2 below are representation of the models developed in this process.

The institutional change that became apparent in the models was confirmed by the results of semi-structured interviews of ten senior policy makers from countries representing geographical diversity in June 2003. The interviews also allowed me to better understand the changing power relations between actors. The policy makers were asked about their country's past, present and future position on the two technology transfer models, i.e. the GEF model and the market based mechanism (CDM) model.

The organizations in the organizational field were classified into six groups: the official designations of *Annex I* and *Non-Annex I* refer to the UNFCCC document where industrialized countries (including economies in transition such as Russia) are listed in Annex I. The remaining actors were classified as *intergovernmental organizations* (e.g. UNFCCC, World Bank), *not-for-profit organizations* that are directly affiliated neither with the private sector nor any government (e.g. Greenpeace, Potsdam Institute for Climate Impact Research), *private sector organizations* and affiliations (e.g. Shell, Business Council for Sustainable Energy) and the organizations acting as *Designated Operational Entities* described in the Kyoto Protocol. The table of power relations (Table 1) was constructed by determining the role of each type of organization in each of the

institutional frameworks. The interests of the category of organization were extrapolated from secondary data and websites of organizations in the respective groups.

Institutional change in the transfer of climate change mitigation technology

Traditional model: Aid

The United Nations Framework Convention on Climate Change (UNFCCC) is a legally binding treaty which seeks to address both the causes and adverse effects of climate change. It was signed in Rio de Janeiro in June 1992 and came into force on 21 March 1994. It currently has 188 member states. The treaty has the "ultimate objective" of stabilizing atmospheric concentrations of greenhouse gases (GHG) at safe levels (Article 2, UNFCCC). To achieve this objective, all countries have a general commitment to address climate change, adapt to its effects, and report on the action they are taking to implement the Convention (Article 4, UNFCCC). The Convention then divides countries into two groups: those listed in its Annex I (known as "Annex I Parties") and those that are not named in this Annex (so-called "non-Annex I Parties").

The countries listed in Annex I of the Convention are industrialized countries including economies in transition that have historically contributed the most to climate change. Their per capita emissions are higher than those of most developing countries and they have greater financial and institutional capacity to address the problem of climate change. The principles of equity and "common but differentiated responsibilities" enshrined in the Convention (Article 4.1) therefore require these Parties to take the lead in modifying longer-term trends in emissions.

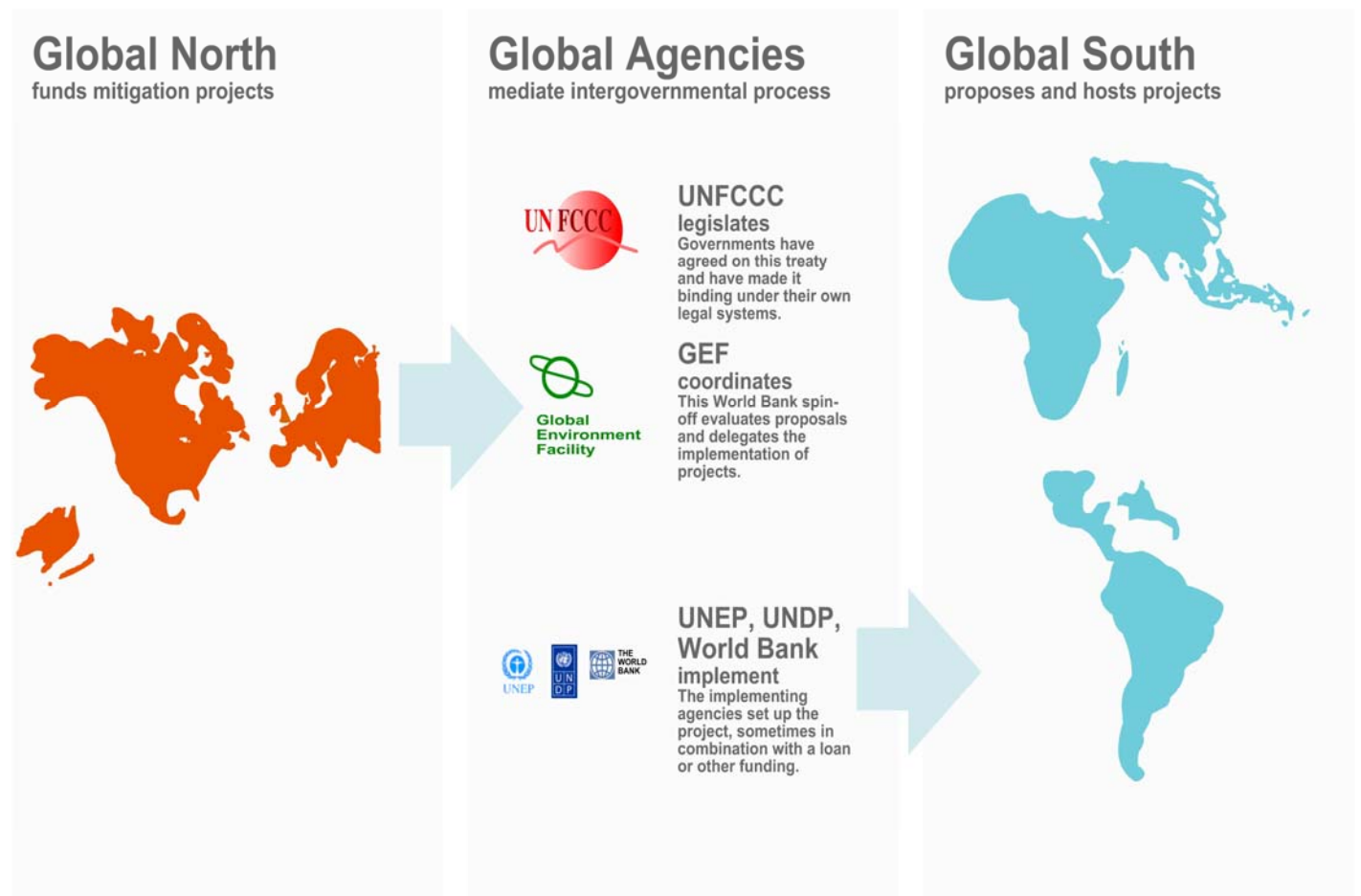
Working in line with these considerations, a funding mechanism was required to sponsor climate change mitigation projects in developing countries. These projects may embrace renewable energy technologies, such as wind power or

solar power, or help make existing facilities more efficient and cleaner. They may be large energy projects such as a hydro dam or small local projects such as natural gas powered buses in urban centers. The funding mechanism that was chosen to coordinate these kinds of projects was the Global Environment Facility (GEF) which was set up by the World Bank as a pilot project in 1991 and restructured in 1994 to be governed by an assembly and a council. Since 1991, this agency has allocated \$4 billion in grants and leveraged an additional \$12 billion in co-financing from other sources to support more than 1000 projects in the area of climate change, biodiversity loss, degradation of international waters, ozone depletion, land degradation, and persistent organic pollutants. The grants come from over 30 donor nations and are transferred to over 140 developing countries. GEF aims to work in partnership with the private sector, NGOs and international institutions to address complex environmental issues while supporting national sustainable development initiatives. The UN Development Program (UNDP), the UN Environment Program (UNEP) and the World Bank as well as regional development banks implement the projects on the behalf of the GEF.

Figure 1 illustrates the funding process of a GEF sponsored climate change mitigation project. I choose to call the overarching institution 'aid' because donor countries submit funds to intergovernmental agencies that in turn coordinate projects in developing countries. Furthermore, the UNFCCC implies a concern for equity between industrialized countries that have caused most of the atmospheric greenhouse gases and the developing countries that are vulnerable to the impacts of climate change (Michaelowa, 2000). The UNFCCC therefore aims at the distribution of the costs of mitigating and adapting to climate change. Some practitioners may prefer to call the model 'development cooperation' to differentiate this effort from the stigmatized term 'foreign aid'.

Figure 1: Institution 'aid' under the UNFCCC

Model 1: Aid



United Nations Framework Convention on Climate Change :: 1992

The governments of the global North (Annex I Parties) and the global South (Non-Annex I Parties) have together negotiated the UNFCCC. As discussed earlier, the funding mechanism under the UNFCCC is the GEF which operates in cooperation with the World Bank, UNDP and UNEP. The latter organizations are the ones that actually execute the climate change mitigation projects in the South.

In summary, the North donates the money to operate the UNFCCC secretariat, the GEF secretariat and other intergovernmental organizations as well as the money needed to set up climate change mitigation projects in countries of the South. The UNFCCC legislates which projects are appropriate, the GEF selects project ideas offered by a government of the South, and coordinates the design and implementation of it. The World Bank, UNEP and UNDP execute projects that have been approved by the UNFCCC and GEF. The countries of the South host the projects and generate new project ideas.

Emerging model: Investment

The Kyoto Protocol to the United Nations Framework Convention on Climate Change strengthens the international response to climate change. Adopted by consensus in 1997, it commits Annex I Parties to individual, legally-binding targets to limit or reduce their greenhouse gas emissions, adding up to a total cut of at least 5% from 1990 levels in the period 2008-2012. Since the impact of climate change is not easily quantifiable because of the time lag and uncertain impact, the setting of targets was a political decision, battled out between economic and environmental interests (Michaelowa, 2000). It is not based on scientific knowledge about safe levels of greenhouse gases in the atmosphere and targets are not calculated according to a set formula. This made it easier to reach consensus at the time but complicates the setting of targets for the second commitment period. Currently, 164 Parties have ratified the Kyoto Protocol including almost 40 Annex I Parties (industrialized countries) that have taken on emission reduction targets. The Protocol has come into effect on 16 February 2005.

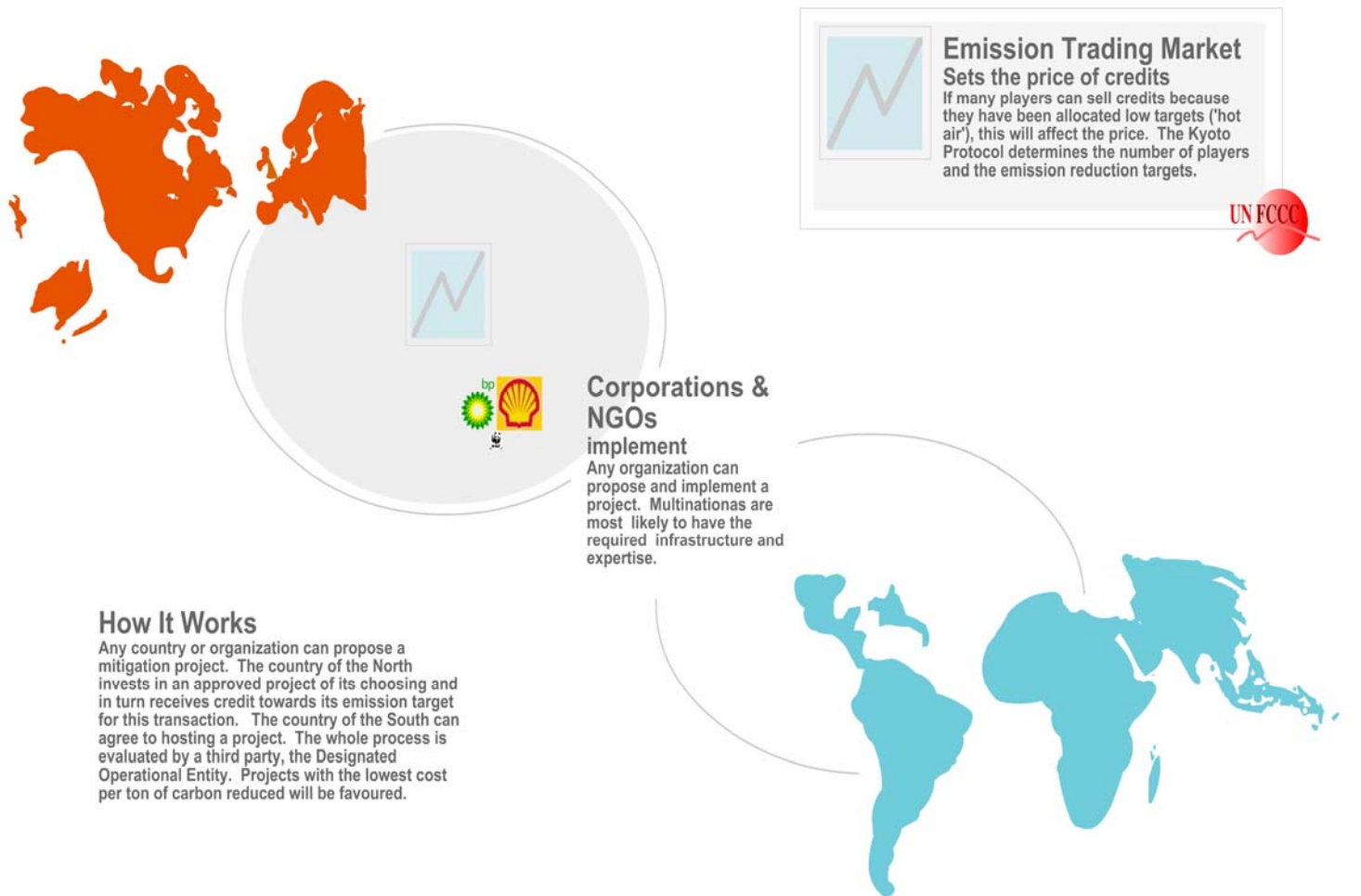
Countries will have a certain degree of flexibility in how they make and measure their emissions reductions. In particular, an international emissions trading regime will be established according to Article 17 of the Protocol allowing industrialized countries to buy and sell emissions credits amongst themselves.

They will also be able to acquire 'emission reduction units' by financing certain kinds of emission reducing projects in other developed countries that would not have otherwise occurred. This is regulated in Article 6 of the Protocol and called the Joint Implementation (JI). In addition, a Clean Development Mechanism (CDM) (Article 12 of the Protocol) will enable industrialized countries to finance emission reduction projects in developing countries that would not have otherwise occurred and to receive credit for doing so. The three innovative mechanisms, emissions trading, JI and CDM, are designed to help Annex I Parties reduce the costs of meeting their emissions targets by achieving or acquiring reductions more cheaply in other countries than at home. It is considered the least cost option. On a global playing field, emission reductions in other countries contribute just as much to the overall global reduction of GHG emissions. Therefore, a joint effort by Annex I countries (JI) or an investment by an Annex I country supporting a project in the developing world (CDM) will reduce emissions on a global scale at the lowest cost to governments, businesses and consumers in the industrialized country. It can be argued, however, that these measures delay the economic transition of industrialized countries themselves to a carbon-constrained future.

In this paper, I deal with the institutional framework of the CDM. This mechanism is a novel framework for climate change mitigation projects in developing countries. Its institutional framework competes with the institutional framework of the GEF-coordinated projects in Figure 1. I call the model that the CDM operates under 'investment'. Non-governmental organizations are encouraged to design and implement a climate change mitigation project. Except for the UNFCCC secretariat and the KP executive board, no further involvement of intergovernmental organizations is required. The operational guidelines for the CDM that have been established so far are depicted in Figure 2. Once it functions fully, it will be self-contained and funds for its operations will be self-generated.

Figure 2: Institution 'investment' under the Kyoto Protocol

Model 2: Market Based



Kyoto Protocol :: Clean Development Mechanism :: 1997

In the investment model, project ideas can be generated by a government of the North or South, as well as by a non-government organization, such as a corporation or not-for-profit organization (NGO). The proposals are examined by the designated operational entity (DOE) and passed on to the CDM Executive Board. The latter legislates, validates and registers climate change mitigation projects. If the project is approved, it will be implemented by a corporation or

NGO of the North or South. The DOE continually verifies that the project is operating under its initial mandate. When the project is completed, the DOE and the CDM Executive Board validate its contribution to reducing greenhouse gases and offers the country of the North a Certified Emission Reduction certificate. The government of the North has thus an incentive to support the organization that is operating the project in the South. It will do so through tax incentives or direct facilitation of the project. The government of the South approves the project and hosts it within its borders.

Discussion

The policy changes in the climate change mitigation field are an account of the emergence of a competing proto-institution. Lawrence, Hardy and Phillips describe a proto-institution as “institutions in the making: they have the potential to become full-fledged institutions if social processes develop that entrench them and they are diffused throughout an institutional field” (2002: 283). The institution of ‘investment’ in the international climate change mitigation regime is in the initial phase of institutionalization. The actors are moving to turning this model into reality. This proto-institution will be competing for resources against the traditional institution of ‘aid’ that was outlined in Figure 1. How did this change come about? Institutional theory can help us recognize *that* institutional change is underway, but the notion of power needs to be considered when discussing *how* the change came about. Institutional theory can therefore be seen as a road map of institutional change. Analysing evolving power differentials, however, is required in order to understand the traffic as well as road blocks and diversions.

Transformation

The brief account of the climate change models clearly indicates that power is shifting between the actors in this organizational field. Under the institution ‘aid’, the GEF has immense power over other actors by choosing and verifying

projects. Its implementation agency (World Bank, UNDP or UNEP) is a powerful actor as well, because it turns the plans into action and offers the funds that it deems necessary. Surprisingly, these two powerful actors have effectively been wiped off the organizational landscape in the proto-institution of 'investment'. Instead, formerly secondary actors have potentially become more powerful: corporations and NGOs, actually any organization can now assume the role of these intergovernmental organizations in designing and implementing a climate change mitigation project.

At the time of the signing of the Kyoto Protocol, it was not clear whether a market-based mechanism, such as the CDM, would become the dominant way of setting up climate-friendly technology projects in developing countries. The mechanism had been defined very vaguely and was still to be developed further by policy makers. Until the ratification of the Protocol by Russia in November 2004, almost 7 years after its signing, there was much uncertainty about the treaty's future.

Institutional theory as a guide for recognizing institutional change

Dacin, Goodstein and Scott (2002) explore four ways an organizational field can be transformed. All four indicators of institutional change are present in the case study outlined above. Their first indicator relates to changes in the relationships between existing organizations. In the climate change policy context, organizations that still remain in the institutional framework now relate to each other in different patterns. For example, a government of the North can now choose a project directly that it intends to financially support. The second indicator deals with modifications of the boundaries of existing organizations. In the CDM framework, many organizations can now propose projects that were not able to do so earlier. The third indicator concerns changes in the make up of the organizational field with new actors entering. It has already been mentioned that the GEF and its implementing agencies have lost their position whereas new organizations, such as the DOE, have emerged in the organizational field. The

final indicator of institutional change, alterations of the field's boundaries and changes in the governance structures in an organizational field, is also present in our case study. The organizational field now involves actors directly which were only side players in the traditional model, such as corporations and NGOs. Clearly, the patterns of interaction have changed.

When further considering the transformation of the organizational field, two peculiar characteristics of the proto-institution become apparent. Firstly, although the proto-institution is designed to compete with the traditional institution, the latter continues to exist and progress. Indeed, the GEF has made several modifications to its project policies (Global Environment Facility 2002) to meet demands made by governments from both the North and South. Also, since the administration of the United States of America has declared its refusal to ratify the Kyoto Protocol, the GEF funding mechanism will continue to be a vehicle for United States funding. We can therefore not call this transformation a deinstitutionalization, preinstitutionalization or reinstitutionalization. The stages of institutional change developed by Greenwood et al. (2002) therefore do not apply to this case.

Secondly, despite the observation that the issue underlying this organizational field (Hoffman 1999) continues to be international climate change mitigation, the shared meaning of this issue has changed fundamentally. It is for this reason that institutional change is evident. Zilber demonstrates the importance of the interpretation of meaning for any discussion on institutional change. "Institutionalized meanings should be analyzed not only as qualities of actions and structures, but also as the cognitive process of interpreting actions and structures – as shared and [...] contested cognitive models" (2002: 236). She goes on to claim that an individual's interpretations of meaning can be seen as the social actions that create, reproduce and change institutions. The institution 'aid' has spun off a competing proto-institution that incorporates modified power relations between existing actors as well as new actors. However, most

importantly, the proto-institution brought about a change in meaning: the UNFCCC implied that countries of the North admit to greater responsibility in causing climate change through industrial processes and wish to help developing countries leapfrog traditional technology choices in order to avoid duplicating the high emission models of industrialization. This is what I call the institution of 'aid'. The Kyoto Protocol on the other hand facilitates more cost-effective climate change mitigation projects in developing countries as a mechanism for industrialized countries to get around cutting emissions in their own backyard. This is what I call the institution of 'investment'. The balance between equity consideration and efficiency considerations has shifted. We have thus moved to a change in meaning of the action and structure. Zilber emphasizes "meaning and interpretation as parts of the medium through which institutional power struggles and relations take place" (2002: 236).

Shifting power

The question remains how this dramatic shift in the institutional framework could have come about. To shed some light on this matter, the notion of power has to be introduced. Power tactics are implemented to promote changes that are viewed by the actor as in their own interest (Bacharach and Lawler 1998). The next step is thus to analyze the actor's potential interests. Power is not inherent in an actor; rather, it lies in specific social relationships with other actors (Pfeffer, 1981). Therefore, the kind of institutional pressures that actors can exercise on the process of institutionalization should be discussed. Lastly, we can compare power potentials to the emerging structure of the proto-institution in order to infer which players have been successful in realizing their interest.

It is beyond the scope of this paper to analyse all aspects of the relations between players in the climate change mitigation field. I have instead compiled the most prominent organizational interests (incorporating the discussion by Greiner, 2000) and power potentials in Table 1. Power relations have indeed changed and the emergence of the proto-institution means an increase of

institutionalized power for some players and a decrease for others. It is also important to note that the table only reflects the relations that are *institutionalized*, not the ones that are hidden or indirect. These may be as important in shaping the policy outcomes but are beyond the scope of this paper.

Although the interests of the organizations are diverse, they all originate in the drive to continue to exist. A democratic government wants to get re-elected and thus has to gauge public interest in the issue as well as the interests of the government's benefactors (Hertz, 2001). A government that was not democratically elected needs to sustain its control over the population through military means and thus needs such resources at its disposal. Governments also have diplomatic responsibilities and need to consider their image on the international stage. In fact, a government's position in the world economy may dictate which other governments can pressure it into acting in a certain way (Chase-Dunn, 1998). Furthermore, an intergovernmental organization like the World Bank has to sustain its *raison d'être* and therefore needs to maintain the worldview that economic development is necessary but absent in many countries (Ferguson, 1990).

Table 1: Power potentials by actor and institution

Actors	Interests in the climate change mitigation policy arena	Involvement in the process within institution 'Aid'	Involvement in the process within proto-institution 'Investment'	Difference in influence over the decision making process due to the institutional change
Annex I Countries (industrialized)	<ul style="list-style-type: none"> -appease electorate -shift costs across actors, across voters and to distant future -accommodate economic interests -avoid normative pressure regarding development and environment 	<ul style="list-style-type: none"> legislates donates 	<ul style="list-style-type: none"> legislates may design selects may facilitate may receive credit 	<ul style="list-style-type: none"> -now able to design project -now able to decide on which specific project to support -may choose and support implementing organization
Non-Annex I Countries (developing)	<ul style="list-style-type: none"> -receive untied foreign transfer of funds -accommodate economic interests -meet national development goals 	<ul style="list-style-type: none"> legislates designs cooperates 	<ul style="list-style-type: none"> legislates may design approves 	<ul style="list-style-type: none"> -no longer necessary to be directly involved in project work -no longer the only actor who can design projects
Inter-Governmental Organizations (GEF, World Bank, UNEP, UNDP, UNFCCC bodies)	<ul style="list-style-type: none"> -encourage caring for the environment to fulfill mandate -see legislation implemented -increase level of reliance on bureaucratic procedures 	<ul style="list-style-type: none"> selects implements 	<ul style="list-style-type: none"> selects verifies validates accredits 	<ul style="list-style-type: none"> -GEF and Implementing Agencies are no longer necessary in this process -UNFCCC bodies, such as the CDM Executive Board, are now more directly involved in the decision making process
Not-For-Profit Organizations (non-industry)	<ul style="list-style-type: none"> -fulfil organizational mandate, e.g. to defend common good -appease donor groups -receive positive press coverage 	<ul style="list-style-type: none"> may be indirectly involved in governmental process 	<ul style="list-style-type: none"> may design may implement may support 	<ul style="list-style-type: none"> -now able to design project -implement project -support project
Corporations and business associations	<ul style="list-style-type: none"> -expand markets -distribute risk -lower costs -gain and sustain 'green' image 	<ul style="list-style-type: none"> may be indirectly involved in governmental process 	<ul style="list-style-type: none"> may design may implement may support 	<ul style="list-style-type: none"> -now able to design project -implement a project -support project
Designated Operational Entities	<ul style="list-style-type: none"> -increase level of involvement in procedures -good record of performance in order to continue to receive contracts 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> evaluates 	<ul style="list-style-type: none"> -involved in selecting project ideas -evaluate project progress

Besides these general concerns for continued existence, the organizations have special interests in the climate change mitigation field. These are the ones outlined in the first column of Table 1. The next two columns give an account of the ways in which the actors can influence the process in each institutional framework. The last column is a brief indication of the implications of the emergence of the proto-institution. I will now go over actors listed in Table 1 in turn to discuss their involvement in the two models.

We can infer from this table that the actors that were able to increase their institutional power potential through the CDM are Annex I countries, private sector organizations and bodies of the UNFCCC. *Annex I countries* by definition have more resources available to them than Non-Annex I countries. This gives them an advantage in the negotiations in two ways. Directly, Annex I countries can send larger delegations to conferences who can constantly seek advice from civil servant experts at home. Non-Annex I countries can often not afford to send anyone and therefore only have the one delegate whose travel is funded by the UN. Workshops and negotiation meetings often run simultaneously at conferences and thus need more than one national delegate. Thus a government with more resources will be able to exert influence on more levels of the negotiation process. In addition, this government receives more exposure in the media and may have special interest groups in tow that support its economic interests.

In the CDM framework, countries of the North can now directly select and sponsor climate change mitigation projects. They are therefore in a position to make geopolitical criteria part of their decision to invest. They can also choose which implementing agency to support. In the GEF process, this aspect was much more bureaucratized.

The table indicates that *Non-Annex I countries* may have lost influence over the process of setting up mitigation projects. They are now no longer the sole source

of project ideas and once a project is underway, close cooperation with the local government is no longer necessary, as the DOE fulfills the third party evaluation criteria.

In fact, developing countries tried to block the CDM when it first appeared on the institutional landscape in 1993 (Michaelowa, 2000). The government of Costa Rica was the first to switch position, which brought it much criticism but also a prompt reward of eight US climate change mitigation projects (Dutschke, 2000). This instance shows that although collaboration amongst Non-Annex I countries could increase their negotiating power (Lawrence et al. 2002), it is very difficult to negotiate as a solid entity, when the group contains over 100 countries representing a wide array of interests.

The opposition to the CDM was based on a variety of economic, ethical and moral claims. The CDM allows industrialized countries to buy their way out of reducing emissions in their own country by capitalizing on low-cost emission reduction projects in developing countries while continuing environmentally harmful ways of production and consumption at home. This could effectively lead to a slower rate of emission-reducing technological innovation. Developing countries were also concerned about the substantial power differential between project participants (Dubash, 1992). A powerful investor may be able to reap increased profits from the project while lowering the host country's benefits. Furthermore, while the developing country has less control over the actual project, financial support from the North may come out of the country's development aid budget and in effect lower overall funding of development projects (Greiner, 2000). On the other hand, however, it has been argued that liquidity for the financial mechanism may be enhanced by soliciting private sector participation (Michaelowa and Dutschke, 2000).

In Table 1 the governments are divided into those that are listed under the Annex I of the Convention and those that are not listed there (Non-Annex I countries).

Of course there are other ways to classify country governments in climate change negotiations. Paterson (1996) describes three dimensions that governments can be divided into in order to understand their bargaining position in global warming politics. The first dimension of energy dependency divides countries into three categories: countries that depend on energy imports, ones that depend on energy exports and those that have their own indigenous energy supply sufficiently large to support their own activities but not for export. The second dimension is economic dependence and the third dimension perceived vulnerability to climate change, depending on the country's ability to adapt. These dimensions determine whether the country is willing to act in order to mitigate climate change or whether the country has an interest in blocking action. They also demonstrate whether a country is able to act independently. In addition, the consensus format used in the climate change negotiations favours blocking action rather than pushing for action (Wittneben et al., 2005).

The decline of the *GEF with its implementing agencies* under the institution of 'investment' may broaden the rift in power relations between the North and South. These intergovernmental organizations were the medium for distributing donations. However, the GEF cannot be seen as non-partisan or apolitical, and is affected by an inherent mistrust of the World Bank by developing nations (Paterson, 1996). The GEF has often been called inefficient by both the North and the South, despite the fact that it has received only meagre funding over the years considering the immense task it has been assigned (Michaelowa, 2000).

Another set of actors in the climate change policy field are *corporations*. Policy decisions concerning fossil fuel production and consumption will directly impact operations of oil companies. Levy and Kolk (2002) demonstrate that the strategic choices of oil industry giants have been diverse: Exxon has chosen to assertively resist responding to the threat of climate change and Texaco has avoided responding whereas the European oil giants BP and Shell have had a proactive stance on climate change action. Nevertheless, their strategies have recently

converged with Exxon investing in fuel cell technology and carbon sequestration and Shell and BP continuing to direct the majority of their investments into fossil fuel exploitation.

Throughout the negotiation process, industry lobby groups have ensured access to delegates and the press, industry representatives hold seminars, distribute leaflets and discussion pieces to delegates during conferences and consult delegates on the negotiation process upon request. As can be seen on Table 1, the CDM has effectively moved these organizations from behind their information booths to the floodlights of the center stage. Although they will not be able to negotiate legislation, they can now suggest projects, implement projects and invest in projects that they see worthwhile in return for emission reduction credits.

Could not the same benefit accrue to the non-industry *not-for-profits*? Not exactly. Although they can also be said to have moved from the corridors to center stage, they may not have the resources available to realize a project that they approve of and may not have the means to push a project idea through the bureaucracy of the UN or rally support from an Annex I government. Their projects are often not large enough to qualify as a CDM project or to absorb the required transaction costs to turn a project into a CDM project. NGOs actually are well positioned to take on CDM projects: they are very efficient information distributors, they are experienced in capacity building, have lower labour costs and enjoy trusting relationships with the locals (Michaelowa, 2000). However, the tax incentive schemes that may be offered by a government of the North do not work for NGOs because they usually do not pay taxes. Instead, the government would have to facilitate a project through direct financial support, which may not be as politically viable with the electorate (Michaelowa, 2000).

Corporations are much more likely to seize the opportunities that the CDM brings. Not-for-profits will be able to participate, but likely not to the same degree. Considering that the CDM operates under the institution of 'investment',

corporations have the advantage that they are very comfortable interacting under this institution. The knowledge and skill set that business corporations encompass are a very close fit with the institution. The shift towards this institutional arrangement gives them an advantage over non-profits, intergovernmental as well as public organizations. In fact, they are experts in this institution that will be consulted and relied upon in the setting up of the governance structure.

Notice that the interests of all organizations include neither the protection of the earth's climate nor the efficiency of abatement strategies (Greiner, 2000). These become relevant issues only if they are connected to the actor's interests. For example, countries dependent on energy imports will call for a rapid development of renewable energy options, as this will ease their geopolitical dependencies.

Conclusion and future research

Overall, it can be observed that a competing proto-institution of 'investment' has emerged from the traditional institution of 'aid' in international climate change mitigation funding. The shift from interpreting climate change mitigation projects in developing countries as political 'aid' to economic 'investment' may be attributed to the meaning shared by the actors that have benefited most from this power struggle in the policy arena: industrialized countries as well as large corporations. Economic forces seem to be favored by their constituents over political ones. It has been observed that the private sector is becoming more successful in exerting institutional pressure in the policy arena (Hertz, 2001). This examination of institutional change in the policy dimension shows that regulatory innovation is not necessarily based on a level playing field between unequal actors (Michaelowa and Dutschke, 2000). Instead, it resembles more an institutional war where actors gain and lose interorganizational power.

An analysis of the changing structure shows that the newly established Kyoto Protocol not only changes the way the transfer of climate-friendly technology is governed, but also the underlying logic of the social interaction. The entrenchment of the market-based logic has thus been established in an environmental treaty. In addition, different actors become pivotal in the new institutional structure. The make-up of the institutional field in terms of its actors, changes instantly as certain actors gain and lose influence with the changing institutional logic and structure.

It becomes clear then that the structure, logic and actors that make up the organizational field as described by Scott (1995) are so closely intertwined and interdependent that one cannot be examined without the other two. In fact, each dimension reflects the other two. If an actor did not share the same institutional logic as the others in the organizational field, it would not be a significant actor or considered within the organizational field by definition. If an institutional logic would not be underlying an institutional structure, this structure would not make sense to the social agents in the organizational field. If a structure were not accepted by the actors in an organizational field, it would not be the governance pattern of the social interactions.

This paper has shed some light on the process of institutional change. Institutional theory aided in the examination of the organizational field and helped determine whether institutional change indeed took place. This was accomplished by using the forms of transformation outlined by Dacin and colleagues (2002) which are a useful tool to understand the extent of the institutional change. Furthermore, the discussion surrounding a proto-institution by Lawrence and colleagues (2002) aids the understanding of the evolution of new patterns of interaction. It was recognized, however, that institutional theory alone cannot explain institutional change. The notion of power was necessary in order to comprehend how actors relate to each other in the traditional and the new pattern of interactions. We can only arrive at a more complete

understanding of institutional change once we understand how power differentials in an organizational field are affected. The notion of power can therefore inform us about how the institutional change has affected the power positions of the actors. We cannot assume, however, that a better power position necessarily means that this actor was instrumental in bringing about the change. Instead, it is pertinent to develop a dynamic dimension of institutional theory that can help observe the changes as they are occurring. In order to accomplish this, further theoretical development is needed.

Although this paper edges towards developing a dynamic model of institutional change that takes power positions into account, the concept of power has been presented in a simplified manner in order to make the institutional changes clearly visible. A more complex analysis of the power dimensions would add to the understanding of the change processes. Also, the focus of the paper has been on the policy perspective of climate change mitigation, disregarding the influence of actors that are not present at the international negotiations. Connecting this policy perspective to a wider society perspective as well as a narrower local perspective can add to the insights gained in this study. The paper is also limited in that it takes the existing influential organizations for granted. Further analysis could critically examine the role of the nation state or the lobbying efforts of firms and environmental groups.

Despite these limitations, the study indicates that an analysis of the institutional changes would have been incomplete without examining the power struggles that are played out in this policy arena. The next step is to analyze the power relations of these and other organizations in the project arena. How do organizations cope with the efficiency demands of the project while keeping the ceremonial front established in the policy arena? According to Meyer and Rowan (1977), we should find much more decoupling and reliance on trust in the 'aid' institution than in the proto-institution 'investment'. Is technological innovation more likely to occur in one model rather than the other or do projects under either

institution resemble each other quite extensively despite such a differing institutional framework? Are the power differentials similar in the project arena as in the policy arena or are some organizations able to exert more power? Since the aim of the climate change mitigation negotiations is to lower emissions, having a closer look at the power relations in the project arena is critical. How is the environment faring under the proto-institution? It has been argued that the lengthy discussions surrounding the Kyoto Protocol mechanisms have been used to divert attention away from developing strategies to reduce emissions (Michaelowa and Dutschke, 2000). Clearly, an examination of the power struggles in the project arena is necessary to answer these questions.

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