

Addressing Institutional & Interest Conflicts:

*Project Governance Structures for
Global Infrastructure Development*

A Proposal Submitted to the Presidential Fund
for Innovation in International Studies (PFIIS)

by

Raymond E. Levitt (Project Governance) Co-PI
Doug McAdam (Political Sociology) Co-PI
Ryan J. Orr (Large Engineering Projects)
W. Richard Scott (Institutional Sociology)

PFIIS Theme: Reforming & Improving Governance at All Levels of Society

Type of Application: Project Grant

Submission Date: December 16, 2005

I. Introduction

A. Overview

Considerable progress has been made in overcoming the technical challenges of providing low cost, distributed infrastructure services in emerging markets. At the same time, the financial, political and institutional challenges of providing clean water and other basic infrastructure to underserved populations in emerging economies, often within failed or failing states, remain daunting and need new kinds of interdisciplinary research to address them.

Various approaches have been attempted to harness private sector finance and expertise for the provision of infrastructure in lesser-developed countries. Yet, few of the new legal, political and governance structures that fall under rubrics such as public-private partnerships, concessions, and build-operate-transfer schemes have fared well (Estache & Serebrisky, 2004). Clashes between “institutional logics” of emerging country governments, local workers and ratepayers, indigenous groups, multilateral development agencies, rich country investors, engineers and contractors have created overwhelming governance problems for the economical and sustainable development and operation of infrastructure (Mol, 2003; Mahalingam, Levitt & Scott, 2005).

It has been extremely challenging to create effective and efficient governance structures for delivering global infrastructure projects when their sponsors could identify, with some confidence, all of the public and private stakeholders whose interests they had to accommodate. However, the range of interests and concerns that must be addressed by the governance structures for global infrastructure projects have recently been made even more complex and uncertain by the emergence of a new group of “informal project participants”—civil society organizations at local, regional, national and transnational levels, including local political organizations and a proliferation of NGOs with mandates ranging from global environmental and social justice concerns (e.g., CIEL) to regional ecological or social justice concerns (e.g., Amazon Watch) to NGOs with narrower sectoral concerns like preservation of specific wild rivers (e.g., Friends of River Narmada). These informal project participants can choose to mobilize their human resources and public relations efforts in support of, or opposition to various aspects of the desirability, feasibility location and/or configuration of infrastructure projects (McAdam, Tarrow & Tilley, 2001; McAdam & Scott, 2005).

The challenges of governance for these ever more complex projects are not being adequately addressed by current practice or prior research on public management, as evidenced by their dismal success rates (Miller & Hobbs, 2005). Nor are they being adequately addressed by research within traditional disciplines. A purely legal framework for identifying risks, allocating them contractually, and enforcing them through legal proceedings that are typically conducted in third countries and locally enforced, is widely acknowledged to have failed (Metzger, 2005; Orr & Metzger, 2005; Orr, 2005b). Similarly, research using traditional economics or sociological approaches fails to capture and uncover the levels of complexity with which governance structures for these projects must contend.

This proposal seeks to launch a multi-year, multi-disciplinary effort to better understand the mix of factors that condition the likelihood that large infrastructure development projects will face potentially fatal forms of institutional conflict or emergent political opposition. We also hope to use the investigation to identify forms of response—either

proactive or reactive—by project managers that are effective in minimizing the extent or incidence of such conflict. Our proposed research draws on engineering project management, organizational and institutional theory, political science and political sociology, and transaction cost economics to provide theoretical frameworks and analysis tools to examine factors affecting the design and effectiveness of project governance systems.

Owing to the relative lack of systematic research in this area, we regard this study as exploratory in nature. That said, we see it as a critically important step toward our ultimate goal: the development of a formal model designed to predict the various engineering, institutional and political challenges the managers of a given project are likely to face. Indeed, drawing on the results of this study, we expect to construct and test such a model in a follow-up project. The value of such a model should be obvious—reducing the number of unpleasant surprises for stakeholders and identifying parameters of governance arrangements to reduce costs and risks for project participants and host countries. To IIS, such a model can contribute to the broad goals of advancing systems of governance and human well-being.

B. Problem Statement

1. Motivating Case: “A Spirit in the Waterfall”

In the 1990s, the US-based AES Corp., the world’s largest independent power producer, proposed to construct a US\$530-million hydroelectric dam on the Nile River. From the outset, the dam was controversial — it would submerge Bujagali Falls, a national treasure of Uganda and a popular site for white-water rafters and tourists. Bujagali Falls was also sacred to the Bugalot, a local indigenous tribe who for centuries had worshiped a spirit said to dwell in the waterfall. Upset at the prospect of the destruction of local cultural, religious and historic sites, the Bugalot tribe and other local groups, supported by the resources of trans-national organizations, submitted requests to have the project reviewed by an independent panel operated by the World Bank. What followed was nearly five years of conflict and contention between the sponsoring organizations, local indigenous peoples, trans-national organizations, regional and national political groups and other interested parties. In the end, more than US\$55-million that had been invested by AES Corp. in planning and shaping the project ultimately was written-down when they withdrew. (For more details, see Orr, 2005a; Esty, 2004.)

2. Not an Isolated Case: Excessive Conflicts and Costs a Major Challenge for Global Infrastructure Development

Although a dramatic example, the Bujagali case is by no means an isolated incident. Large, capital-intensive construction projects, such as dams, subways and power plants, are enormously complex because they involve various—and often competing—participants, stakeholders, interests, and institutions. Formal participants include owners, financiers, planners, designers, engineers, and contractors. Potential stakeholders include social movements and other interest groups as well as formal organizations such as non-governmental organizations (NGOs). Inevitably, there are clashes of political goals and interests—social, economic, environmental—and clashes of institutions—beliefs, values, norms and rule systems. When these escalate into conflict, they cause emergent transactions costs for the various participants and stakeholders (Orr & Scott, forthcoming). If such projects are to be successfully conducted, they must succeed in

erecting effective governance structures—structures to orchestrate private, public, and third sector parties and interests.

Formal project participants are increasingly reminded of their limitations and vulnerabilities, as forces beyond their comprehension or control are unleashed resulting in, at best, cost overruns and delays and, at worst, total project failure. Leading finance, design, engineering and construction firms know how to plan and build large-scale projects in a home environment, where social and political forces are generally well understood and, hence, reasonably predictable (although this does not necessarily mean the absence of conflicts among contending interests). However, when they enter a foreign host environment, or collaborate with partners and personnel from unfamiliar countries and cultures, they face heightened levels of uncertainty and risk (Lorraine, 1992; Wells, 1995).

In a world dominated by powerful corporations and Western models and archetypes of progress, informal stakeholders, especially in developing or emerging market countries, often feel helpless against the momentum of mega development (Asian Tribune, Dec. 6, 2005). Even when projects are objectively in the interest of these stakeholders, they may be perceived as representing significant threats to their lands, cultural sites, and traditions (Sen, 2004). Such “attributions of threat” are especially likely when transnational movements enter the fray on the side of these stakeholders (Keck and Sikkink, 1998; Khagram, Riker & Sikkink, 2002).

3. The Consequence of Conflicts & Costs: Project Governance Structures are Plagued by Failures

We take a broad view of project governance structures to include the coordination of formal participants such as suppliers, subcontractors, joint venture partners, government inspectors, and human resources (Winch, 2001); as well as the coordination of community stakeholders such as NGOs, political entities, and other interest groups. Thus, from a Williamsonian perspective, project governance systems exist as a complex set of market, hierarchical and hybrid governance forms (Eccles, 1981; Gunnarson & Levitt, 1982); or as a regime helping to manage the array of relations, interfaces and transactions among individuals and organizations in corporate, political and community spheres.

As a result of all of this complexity, governance failures are not uncommon. For example, long-term investment contracts between foreign investors and host governments, a core aspect of such governance structures, are inherently susceptible to conflicts (Vernon, 1971; Wells, 1999). One study of more than 1000 long-term investments in Latin American infrastructure concluded that 30% of the underlying contracts were ultimately renegotiated (Guasch, 2003). In the 1990s, two-thirds of the agreements supporting 33 investments in independent power projects were revisited and revised, a Stanford IIS study shows (Woodhouse, 2005). The World Bank itself has estimated that of the 3500 odd projects evaluated by its Operations Evaluation Department during 1980 to 1995, only 68 percent were rated successful. (World Bank, 2004). And the Asian Development Bank has just completed a study of failed infrastructure projects in South East Asia (ADB, 2005).

Not surprisingly, dozens of partially completed, failed and abandoned infrastructure projects stand as monuments, almost as tombstones, marking the failure of project governance structures when projects became distressed.

4. The Rising Need for Better Project Governance: Population Growth and Weak National Governance

The world needs to develop basic infrastructure for a billion new people in the next decade in places with very weak national governance and very little money! Consensus estimates for population growth predict that there will be another billion people on earth by 2015 — almost all of them born in developing countries with minimal existing infrastructure (Sachs, 2004). Providing these people with safe and sustainable housing, safe drinking water, sewage, energy, transportation and communication adds up to a demand for about \$1 trillion in infrastructure development over the next five years in East Asia alone, and upwards of \$3 trillion worldwide (ADB, 2005). For example, in his address to the representatives of global finance in New York a year ago, Prime Minister Singh put India's investment needs in core infrastructure like roads, ports, airports, power and water at a minimum of US\$150 billion over 10 years (Dash, 2005).

The development challenge is exacerbated by the fact that in many places where infrastructure is lacking, national governance and property rights are weak (North, 1990; de Soto, 2000; Krasner, 2004) and corruption runs rampant (Shleifer & Vishny, 1993). Contracting is difficult under corrupt regimes, as the award of contracts can become an auction selecting for the payment of bribes (Shleifer, 1998). In such locations, project governance structures face additional strains and stresses that are not present in countries that uphold strong legal-rational frameworks for contracting, procurement and dispute resolution (Guasch, 2004). In order for projects in weak and transitioning states to succeed, project sponsors must build autonomous, almost self-standing project governance structures to compensate for weaknesses in the host societal institutional framework (Miller & Lessard, 2000).

II. Detailed Project Description

A. Goals & Research Questions

In this section, we review the goals of our current work on institutional conflict, and explain how we hope to extend this work to focus on (a) the mobilization of grass roots and/or NGO opposition to large infrastructure projects and (b) policy recommendations for better project governance structures to accommodate the interests of non-traditional project stakeholders, thereby lessening the likelihood of emergent conflict.

1. Goal One: Addressing Conflicts Rooted in Institutional Differences

Under a continuing program of research led by Levitt, Scott and four doctoral students, funded by a National Science Foundation grant and by corporate affiliates of the Collaboratory for Research on Global Projects, our team has investigated how internalized differences in institutional understandings between stakeholders can lead to high levels of conflict in global development projects, and how organization structures can be designed to cope with such conflicts (eg. Mahalingam, 2005; Orr, 2005a). We are finding that the recent trend towards privatization and public-private partnership arrangements raises the levels of institutional conflict on these projects to new highs (Orr & Metzger, 2005; Estache, 2005). This ongoing line of inquiry addresses two main questions:

- ❖ What are the key, relatively stable, institutional elements and differences between them that affect the behavior of global project participants, local hosts, and interested parties? Can we identify, categorize, and assess them?
- ❖ How do the demands associated with the varying technical and engineering features of infrastructural construction projects affect the design of corporate governance systems intended to manage them?

In the proposed project we will continue to examine which types of institutional conflicts become salient under varying conditions, and how these are addressed by governance systems. Also, we propose to extend this work to focus more specifically on those cases where global infrastructure projects are “ambushed” by uninvited guests, a phenomenon that has risen dramatically as the number of trans-national non-governmental advocacy organizations has grown 12 fold since the 1950s (Khagram, 2004: 13)! These uninvited guests typically include a mix of local and/or national groups who see the development project as a threat to their interest, and one or more transnational NGOs allied with the domestic opposition. For example, in the “Spirit in the Waterfall” case, the local Bugalot tribal council was supported in their campaign against the World Bank and AES Corp. by a major trans-national NGO, Friends of the River.

Traditionally, informal stakeholders have been excluded from formal project governance structures and from contractual provisions between investors and host governments (Orr & Metzger, 2005). Under current corporate practice, when these groups become activated, formal stakeholders react with shock, surprise and dismay and respond by implementing stop-gap compensatory measures (see Moody, 2005). Until project sponsors get beyond the prevailing assumption that the activation of these groups is akin to a series of randomly occurring events, current industry practice is unlikely to change. To help industry get beyond current practice, we have two additional goals.

2. Goal Two: Predicting Stakeholder Involvement & Conflicts

Goal two is to enhance understanding of, and to develop an initial predictive model for, stakeholder involvement and stakeholder conflict. Together with Scott's insights about institutions and conflict, we believe that McAdam's theories and research methods for studying stakeholder goal differences, social movements, and contentious politics will help us to understand severe conflicts of interests in the presence of significant differences in institutional frameworks. Overall, we seek to demystify three important research questions:

- ❖ What attributes of global infrastructure projects appear to invite opposition by domestic or international actors?
- ❖ What crucial goal differences, and political dynamics catalyze conflicts between project participants, local hosts, and interested parties? Can we identify, categorize, and assess them?
- ❖ What characteristics of host countries are associated with more or less institutional or “contentious” opposition to large-scale development projects?

3. Goal Three: Improving Project Governance Structures

As we develop a more nuanced understanding of the factors that trigger stakeholder involvement and conflicts, the third goal is to improve the design of project governance structures so that they more appropriately buffer conflicts rooted in institutional and goal

differences between stakeholders. This effort will focus on obtaining answers to the following questions:

- ❖ What types of governance structures—including public, private, and voluntary sector forms—are erected to oversee these participants and interests? Which of their features appear to be associated with project success or failure?
- ❖ Which specific governance mechanisms operating at various levels—including types of contracts, leader behaviors, inter-team coordination systems, corporate strategies, mediating structures, and modes of organizing—can project participants and stakeholder groups utilize to reconcile institutional differences and emergent stakeholder conflicts?

Despite many individual case studies (eg. Fearnside, 1988; Vyas, 2001; Webber & McDonald, 2004), to the best of our knowledge, this is a new research area that has not been investigated with a systematic approach.

B. Theoretical Background

Figure 1 depicts a theoretical model summarizing our ongoing research program and the planned extensions to this program proposed to IIS for additional funding. In addition, the figure identifies how the complimentary areas of expertise of the four investigators on our team blanket all proposed research areas.

For those who prefer diagrams, the figure summarizes the next four pages of text to show how the human, social and technical determinants of stakeholder conflict whose activation and effects we seek to address are grouped into three categories: host societal characteristics, stakeholder interface characteristics, and project technical/locational characteristics. The figure also illustrates how the ramifications of stakeholder conflicts can be measured as different kinds of transaction costs, and how project governance frameworks can serve to alleviate these conflicts and costs.

The figure also serves to distinguish between our ongoing research and our proposed new work. Note that while our ongoing research emphasizes the causal linkage between institutional differences, stakeholder conflicts, and project-besetting transaction costs, the new extensions, shown in bold text, will permit significant expansion of this framework to include more emphasis on how project and host societal factors, as well as goal and interest differences, lead to social movements and contentious politics, and then from a policy perspective, how process and decision support features of project governance frameworks can assuage these conflicts and costs.

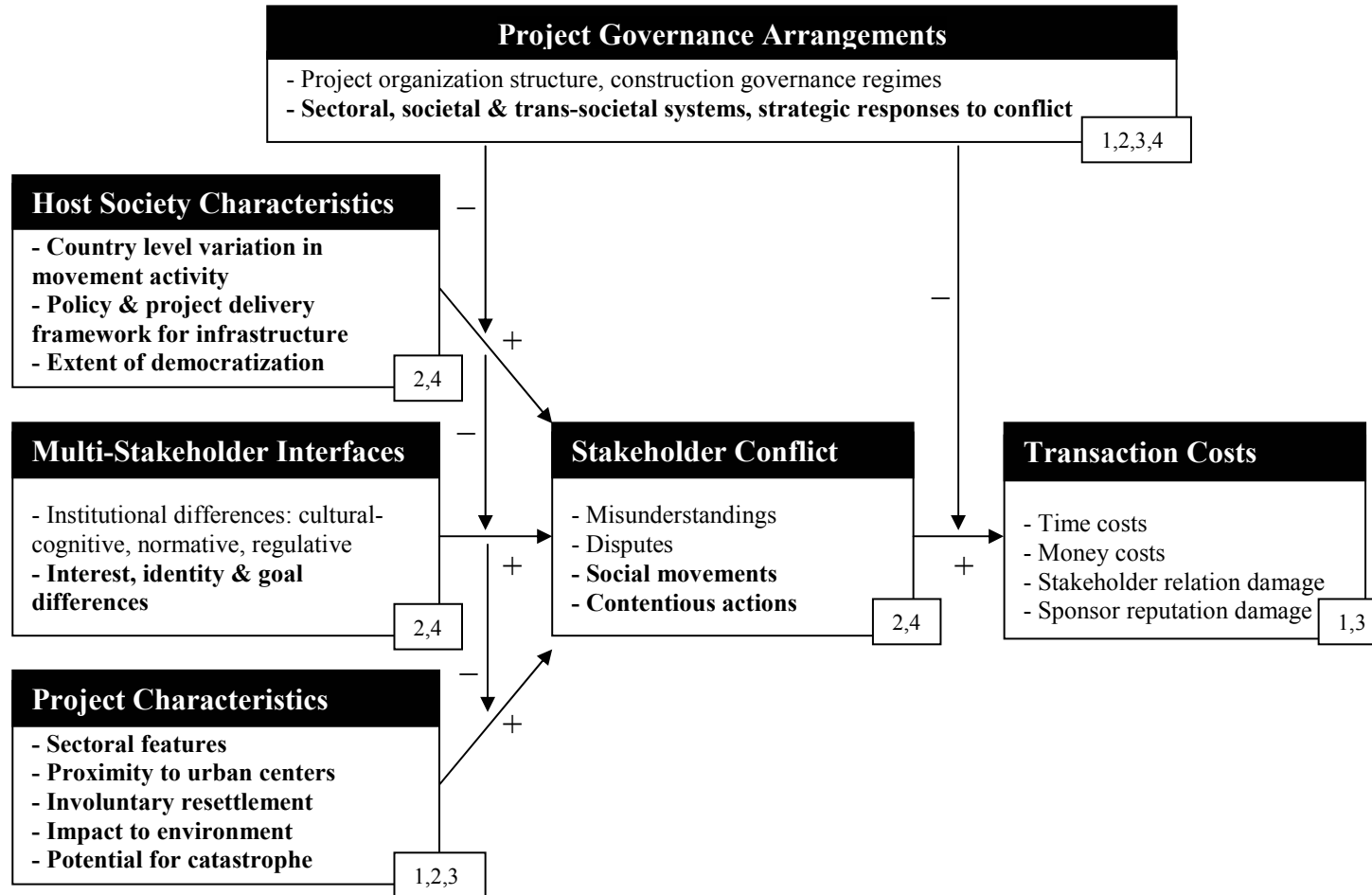
1. Sources of Conflict: Host Societal Characteristics

There are many potentially relevant host societal characteristics that increase social movement activity and contentious politics related to large infrastructure projects, and we expect to focus in on four of these:

a. Country-level variation in movement activity.

Nations vary in their levels of non-routine, or “contentious politics.” The important, if obvious, point here is that the “social movement” is a form of politics that, like any other, consists of learned repertoires (e.g. sit-ins, mass marches, etc.). Nations vary in the extent to which these routines are known and supported by local norms and formal legal structures thereby conditioning the overall level of such activity in that state (Gurr, 1993).

Figure 1 – Overall Theoretical Model¹ & Primary Expertise of Investigators²



¹ The numbers indicate the investigators who provide primary expertise: 1 – R. Levitt, 2 – D. McAdam, 3 – R. Orr, 4 – W.R. Scott.

² Non-bold items represent areas under investigation in an ongoing three-year research program led by Levitt, Scott and five doctoral students. Bold items represent proposed extensions to this research program to be enabled under the present proposal by adding Doug McAdam to the team.

b. Provisions of policy & project delivery framework for infrastructure.

Many jurisdictions in developing countries lack a time-tested, mature framework for the public procurement of new infrastructure projects such as school buildings, roads and water systems. In the US, the policy and project delivery framework is administered by the General Services Administration at the federal level and then by different state, county and city agencies at the local levels. When the backing of such an institutional framework is missing, or when it is weak or un-enforced, it increases uncertainty for all stakeholders involved in the development of large infrastructure projects. In these situations, especially under authoritarian regimes, seldom are there processes specified for involving local stakeholders. In these situations, we expect that locals who want to oppose development have few choices but to protest or to engage with external transnational NGOs to pressure their own governments from the outside (eg. Moody, 2005).

c. Degree of democratization

All things equal, the more democratic the country, the greater the likelihood of mobilized opposition to large infrastructure projects, especially if the state lacks the capacity or will to constrain opposition groups.

By contrast, less democratic states—especially those with a “high capacity” for social control—are also less likely to invite mobilized opposition by domestic groups of international NGOs. Contemporary Thailand would seem to afford a good example of this latter pattern. Thailand is a country that is still controlled by a more or less authoritarian regime, with Prime Minister Thaksin rapidly approving major infrastructure projects with very little public consultation or deliberation, and yet, without questioning from the public (The Nation, Dec. 15, 2005). The US and Canada are extreme examples of highly liberalized societies, where no project goes ahead without months and even years of public review and scrutiny by media and concerned publics.

2. Sources of Conflict: Stakeholder Interfaces

Across stakeholder interfaces, we seek to address two types of social and human differences that lead to stakeholder conflict. We briefly define each type and then elaborate:

- ❖ Institutional differences – large global projects invariably involve interaction among a broad range of institutionalized actors nested within transnational, national and sectoral contexts. These contexts are likely to differ in their requirements and assumptions.
- ❖ Goal and interest differences – constitute another, generally more volatile, non-routine, often political, form of conflict that threatens large development projects. These involve the emergent mobilization of local, national, and transnational opponents, and the counter-mobilization of supporters, of the project.

a. Institutional Differences.

All social behavior occurs within the context of a matrix of institutional structures. Although there is much recent interest in institutional frameworks across the social sciences (see Campbell 2004, North 1990, 2005; Peters 1999; Pierson 2004), little consensus marks the definition of institution. In this research, we embrace Scott’s

(2001:48) broad definition of institutions as “composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life.” The elements are often interrelated and interactive, but may be analytically distinguished.

- ❖ Cultural-cognitive elements refer to the shared conceptions that constitute the nature of social reality. They include differences in language, religious beliefs, political ideologies, and other symbolic frameworks. Wider cultural beliefs shape the cognitive schemas (premises, assumptions) employed by individual actors.
- ❖ Normative elements refer to the “prescriptive, evaluative, and obligatory dimensions” of social life (Scott 2001: 54). We expect to observe differences in values (conceptions of preferred goals), in norms (prescriptions for pursuing goals), and roles (varying classes of actors).
- ❖ Regulative elements refer to more formalized “rule-setting, monitoring, and sanctioning activities” (Scott 2001: 52).

As Campbell (2004: 130) notes, most students of globalization “neglect the mediating effects of the normative and cognitive aspects of institutions, privileging instead the regulative aspects.” Regulatory elements have received more attention from scholars than the “softer” cultural-cognitive and normative elements. However, there is growing recognition that, although regulative features are more visible, they can also be more superficial, “thinner”, and less consequential than normative or cultural elements (Evans 2004). Rule systems are also more readily changed—“fast-moving”—compared to the slower pace with which norms and cultural schemas and beliefs evolve (Roland 2004).

Institutional frameworks operate at multiple levels, transnational, national, sectoral, and organizational. Transnational frameworks include language groups, political ideologies, profession normative standards, and various transnational regimes and governance structures (see Brunsson & Jacobsson 2000; Djelic & Quack 2003). Nation-states carry their own distinctive national cultures, standards of conduct, and regulative agencies (Hall & Soskice 2001). Sectors are characterized by distinctive beliefs and practices (Schmitter 1990); and organizations each have their own cultures and structural arrangements (Schein 1996; Scott 2003). In our own research, we will describe salient macro systems operating at each of these levels, but concentrate analytic attention on the ways in which they come to the attention of and are processed by project actors, including stakeholders.

b. Goal, Identity and Interest Differences.

Misunderstandings and conflicts associated with competing beliefs and interests are a ubiquitous feature of social life. Stable authority systems are frequently challenged by emergent groups who organize to advance their goals and interests. There have always been suppressed interests and groups who, through mobilization, find ways to pursue their objectives. But what is different today is the extent to which 1) such groups are able to learn from one another, often using advanced IT; and 2) such movements are organized at a transnational level. Global projects are increasingly confronted by anti-globalization social movements that seek to halt or amend their development. (See for example: Khagram, Riker, & Sikkink 2002; Lindberg & Sverrisson 1997; McAdam, McCarthy, & Zald 1997; Smith et al., 1997; Fox & Brown 1998; Sassen 1998b).

3. Sources of Conflict: Project Characteristics

It is clear that certain categories of infrastructure development projects are more 'at risk' to protest than others. We will focus on five key dimensions of variation in susceptibility:

a. Sectoral Differences.

Stakeholder involvement and conflict is probably more likely in certain sectors of infrastructure development. For example, large dams seem to be especially vulnerable to trans-national protest movements, with the recent emergence of a "transnational anti-dam advocacy network" guided by NGOs like International Rivers Network (IRN) to counteract an earlier coalition of big dam advocates (Khagram 2004). By contrast, projects involving fossil fuel power plants confront a less unified political environment, facing varying levels and types of opposition and support.

b. Proximity to Urban Centers.

The universe of projects may be classified by proximity to human cities, towns and villages. We expect that projects in uninhabited or rural areas are less likely to attract stakeholder involvement, simply because citizens are unaware; in contrast, as project sites are located closer to the locus of sub-urban areas or urban city centers, they are more likely to face higher levels of scrutiny by concerned publics.

c. Involuntary Resettlement.

Many large projects like the Three-Gorges Dam (Fearnside, 1988), the Sardar Sarovar project (Vyas, 2001), and the Xiaolongdi Dam (Webber & McDonald, 2004) induce involuntary resettlement of displaced peoples. When entire communities lose cultural, religious and historic sites, not to mention home lands and habitations, this brings local protests and attracts involvement of trans-national NGOs who stand for environmental protection and social justice (Cernea, 1997; Muggah, 2003). We expect that as resettlement numbers rise, so does NGO and advocacy group involvement and conflicts between these parties and project sponsors.

d. Impact to Environment.

We also expect that as a project's environmental footprint increases—regardless of its sector, its proximity to urban centers, or the level of resettlement that is induced—that more environmental groups will take notice and arrive to oppose the development (Bhalla & Mookerjee, 2001).

e. Potential for Catastrophe.

Finally, projects in particular sectors and with certain technical configurations, especially nuclear power plants, mine tailing ponds, and dams, create the possibility for catastrophic failure, contamination of water supply, and loss of human life. The Long Island nuclear disaster is one example that has galvanized the public against potentially perilous projects. We expect that as the potential for catastrophic disaster rises, so will the likelihood of stakeholder involvement and conflict.

4. Stakeholder Conflicts & Transaction Costs

In our ongoing work we seek to broaden the concept of transaction costs (Orr, 2005b) which has been usefully employed to examine exchange costs arising from agency and bounded rationality in imperfect markets (Williamson 1975; 1985), to include transaction costs arising from institutional and political conflicts. Global development projects encounter not only the conventional transaction costs posed by uncertainty, task interdependencies of large-scale construction and the “lock-in” problems of small numbers of opportunistic buyers and sellers, but also incur significant costs caused by misunderstandings, disputes, social movements and contentious political actions. To date, costs of exchange have received the lion’s share of research attention (Shelanski & Klein 1995; Rindfleisch & Heide, 1997), but recent experience suggests that the latter that arise from differences in goals and interests and differences in institutional frameworks introduce high levels of uncertainty and are now especially fateful in their effects on global project costs, and hence success rates.

5. Responding Governance Structures and Strategies

Complex governance systems are layered, overlapping, and sometimes conflicting. They involve organizational hierarchies, wider contractual and political regimes, and supporting/constraining normative and regulatory structures at the sectoral, societal, and trans-societal levels. In our research, we propose to examine the nature and effectiveness of (a) governance units crafted to coordinate the work of interdependent companies making up the project team(s); and (b) governance units devised to manage challenges posed by institutional and political entities attempting to influence project processes and outcomes; and (c) salient governance structures at sectoral, societal and trans-societal levels. Particularly at levels (a) and (b), we emphasize that governance structures are not determined by external forces, but involve interpretation, sense-making, and strategic choice by influential actors.

a. Project Management

A substantial literature provides much theoretical guidance to the design and effectiveness of governance structures developed to manage complex projects (see Eccles 1981; Galbraith 1973; Burton & Obel 2004). Levitt and colleagues (Levitt 2004, Levitt et al., 1999; Jin and Levitt 1996) have devised and tested modeling and simulation procedures to support the design and evaluation of project governance structures.

b. Construction Governance Regimes

A large and rapidly expanding literature exists to guide the study of governance regimes overseeing independent but interdependent parties collaborating to achieve specific goals. (See, for example, Levy and Spiller 1994; Stinchcombe and Heimer 1985.) As noted earlier, a search is underway to craft more flexible governance systems to replace the overly rigid legal and contractual systems that presently dominate the management of infrastructure construction projects (Victor and Heller 2005; Woodhouse 2005).

c. Sectoral, Societal and Trans-societal Systems

We will describe and take into account the existence and effects of these overarching systems which act to constrain and support more localized governance systems. Such structures vary considerable across countries and regions of the world (see Hall & Soskice 2001; Whitley, 1992a, 1992b; 1999). Moreover institutional-building at the

trans-societal level has grown rapidly in recent decades (Boli & Thomas 1999; Djellic & Quack 2003).

d. Strategic Responses

In designing their own governance mechanisms as well as in responding to the demands of external regulatory systems, organizations and their leaders may resort to strategic responses. Oliver (1991) points out that responses to regulatory and normative demands are not always met by compliance but, variously, by efforts at compromise, avoidance, manipulation, and defiance. We will take account of such strategies and factors associated with their occurrence as we analyze our case materials.

C. Research Design & Data Sources

1. Sketch of Research Design

We propose to carry out secondary comparative case analysis of 25-30 case studies of global construction projects in two sectors: (1) large dams; and (2) electric power plants. In addition to sector, the sampling frame will seek to maximize variation on a number of the other key independent variables identified above.

Our case analysis will be guided by methodologies suggested by Ragin (1987), who applies the logic of Boolean algebra to the comparative case method. This method embodies a strong inductive component together with the ability to identify patterns of multiple-factor causation, making it an appropriate methodology for our data and arguments. We provide a fuller discussion of this method below.

2. A Comparative Case Method

The case study has long been a methodological staple of social science research. The strength of the method is the depth of analysis it yields for a single case; however, the method's weakness is inextricably linked to its strength. Restricting analysis to a single case does not allow the researcher to generalize to an imagined population of comparable cases. Breadth is therefore sacrificed for depth. In recent years, however, researchers in sociology and political science have sought in various ways to combine the empirical riches of case analysis with the inferential power of traditional quantitative techniques. Perhaps the best known of these approaches is the method of comparative case analysis outlined by Charles Ragin in his 1987 book, *"The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies."* Insofar as we intend to make Ragin's method the centerpiece of our investigation, we describe it in some detail.

Ragin's approach seeks to apply the logic of Boolean algebra to the comparative case method. While a detailed discussion of the Boolean underpinnings of the method is beyond the scope of this proposal, the operational logic of the approach can be summarized fairly easily. Reflecting the logic of Boolean algebra, researchers are asked to identify all theoretically relevant independent variables and to code them in binary terms. The dependent variable of interest is also treated as a binary outcome. Using the basic principles of Boolean algebra and the vehicle of the "truth table," analysts seek to factor the resulting Boolean expressions to yield the simplest pattern of independent variables that is associated with the outcome of interest.

A simple example adapted from Ragin (1987: 95-97) will help to illustrate the actual workings of the method. Consider the "truth table" shown below (Table 2) which

summarizes data on three causal conditions thought to affect the success of strikes already in progress (S): a booming market for the product produced by the strikers (A), the threat of a sympathy strike by workers in associated industries (B), and the existence of a large strike fund (C).

Successful strikes are associated with the following four empirical patterns:

$$AbC, aBc, Abc, \text{ and } ABC$$

where the upper case letters represent the presence of the causal condition and the lower case letters represent its absence. In its unreduced form, the Boolean equation for S (successful strike) is thus:

$$S = AbC + aBc + Abc + ABC$$

But when, using Boolean algebra, the equation is reduced to its simplest form, it comes out as:

$$S = AC + Bc$$

This equation states simply that successful strikes occur when there is a booming market for the product produced by the workers and a large strike fund (AC) or when there is the threat of sympathy strikes by workers in associated industries combined with a low strike fund (Bc).

Table 2: Truth Table Showing Three Causes of Successful Strikes

Causal Conditions			Success	Frequency
A	B	C	S	
1	0	1	1	6
0	1	0	1	5
1	1	0	1	2
1	1	1	1	3
1	0	0	0	9
0	0	1	0	6
0	1	1	0	3
0	0	0	0	4

3. Adapting the Method to our Study

We see Ragin's method as ideally suited to our project. We are especially taken with two features of the approach. First, it has a strong inductive component, proceeding from the bottom up, simplifying the complexities of the cases in a methodical, stepwise fashion. Given the relatively primitive state of knowledge in this area, the inductive nature of the technique is highly attractive. Second, it is ideally suited to identifying patterns of multiple conjunctural causation, exactly what we expect to find in the kinds of episodes on offer here. But what specifically do we propose to do? What follows is a brief discussion of the three-step methodological sequence we envision for the project.

a. Case Selection

Our first step will be to collect existing case materials on a fairly large number of recent dam and power projects that vary in their outcomes. That is, we want to make sure that our final sample of cases includes projects that experienced no or minimal disruption as well as ones that were the target of sustained and ultimately decisive opposition.

Our goal is to include between 25-30 cases in the analysis. To date, we have assembled detailed information on roughly a dozen or so cases (Altinbilek, Bayram and Hazar, 1999; Bingeman, Berkes and Gardner, 2004; Devasia, 1998; Feamside, 1988; Lemos and De Oliveira, 2004; Mehta, 2001; Nickson and Vargas, 2002; Ortolano and Cushing, 2002; Vyas, 2001), split evenly between dam and power projects. That means we still need another 10-15 cases to reach our target sample size. Fortunately, we are aware of the existence of other detailed case studies for both project types and have secured the cooperation of experts in both areas to help us identify the additional cases needed to fill out our sample. Sanjeev Khagram, formerly Senior Policy Advisor to the World Commission on Dams, has agreed to assist us in locating appropriate cases in his area of expertise. While the construction of fossil fuel plants has attracted less widespread research attention than dams, we are fortunate to have access to the data base and considerable research experience of the Program on Energy and Sustainable Development (PESD) here at Stanford University. This research center is completing a detailed study of independent power construction projects in developing countries. We see our work as building on and complementing their investigation of these projects. Thomas Heller (PI) and David Victor (Project Director) have approved access to their relevant data and have expressed great interest in partnering with us in this effort.

b. Causal Factors

Practical considerations will necessarily play a large role in our selection of cases. Most importantly, the quality and completeness of information on a project will be a requirement for inclusion in our sample. Beyond this practical consideration, however, we will seek to pick cases based on variation in the three broad sets of causal factors discussed in the "Theoretical Background" section. We are still refining our operational understanding of these factors, but for illustrative purposes, we discuss one specific variable for each of our three general categories of causal factors.

1. Host Societal Characteristics

- National differences in propensity to protest – National-level variation in public protest will be measured by means of time-series data, assembled by

Gurr (1993), on disruptive political events in 150 countries since 1980. This data set (now in the public domain) will allow us to determine the relative likelihood that a project in a given country will be subject to “non-routine” political conflict.

2. Project Characteristics

- Sectoral Risk – All things equal, we see certain development sectors as more vulnerable to emergent opposition than others. That is why we have limited our cases to two areas. We see large dams as especially vulnerable to transnational protest movements. Indeed, Khagram (2004) describes the emergence of a “transnational anti-dam advocacy network” guided by NGOs like the International Rivers Network (IRN) to counteract an earlier coalition of big dam advocates. By contrast, projects involving fossil fuel power plants appear to invite less institutional and/or emergent “contentious” opposition.

3. Stakeholder Interfaces

- Institutional Differences – The likelihood that a project will run into significant and sustained opposition is also expected to be related to differences in the normative basis of institutional structuration in the host society. Reflecting the binary logic of the Boolean case method, we distinguish between societies that have long embraced rational-technical (scientific) values and those where these values are more recent or still very much in tension with more traditional and/or religious belief systems. Our prediction is simple: projects located in traditional societies will encounter greater opposition than those rooted in countries with well-established Western-style institutions.

Again, the specific variables discussed here should be regarded as merely illustrative of the approach we plan to take. That is, we intend to pick cases that maximize variation across the aforementioned three broad categories of causal factors. But exactly which variables—and how they are to be defined operationally—remains one of the major challenges we will confront in year one of the project.

c. Coding, Analysis of Causal Factors & Analysis of Costs

Once we have identified all of the causal factors we intend to include in the analysis, we will then use our case materials to make binary coding decisions for each variable of each case that makes it into our final sample. These coding decisions will yield a “truth table” that will summarize our findings and serve as the basis for the Boolean analysis of the conjunctural factors that shape emergent contention over large development projects.

For each stakeholder conflict, we will assess and categorize the resultant transaction costs into four categories identified by Orr (2005) -- relationship damage, reputation damage, money costs and time costs -- and estimate their approximate magnitudes. To promote comparability across cases, we will use a method for ordinal ranking to gauge the extent to which stakeholder relations are crippled and sponsoring firms’ reputations are denigrated (Miles & Huberman, 1994) and we will normalize the money and time cost data against overall project value and scheduled project duration, respectively.

III. Project Organization

To address the complexities, conflicts, risks, and unforeseen costs posed by global project developments and assess the effectiveness of governance systems established to manage them, we propose to bring together a team of social scientists and engineers who together provide a complementary mix of relevant expertise. Principal members of the research team will include:

- ❖ **Doug McAdam (co-PI)**, political sociologist, a long term student of social movements and contentious politics, who will examine conditions affecting the activation of social movement actors and the larger national and transnational structures to which they are connected;
- ❖ **Raymond Levitt (co-PI)**, civil and environmental engineering, with more than two decades of experience in studying and modeling construction project and team organization and management;
- ❖ **W. Richard Scott (Investigator)**, organizational sociologist,, who will focus on examining institutional conflicts and related governance approaches to managing them; and
- ❖ **Ryan J. Orr, (Postdoctoral Scholar)**, civil and environmental engineering, has just completed a Ph.D. dissertation advised by Professors Levitt, Scott and Douglass North (Institutional economist and Nobel Laureate) to define and measure the “institutional transaction costs” that arise on global projects.

IV. Research Timetable

We see the project as dividing fairly neatly into the following three year plan:

Year One: Case Selection – The promise of the project depends critically on the quality and variety of the cases selected for comparative study. We think we have a good start on this with the 10-12 cases we have already assembled, but that still leaves at least 10-15 to go. Working with our sectoral experts, we would use year one to (a) identify all possible candidate cases, (b) assemble detailed materials on these cases, and based on these materials, (c) select our final sample of projects to maximize variation on those key variables of interest.

Year Two: Coding and Analyses – Year two would then be given over to a theoretically informed reading and coding of the case material along the key dimensions noted above. Inevitably, in this kind of work, the case materials will not always yield a definitive judgement on one or more of these key dimensions. When this happens, we will need to supplement existing case materials with further investigation (e.g. interviews with project participants, archival research). Once we have coded all of our cases on all relevant dimensions, we will then be in a position to analyze the data using the Boolean techniques described above.

Year Three: Formal Modeling and Further Case Study – Based on the results of our Boolean analysis, we want to spend year three developing a formal model that seeks to predict the stakeholder conflicts and resulting transaction costs associated with large infrastructure projects, by sector, by regime type, etc. In addition, we would like to undertake detailed real time analyses of 2-3 contemporary cases. Our aims in this would be twofold. First, these cases would serve as a further “test” of the findings produced in year two. Second, we would use these cases to begin to try to identify the dynamic mechanisms that account for the associations we see in the Boolean analyses.

V. Detailed Budget & Other Available Funds

OMITTED.

We anticipate several additional sources of funding with which we will leverage the support requested from IIS under this proposal, and we will continue to take steps to secure these additional funds.

- ❖ The U.S. Agency for International Development (USAID) has expressed interest (1) in reviewing the present proposal through their unsolicited proposal program and (2) in providing access to active agency funded projects and archival project documents for our analysis.
- ❖ Several organizations that have supported CRGP research over the past three years—eg. AES Corp., Bechtel Corp., International Finance Corp. (IFC), Japanese Marine Science, Baker & Mackenzie LLC, AkinGump LLC, etc.—may potentially be interested in sponsoring the pursuit of the goals outlined in this proposal. As parties involved in sponsoring large infrastructure projects, these organizations are particularly excited by the idea that our research might enable more systematic prediction of the activation and involvement of NGOs, political entities and other interest groups even before funds are committed to shaping a project concept.
- ❖ The National Science Foundation (NSF) is increasingly receptive to interdisciplinary research collaborations between scholars in engineering and the social sciences (eg. see the Human and Social Dynamics Program), and we intend to submit a larger proposal to the NSF to seek multi-year funding to support this line of work.

VI. Teaching & Research Products

Our ongoing program of research, to be significantly expanded under the present proposal, will contribute to the creation of several new research and teaching products.

A. Research Products

- ❖ We will synthesize cases into a structured case library and make the case library available on a website for the benefit of other researchers.
- ❖ We expect to publish the study in a journal like *World Development* or *Studies in Comparative International Development*.
- ❖ We have been starting to seriously consider synthesizing the data and findings of our prior three-year research effort into book format, possibly to be titled, "Institutional Conflict, Contentious Politics and Development". Although this book project would extend beyond the scope and resources of the present proposal, it would serve to pull together the various strands of our research program into a more coherent and integrated research product.

B. Teaching Products

- ❖ We anticipate that the findings of our research will continue to trickle into our current course offerings. For example, current courses taught by our team that could be enhanced with the case studies and analysis assembled under this proposal, include the following:
 - Levitt, CEE 242, Organizational Design for Projects and Companies
 - Levitt, CEE 246, Managing Construction Companies
 - McAdam, SOC 312, Political Sociology, Social Movements, and Collective Action
 - Orr, CEE 245a, Global Construction Projects
 - Orr & Scott, CEE 245c, Institutional Conflict and Development
 - Scott, SOC 367, Institutional Analysis of Organizations
- ❖ We also expect significant diffusion of our research findings to industry through executive education channels such as the Advanced Project Management Program, and the CRGP annual Summer Program. For example, the Summer Program last year received positive press coverage after more than three dozen senior managers and executives from organizations like Bechtel Corp., USAID, and the Asian Development Bank attended to learn about our research findings.

References

1. ADB. 2005. Connecting East Asia: A New Framework for Infrastructure. *A Joint Study by ADB, JBIC and World Bank* Available at: <http://www.adb.org/Projects/Infrastructure-Development/output.asp>
2. Altinbilek, H.D. , M. Bayram, T. Hazar. 1999. The New Approach to Development Project-induced Resettlement in Turkey. *Water Resources Development* **15**(3) 291-300.
3. Bhalla, S., A. Mookerjee. 2001. Big Dam Development: Facts, Figures and Pending Issues. *Water Resources Development* **17**(1) 89-98.
4. Bingeman, K., F. Berkes, J. Gardner. 2004. Institutional responses to development pressures: Resilience of social-ecological systems in Himachal Pradesh, India. *International Journal of Sustainable World Development* **11** 99-115.
5. Boli, J., G.M. Thomas . 1999. *Constructing World Culture: International Nongovernmental Organizations Since 1875*, Stanford, CA, Stanford University Press.
6. Brunsson, N., B. Jacobsson . 2000. *A World of Standards*, Oxford, Oxford University Press.
7. Burton, R.M., B. Obel . 2004. *Strategic Organizational Diagnosis and Design: The Dynamics of Fit*, 3rd Edition New York, Kluwer.
8. Campbell, J.L. 2004. *Institutional Change and Globalization*, Princeton, Princeton University Press.
9. Cernea, M. 1997. The Risks and Reconstruction Model for Resettling Displaced Populations. *World Development* **25**(10) 1569-1587.
10. Dash, P.R. Dec 4, 2005. Funding infrastructure through SPV route. *Daily News & Analysis India: Diligent Media Corporation*.
11. De Soto, H. 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, New York, Basic Books.
12. Devasia, V.V. 1998. Tribal Women in Sustainable Development through Watershed Programmes in Vidarbha. *Water Resources Development* **14**(4) 527-535.
13. Djelic, M.-L., S. Quack . 2003. *Globalization and Institutions: Redefining the Rules of the Economic Game*, Cheltenham, UK, Edward Elgar.
14. Eccles, R. 1981. The quasi-firm in the construction industry. *Journal of Economic Behavior and Organization* (2) 335-357.
15. Estache, A. 2005. PPI Partnerships versus PPI Divorces in LDCs (or are we switching from PPPI to PPD1?). *World Bank Policy Research Working Paper 3470* Available at: <http://ssrn.com/abstract=644323>
16. Estache, A., Serebrisky. 2004. Where Do We Stand on Transport Infrastructure Deregulation and Public-Private Partnerships? *Policy Research Working Paper Series no. 3356* World Bank:, Washington, D.C. Available at:

<http://ideas.repec.org/p/wbk/wbrwps/3356.html>

17. Esty, B. 2004. *Modern Project Finance*, New York, John Wiley & Sons, Inc.
18. Evans, P. 2004. Development as Institutional Change: The Pitfalls of Monocropping and the Potentials of Deliberation. *Studies in Comparative International Development* **38**(4) 30-52.
19. Fagan, B. 1997. *In the Beginning: An Introduction to Archaeology. Ninth Edition.*, Harlow, Longman Publishing.
20. Fearnside, P. 1988. China's Three Gorges Dam: "Fatal" Project or Step Toward Modernization? *World Development* **16**(5) 615-630.
21. Fiske, A.P. 2002. Using individualism and collectivism to compare cultures: A critique of the validity and measurement of the constructs: Comment on Oyserman et al. (2002). *Psychological Bulletin* **128**(1) 78-88.
22. Fox, J., D. Brown . 1998. *The Struggle for Accountability: The World Bank, NGOs, and Grass Roots Movements*, Cambridge, MIT Press.
23. Friedman , T.L. 1999. *The Lexus and the Olive Tree* , New York, Farrar, Straus and Giroux.
24. Galbraith, J.R. 1973. *Designing Complex Organizations*, Reading, Mass.: Addison-Wesley.
25. Guasch, J.L. 2004. *Granting and Renegotiating Infrastructure Concessions: Doing it Right*, Washington, D.C., The World Bank.
26. Guasch, J.L. 2003a. Infrastructure Concessions in Latin America and the Caribbean: The Renegotiation Issue and its Determinants. *Infrastructure and Financial Markets Review* **9**(2) 1-6.
27. Gunnarson, Sven and Levitt, Raymond E. 1982. Is a Construction Project a Hierarchy or a Market? 7th Internet Congress. Copenhagen, Denmark.
28. Gurr, T.R. 1993. *Minorities at Risk*, Washington, D.C., United States Institute of Peace Press.
29. Hall, P., D. Soskice . 2001. *Varieties of Capitalism*, New York, Oxford University Press.
30. Jin, Y., R.E. Levitt. 1996. The Virtual Design Team: A Computational Model of Project Organizations. *Journal of Computational and Mathematical Organizational Theory* **2**(3) 171-195.
31. Karunaratne, G. Dec 6, 2005. The Quest for a New Paradigm for World Development. **5** (234): World Institute for Asian Studies.
32. Keck, M., K. Sikkink . 1998. *Activists Beyond Borders: Transnational Advocacy Networks in International Politics*, Ithaca, NY, Cornell University Press.
33. Khagram, S. 2004. *Dams and Development: Transnational Struggles for Water and Power*, Ithaca, Cornell University Press.

34. Khagram, S., J.V. Riker, K. Sikkink . 2002. *Restructuring World Politics: Transnational Social Movements, Networks and Norms*, Minneapolis, University of Minnesota Press.
35. Krasner, S. 2004. Governance Failures and Alternatives to Sovereignty. *Center for Democracy, Development and the Rule of Law Working Paper* Available at: <http://fsi.stanford.edu/publications/20667/>
36. Lemos, M.C., J.L.F. De Oliveira. 2004. Can Water Reform Survive Politics? Institutional Change and River Basin Management in Ceara, Northeast Brazil. *World Development* **32**(12) 2121-2137.
37. Levitt, R. 2004. Computational Modeling of Organizations Comes of Age. *Journal of Computational and Mathematical Organization Theory* **10**(2) 127-145.
38. Levitt, R.E., J. Thomsen, T.R. Christiansen, J.C. Kunz, Y. Jin, C. Nass. 1999. Simulating Project Work Processes and Organizations: Toward a Micro-Contingency Theory of Organizational Design. *Management Science* **45**(11) 1479-1495.
39. Levy, B., P.T. Spiller. 1994. The institutional foundations of regulatory committment. *Journal of Law, Economics and Organization* **10**
40. Lindberg, S., A. Sverrisson . 1997. *Social Movements in Development*, New York, St. Martin's Press & Macmillan Press.
41. Loraine, R.K. 1992. *Construction Management in Developing Countries*, London, UK, Thomas Telford Ltd.
42. Mahalingam, A., R. Levitt, W.R. Scott . 2005. Cultural Clashes in International Infrastructure Development Projects: Which Cultures Matter? In: *Proceedings of the International Symposium of CIB W92/TG23/W107 on Procurement Systems: The impact of Cultural Differences and Systems on Construction Performance, 8-10 February.*, Las Vegas, USA, CIB,
43. Mahalingam, A. 2005. *Analyzing and Mitigating Institutional Costs on Global Projects*, Stanford, CA, A Doctoral Disseration Submitted to the Department of Civil and Environmental Engineering at Stanford University.
44. McAdam, D., McCarthy, John D., M.N. Zald . 1996. *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*, Cambridge, Cambridge University Press.
45. McAdam, D., Scott W. Richard . 2005. Organizations and Movements. In: McAdam, D. and Scott W. Richard, (Eds.) *Social Movements and Organization Theory*, New York, Cambridge University Press,
46. McAdam, D., S. Tarrow, C. Tilly . 2001. *The Dynamics of Contention*, New York, Cambridge University Press.
47. Mehta, L. 2001. The Manufacture of Popular Perceptions of Scarcity: Dams and Water-Related Narratives in Gujarat, India. *World Development* **29**(12) 2025-2041.
48. Metzger, B. 2004. The Legacy of Failed Global Projects: Testing the Legal Paradigm. Anonymous Available at: <http://crgp.stanford.edu/news/events.html> Unpublished work.

49. Miles, M.B., A.M. Huberman . 1994. *Qualitative data analysis: an expanded sourcebook*, 2nd Thousand Oaks, CA, Sage.
50. Miller, R., B. Hobbs. 2005. Governance Regimes for Large Complex Projects. *Project Management Journal* **36**(3) 42-50.
51. Miller, R., D. Lessard . 2000. *The Strategic Management of Large Engineering Projects: Shaping Institutions, Risks, and Governance*, Cambridge, MA, MIT Press.
52. Mol, A.P.J. 2003. Global institutional clashes: economic versus environmental regimes. *International Journal of Sustainable Development and World Ecology* **10** 303-318.
53. Moody, R. 2005. *Mining, Communities and Political Risk Insurance*, London, UK, International Books.
54. Muggah, R. 2003. A tale of two solitudes: comparing conflict and development-induced internal displacement and involuntary resettlement. *International Migration* **41**(5) 5-27.
55. Nickson, A., C. Vargas. 2002. The Limitations of Water Regulation: The Failure of the Cochamba Concession in Bolivia. *Bulletin of Latin American Research* **21**(1) 99-120.
56. North, D. 1990. *Institutions, Institutional Change, and Economic Performance* , Cambridge, Cambridge University Press.
57. North, D.C. 2005. *Understanding the Process of Economic Change*, New York, NY, Cambridge.
58. Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review* (16) 145-159.
59. Orr, R.J. 2006. Living Agreements for a Risky World. *Harvard Business Review* (in press for March/April issue)
60. Orr, R.J. 2005a. Unforeseen Conditions and Costs on Global Projects: Learning to Cope with Unfamiliar Institutions, Embeddedness and Emergent Uncertainty. *A Doctoral Dissertation Submitted to the School of Engineering at Stanford University* 1-205.
61. Orr, R.J. 2005b. Investment in Foreign Infrastructure: The Legacy and Lessons of Legal-Contractual Failure. *Collaboratory for Research on Global Projects Working Paper Series* 1-21. At: <http://crgp/publications/working.html>
62. Orr, R.J., B. Metzger. 2005. General Counsels' Roundtable: The Legacy of Failed Projects. *The Collaboratory for Research on Global Projects (CRGP), Working Paper Series*. 1-49. At: <http://crgp.stanford.edu/news/gcr.html>
63. Ortolano, L., K.K. Cushing. 2002. Grand Coulee Dam 70 Years Later: What can we learn? *Water Resources Development* **18**(3) 373-390.
64. Peters, B.G. 1999. *Institutional Theory in Political Science. The New Institutionalism.*, London, Pinter.

65. Pfeffer, J., G.R. Salancik . 1978. *The External Control of Organizations: A Resource Dependence Perspective.*, New York, Harper & Row.
66. Pierson, P. 2004. *Politics in Time: History, Institutions, and Social Analysis* , Princeton, NJ, Princeton University Press.
67. Ragin, C.C. 1987. *The comparative method: moving beyond qualitative and quantitative strategies*, Berkeley, CA, University of California Press.
68. Rindfleisch, A., J.B. Heide. 1997. Transaction Cost Analysis: Past, Present, and Future Applications. *Journal of Marketing* **61**(4) 30-55.
69. Sachs, J. 2005. *The End of Poverty: Economic Possibilities for Our Time*, New York, The Penguin Press.
70. Sassen, S. 1998b. *Losing Control? Sovereignty in an Age of Globalization*, New York, Columbia University Press.
71. Schein, E.H. 1996. The three cultures of management: implications for organizational learning. *Sloan Management Review* **38** 9-20.
72. Schmitter, P.C. 1990. Sectors in modern capitalism: models of governance and variation in performance. In: Renato, B. and Dell-Aringa, C., (Eds.) *Labour Relations and Economic Performance*, Houndsmills, UK, Macmillan Press, pp. 3-39.
73. Scott, W.R. 2001. *Institutions and Organizations*, 2nd Edition Thousand Oaks, CA, Sage.
74. Scott, W.R. 2003. *Organizations: Rational, Natural, and Open Systems*, 5th ed., Englewood Cliffs, NJ, Prentice Hall.
75. Sen, A. 2004. How does culture matter? In: Rao, V. and Walton, M., (Eds.) *Culture and Public Action*, Stanford, Stanford University Press, pp. 37-58.
76. Shelanski, H.A. , P.G. Klein. 1995. Empirical research in transaction cost economics: a review and assessment. *Journal of Law, Economics and Organization* **4** 335-361.
77. Shleifer, A. 1998. State versus Private Ownership. *The Journal of Economic Perspectives* **12**(4) 133-150.
78. Shleifer, A., R.W. Vishny. 1993. Corruption. *Quarterly Journal of Economics* **58**(3) 599-617.
79. Smith, J., C. Chatfield, R. Pagnucco . 1997. *Transnational Social Movements And Global Politics: Solidarity Beyond The State*, Syracuse, NY, Syracuse University Press.
80. Stinchcombe, A., C. Heimer . 1985. *Organizational Theory and Project Management: Administering Uncertainty in Norwegian Offshore Oil*, Oslo, Norwegian University Press.
81. The Nation Dec 15, 2005. Mega-Projects: Thailand Grand Style. Bangkok, Thailand: Nation Multimedia Group.
82. Vernon, R. 1971. *Sovereignty at Bay: The Multinational Spread of U.S. Enterprises*, New York, Basic Books.

83. Victor, D., T. Heller . 2005. *Political Economy of Power Sector Reform: The Experience of Five Major Developing Countries*, In Press, Cambridge University Press.
84. Vyas, J.N. 2001. Large Dams and Sustainable Development: A Case-study of the Sardar Sarovar Project, India. *Water Resources Development* **17**(4) 601-609.
85. Webber, M., B. McDonald. 2004. Involuntary Resettlement, Production and Income: Evidence from the Xiaolongdi, PRC. *World Development* **32**(4) 673-690.
86. Wells, Louis T. Jr. 1999. Private Foreign Investment in Infrastructure: Managing Non-Commerical Risk. Private Infrastructure for Development. Rome.
<http://www.worldbank.org/html/fpd/risk/papers.htm>.
87. Wells, L.T.Jr., E. Gleason. 1995. Is Investment in Foreign Infrastructure Still Risky? *Harvard Business Review* (September/October) 1-12.
88. Wester, P., D.J. Merrey, M. De Lange. 2003. Boundaries of Consent: Stakeholder Representation in River Basin Management in Mexico and South Africa. *World Development* **31**(5) 797-812.
89. Whitley, R. 1999. *Divergent Capitalisms*, Oxford University Press.
90. Whitley, R. 1992a. *European Business Systems: Firms and Markets in their National Contexts*, London, Sage.
91. Whitley, R. 1992b. The social construction of organizations and markets: The comparative analysis of business recipes. In: Reed, M. and Hughes, M., (Eds.) *Rethinking Organizations: New Directions in Organization Theory and Analysis*, Newbury Park, CA, Sage, pp. 120-143.
92. Williamson, O.E. 1985. *The Economic Institutions of Capitalism*, New York, Collier Macmillan Canada, Inc.
93. Williamson, O.E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*, New York, Free Press.
94. Winch, G.M. 2001. Governing the Project Process: A conceptual framework. *Construction Management & Economics* **19** 799-808.
95. Woodhouse, E.J. 2005. A Political Economy of International Infrastructure Contracting: Lessons from the IPP Experience. *Program on Energy and Sustainable Development Working Paper Series* 1-123.
96. World Bank. Bank Commitment to Quality Brings Results. 2004. At:
<http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/QAG/0,,contentMDK:20067884~pagePK:109617~piPK:109636~theSitePK:109609,00.html>