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Democracy and the environment in Latin America

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DEMOCRACY AND THE ENVIRONMENT IN LATIN AMERICA

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ABSTRACT

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This study examines the ability of democratic and non-democratic states alike to protect the environment. Democracy has long been an important concept in the study of politics and environmental protection is an increasingly important issue in world politics. Advocates of democracy claim democratic states are better able to protect the environment than non-democracies. In contrast there are those that argue democracy's emphasis on individual rights leads to excessive resource consumption. This thesis employs a mixed methods approach to determine if democratic countries protect the environment more than their non-democratic counterparts. In short democracies do protect the environment better than non-democracies but certain conditions must be met. It is argued that democracy is a necessary but not sufficient condition to ensure greater environmental protection. This study restricts analysis to Latin America which allows for a more focused and detailed analysis of cases with various levels of democracy. This allows for greater inspection as to the effect the institutions have on environmental protection.

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CHAPTER 1

INTRODUCTION

Democracy is an important concern in the study of international relations and comparative politics. Indeed, Latin American political research has referred to democracy as the "master concept" since much of the literature revolves around the use of the term (Munck 2007, 26). Much literature has focused on the effect that democracy has on dispute settlement, peace processes, trade negotiations, environmental protection, and international law (Payne 1995; Chan 1997). This work focuses on the ability of democratic states to protect the environment.

It is claimed by theorists that democracies protect the environment better than non-democracies (Payne 1995, Paehlke 1988). The most general reason given is that democratic states are responsible to citizen groups who petition for a safer living environment. Payne (1995) offers five reasons why democracies have better environmental conditions: individual rights, regime responsiveness, political learning, internationalism, and open marketplace of ideas.

Each reason given assumes certain actions will be performed and that the institutions will be responsive to citizen demands. The claim that individual rights will lead to citizen demands for environmental protection. It is more likely that citizens in developing states will demand greater social equity. Regime responsiveness assumes states have the

resources to respond. In other words the claim assumes states have the capacity in terms of organization, expertise, and fiscal resources to enforce environmental regulations. Political learning assumes elite has emerged willing to address the problem of environmental degradation. However, depending upon how a state transitioned to democracy will determine how institutions function. In many cases a transition to democracy does not result in a transfer of power (i.e. Guatemala 1988, Chile 1990). Internationalism assumes foreign states will petition and/or share technologies to protect the environment. This ignores foreign state's preoccupation with only those areas that affect the international commons (i.e. air and oceanic pollution). Finally, open market place of ideas assumes such ideas will be acted upon. Simply because a state becomes democratic does not necessarily mean that heretofore neglected ideas will be heeded. All the reasons Payne points to are debatable especially since individual rights are the cause, according to some for environmental degradation.

By contrast some theorists claim democracy's emphasis on individual rights leads to excessive consumption, overpopulation, corruption, and negligence (Ophuls 1973; Ehrlich 1989; Hardin 1968; and Heilbroner 1980). The view by these authors is the emphasis on individual rights, especially economic rights, inevitably leads to an overall decline of the community's right to a clean environment as a result of excessive use of the environment. Ophuls (1973) critiques the

claim by economists that technological breakthroughs will overcome resource scarcity. In his opinion, increased technological capacity depends on scarce resources; which entails greater extraction of scarcer materials. This makes the costs of production rise while the quantity of a product does not rise. Ehrlich (1989) argues that unrestricted population growth leads to increasingly polluted land. In a democracy growth cannot be restricted nor can consumption patterns which lead to greater use of the commons. Heilbroner (1980) argues that in democratic states the business elite have greater influence than the average citizen. The elite will oppose any efforts that hurt their interests. This is a possibility but it is equally possible under authoritarian rule as it is under democratic rule.

This paper explores the ability of states democratic and non-democratic alike to protect the environment. The argument Payne and others put forth may be valid but require institutions responsive to the population, non-clientelistic behavior in political affairs and the bureaucracy, along with greater economic equality. However, all too often authors consider an *idealized* version of democracy which does not parallel reality in many respects. The idealization of democracy is common and for this reason a subsequent section examines various conceptualizations and measurements of democracy. In short, most measures of democracy examine procedural aspects. These measures

neglect levels of representativeness which is what advocates of democracy assume exist in all democracies.

This chapter proceeds as follows. A review of the theoretical literature is provided followed by a review of the empirical literature. The following section addresses the question, what is democracy? The final section examines the importance of institutions in the democratic process and how the balance of power within the state determines the ability of the state to protect the environment.

Theoretical Review

Payne's theoretical framework has been the most referenced work regarding the relationship between democracy and the environment. His attention to political rights has been the source of protection, giving support for those that advocate democracy. Most attention has been given to political rights and how the free flow of information will allow environmental groups to raise awareness of issues and push for legislation (Schultz and Crockett 1990; Payne 1995). Under democratic rule environmental groups are more easily formed and have more influence over public opinion and more access to individual legislators than under authoritarian rule. Kotov and Nikitina (1995) claim democracies are more responsive to environmental needs as a result of electoral accountability, and the ability of groups to mobilize and achieve political representation. Democracies are said to have greater respect for the rule of law which leads them to follow environmental agreements

more than non-democracies (Weiss and Jacobsen 1999). Congleton (1992) argues elites, who are presumed to be less pro-environment, control the political process in authoritarian states which prevents environmental protection. Congleton also notes that authoritarian regimes have a shorter time horizon than democracies. Authoritarian rulers care less about long term consequences because they may not be in power when the negative externalities become readily apparent.

Those who claim democracy leads to greater environmental protection make many assumptions. The first is the willingness of the masses to petition the state to protect the environment. In many poor states people may be willing to tolerate some environmental degradation for faster economic growth. This perspective also assumes there are channels of influence within the state that are accessible to environmental groups. They assume the state has the resources and ability to respond to the demands of the masses. Yet state capacity has not been addressed in the literature, a shortcoming addressed in the following chapters. Environmental protection requires expertise, constant oversight, and the ability to enforce laws which many states (democratic and authoritarian alike) do not possess. Environmental degradation comes in many forms which leads to numerous environmental groups that many assume will be homogenous; this assumption may not be true. A final assumption is that elected officials control the resources of

the state but in Latin America the distribution of power is mixed and varied leading Karl (1995) to label many regimes "hybrid regimes."

There are theorists who claim democracy's emphasis on individual rights and economic freedoms lead to greater environmental degradation. These theorists provide convincing theoretical support for Hardin's (1968) famous "tragedy of the commons" which holds that unrestricted use of the commons leads to excessive consumption, environmental mismanagement, and unrestricted resource exploitation. This oft cited work demonstrates what is individually rational is collectively suboptimal. For this reason the collective action problem is an important issue to environmental protection. Paehlke (1996) argues that the economy and environment have global significance while democracy functions only at the local or national level. This does, however, neglect the fact that most environmental problems are national, regional or local. Also, proposed solutions to environmental problems are often local. Heilbroner (1974) and Ehrlich (1978) point to the inability of democratic states to restrict the growth of the population which then leads to greater resource consumption. Democracies tend to be market economies which give business groups greater clout in the political process than environmental groups (Dryzek 1968). Midlarsky (1998) points to gridlock over environmental protection issues. Gridlock occurs because elected politicians want to win as many votes as possible which leads to greater compromises on environmental issues.

Those who claim democracy leads to greater environmental degradation assume authoritarian regimes will protect the environment. This would occur if "ecological kings" were to govern the state, but if history is to be a guide economic growth is of greater importance than environmental protection to democracies and authoritarian regimes alike. Dryzek's (1987) claim that the elite control the political process under democracy is just as true under authoritarian regimes. The gridlock that Midlarsky (1998) points to will not occur under authoritarian rule simply because such issues will not be considered to begin in the first place. When there is a lack of environmental degradation it has been the result of an inability to exploit the resource as opposed to a desire to protect. The claim by Heilbroner (1974) and Ehrlich (1978) is complicated but population trends indicate greater economic growth leads to slower population growth. The lag it takes for this to occur does however pose problems for the environment. The proponents of democracy put forth an idealized version of democracy while the critics of democracy implicitly assume authoritarian rulers would have more capacity.

Background Literature

The relationship between democracy and the environment has been addressed sparsely in the literature and has lacked large-N statistical analysis. This is partly due to a lack of quality data on environmental indicators which has plagued the area of environmental

politics in general. Only certain indicators have been recorded for a long period of time. The indicators which have sufficient data for time-series analysis are: carbon dioxide emissions (CO_2), PM10, and protected land as a percentage of total land (PROTECT). The existing literature, which is reviewed below, shows mixed results and questionable findings.

The research by Midlarsky (1998) examines five types of environmental conditions and uses three different measures of democracy. However, his research is limited in scope because it only looks at one point in time as opposed to looking at how states treat their territory over a period of time. The conclusions he arrives at show that democracy is not better at preventing a rise in CO_2 emissions, soil erosion, or deforestation. The only variable that showed democracy is best for the environment is protected land area; democracy had no effect on fresh water availability or soil erosion by chemicals (358). His results are mixed and the lack of time-series analysis results in an inability to conclude if environmental degradation is subject to change with time under either regime type.

Congleton (1992) claims democracies have stricter environmental regulations than non-democracies, but he is unable to demonstrate if regulations are enforced. He also focuses on international environmental agreements, such as the Montreal Protocol and the Vienna Convention, and concludes democracies sign environmental agreements more than authoritarian regimes. However, today the results would be different

because most states have signed both agreements. At most he can claim democracies sign sooner, but we are still unable to determine if states live up to said agreements. Neumayer (2002) examines multi-lateral environmental agreements (MEAs) and concludes democracies commit themselves to more environmental agreements than non-democracies. Neumayer's study has the same problem as Congleton (1992), namely the lack of information on ability to enforce regulations. Many states could sign and never live up to the agreement's principles. It also fails to tell us what the internal costs of compliance are. For instance Mali is a member to the International Whaling Commission (IWC) but it does not whale so signing the agreement does not hurt Mali's interests.

Barret and Graddy (2000) effectively show that democracy lowers sulfur dioxide (SO_2) emissions but the results for water pollution were not statistically significant. Torras and Boyce (1998) find higher levels of democracy leads to lower air pollution, SO_2 and particulate emissions, and decreases water pollution. Scruggs (1998) finds results opposite to those of Torras and Boyce (1998) despite using the same environmental indicators. These results raise questions about the robustness of democracy as a predictor of environmental conditions.

Li and Reuveny (2006) use time series data and a large data set to look at five environmental indicators: CO_2 emissions, nitrogen oxide, land degradation, deforestation, and organic pollution in water. The main shortcoming is that they did not include a regional indicator to

distinguish the developing world from the developed world. The analysis which shows democracies do protect the environment better may simply be a result of state capacity not necessarily democracy. The richer countries have less pollution per capita than poorer countries which tend to be authoritarian[1]. The missing variable is the ability of states to protect the environment. Another problem is the environmental indicators used, especially deforestation, is something that was not occurring in the developed world simply because those forests had been deforested prior to the time horizon of the analysis.

It should be clear that prior research has had limitations, methodological problems, and that the statistical results of some studies contradict the findings of others. For these reasons further work on this question is warranted. This research begins with statistical analysis to determine whether democratic states protect the environment better than non-democracies. The findings, not surprisingly are mixed. Therefore, qualitative work must be conducted to determine why some democratic states protect the environment more than others and if there is a difference between authoritarian states and democratic states.

[1] The main exception to this would be the United States which pollutes more than most if not all developing states.

What is Democracy?

Democracy has been among the most important concepts in the study of comparative politics but as yet there is no consensus as to how it should be defined or how to measure it. Various measurements have been advocated that could be called maximalist, minimalist, and procedural. There are weaknesses in each. Maximalist definitions lead to too narrow a concept which limits the generalization and minimalist definitions typically examine only elections which neglects "who exercises power" (Munck and Verkuilen 2002, 12). For example the President of Iran is elected, but it is the Supreme Leader who has "effective" control over the political process and the military. So while Iran may appear to be democratic under the minimalist definition it is not under other definitions. The two approaches lead to what Collier and Levitsky (1997) refer to as "democracy with adjectives" which refers to the creation of new concepts which have little use.

As noted above democracy is said to alleviate many of society's ills, but not much thought (in previous empirical work on this topic) has been given to the conceptualization and measurement of democracy. The literature reviewed above refers to data mostly from Freedom House or the Polity IV datasets. However, there are limitations to both which lead to substantive differences. Freedom House has many components under its two attributes "political rights" and "civil liberties" which are not necessarily related. The Polity IV dataset identifies "competitiveness" and

"regulation of participation" which are two of the most important components of democracy, but not sufficient to address the question of "who effectively governs." Another issue of concern is "replicability" as only Polity IV grants enough information to replicate the dataset with precision. Freedom House lacks inter-coder testing and the information necessary to replicate the data (Munck and Verkuilen 2002, 19-20). This means that different people looking at the same data could lead different classifications.

Most regimes in Latin America (and elsewhere) do not fully satisfy the requirements of democracy, namely civilian control over the military, which makes a dichotomous variable less robust. As a result the dichotomous dataset established by Przeworski et al (2000) is insufficient. Przeworski et al (2000) reject the existence of borderline regimes between democracy and authoritarian, but such dichotomy neglects the procedural nature of *democratization*. No contemporary state emerged from authoritarian rule fully democratic. Institutions which protect political rights, civil liberties and foster democratic participation require time and experimentation to develop. For these reasons the Polity dataset will be used.

Any classification of democracy must include the components which are necessary for *effective* representation yet not broad enough to be inapplicable. The most stringent democracy characterization would be Robert Dahl's classic contribution (1971). However, the opposite is

equally true and just as common. Przeworski et al (2000) and Schumpeter (1942) give great importance to *procedural* aspects of free and fair elections, but scant attention to the protection of political rights and civil liberties which enable *free* and *fair* elections to occur. The Polity dataset may have its flaws but in comparison to the rest it is superior.

However, it will be seen that many states categorized as democratic do not represent the people which elected them. This is a result of weak institutions and political patronage appointments. Such appointments compromise the ability of many state institutions to establish policies which benefit society. Many studies of democracy rest upon the belief that democracy represents the interests of the masses. This is not always the case though. Most states categorized as democratic in the various indices get at the procedural dimensions of democracy not how representative the state is. Representative democracies are those states that achieve the procedural dimension of democracy but also listen to and act upon the demands of the population. It is the representative nature that inherently makes democracy more suitable to environmental protection. However, none of the democracy indices measure representativeness for this reason statistical analysis can be misleading.

Consequently this study uses a mixed methods approach to determine statistically the relationship between democracy and the environment. The statistical analysis is followed by comparative case studies of states with differing regime types and various levels of

representativeness. If all democratic states were representative statistical analysis would not be as disparate as it currently is. However, representativeness also assumes states have the capacity to respond to the demands of the populace. For this reason the following section examines state capacity and its impact on environmental protection.

Other Factors Affecting Environmental Protection

The ability of the state, or state capacity, is essential to environmental protection. State capacity refers to the ability of states to "have the capacity, in terms of organizational cohesion, expertise, and extractive and coercive ability, to carry out decisions based on their preferences" (Geddes 1990, 217). In other words, state capacity refers to the ability of the state to perform its delegated duties. In many instances the state is incapable of performing. This can come about for a number of reasons including powerful interests in society, military threat, lack of experience and expertise, incompetence, and uncommitted bureaucrats.

Weyland (1996) identifies three forms of organization: personalism, segmentalism, and universalism (32-37). Universalism implies that the bureaucracy puts the interests of the state before their own interests and views the whole citizenry as their constituency. Segmentalism is when bureaucracy responds to a narrow group and their demands. The final category is personalism, or clientelism, whereby businesspeople ask for particular favors and hinder collective action among civil society. The

type of organization that typifies the bureaucracy is going to have important effects on achieving state goals.

There are institutional features that can also prevent the ability of the state to act upon environmental degradation. Principally the delegation of powers within the state can hinder or foster the ability of the state to enact reform. The powers of the executive over the bureaucracy, powers to create legislation, and control the legislative agenda affect a leader's ability to initiate reform. The formation and organization of party systems greatly affects the ability of legislatures to pass laws. In a state with a highly fragmented party system it is much more difficult to get legislation passed. The powers of the bureaucracy are central to the implementation of legislation. When the bureaucracy is given too much autonomy rent seeking and clientelistic behavior is more likely[2]. The opposite is equally troublesome. Too much oversight could lead to selective policy implementation based upon an elected official's interests. A proper balance must be developed among the executive, legislature, and the bureaucracy to ensure clientelistic behavior is not rampant.

Geddes (1994) notes three prerequisites for the state bureaucracy: expertise in bureaucratic agencies, an efficient concentration of scarce resources, and a committed bureaucracy to achieve goals so as to keep

[2] Rent seeking refers to bureaucrats using their position of influence as a way to extract monetary benefits from individuals pursuing their own self-interests. In contrast clientelistic behavior refers to bureaucrats serving only certain sectors of the population.

jobs (218). Implied in these three characteristics is a bureaucracy susceptible to losing their jobs for poor performance, non-clientelistic behavior, and bureaucrats with expertise. In addition to these factors I would add administrative autonomy from elected officials. When a fragmented party system exists the executive must make concessions for short term political survival which leads to appointment of non-technocratic officials in bureaucratic positions which control significant resources. This is what Geddes (1994) refers to as "the politician's dilemma." A proper balance is needed though. A bureaucracy too constrained will be unable to look at the nation as a whole as its constituency, only the interests of the traditional elite will be heeded (Weyland 1996). The universalist perspective would lead bureaucrats to disregard the demands of politicians to pursue the best interests of the public at large. A key component to measuring competence in the bureaucracy is entrance exams and the absence of life tenure systems. Both of these components have been misused in Latin America which has hindered the ability of the state to address many facets of social life.

An essential component of democracy is the ability of civil society groups to emerge. Such groups have emerged across Latin America but their success has been uneven. This is due to fragmented institutions within states which allows for the continued practice of clientelism. Another problem with civil society groups is they have divergent interests which are not necessarily compatible. Therefore, the homogeneity often

assumed by civil society advocates is often absent (Diamond 1994). Furthermore, many of the bureaucratic institutions that civil society must petition for reform are political appointments and therefore do not concern themselves with public opinion. These bureaucrats shape policies which serve their own interests or the interests of the industrial sectors they represent. For this reason civil society groups have not been effective in pushing for reform.

For all these reasons democracy does not function the way many suppose. Many take an idealized version of democracy which ignores political reality. This reality demands political compromises on certain issues. Many states have institutions which were designed to be weak and to cause gridlock (Ames 2001). This gridlock ensures the continued status quo. It also allows for the traditional elite to control the policy process so it serves their interests not the interests of society as a whole. For all these reasons it is necessary to examine institutions within a state. How they were created, why they were created, the intention of those who created the institutions, and the power of the institutions must be examined to discern why environmental protection is only sometimes addressed. In short, democracy is not the panacea many presume it to be. It can be made effective but the establishment of institutions in the early phases of the transition affects the state's ability to conduct affairs with impartiality.

Plan of the Thesis

The second chapter attempts to improve upon the existing statistical analysis using appropriate regression techniques. However, the data determines the techniques used and as always with environmental data the quality of data is questionable. In short the statistical analysis shows that democracies are not better protectors of the environment. This thesis defends the advocates of democracy but with certain caveats. Democracies protect the environment better but the state needs two factors to do so: the resources (in terms of economic resources and technical expertise) to protect the environment and the will to do so. It is not sufficient for the people to want greater environmental protection the state must have the capacity to protect the environment and the willingness to do so. In many states people want greater environmental protection but due to institutional weakness, fragmented political parties, weak executives, and clientelistic oriented bureaucracies words do not turn into action. For these reasons I argue democracy is a *necessary* but not a *sufficient* condition for greater environmental protection. The work herein focuses on the distribution of power within the state. Specifically the powers of the executive, the legislature, and the bureaucracy are examined. Some would caution against such an approach for most environmental problems are local, regional, or global not necessarily national. The unit of analysis, however, will remain at the national level for two reasons. First, data

availability is at the national level. Second, most environmental decision making occurs at the national level (Gleditsch and Sverdrup 2002, 57). For these reasons analysis is restricted to the national level which is where state resources are distributed and political power is concentrated. Non governmental organizations (NGOs) are examined in the comparative case studies to see how they influence policy. The importance of NGOs is secondary to that of the state. This is a result of the state having the necessary resources to enforce environmental protection. The role of NGOs is simply to push the state to act and is therefore of secondary importance.

The third and fourth chapters examine institutional arrangements within four Latin America states. More specifically, I will examine formal powers of the executive and the legislature. Much literature that focuses on the institutional capabilities of various states examines the formal powers of the legislature and the executive independently of each other. This, however, is an inadequate approach. Shugart and Carey (1992) rightly recommend the examination of the distribution of power within the state. Each branch must be considered with regard to the power of the other. In essence, power is a zero sum game even in domestic politics. The autonomy and effectiveness of the bureaucracy is examined, especially its relationship with the executive and legislature, to determine the type of influence civil society groups can have. Civil society groups

are examined in each chapter to determine their influence in the policy process.

Chapter two contrasts two states categorized as democratic Brazil and Costa Rica. Brazil has a poor record of environmental protection, while Costa Rica has been a leader in the area. These states were chosen because they have many commonalities aside from being democratic, including having strong legislatures, a populace that demands environmental protection, relatively high levels of economic wealth, and a lot of biodiversity. In other words both states have the necessary resources to protect the environment and the populace demanding such protection. Chapter three contrasts two states categorized as either not democratic (Guatemala) or semi-democratic (Chile). These states were chosen because they have one of the two necessary requisites to environmental protection. Guatemala has lacked the resources for protection yet the population has demanded protection; Chile has lacked the demand to protect the environment yet has the resources to do so if compelled to. The final chapter makes comparisons across all four states and makes the case as to how democracy is a *necessary* but not *sufficient* condition for environmental protection.

CHAPTER 2

STATISTICAL ANALYSIS

The relationship between democracy and the environment has been previously investigated by Li & Reuveny (2006), Midlarsky (1998), Congleton (1992), Neumayer (2002), Barret and Graddy (2000), Torras and Boyce (1998), and Scruggs (1998). These studies have had limitations which have been reviewed in the preceding chapter. This study departs from previous work by focusing upon Latin America exclusively and on the time period of 1975-2007.

This study is unique in its use of cross sectional time series analysis to focus on a developing region. This strategy has certain benefits. First, it permits comparison of states that have similar cultures and political experiences. The concentration on a geographic region helps isolate the origins of environmental protection. A global analysis may mistakenly attribute the cause of environmental protection to democracy when in fact the cause could reside elsewhere (e.g. level of development). By examining a particular region, with similar political culture we can determine other sources of environmental protection. It allows us to compare states at different levels of economic development and different levels of democracy. The former difference allows us to examine state capacity. Richer states have the ability in terms of fiscal resources and

human capital to make environmental protection work. The latter difference allows for comparisons across regime types.

A necessary prerequisite for environmental protection to occur in any state is demand from the citizenry for such protection. In any state, democratic or not, environmental protection will not be an issue, unless there is some segment of the population is pushing an environmental agenda. Table 2.1 shows the position of respondents in Latin America that favor environmental protection even if it leads to slower economic growth. Respondents have consistently placed environmental protection above economic growth. This runs contrary to Maslow's "hierarchy of needs" argument which holds only when basic needs are met will aesthetic concerns become an issue of concern. The majority of citizens in Latin America live in poverty, according to World Bank classification.

Table 2.1 Public Opinion toward Environmental Protection

Year	Environment	Economic Growth	Expertise
1995	29%	21%	57%
2000	53%	31%	53%
2005	61%	28%	62%

Source: World Values Survey

The column environment shows that respondents over time have increasingly favored environmental protection even at the expense of economic growth. The column economic growth shows the percentage of

respondents favoring economic growth at the expense of the environment. This column peaks in year 2000 then drops in 2005; whereas respondents favoring the environment have continuously grown. Despite low levels of wealth, the masses are increasingly demanding greater environmental protection. Another necessary condition for environmental protection is that bureaucratic recruitment be based on merit; this condition has not been met in Latin America. Table 2.1 also shows how the public feels about "experts" making policy decisions. A majority is consistently in favor of experts injecting expertise into policy making. This condition has been problematic in many states as a result of patronage appointments. Patronage appointments are made for a number of reasons such as to build electoral coalitions, reward voter support, or simple rent seeking behavior. The respondents favoring experts in positions of influence illustrates the discord between society and political elites who continue patronage appointments. It is clear that respondents in Latin America favor meritocratic recruitment.

Statistical Models

The regression model used in this analysis is a pooled time series cross sectional (TSCS). In time series analysis a given time point is the unit of analysis whereas in panel analysis it is the individual, in this case the state (Markus 1979, 7). This model has the additional benefit of capturing variation across units and time which has the subsequent effect of more confident results (Sayrs 1989, 7).

This analysis differs from other studies in that a greater emphasis is on the state's ability, or lack thereof, to protect the environment. For this reason appropriate variables are included to measure state capacity, namely gross domestic product per capita (GDP2) and tax revenue as a percentage of GDP.[3]

Dependent Variables

The dependent variables in this analysis follow previous research by focusing on anthropocentric sources of environmental degradation. The dependent variable[4] with the longest time series is carbon dioxide emissions per capita (CO2) for the years 1975-2005. A second measure is protected area (PROTECT) as a percentage of total land area for the years 1990-2004. A third measure is PM10 (PM10), measured by microgram per cubic meter, covers the period of 1990-2005. This variable is normalized with gross domestic product (not per capita) to control for differences in economic size. The indicator reflects the level of industrial activity, the pollution from which is the source of respiratory problems throughout the developing world. While these indicators were chosen as a result of their availability they do provide useful comparisons with other states. For instance CO2 and PROTECT are both of significant interest to the international community. In contrast, PM10 is of little

[3] All abbreviations inside parenthesis refer to the output used in STATA for this reason subscripts will not be used.

[4] The data used in this analysis is also largely used in previous statistical work. The data were collected from the WDI the sole exception is Protected land as a percentage of total land which comes from the UN Statistics Division.

importance to the international community therefore does not receive much attention from the international community simply because the hazard posed by this type of pollution does not cross borders whereas the others do. However, it is still a good indicator of environmental degradation.

Independent Variables

The measure of democracy used will be the Polity dataset. This variable has been used in much of the empirical literature reviewed above and in other fields as well. The Polity data have been found to be more reliable and accurate than Freedom House data by Mainwaring et al (2007). The difference between Polity and Freedom House data is the emphasis on different aspects of democracy. Polity specifically looks at measuring political competition; whereas Freedom House focuses on political rights and civil liberties. The Polity dataset ensure inter-coder reliability whereas Freedom House does not[5].

Appropriate control variables are necessary to prevent spurious correlations and/or omitted variable bias. For this reason theoretically relevant variables are introduced to get at the source of environmental protection. The control variables used in this analysis largely follow previous empirical work. Gross domestic product per capita (in constant 2000 U.S. dollars) is introduced in response to Maslow's "Hierarchy of Needs" hypothesis and the Environmental Kuznets curve literature. The

[5] Inter-coder reliability refers to the ability of multiple individuals looking at the same data, with the same rule making, coming to the same conclusion.

expectation is that as GDP/capita increases pollution will decrease. This is expected for two reasons. First, an increased standard of living results in a shift to more aesthetic concerns (Maslow 1943). Second, it is expected that as states generate more wealth the potential to protect the environment is strengthened. However, the relationship between GDP/capita and environmental protection may be non-linear. To correct for non-linearity in the model, the squared term of GDP is used, (GDP2 is the name of the variable in the model results).

A proxy measure of state capacity is the ability of state's to tax its populations. This measure does not vary as a result of regime type. Rather, tax rates vary only as a result of state capacity (Cheibub 1998). Tax as a percentage of total state revenue (TAX) is introduced to measure state capacity. It is expected that as tax rates increase the ability of the state to perform its delegated duties and achieve its goals will be enhanced (Hendrix 2009; Cheibub 1998; Garrett 1998; Fauvelle-Aymar 1999). This covariate was dropped for the CO2 model for two reasons. The data gathered only began in the 1990s to early 2000s, and, for this reason, would not affect the other variables. Since CO2 begins in 1975 the n-size is drastically reduced and analysis would not begin until the 1990s.

Population change (POPCH) is another variable excluded by much of the literature. As population increases, the strain on the carrying capacity of the natural environment also increases leading to greater

environmental degradation (Malthus 2004, Hardin 1968, Ophuls 1977). The data have been gathered as a percentage change over the years 1975-2004 from the WDI database. In the context of this model it is expected that as population increases environmental conditions will worsen.

Trade openness (TRADE) is expected to decrease environmental pollution. The control for trade is included to test Payne's hypothesis that a freer market place of ideas will lead to greater environmental protection. In other words Payne assumes a free market place of ideas will lead to cleaner technologies being used. This measure allows us to determine how open a state is to foreign investment. A parallel to this would be: the freer an economy is to trade the more likely cleaner technologies will be adopted from abroad. This model follows Li and Reuveny's (2006) technique which holds that the sum of exports and imports divided by GDP (not per capita) will gauge the level of openness in the economy.

Each dependent variable is lagged (t-1) and included as an independent variable to correct for correlation among error terms within each unit (state). To control for heteroscedasticty panel corrected standard errors (PCSE) is used (Beck & Katz 1995; 1996). The high R^2 is a consequence of this technique but is required for proper specification[6].

[6] The R2 for CO2 would be .49, for PM10 .35, and for PROTECT .47 otherwise.

Results

Table 2.2 displays the results. Beginning with the model for CO2, we find that the POLITY index does have a significant effect on CO_2 emissions. However, the direction of the coefficient indicates that as democracy increases so too do emissions. This is contrary to what the advocates of democracy predict. GDP2 is significant and shows as states become wealthier a rise in emissions follows. The last variable that shows significance, albeit not at the standard social science threshold, is POPCH which shows an increase in population will lead to a rise in emissions. No other variables had significance and all significant variables led to a rise in CO_2 emissions.

The data for PM10 has the least variables achieving significant levels. An interesting finding is that an increase in TAX leads to an increase in PM10 emissions, again not at the traditional .05 level. No other variables were significant for this model. The final model is PROTECT which also had interesting findings. The POLITY variable achieves significance at the .1 level and shows that an increase in democracy leads to lower levels of protect land. Population change shows an increase in protected land with an increase in population. No other variables achieved significant levels. This analysis has shown that contrary to what advocates of democracy presume environmental protection is not assured under democratic rule.

Table 2.2 Effect of Level of Democracy on Environmental Degradation			
	CO2[1]	PM10[2]	PROTECT[3]
POLITY	.0008***	7.56e+08	-.0140*
	(.0003)	(2.30e+09)	(.0072)
GDP2	2.87e-09**	-2707.21	-7.38e-10
	(1.39e-09)	(3529.388)	(1.32e-08)
POPCH	.0239*	-8.14e+10	.5417*
	(.0142)	(7.75e+10)	(3120)
TAX	n/a	.1684*	.0383
	n/a	(.0720)	(.0348)
TRADE	.0340	-1.39e+10	-.1722
	(.0238)	(5.69e+10)	(.2753)
LAG_{t-1}	.9739***	.9912***	.9711***
	(.0181)	(.0108)	(.0214)
Constant	-.0365	3.51e+11	-.4139
	(.0448)	(2.31e+11)	(.7358)
Observations	522	132	121
R^2	.97	.99	.97

1 TAX was excluded from the analysis because it dropped the n-size by over 300 observations and shortened the time horizon of data
2 Argentina is an outlier and was excluded from analysis
3 Venezuela is an outlier and was excluded from analysis
Panel corrected standard errors in parentheses
*Significant at 10%, **Significant at 5%, ***Significant at 1%
Outliers were found using scatter plots of their residuals

Conclusions

The results of the regressions are contrary to the findings of many advocates of democracy. The variables that reach significance show that the environment is not better protected under democratic rule. Furthermore, the variable expected to measure state capacity (TAX) is in

contradiction to what is expected in stronger states. The variable TRADE achieves no significance in any of the models despite robust findings in the model provided by Li and Reuveny (2006) and statistical analysis runs counter to other studies and contributes to the empirical confusion about the relationship between democracy and the environment. The TRADE variable account for variations among states with regard to the influence of market forces and the ability of states to adopt "green" technologies.

This study is not without limitations. For instance the same models used here but with a global population could find different results. An important indicator that would need to be included is an indicator that would distinguish states based upon their level of economic development. An excellent classification system would be the World Bank categories. This indicator was not used in this analysis due to multicollinearity problems and Latin America does not meet the full spectrum of the classification.

The theoretical confusion and the mixed results of previous empirical work in addition to the results of this analysis demonstrate the need for qualitative research. Even if the results of statistical analysis were consistent across studies qualitative research would be needed given the questionable reliability of environmental data.

The case studies that follow are contrary to the statistical analysis. The cases show how democratic states do protect the environment better than less democratic states. The substantive difference among states is the distribution of power within the state. This is something that has not been quantified, which furthers the need for case studies. A proper balance of power will make reform more likely which is necessary for environmental protection. It cannot be expected that the first efforts will be effective it takes time and experimentation to determine what will work. A state that inhibits reform from taking place will lead to unabated environmental degradation. The autonomy of the bureaucracy is also examined to determine the capacity of the state to achieve its stated goals. For these reasons the next two chapters conduct comparative case studies to show how the distribution of powers within the state lead to significant differences in environmental protection.

CHAPTER 3

BRAZIL AND COSTA RICA

Brazil and Costa Rica are among the most affluent states in Latin America. These political systems are democratic and people are outspoken on issues. These states share many characteristics in their political institutions. Both are presidential, and have a legislature formally endowed with strong power relative to the executive. They also have a strong independent judiciary. The legislature has, however, ceded much power to the executive. The reasons for this are partly explained by the political system itself. In Costa Rica legislators are not permitted immediate re-election. This prevents the accumulation of policy expertise and the formation of standing committees to address issues of a long term nature. For this reason much policy begins with the executive and the cabinet; the latter are especially adept at policy making for there are no restrictions on the time they may serve. In Brazil the party system is highly fragmented and party discipline is non-existent; this is why the legislature produces very little policy. These are important differences which have resulted in significant differences in policy outcomes.

Brazil and Costa Rica have two ingredients necessary for environmental protection – the resources to protect the environment and public demand for such protection. Many states have neither. Some have one but not the other. But it is necessary to have both. A third

ingredient that must be added is a system open to reform which Costa Rica has and Brazil lacks. Environmental protection requires heavy investment which stipulates a healthy economy which both states have. The average GDP/capita[7] in Latin America is USD 2,804. Brazil and Costa Rica are above that average with USD 3,503 and USD 3,480 respectively. This shows that both are in a better position, relative to the average state in Latin America, to protect the environment if compelled to do so.

This leads to the other necessary prerequisite – the desire to protect the environment. In a democracy the will of the state is supposed to reflect the will of the people. Therefore citizens must push their elected officials to protect the environment. Otherwise material wealth will be used for other purposes. In both states citizens have demanded a cleaner environment Costa Ricans have gotten it while Brazilians have not. The World Values Survey (WVS) reports that in 2005 60 percent of respondents in Latin America favored environmental protection even if it resulted in slower economic growth[8]. Conditions in Costa Rica have gradually gotten better while conditions in Brazil have gotten worse (see tables 3.1 and 3.2). In short the fragmented party system in Brazil coupled with the absence of party discipline has prevented most reform

[7] This is gross domestic product divide by total population for the years 1975-2007, data gathered from World ent Indicators. This is in constant U.S. dollars year 2000.
[8] The WVS has not been conducted in Costa Rica, the Latino Barometer ranks preferences so the question is not applicable, and I could not get access to the Latin American Public Opinion Project database.

from emerging. In addition the clientelistic nature of the bureaucracy has led to ineffective policy. In contrast strong party discipline and an autonomous bureaucracy have allowed Costa Rica to become one of the leaders in ecotourism and environmental protection in general.

A Short Environmental History

Brazil has one of the most bio-diverse ecologies in the world. Within Brazil there are five regions highly sensitive to ecological disruption. The most obvious is the Amazon rainforest which is the world's largest carbon sink. The Littoral and Mata Atlantica along the coastlines are being degraded by sewage, industrial toxins, trash, and shipping materials. The most biologically diverse wetlands in the world are in Alto Paraguai which is contaminated by mercury from gold mining, hunting, fishing, pollution, fertilizers, and hydroelectric projects. The Savanna is being rapidly industrialized and as a result the soil is being degraded. This area contains numerous plant and animal species that have not been studied, and the Pampas and Matas in the south contain large areas of grasslands that are being affected by agriculture expansion, slash and burn policies, and overall desertification (Peritore 1999, 111-112). Brazil has made some attempt at environmental protection: cattle subsidies have been eliminated, national parks have emerged, and new agencies have been created. However, the elimination of subsidies was a requirement of IMF and World Bank loans, national

parks are financed by foreign states in an attempt to protect the area[9], and the new bureaucracies do not have the resources or autonomy necessary to enforce regulations.

Table 3.1 Environmental Indicators in Brazil

Year	CO2	PM10	NOX	FOREST	PROTECT	GDP/Capita	MILITARY SPENDING
1980	1.56					3537.62	
1981	1.41					3304.36	
1982	1.38					3247.65	
1983	1.31					3066.53	
1984	1.29					3157.81	
1985	1.36					3337.34	
1986	1.47					3518.01	
1987	1.48					3568.99	
1988	1.46					3357.53	3.18
1989	1.47					3353.01	2.35
1990	1.4	40.23	227790	61.47	15.7	3285.51	2.60
1991	1.46	40.72			16.67	3386.97	1.49
1992	1.44	40.96			16.81	3514.59	1.45
1993	1.49	39.74			16.89	3615.29	1.77
1994	1.53	37.54			16.9	3637.93	1.57
1995	1.6	33.23	15030		16.91	3704.59	1.89
1996	1.74	32.14			16.91	3650.79	1.58
1997	1.79	31.5			16.97	3606.13	1.86
1998	1.85	31.41			17.11	3706.91	1.73
1999	1.84	34.07			17.12	3701.93	1.54
2000	1.86	32.76	27160	58.3	17.15	3746.85	1.58
2001	1.88	33.49			18.1	3737.39	1.77
2002	1.82	32.75			18.1	3896.97	1.94
2003	1.72	30.26			18.1		1.51
2004	1.8	28.16			18.1		1.37
2005		25.71	83410	56.46			1.41

Source: All data comes from the World Development Indicators except Protected land which comes from the United Nations Statistics Division

[9] An irony of this is the Indigenous populations of the area have been evicted from the land which has made them less sensitive to environmental groups. The eviction was not anticipated by environmental groups. I was unable to find out if an agreement was reached which would allow the indigenous to return to the land.

The willingness of foreign entities to assist in environmental protection has been limited to preventing the destruction of the Amazon rainforest (Foweraker 2001, 865). Attempts have also been made to establish protected land areas in conjunction with non-governmental organizations. These attempts have been fairly successful but they are largely foreign financed which is indicative of the lack of resources the Brazilian state is willing to distribute for such projects (Rocha and Jacobson 1998, 938-939).

An examination of the data in table 3.1 shows the emergence of democracy has not resulted in an overall improvement of most environmental indicators; the only exception is PM10[10]. Nitrous oxide emissions have continued to increase under the democratic regime, forest as a percentage of total land has continued to decline, CO_2 emissions per capita from 1980-1988 (authoritarian period) compared with 1988-2004 (democratic period) do not show much variation despite the transition to democracy. It would be expected that the longer a democratic regime is in place these indicators would drop with time. This has not been the case some indicators have gotten worse and CO_2 has not changed. Some pressure for environmental protection comes from outside the state. For instance, optional eco-labeling has had an effect on some business sectors. Brazil is particularly susceptible to foreign

[10] PM10 refers to fine suspended particles less than 10 microns in diameter which enters the respiratory tract and causes severe health problems, main source is from industrial pollution.

pressure because export industries must meet the environmental requirements of foreign states which are higher than Brazil's own (Jha, Markandya, Vossenaar 1999, 104).

In 1992 Brazil hosted the United Nation's Conference on Environment and Development (UNCED) in Rio de Janeiro. The hosting of this conference was evidence, according to Hochstetler and Mumme (1998), that the New Republic's view of environmental policy is different from the authoritarian period (46). Prior to the Rio conference President Collor de Mello placed great emphasis on environmental protection, going so far as to appoint Jose Lutzemberger to the post of Environmental Secretariat despite military objections (Rocha, the Guardian London). Mello's concern for the environment is in sharp contrast to his predecessor Jose Sarney who stated "let pollution come, provided that it brings industries with it" (Quoted in Feeney 1992).

According to Roberto Guimaraes, a former Minister of the Environment stated "environmental planning lacks relevance" and "every public enterprise has a cosmetic and powerless environmental unit that creates environmental impact statements, which are generally ignored" (Quoted in Peritore 1999, 123). While environmental protection is a *stated* goal of the Brazilian state environmental bureaucracies have been constructed to create deadlock on the issue (Chapter 6). Peritore has interviewed an executive in Embrapa who claims Embrapa, which is in charge of sustainable development policy, was placed under the direction

of the Ministry of Agriculture to ensure conservation efforts would be slow to emerge (121). Government agencies thus work against environmental protection ensuring that protection goals will not be met.

Costa Rica is not as bio-diverse nor does it maintain the mineral resource wealth of Brazil, in fact no state does. However, Costa Rica does contain an approximated 4 percent of total world terrestrial biodiversity. Costa Rica, which is roughly the size of West Virginia, has more bird species than the entire United States. The territory consists of dry forests in the North West, rainforests in the region Corcovado, and contains approximately 8,000 species of plants (Steinberg 2001, 50). So while Costa Rica may not be endowed with the natural beauty of Brazil it more endowed relative to most states, just not Brazil. Costa Rica has been among the leading states in the area of ecotourism which has proven a great incentive to protect its commons. Costa Rica is also home to some of the most environmentally concerned citizens in Latin America (Brockett & Gottfried 2002, 8). Environmental degradation was prevalent in Costa Rica prior to the current democratic regime and has continued. The environmental movement which began in the 1960s gained influence as a result of the state's investment in schools and research.

Table 3.2: Environmental Indicators in Costa Rica							
Year	CO2	PM10	NOX	FOREST	PROTECT	GDP/Capita	MILITARY
1980	1.05					3184.06	
1981	0.93					3026.51	
1982	0.84					2728.63	
1983	0.83					2729.49	
1984	0.76					2819.53	
1985	0.84					2771.88	
1986	0.94					3002.78	
1987	0.97					3074.25	
1988	1.01					3114.16	...
1989	0.98					3116	...
1990	0.95	45.13	3440	50.22	18.88	3319.65	...
1991	1.05	42.81			20.53	3481.04	...
1992	1.16	45.2			20.83	3558.32	...
1993	1.19	43.24			20.83	3607.72	...
1994	1.54	42.4			20.83	3549.28	...
1995	1.4	41.43	3420		21	3653.38	...
1996	1.33	44.41			21	3862.01	...
1997	1.36	36.82			21	4079.56	...
1998	1.42	37.88			21	4058.88	...
1999	1.44	36.61			21	4015.13	...
2000	1.41	33.72	2910	46.53	21	4048.09	...
2001	1.4	32.73			23.05	4225.31	...
2002	1.38	38.74			23.25	4327.37	...
2003	1.55	41.8			23.25		...
2004	1.51	39.11			23.25		...
2005		36.96	2850	46.83			...

Source: All data comes from the World Development Indicators except Protected land which comes from the United Nations Statistics Division

The social tranquility of the state led foreign researchers interested in the tropics to conduct their research within Costa Rica. These researchers assisted in the establishment of educational facilities, training staff, and promoted conservation initiatives (Barbosa 2000, 143; Esposito 2002, 65; Steinberg 2001, 54). Costa Rican's have a high literacy rate which has helped build awareness of environmental

sensitivity. The state has even placed conservation awareness in school curricula (Martin 2004, 164). In 1969, the General Forestry Directorate (DGF) was created within the Ministry of Agriculture and placed in charge of the national parks, establishing protected zones, and regulating recreational activities on the land. Since that time the state has created a new autonomous agency to oversee all conservation projects where the DGF now resides (Brockett & Gottfried 2002, 17). Separate agencies have prevented the marginalization of environmental impact statements as has happened in Brazil.

Table 3.2 shows that, for the most part, Costa Rica has lower pollution levels than Brazil. The two exceptions to this are PM10 emissions and forest area as a percentage of total area. The latter category is the result of an inability to deforest the land. Brazil has attempted to convert large areas of the Amazon but it has been too costly in lives. International attention to this area, coupled with indigenous demands, has prevented deforestation. Second, high rates of deforestation in the Amazon and Atlantic forests could result in parity between the two soon. A closer look at this indicator shows that in 1990 Brazil maintained 61.47 percent of its forest area. This dropped to 58.3 percent in 2000 and to 56.46 percent in 2005. This compares to Costa Rica which had 50.22 percent in 1990 dropped to 46.53 percent in 2000

and rose in 2005 to 46.83 percent.[11] This shows that deforestation rates in Costa Rica have tapered off in recent years but have continued to rise in Brazil. The data show that Costa Rica currently has less forest area than Brazil but that could change in the coming decades. PM10 levels have dropped much more rapidly in Brazil than in Costa Rica which shows that given proper incentives Brazil can enact change.

Another effort to protect the environment in Costa Rica has been investment in alternative energy sources (Martin 2004, 162; Sanchez-Azofeifa et al 2002, 410). Deadlines and goals have been set to decrease the state's dependence on fossil fuels and move toward hydrogen power. The state is engaged in the Kyoto Protocol's "carbon trading" program whereby a reduction in one state's emissions can be bought by another state. The money earned from the program has been used to compensate individuals who have lost land as a result of protection zones and to fund sustainable forestry (Borges-Mendez 2008, 373). Costa Rica has been more willing to engage in international assistance programs than Brazil. A prime example is debt for nature swaps. Brazil has refused to engage in such programs labeling them as imperialism whereas Costa Rica has embraced the proposal (Barbosa 2000, 143). Costa Rica has also been one of the leading developing states in joint implementation initiatives proposed by the United Nations. This program assists in the implementation of conservation projects which involve the state, foreign

[11] Albeit this rise could likely fall within the margins of error which I was not able to find in World Development Indicators database.

states, multi-national companies (MNCs), and environmental non-governmental organizations (ENGOs). An example of joint initiatives is the ENGO Foundation for the Development of the Central Volcanic Range (FUNDECOR). The creation of this ENGO was sponsored by the state but was never under state supervision. The organization has fostered relationships between land squatters, private businesses, and public agencies instructing each as to the proper maintenance of the land. FUNDECOR has helped inform people how land preservation can generate money. Among the programs started by FUNDECOR are certification of "green" wood, the wood futures market, timber auctioning, and carbon trading schemes. Other strictly preventive assistance has been showing companies how to preserve watersheds, and minimize soil pollutants and waste (Borges-Mendez 2008, 376). Costa Rica has been at the forefront of innovative policy initiatives such as payments for environmental services where the state pays firms and/or individuals to incorporate conservation efforts in their business practices (Pagiola 2002).

Barbosa (2000) attributes Costa Rica's conservation efforts to its longevity as a democracy and Brazil's unsuccessful conservation efforts to being an infant democracy (141). This overlooks the ability of each state to protect the environment. Costa Rica's political institutions are more amenable to reform and the bureaucracy more effective at policy implementation. Most conservation efforts have problems. The important

difference is the ability to learn from mistakes and correct errors. For this reason environmental protection is more guaranteed with a political system amenable to reform. The political structure of Costa Rica allows for reform whereas Brazil's institutions are not receptive to change.

Political Institutions

The Executive

The Brazilian executive was intentionally made weak under the 1988 constitution and the Costa Rican president weakened under the 1949 constitution (Meade 2003; Booth 1998). This was done to prevent too much power concentrated in the hands of a single individual. Both have a history of an executive gaining too much control over state resources which led to political conflicts. Formal powers aside the, Costa Rican and Brazilian executive have become stronger relative to the legislature in recent decades as a result of informal powers.

The executives in both have become stronger in recent decades as a result of being the source of policy initiation. The fragmented party system (discussed further below) has hampered the ability of the Brazilian legislature to formulate policy whereas the constitutional ban on immediate re-election for legislators in Costa Rica limits sustained policy expertise in the legislature. Mainwaring (1997) identifies three types of powers delegated to the Brazilian executive: reactive legislative powers, proactive legislative powers, and the ability to shape the legislative agenda (60). Reactive powers allow presidents to veto or

partially veto legislation, but given the relatively minimal amount of legislation passed by Congress it matters little. Proactive powers refer to the ability of presidents to govern by decree. This allows any presidential decree to have the force of law for 30 days, unless Congress acts. Environmental protection requires expert policy making, diligent attention, consistent policy, and sufficient material resources which is unattainable under a 30 day presidential decree.

The executive in Costa Rica has similar powers but has not had to rely on them. Like Brazil, much policy begins with the executive. Unlike the Brazilian president, the Costa Rican president can introduce legislation without sponsorship. The shift in power to the Costa Rican executive has been aptly described by Booth as "the executive not only carries out the law but increasingly makes it as the assembly retreats from key policy areas" (1998, 63).

This is not to say the executive is unchecked. If a legislator or a cabinet member objects to an action or piece of legislation, the Supreme Court of Justice may immediately review the situation and overturn it. No damage to persons or property is necessary to provoke a review. Another restriction on the executive is the quasi autonomous nature of his cabinet. In order for the executive to veto a piece of legislation he needs the support of the cabinet member in charge of the legislation affected, which may not be forthcoming. Furthermore, cabinet members

are the individuals with the greatest expertise and may serve an indefinite period of time, and as a result are not easily discarded.

An important informal power of the executive in Costa Rica is the role of party leader. This derives from the centralized nature of the political system. This allows the executive to have much control over state resources and high level positions in the bureaucracy. Brazil has a federal system but the regional governors act as party leaders for their region. Governors in Brazil control nominations, alliances, and the resources needed for election (Samuels 2000, 16). For this reason legislators in Brazil heed the demands of regional governors over the executive. For this reason greater concern is given to regional loyalties and issues.

The executive in Costa Rica has what Cox and Morgenstern (2001) call a "workable" environment; this is when the government is split between parties but both are willing to negotiate and compromise over policy. The executive has some authority over the legislature in terms of financing, but no control over the legislative agenda (Aleman 2006). When a majority is not in place, the executive still has the support of his party members who are able to place issues on the agenda. In contrast to Brazil the Costa Rican executive maintains control over his party.

The Legislature

The relationship between the executive and the legislature is of great importance as well. Cox and Morgenstern (2002) identify four types of legislatures. Only two are important for this analysis. Brazil would be considered a "recalcitrant" majority and Costa Rica would be considered a "workable" majority (173). Brazilian presidents have rarely maintained a legislative majority and have had to cope with a legislature un-beholden to anyone. In Costa Rica there are two main parties which compete and as a result are more cooperative. A clear example of the suitability of the aforementioned titles is the dependence of executives on their unilateral powers. The Brazilian executive has had to rely chiefly upon his decree making authority (which expires in 30 days) while the Costa Rican executive has not resorted to unilateral powers. For this reason the Costa Rican executive creates policy with the preferences of opposition candidates in mind and drafts policies with the intent of legislative reaction.

Mainwaring and Scully (1995) claim political parties "put order into what would otherwise be a cacophony of dissonant conflicts" (3). Most scholars agree that parties are useful for the consolidation of democracy. Parties aggregate social interests, regularize the political process, and serve as an institution for compromise and representation; Brazilian parties have not served these functions though (Desposato 2006, 62). Brazil is a classic example of what Karl (1990) calls a "transition from

above." The Brazilian transition took place with no economic crisis, political opposition, or military defeat. Rather the military began liberalization as a way to control the political system that would emerge (Stepan 1989, ix). A clear example of the military's attempt to keep the transition under their control is the dismemberment of the opposition party into numerous weaker parties (Skidmore 1989, 22). This in effect weakened the opposition and strengthened the party favored by the military. This has had deleterious effects for the new democracy. The Brazilian military, with the support of President Sarney, ensured that a presidential system would emerge. This was done to guarantee Sarney's continued powers which he would use to protect the military (Linz and Stepan 1996, 169). The legislature has many powers associated with a parliamentary system and as a result has led to gridlock in the legislative process. The current political system was further embedded in the 1988 constitution which maintained the pre-existing electoral structure of open-list proportional representation. This procedure weakens the party and strengthens the individual. Parties are further weakened by electoral laws. Laws require parties to place an incumbent on their ticket regardless of party discipline (Ames 1999, 141). These factors have led to fragmented parties. Power and Roberts (1995) have argued that the electoral process has proven too confusing for the average voter. Mainwaring and Perez-Linan (1997) have shown that Brazil lacks party

discipline which prevents coalitions from forming and places the consolidation of Brazilian democracy in question.

For instance WVS data show the public want increased civilian spending as opposed to military spending but this occurs only sporadically (Lebovic 2001, 450) possibly as a result of political pacts agreed to during the transitional phase (Karl 1990). Mainwaring (1992) points to four factors which have prevented strong parties from emerging. First, income inequality and lack of information has prevented informed voting. Second, regulatory power is concentrated within the bureaucracy. Third, the combination of a weak presidency and undisciplined parties has led to legislative gridlock. Finally, the Brazilian political class has opted for weak parties (678). In Brazil a major problem is that the state controls the parties by controlling party affiliation, voting behavior of representatives, and most importantly by ensuring or denying access to jobs, resources, promotions, and favors (ibid, 681). This grants state officials leverage over legislators which in turn leads to compromised politicians. Ames (1999) goes on to say that political institutions create incentives that weaken parties and encourage politicians to enrich themselves or to focus on pork barrel legislation (131). Desposato (2006) shows that Brazilian legislators switch parties to maximize pork barreling and short term electoral concerns. The segmentalist organization of Brazilian society also hinders the importance of political parties (Weyland 1996, 44). This occurs because lobby groups direct resources to

bureaucrats and can bypass parties to achieve their goals. This is possible because once appointed bureaucrats no longer have allegiance to the individual that placed them in power. This is in contradiction of Geddes' requirement that bureaucracies must be held accountable. The inability to remove bureaucrats weakens the ability of the state to function properly.

The disillusionment of the populace with regards to political parties is apparent in the WVS of 2005. Twenty percent of respondents claim they have "a great deal" or "quite a lot" of confidence in the parties. In short, the citizenry is aware that parties do not represent their interest which partly explains low political participation throughout the country. Mainwaring concludes that most politicians see parties "as vehicles for getting elected, not as organizations to which they owe an attachment" (688). It is the continued weakness of parties that has allowed business associations to maintain their control of policy making and enforcement. Mainwaring and Scully (2008) put forth four characteristics of effective political parties: stable party competition, voter attachment to parties, party legitimacy, and party solidarity (119). It is clear that Brazil achieves none of these characteristics. When parties are weak it enables the traditional elite to "capture" the policy making process. The party system has caused several problems even for self-proclaimed environmentalists. In 1982, three environmentalists were elected to state and local office but soon came into conflict with the environmental groups that got them

elected because they had to comprise on issues (Hochstetler and Mumme 1998, 49).

The Costa Rican legislature is more straightforward. In short, political parties matter and party discipline is adhered to. This makes it easier to legislate and react quickly to potential problems. Since Costa Rican independence there have been two factions in social life – the conservatives and the liberals. The two national parties are the National Liberation Party (PLN) and Social Christian Unity Party (PUSC) which have been dominant since democracy re-emerged. The 1949 Costa Rican constitution does not allow immediate re-election of legislators and provides for proportional representation which should undermine the strength of political parties. However, parties have maintained influence over legislators because, unlike Brazil, voters vote for the party not the individual.[12] This demonstrates the importance of party platform. Parties have been able to maintain influence over legislators because most legislators want re-election or a post in the president's cabinet (Taylor 1992). In a survey of Costa Rican legislators Taylor (1992) found that the second most important part of a legislators' job is to perform constituency service on behalf of the party (1061). In Costa Rica a cabinet position is considered a promotion and is highly desirable. A second incentive to adhere to party discipline is appointment to the

[12] This is not the case for the executive though. Party preference only matters to the legislature. When polled voters claim executive ideology and personality were more important than party allegiance. See Booth 1998, 70.

standing committees. The most important is the finance committee which makes it easier for legislators to deliver pork to their district. This committee is wholly dominated by the party in power and access is only granted to individuals who adhere to party principles. Again, unlike Brazil, parties are capable evicting individuals from their party, which effectively retires that person from politics (Carey 2003, 200).

The Supreme Electoral Tribunal subsidizes the costs for elections in Costa Rica. This allows legislators to be independent of regional governors and pursue the interests of society as a whole. This is in sharp contrast with Brazil where legislators are loyal to regional governors, not the national party. This is not the case in Costa Rica. The national committee, or the executive, maintains control over national electoral resources. Reimbursement regulations also ensure that national parties continue in power. To be reimbursed a party must win at least 5 percent of the national vote. This subsidy allows equal footing between the two parties because neither party becomes beholden to special interest groups.

The differences between party discipline in Brazil and Costa Rica is what has led to the differences in policy output. Party discipline is non-existent in Brazil which is why little gets accomplished. Party discipline is strong in Costa Rica which makes the policy process and implementation of policy more efficient. The multitude of parties in Brazil has led to party labels having little significance.

The Bureaucracy

Another important distinction is the bureaucratic recruitment systems. Costa Rica has been more effective at enacting policy while Brazil has made little progress in enacting reform (Meade 2003; Weyland 1996). Geddes (1990) identifies three prerequisites for good state bureaucracy: expertise, efficient concentration of scarce resources (funding), and a bureaucracy committed to achieve its goals (218).

When speaking of efficiency the reference is to "state capacity" which is the ability of states to "have the capacity, in terms of organizational cohesion, expertise, and extractive and coercive ability, to carry out decisions based on their preferences" (Geddes 1990, 217). State capacity varies among nations. The economically developed West has much greater capacity than states in the global South. The reasons for lack of state capacity vary. Among the reasons is a lack of information, experienced delegates, and/or technical experts (Chasek 2001). State capacity will also affect how representative a state will be. Without capacity states will be unable to respond to citizen demands. For this reason a measure of state capacity can also serve as a proxy of representativeness.

Weyland (1996) identifies three forms of organization: personalism, segmentalism, and universalism (32-37). Universalism is typified by a bureaucracy that puts the interests of the state before its own and views the entire citizenry as its constituency. Segmentalism is when the

bureaucracy responds to a narrow group and its demands. The final category is personalism, or clientelism, whereby bureaucrats sell their services to the highest bidder. The latter two pose problems for collective action. Environmental projects are particularly susceptible. These projects depend on few people relative to labor movements. The clientelist category typifies Brazil. Ames claims Brazil has the "worst" civil service of any state in Latin America (1999, 132). Costa Rica will be shown to be universalist.

Brazil has a federal system which delegates environmental powers to the local, state, and national level. Policy making power is within the realm of bureaucracies not centralized (Back and Hadenius 2008). National resources, principally funding, are not in the hands of the executive. Rather, it lies within congress which is fragmented, again contrary to what is prescribed. As a result of income inequality the public is generally ill informed and easily misled. Participation is limited to the election of officials most of which the public has no confidence (WVS 2005). Grassroots organizations lack the material resources to petition the state so they become co-opted to ensure regulations are enforced, unintentionally becoming subordinate to state demands (Foweraker 2001, 850). Brazil lacks state capacity because the executive is weak and cannot enforce regulations, Congress is weak because it is highly fractionalized as a result of multiple parties, no party discipline, and the bureaucracy has traditionally been clientelistic oriented. Brazil does not

have the ability to create and enforce environmental reform principally as a result of the large amount of powers delegated to the legislature and the fragmented party system. The legislature prevents the executive from pursuing an agenda. The legislature is unable or unwilling to keep the bureaucracy from lining its pockets and is incapable of passing meaningful legislation.

An important part of Geddes (1990) and Chasek (2001) is an autonomous and expert bureaucracy making informed decisions. However, across Latin America, especially Brazil, the main influence political parties have is the appointment of bureaucrats and policy makers (Mainwaring 1992, 684). Appointments, however, are not based on merit. They are the result of political necessity. Reid et al (2006) examines the role of bureaucrats in regulating fisheries in Brazil. They conclude that most of the agencies lack qualified personnel and many bureaucracies are in charge of regulating the same problem, but have different agendas (Reid et al 2006, 271). What further hinders state capacity is the Brazilian constitution grants life tenure to bureaucrats (Ames 1999, 132). Referring to Geddes' three requisites of state capacity: expertise, sufficient resources, and bureaucrats performing to keep their job; it is noticeable that none are met in Brazil. This feature has been present since the beginning of Brazilian democracy. Guimaraes (2002) goes so far as to say that "civil service" in Brazil means "to serve one's own interest," not the public (233).

President Sarney, the first president[13] of the new republic, was forced to respond to traditional clientelistic demands (Mainwaring 1986, 173). The claim by Weyland (1996) that "organizational fragmentation" prevents economic reform equally applies to environmental reform (4). The close connection between state agencies and business groups; coupled with the fragmentation of society gives the bureaucracy a certain degree of autonomy which precludes environmental protection reforms from emerging. In short, even though a move to democracy has taken place, the institutional structure of the Brazilian state has not changed much (Mainwaring 1986).

The Costa Rican bureaucracy has constitutional guarantees for its funding while in Brazil the budget is in constant flux (Booth 1998, 64). This restricts the ability of Brazilian bureaucrats to make long term plans. The guarantee of funding is fundamental for environmental protection. Conservation efforts require long term investment and oversight which is difficult to achieve with funding variation.

It has also been shown that meritocratic recruitment, one of the most important prerequisites for state capacity, has been met in Costa Rica and not in Brazil[14] (Panizza 2001). In Brazil, the executive makes appointments to those who will provide him support in the legislature.

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[13] Jose Sarney was the first president of the new republic. However, he was not elected he assumed office with the unexpected death of Tancredo Neves the directly elected president, Jose Sarney was the Vice Presidential candidate.

[14] This is the process whereby applicants for a position are hired based on their qualifications not as a result of who they know.

This means giving jobs to people who are not necessarily qualified. The Costa Rican executive can appoint and remove ministers from their post without legislative approval but the expertise of these officials along with the short time of the executive has made removal a rarely used option. Furthermore, appointment of these officials is staggered and overlaps executive administrations (Hughes & Mijeski 1984, 90-91). This means the executive does not get the administration of his choice rather he inherits an administration and modifies it with time. This allows for a diversity of views and a continuation of policy from one administration to the next.

Autonomy is essential to protect bureaucrats from undue political interference in policy implementation. For this reason Costa Rica has nearly 200 autonomous administrative agencies which increase capacity and protects bureaucrats from political manipulation (Booth 1998, 400). Rosenburg (1984) has noted that corruption within the social security bureaucracy has not been tolerated (120). Rather emphasis has been given to gaining legitimacy from the public so expertise has been an overriding concern in Costa Rica. This would clearly place Costa Rica within Weyland's "universalist" category (1996). The preceding would make it seem that the Costa Rican bureaucracy can be easily influenced by elites for they have too much autonomy thus violating one of Geddes' (1990) prerequisites of a bureaucracy subject to removal for poor performance. This has not been the case for three reasons. First, the

budget is still within the purview of the legislature. The legislature cannot reduce funds but can choose to not increase funds for other projects. Second, performance has been rewarded within the bureaucracy via promotions and amenities. Lastly, pay within the public sector has been higher than that in the private sector which helps to keep bureaucrats loyal to the state (Panizza 2001, 143).

Civil Society

Civil society in Brazil is weak as a result of an inability to build strong coalitions and effectively pressure the state (Encarnacion 2003). However, the weakness of civil society is a result of the institutions in place. Civil society organizations are well financed and organized but the fragmented system in place prevents effective pressure.

It is expected that civil society groups provide an alternative to political parties to have their interests represented (Diamond 1994, 8). However, as a result of political patronage in the bureaucracy and severe economic inequality the bureaucracy is not responsive to civil society groups. Civil society groups have lacked discipline and connections to political parties to be effective at pushing an environmental agenda (Foweraker 2001, 850). The fragmented party system makes it difficult to rally legislatures to a particular cause and the lack of party discipline forces civil society to appeal to a wide range of individuals. Certain civil society groups do benefit from the fragmented system by following the clientelistic actions of business associations (Encarnacion 2003, 129).

This has, however, resulted in the lack of cohesion among civil society groups and results in free riders, lack of collective action, and mistrust (ibid, 129). Political patronage prevents bureaucrats from being removed from office especially since most appointments are made by individual congressional members not the party (Mainwaring 1992, 684). Diamond is correct in pointing to the benefits that civil society can provide, but the importance of political parties which do engage in the political process is superior to civil society (Mainwaring 1999, 332**).** Another problem is environmental policy is highly technical, requires expertise, and needs financial resources which many grassroots groups do not have (Hochstetler and Mumme 1998, 38). It could be claimed that people are more interested in economic development as opposed to environmental protection. However, Jacobs (2002) effectively shows that despite widespread poverty there is no significant difference between Brazil and European states with regards to environmental issues. In the study Jacobs compares group participation in environmental cleanup projects and awareness, as measured by the Euro barometer and Latino barometer, and finds no significant difference.

Environmental groups are the civil society of most importance to this study, but while environmentalist have a long history in Brazil they have not been effective. Environmental movements are typically seen as unified and homogenous which may not be true. In Brazil environmental groups in the various regions differ on strategies and concession making

(Hochstetler 1997, 204). It is reported by Hochstetler that international environmental groups have had difficulty finding partners in the Amazon because environmental groups are fragmented and not cohesive (214). As a result they have had to seek support from the Rubber Tappers and union leaders in the region. This is especially true for protection of the Amazon. Foreign environmental groups worked with Chico Mendes' movement to prevent the encroachment of ranchers into the forests. Mendes' movement has been used as a model but it neglects the contextual factors that made the movement a relative success. Keck (1995) points to the murder of Chico Mendes and the salience of environmental protection at the time as factors which were influential. These factors may not be present for other movements (420). Civil society groups have not had much influence because resources are highly concentrated in the state bureaucracy, which is inaccessible to most environmental groups (Guimaras 2002, 231-232).

Costa Rica has an institutional structure more open to pressure from civil society groups. The party system and party discipline have made it easier to pressure legislators. Like Brazil, much of the money that sustains these organizations comes from foreign donors. These donors are only interested in protecting the rainforest, as is the case with Brazil. Localized air pollution and improving urban waste management has not been of importance to foreign donors (Quiros 2003, 135). ENGOs have traditionally worked with the state to get environmental projects

underway and provide oversight to ensure policies enacted are effective (Tahkokallio & Nygren 2008, 348). Like Brazilian groups, Costa Rican environmentalists have sought the assistance and cooperation of those affected by environmental policy. A defining feature of these groups, compared to Brazilian groups, is their aversion to engaging in politics (ibid 2008, 347; Steinberg 2001 84-86). The reluctance of ENGOs to engage in the political process has restricted their concerns to international issues which neglects pollution that adversely affects the local population.

Civil society groups have been much more effective in Costa Rica than in Brazil. The emphases of both have been on international concerns not of the local population. This has restricted their ability to gain the loyalty of the local population. All the same, civil society groups do provide an invaluable function that Payne (1995) and Diamond (1994) predict. The theoretical fault of Payne and Diamond come from not examining the institutions in which actors must engage. Brazil does not maintain institutions open to change nor are they easily accessible. Costa Rica has an open system which is why civil society groups have been more effective. For this reason the institutional setting is of superior importance than the strength of civil society.

Conclusions

An important distinction between the two states is the absence of a military in Costa Rica. Military expenditures average 1.9 percent of GDP across Latin America[15]. This allows Costa Rica to invest in social projects whereas Brazil continues to spend large sums for national security. Costa Rica has degraded its environment and had one of the highest deforestation rates in the world (Pagiola 2002, 38). However, the state has been remedying the negative externalities of economic development. Costa Rica has been able to learn from its experiences at environmental reform and adjust accordingly; while Brazil maintains a deeply entrenched system which is not amenable to reform. The fragmented party system in Brazil has hurt all efforts at environmental reform. This is in contrast to the strong federal system in place in Costa Rica. Costa Rica also maintains an independent meritocratic based bureaucracy which serves the interest of the nation as a whole. The opposite is true of the Brazilian bureaucracy, which is headed by patronage appointments and a dearth of expertise in environmental management.

Environmental protection in Costa Rica can easily be attributed to the revenue generating industry ecotourism. This, however, would neglect the decade's long movement toward environmental protection which preceded the emergence of this industry. It was not until the mid 1980s when ecotourism became a success in Costa Rica (Steinberg 2001,

[15] Brazil averages 1.8 percent of gross domestic product

76). This was four decades after the roots of environmental protection had been planted and two decades after it began to receive international recognition for its efforts.

In summary, the term democracy is a contested concept. The term can more easily be understood when making the distinction between procedural democracy and representative democracy. The former has democratically elected officials and the rule of law prevails. However, the system itself fails to reflect the interests of the masses they represent. The latter maintains democratically elected officials, the rule of law, and reflects the interests of the masses. When democratic theorists declare the benefits of democracy the distinction should be made between procedural and representative democracy. Brazil falls under the category of procedural democracy and Costa Rica under representative democracy. A transition to procedural democracy can occur without a transfer of power away from the traditional governing class.

CHAPTER 4

CHILE AND GUATEMALA

As has been argued there are two necessities for environmental protection: 1) the resources and 2) the desire to protect the environment. Chile's institutional structure strengthens the executive and minimizes the ability of the legislature to heed the demands of civil society which results in lackluster environmental performance. While Chile does protect the environment more so than Brazil it does so simply to ensure good relations with its trading partners in the event of a free trade pact requiring such protection. It will be shown that because the legislature is not an avenue to petition for environmental protection the only recourse is the executive. The executive maintains control over the state bureaucracy and the budget. It is the prerogative of the executive to enforce the law; if he chooses to ignore the environment there is little that can be done to compel enforcement. State capacity is not lacking in Chile. The staff and resources are available but the limited desire to protect the environment has led to half-hearted policies.

As of 2003 Chile was still considered by some to be in a transitional phase (Aguero 2003). Garreton (2000) claims Chile is a consolidated semi-democracy but not many observers suggest Chile is a full fledged democracy. Among the reasons for this are the constraints imposed upon the current regime as a result of the drafting of the

constitution prior to the demise of the dictator Augusto Pinochet. The military is allowed to appoint nine senators who can prevent the legislature from overriding executive vetoes. The Chilean president is debatably the most powerful of all executives in Latin America. The disproportionate power granted to the executive is the result of manipulations by Pinochet who thought he would be elected to the presidency (Siavelis 1997). However, this study begins with the assumption that Chile is a democracy for all indices categorize Chile as a democracy since 1990. However, the limitations that Garreton emphasizes have restricted the ability of the state to perform many functions so the ability of the state to represent the will of the people is questionable. President Lagos (2000-2006) outlined seven "great reforms" that would modernize the country none had any provisions for environmental protection (Aguero 2003, 318). During the authoritarian rule of Pinochet most avenues of expression were silenced. Environmental concerns were not among those silenced as a result the environmental movement garnered support among a diverse populace, but this community died when it no longer had a common cause (Silva 1996, 9; Carruthers 2001, 345). Carruthers (2001) points to the movement fading as the result of lackluster gains in environmental protection. He claims the end of dictatorship has resulted in the departure of environmental experts to positions within the state. This, however, is a good thing for it is experts that are needed to make

informed policy decisions. An examination of the influence of experts in the policy process is of more importance. The problem hurting Chilean environmental policy is the asymmetrical nature of the policy process. The executive yields many powers typically reserved for the legislature and maintains a significantly larger staff than does the legislature as a whole. This allows the executive to be more informed and draft legislation that tends to the needs of a particular sector. This reduces the number of avenues available to ENGOs can attempt to influence policy.

Guatemala is among the poorest states in Latin America hence state capacity is immediately questionable. The average per capita income for the time period under consideration is USD 1,568; far less than the average for Chile USD 3,652. In addition, income distribution is much less skewed in Chile than in Guatemala. These two factors would lead us to believe that Chilean demands for environmental protection would be greater than in Guatemala. Guatemalans responding to the Latino Barometer consistently placed environmental protection ahead of economic development with a low of 52 percent in 1996 and a high of 66 percent in 1997. Chileans also favored environmental protection over economic development with a low of 66 percent in 1995 and a high of 80 percent in 1996. In addition Guatemalans, unlike Chileans, were willing to be taxed to pay for environmental protection (63 percent in favor); whereas only 22 percent of Chileans were willing to pay the necessary taxes. It is interesting that Guatemalans prefer environmental protection

to economic growth due to the lack of material wealth for most persons. Guatemala makes an interesting case because it is not categorized as a democracy by most indices; rather it is considered semi-democratic at best. In contrast to Chile, the people of Guatemala favor environmental protection on roughly equal terms, but Guatemalans are willing to pay for such protection (despite the higher poverty rate in Guatemala), but Guatemala is not a democracy. This allows us to compare a democratic state with the *capacity* but not the *will* to protect the environment (Chile) with a non-democratic state that has the *will* but not the *capacity* to do so (Guatemala).

The political system in place, similar to Chile, is the result of a pact between the military and representatives of the civilian population. The transition to democracy technically occurred in 1985 with the election of Vinicio Cerezo. However, the limitations placed upon the regime and the constant threat of military intervention restrained the governance of elected officials. Despite winning by a wide margin and U.S. support for his regime, the Christian Democrat Vinicio Cerezo did very little to change the priorities of the state (Jonas 1995, 30). This meant continuing the civil war which included the continued oppression of the Mayans (who incidentally account for at least 50 percent of the population) and the continued rule of the traditional elite. The transition to democracy did not mean a transfer of power. Instead, the transition involved the continuation of the military regime with a civilian president

(Jonas 1995, 29). All of this meant the environment along with all other social issues were a non factor. In fact the military leaders warned against any major reform efforts (Williams and Seri 2003, 321). In addition, the ability of political parties to participate in the electoral process was greatly restricted (Jonas 2001, 62).

The military which ruled from 1954-1985 formally cannot be labeled efficient simply because its only prerogative was to quell any social unrest. The instability of the post Arbenz state is chronicled by Granados (1992) who states "one president was assassinated, two interim presidents were named, five government juntas were formed, one election was annulled, one presidential election was repeated, and one president elected through the mechanism of a coup d'etat was deposed (92)." This has continued with the semi-democratic state of today. The powers of each branch have been contested, stalemates have occurred, and the implementation of laws have been selective (Macias 1996, 147). Congress has been marked by vote buying and an executive which is corrupt. Guatemala has been cited by Transparency International as the third most corrupt state in all of Latin America (cited in Canache and Allison 2005, table 1). In short, all branches of the state are inefficient just as they were under authoritarian rule. In fact human rights violations are thought to have become worse under a pseudo-democratic regime (Trudeau 1993, 125). Military prerogatives remain supreme and any policy efforts which differ from its interests will not pass and will not

be enforced. This leads the evaluation of each branch of the Guatemalan state to focus on the restrictions placed upon it by the military.

A Short Environmental History

Chile has taken a market-friendly approach to environmental protection. This approach has not incorporated grassroots projects like that in Costa Rica (Silva 1997, 458). As a result conflict has been high over environmental policy because the indigenous populace has not been willing to go along with state programs. Indeed the relationship between indigenous groups and foreign conservationists, these are people who purchase land with no intent of using it, has been tenuous at best (Meza 2009). Environmental protection has not been high on the priority list for the Chilean state yet it has been a concern for the Chilean people. Responding to polls from Latino Barometer for the years 1995-1998 a majority of people favored environmental protection at the expense of slower growth. The lowest number in favor of the environment was 57 percent in 1998 with a high of 80 percent in 1996. This is in large part a result of the economic success of the state. This success however has come at the expense of the environment which has been the development path followed for decades. Under the Pinochet regime the state followed a policy of resource led development. This policy has continued under the democratic regime with little change (Clapp 1998). Treasury Secretary Alejandro Foxley attributed Chile's continued economic success to its resource endowments and reflects the overall sentiment that

diversification of the economy is not necessary; rather expansion of resource exploitation is (cited in Clapp 1998, 4). Much of Chile's environmental problems arise from the demand on the environment. The fishing industry, forestry sector, mining, and the agricultural sector all boomed under authoritarian rule and this success has continued unabated. The consequent effects are an urban environment, water pollution, biodiversity is threatened, and over fishing is threatening salmon in the region (Silva 1996, 7). The development policy Chile has followed has relied on resources which have little or no value added. The industries have not required much human capital despite the state's willingness to finance worker education programs. The industry and the state have ignored those who advocate moving toward products with higher-value added content, but stalemate has been reached as a result of the ideological commitment which prevails (Weyland 1999, 75).

Attempts at environmental protection in Chile include the use of tree farming. This is a process whereby farmers plant non-native trees for export. This has led to a reduction in the deforestation of native species but the sustainability of the project is questionable. Clapp (2001) puts forth four requisites for sustainable forestry and Chile does not meet one of the requisites. The missing requirement is for managed forests lead to a reduction in demand for traditional markets. This has not occurred because the harvesting of native plant species is controlled by small farmers who do not have the resources necessary to engage in

sustainable forestry. Another reason for the failure of this program is the inability to know the exact conditions for successful forestry projects. The local farmers do not have the necessary capital to fund the research and the state is unwilling to expend the resources to make sustainable forestry feasible (Silva 1997, 468). Chile has also received praise for its "reduction" of PM10 emissions and CO_2 emissions (Gunther et al 2002)[16]. This was another market based approach which sought to provide the proper incentives to polluting firms to voluntarily reduce emissions. There are two problems with this decree the first is a reduction in emissions is not a guarantee that pollution levels will increase.[17] This is because a cap has not been placed upon emissions. Rather, firms are granted trading permits for the emissions that they are capable of emitting not for their actual emissions. A firm does not need to reduce its emissions in order for it to sell its potential emissions. It can sell emissions that it may have never reached. Therefore this is not an efficient way to reduce emissions nor is it a way to maintain emissions at the current level. Another problem is the potential for rent seeking behavior within the permit industry. Since caps are not set at the actual emissions level it is possible for bribery to occur so as to increase the

[16] This is contrary to the data used in this study which shows increases in CO2 emissions

[17] The emissions trading scheme is not law because it has not passed in the legislature rather the executive has issued a decree which has the force of law since Congress did not act upon it. This will be elaborated upon when the powers of the executive are examined.

potential emissions to allow for greater trading of emissions that would not have otherwise occurred.

Environmental policy is not new to Chile as attempts to protect forests have existed for some time. Prior to the 1973, coup protected areas were established to protect a slow growing tree, the Alerce species. This policy continued under Pinochet who declared the species a national monument and made it illegal to cut any of the trees dead or alive. However it was permissible to cut fallen trees which made enforcement difficult because it required someone to be caught in the act of felling the tree (Clapp 1998, 11). This policy has been extended to other tree species but the same exception has led to continued logging hence enforcement has been difficult to achieve. Furthermore, permits are needed to cut trees but enforcement has been lacking. The organization in charge of forest clearing is the National Forest Corporation (CONAF). As was the case with Brazil this group's two primary mandates contradict each other. This group has a broad mandate and limited staff a characteristic all too common in environmental protection agencies. President Eduardo Frei has gone so far as to say "no environmental cause will stand in the way of development" (quoted in Clapp 1998, 24). This is opposed to what the majority of Chileans prefer according to the above cited polls by Latino Barometer. Despite citizen requests for environmental protection, Chile has had an unimpressive record. Table 4.1 shows that on most

Table 4.1: Environmental Indicators for Chile							
Year	CO2	NOX	FOREST	PM10	PROTECT	MILITARY	GDP/Capita
1980	2.47						2501.4
1981	2.19						2580.7
1982	1.85						2278.36
1983	1.89						2157.06
1984	1.94						2291.17
1985	1.82						2413.99
1986	1.79						2507.05
1987	1.84						2628.02
1988	2.15					4.94	2772.81
1989	2.57					4.08	3013.13
1990	2.7	8170	20.38	87.88	13.44	4.16	3069.87
1991	2.53			82.04	13.44	3.95	3255.22
1992	2.6			76.5	13.44	3.72	3588.69
1993	2.6			76.28	13.44	3.60	3770.54
1994	2.95			75.38	13.55	3.37	3916.93
1995	3.11	9430		71.26	13.82	3.06	4262.68
1996	3.51			71.98	13.82	3.09	4509.15
1997	3.97			70.14	13.82	3.21	4738.69
1998	3.89			67.97	13.84	3.42	4826.38
1999	4.16			69.78	13.84	3.68	4728.62
2000	3.87	10990	21.15	62.51	13.84	3.70	4880.23
2001	3.55			59.19	13.84	3.71	4985.36
2002	3.64			60.47	13.84	3.81	5036.33
2003	3.61			58.13	20.76	3.41	5176.06
2004	3.87			54.98	20.76	3.80	5426.99
2005		12590	21.53	53.12		3.72	

Source: All data comes from the World Development Indicators except Protected land which comes from the United Nations Statistics Division

indicators environmental conditions have increasingly gotten worse, PM10 and protect are exceptions. This is despite the reduction in military spending and increased GDP/Capita. Both indicators would suggest a move toward more socially oriented programs.

Interestingly enough Chile has renewed efforts to protect the environment as a result of the North American Free Trade Agreement (NAFTA). The free trade agreement among the three North American

states required certain environmental provisions mostly directed at Mexico. This, however, has shown Chile what conditions a free trade agreement with the U.S. will be included. For this reason the state has begun to take the environment more seriously (Silva 1996, 2). This is fine by the Chilean populace who in 2000 overwhelmingly (86 percent) supported the incorporation of environmental protection in any free trade agreement. It has been shown that the Chilean people want environmental protection yet the state has been unwilling to expand environmental programs. Carruthers (2001) attributes the lack of environmental policy and enforcement on the state's close ties and dependency upon the business sectors that profit from lax environmental regulations. However, another poll by Latino Barometer in 2001 shows that 77 percent of respondents would not want to pay higher taxes to protect the environment. It is, therefore, not just the business elite that do not want their flexibility taken away it is also the masses who do not want to make the necessary sacrifices to protect the environment. A final factor leading to the predominance of market-friendly environmental policies is the fear of military intervention for issues that would appear leftist (Linz & Stepan 1996, 205). Chile has shown a "bias toward risk-aversion in the domain of gains" (Weyland 1999, 89). In other words Chile has preferred the certainty of the status quo to the risk of changing anything within society. This sentiment is accurate of its approach to environmental protection. There has been continued environmental

protection but there has been little change in policies from the Pinochet years. The changes that have occurred prescribe gradual changes only to sectors that are relatively small relative to the overall economy.

Environmental conditions in Guatemala have steadily gotten worse since 1980 on all indicators except protected area (see table 4.2). The ability of the state to protect this area is questionable given the low taxation rates and the lack of expertise in the bureaucracy to carry out regulations. Not only is there a dearth of expertise but the ability of the state to pass, let alone implement, regulations is restricted by military prerogatives. Deforestation has been a major issue in Guatemala not just for environmental degradation but also for the displacement of persons that has occurred as a result. The military followed a "scorched earth" policy up until 1996 (when the civil war ended) to weaken the guerillas. This resulted in land use changes and the displacement of people. These two factors led to an increase in cattle ranching, which further degraded the soil and the forced migration of indigenous people to the metropolitan areas which worsened air and water quality in urban areas.

Table 4.2: Environmental Indicators in Guatemala							
Year	CO2	NOX	FOREST	PM10	PROTECT	MILITARY	GDP/Capita
1980	0.64						1684.98
1981	0.55						1654.51
1982	0.49						1556.9
1983	0.42						1479.66
1984	0.44						1451.02
1985	0.44						1407.96
1986	0.45						1377.25
1987	0.48						1393.53
1988	0.48					1.59	1415.13
1989	0.49					1.54	1437.88
1990	0.57	4780	43.79	63.07	25.92	1.47	1449.11
1991	0.55			64.22	25.92	1.08	1468.15
1992	0.64			66.47	25.92	1.25	1504.26
1993	0.59			61.54	25.92	1.08	1527.86
1994	0.7			64.17	25.92	1.08	1553.61
1995	0.72	5060		62.93	29.47	0.99	1593.93
1996	0.65			59.45	30.1	0.82	1604.59
1997	0.73			57.12	30.67	0.74	1637.55
1998	0.82			61.3	30.73	0.72	1681.14
1999	0.81			69.58	30.74	0.68	1706.52
2000	0.91	7090	38.81	77.93	30.76	0.82	1727.56
2001	0.92			77	30.76	1.05	1726.55
2002	0.93			77.12	30.76	0.76	1723.53
2003	0.88			69.13	30.76	0.82	1718.13
2004	0.99			67.36	30.76	0.48	1721.42
2005		7980	36.32	62.23		0.38	

Source: All data comes from the World Development Indicators except Protected land which comes from the United Nations Statistics Division

Unlike Chile, conditions for foreign aid were not tied to improvements or enforcement of environmental regulations. Rather USAID was tied to improvements in human rights which assisted in the transition to democracy in 1985. Guatemala, just like Chile, depended upon its resource endowments (again at the behest of the U.S.) for its economic development (Berger 1997, 100; Jonas and Walker 2000, 5). Throughout the authoritarian period and to the present day the economy

has been dependent on agricultural products (primarily bananas, sugar, and coffee). This dependence has led to the unrestricted use of land which resulted in degraded soil conditions, polluted waters, and deforestation throughout the country.

Environmentalists in Guatemala are routinely threatened by the military who objects to protected reserves. The military in addition tells the locals that environmentalists are attempting to take away their livelihood by creating protected areas (Berger 1997, 106). This has resulted in tense relations between environmentalists and local residents. Similar to Chile, the environmental movement in Guatemala did consist of various interests; but, unlike Chile, all social movements were oppressed and all proposals objectionable to the military labeled communist (Zarate 1994, 61). The principle objective of the state has been economic development with little regard for the environment. This is contrary to public opinion probably because the poorer sectors of the population know they will not benefit from economic growth.

Still, alleviating poverty in Guatemala must remain the priority of any governing regime. This necessitates policies that protect the environment but not at the expense of economic growth. For this reason most attempts at environmental protection have come from abroad with acquiescence from the state, not necessarily avid support. There have been efforts at such programs. The principal effort has been in the form of promoting ecotourism. State programs often fail simply as a result of

the indigenous population isolating themselves and disregarding national regulations. Bascomb and Taylor (2008) advocate ecotourism as a way to incorporate indigenous demands and national policy into a sustainable project. This would be done by tying the success of the industry to the quality of life of the local residents. Bascomb and Taylor examine the benefits ecotourism has had on the village of Chicacnab in the Central part of the country and note ecotourism has been beneficial for local residents. Yet the industry, while not failing, has not thrived. This is a result of high crime rates and continued social conflict within the state. The U.S. State Department has consistently issued travel warnings to Americans traveling in the area. Another issue area has been oil exploration. Imports of oil account for 10 percent of all imports which is a heavy burden on the state. As a result when a proposal is offered the state is eager to accept despite the environmental hazards posed and the displaced persons it results in (Trudeau 1993, 164).

In regards to deforestation, politicians often hold the view that the land itself is more valuable than the trees that reside on the land (Richards & Tucker 1988). The regulation of forests is the responsibility of the local municipalities. The 1985 constitution requires 8 percent (increased to 10 percent in 1994) of the national budget be transferred to the municipalities. However, Guatemala ranks among the least taxing states in Latin America. This is partially the result of international lending institutions (FAO 1999) that believe decentralization leads to

more efficient management. This assumes that the local population and governing elite will place emphasis on protection of the forests. This has not been the case in Guatemala. In a survey of Guatemalan mayors Gibson and Lehoucq (2003) find that protection of the forests is not a priority for the local governments and when staff is allocated to protection of the forests it is only to secure federal financing. Guatemala has been seen as a potential carbon sink to offset carbon emissions. An independent power agency Applied Energy Service (AES) gave Guatemala USD 2 million (renewed in 2000) to protect a forest which would offset the emissions AES produced in Connecticut. However, with enforcement of forestry protection being shifted to municipal areas reforestation projects has slowed and an inhospitable population has threatened reforestation efforts (Wittman & Caron 2009, 715). The protected area created as a result of AES financing has taken away wood which is the primary energy source of local communities. Furthermore, Brown and Delaney (1999) have found that the project has not sequestered the 11 million tons of carbon predicted by AES and the World Resources Institute (WRI). Rather they conclude around 275 thousand pounds have been sequestered. This shows the lack of expertise on the ground and the uncertain nature of such projects. Debt for nature swaps have been another international effort at helping lower Guatemalan debt simultaneously protecting the environment. In one of the largest debt for nature swaps the United States lowered Guatemala's debt 20 percent for

four regions (Ness 2006). The money is expected to support financing of park rangers and monitoring. Given the lack of attention given to indigenous groups demands it is unlikely they will be cooperative in these efforts.

Political Institutions

The Executive

The executive in Chile is among the most powerful in Latin America. In fact Shugart and Mainwaring (1997) list Chile's executive as the most powerful in all of Latin America (table 1.6, p 49). Siavelis (1997) gives an account of the formal powers the executive has compared to the legislature. Among the most useful tools at the executive's disposal is the ability to issue executive urgencies which must be considered before anything else by the legislature. This allows the executive to control the legislative agenda and possibly prevent any other legislation from being debated. The president can also call the assembly into session. During these sessions the legislature can only consider proposals initiated by the executive. Possibly the most important power granted to the executive is control over the budget. The executive has almost exclusive control over the budgetary process. The legislature may only reduce or approve the budget. If neither is done within 60 days the budget goes into affect without legislative approval. The power of the purse allows the executive to control the finances of the various agencies. This permits the preferred

projects of the president to get full consideration and less important items to be disregarded or neglected entirely.

During the initial period of democracy the environment was low on the list of priorities. Rather, democratic consolidation, maintaining economic growth, and human rights issues were of primary interests. By the second president (Patricio Aylwin) the environment began to gain some attention; too much as it turned out. The Aylwin presidency was based on compromise and his coalition was tenuous. He therefore did not want to offend too many by pushing an agenda supported by a few. For this reason he took a middle ground position by continuing programs from the Pinochet era to protect the environment. These were all market-based approaches which adhered to the tenets of the neo-liberal model. For this reason the policy of gradualism emerged whereby first priority would be given to those issues which would generate the least conflict. None of the regulations imposed on the business sector would be too onerous and the enforcement agency was made to be more of a coordinating institution (Silva 1996, 24).

The Guatemalan executive is in charge of appointments to the bureaucracy. Therefore similar to Chile and Brazil an executive interested in ecological preservation can strengthen the bureaucracy but this has yet to be the case. As a result, the marginalization of environmental issues has continued once again showing the lack of change from authoritarian rule to a *prima facie* democracy. The executive

has been seen as corrupt and nepotistic (Jonas 1995, 33). In 1993, in an attempt to overcome stalemate between the legislature and the executive President Serrano (with military support) dissolved Congress and the Supreme Court. Attempts were made to reduce the size of the legislature which would make coalition building easier and increase the power of the executive. However, due to pressure from the U.S. and civil unrest the military turned against Serrano and ordered his exile. The continued instability in Guatemala and the central role of the military in the policy process has inhibited proposals that threaten the landed elite from coming forth. The corruption that plagued Serrano's presidency was a consequence of his inability to get legislation passed. It is estimated he spent nearly USD 50 million a year on buying votes in the Congress (Cameron 1998, 134). Aside from Serrano all Guatemalan executives have had a majority in Congress yet have not been able to fulfill their campaign promises (Negretto 2006, 73).

Rather than alienate the military, all executives up until 1996 continued the civil war. The continuation of the civil war resulted in the disregard for all other functions of the state. In addition the lack of party discipline and the multitude of political parties have led to an executive unable to build a coalition (Carey 2007, 98). In short the executive is not independent of the military. The executive serves at the behest of the military and when attempts are made to become independent the military has removed that president. Things have changed in recent

years. The *autogolpe* attempted by Serrano has actually helped to further democracy simply because it failed (Cameron 1998). However, the interests of the military remain the same and social reform has not occurred. For instance Guatemala's tax as a percentage of total GDP was the lowest in Latin America at 6 percent in 1990. However, since 1996 this has increased rapidly and reached 11 percent by 2006. This shows that there is a move toward greater accountability but the inability of the legislature to reach a consensus has led to stalemate. In contrast to Chile the Guatemalan executive is very weak relative to the legislature. The Chilean executive dominates the legislative agenda, prioritizes issues, controls the budget, and maintains strict control over his or her party. The Guatemalan executive has none of these attributes (Aleman 2006, 140). The environment as a result is of secondary interest to an executive that prioritizes continued economic growth. Secondly, the executive is more difficult for ENGOs to petition in comparison to individual legislators. If an executive decides reduce the budget for environmental programs the legislature can do nothing.

The Legislature

It has already been shown how the executive can control the legislative agenda. However, it could be argued the legislature can simply vote down all of the executive's proposals and move on to concerns of its own. This would not occur for three reasons. First, if the executive's proposals were voted down simply for this reason they could simply be

proposed again to be heard at the same legislative session. Second, parties are strong and there are strong incentives to cooperate with the executive so as to achieve other goals specific to individual legislators (Carey & Siavelis 2005). Third, the legislature does not have the resources to carry out the necessary research nor the expertise needed to formulate good policy.

Political parties are strong in Chile and party discipline is adhered to in the legislature. There are two main parties in Chile the Concertacion and the Alliance for Chile. These parties however are coalitions of parties and therefore represents a diverse and large populace. The Chilean system has been a multiparty system since democracy first emerged in 1932, which necessitated coalitions. Such coalitions, it has been argued, led to the coup of 1973 (Linz and Stepan 1996; Aguero 2003; Scully 1995). The gridlock caused by diverse interests worked initially but faltered which led to the socialist candidate Salvador Allende gaining the presidency which in turn led to the coup by Pinochet. This is part of the reason the legislature was made weak relative to the executive to avoid such problems again (Baldez & Carey 1999, 30-31). Nevertheless, political parties have resumed their place at the center of the Chilean political process (Scully 1995, 123).

The legislature is often perceived as the best route for civil society to pressure the state to achieve its goals. However, in Chile the legislature is strictly forbidden from proposing legislation which deals

with “social issues” (Siavelis 1997, 329). This is a result of Pinochet’s influence over the drafting of the constitution currently in effect. Only the executive may initiate bills which deal with social issues. This was an attempt to ensure that no socialist measures were proposed by the legislature. Pinochet believed he would be elected to the presidency so he intentionally made the executive stronger relative to the legislature. If such legislation is proposed two things can occur. First, the legislation can be declared unconstitutional by the Constitutional Tribunal. Second, the legislator who proposed the legislation can be removed from office (ibid, 329). This restriction on the legislature has had the beneficial affect of preventing rampant clientelistic behavior. This has however resulted in the inability of ENGOs to pressure the legislature for reform. Rather all pressure must be directed at the executive and ministerial level. Neither of which have been eager to change existing environmental policies.

Another impediment to proper legislation within the legislature is the lack of staff granted to legislators. This translates into insufficient expertise on most policy issues. Environmental protection is an area which requires long term investments and careful planning. The executive in contrast has access to a large staff and control over the ministries which are charged with specific tasks. Asymmetric information grants the executive an informal power which adds to the power of the office. A problem that arises is the protection of the environment requires long term policies and enforcement but if an executive comes to office

and chooses to neglect those policies the legislature has little recourse because it does not control the budgetary process. The system in place restrains spending by the legislature and greatly favors the executive (Baldez & Carey 1999, 34). Environmental protection requires investment of money, staff, and time none of which are controlled by the legislature.

Another avenue available to reduce the asymmetrical nature of the policy process is the availability of academics and think tanks to advise legislators on a *pro bono* basis (Siavelis 1997, 333). However, when commissioned by the state to produce a report on the status of the forests the results were not to the liking of the forestry sector and as a result the director of the project has been fired and the rest of the collaborators have faced disciplinary action (Clapp 1998, 30). Such actions were undertaken by the military regime and continue under the democratic regime of today. For this reason academics would rather not undertake such projects out of fear of repercussions. As a result the congress simply meets with the minister in charge of certain areas so as to become informed of potential policy proposals and the subsequent effect (Siavelis 1997, 353.)

Parties are disciplined in Chile but the executive needs a majority to achieve its stated goals. There are two main parties in Chile which vie for power and as a result could pose the challenges found in Brazil. However, with the executive controlling the agenda and the budget it is incumbent upon legislators of all parties to cooperate with the executive

to achieve their goals as well. Carey and Siavelis (2005) examine how Chile's Concertacion party is able to hold together its coalition. The use of complex informal incentives has proven effective at maintaining party discipline. Chile's electoral system uses two member districts with proportional representation. It is not the two candidates with the most votes that attain office rather it is the two parties that achieve the most votes unless two candidates from the same party receive a super majority of the vote.[18] For this reason parties always place one strong candidate with one weak candidate in districts where they are unlikely to achieve the supermajority. In districts where a supermajority is possible two strong candidates are paired together in the event the supermajority is not achieved the unelected candidate is guaranteed a position in the ministry of the executive the next time the party controls the executive.

Guatemala, in contrast, has a multitude of parties and party discipline is non-existent. Party proclamations are only made around election season and promises made are forgotten shortly after (Azpuru 2008). In the immediate transition to democracy political parties were severely restricted (hence the semi-democratic nature of the current regime). Even still the parties that did emerge were not strong, did not subscribe to an ideology, fragmented overall, and no dominant party emerged like in Chile (Granados 1992, 100). Guatemalan legislators

[18] A supermajority would occur in one of two situations the same party receives two-thirds of the vote or if both candidates (independently of each other) receive double the vote of the third place candidate.

wield some control over bureaucratic appointments but any appointments made have not been for the benefit of regulations. Patronage appointments are made not to ensure re-election but to simply earn money, vote buying is a common phenomenon in the state (Jonas 1995, 33). Electoral laws also restrict the ability of the indigenous population to be represented at the national level. Each party must achieve a minimum threshold in all the provinces to nominate a candidate for national office (Mumme & Korzetz 1997, 48). Given the high concentration of indigenous peoples in only the Northern provinces, representation of their interests has been negligible. This has led to frictions between the state and the indigenous populace. Many actions are taken without the interests of the locals taken into consideration. For this reason like in Chile the indigenous people have not adhered to national laws. Legislators are given plenty of time to contemplate a bill before it is voted upon. This time is used not to judge the merits of proposed law rather it is to delay votes (Aleman 2006, 133).

The Bureaucracy

Chile has been effective at enacting the legislation it has passed; there have been few rifts between elected officials and the bureaucracy. The bureaucracy is formally controlled by the executive and the budget is determined by the executive which strengthens executive influence over the bureaucracy. As has been stated above many cabinet level positions are granted as a result of risking one's office for the benefit of the

coalition. These positions can be seen as a form of patronage appointments. The difference is that the individuals appointed to these positions are from the same political party and are qualified in policy formation. These two factors greatly distinguish Chile's patronage positions to that of Brazil where patronage appointments lead to incompetent staff and disagreements within the executive branch. In this regard Chile is closer to Costa Rica in its ability to enforce the laws that it passes. This ability is not overwhelmingly seen by the citizenry where only 53 percent, in 2005, believe the state is able to enforce the law (Latino Barometer 2005).

The ministries are directed by an expert in that field and assist the executive and the legislature in formulating policy which correctly addresses potential problems. Many of the experts in the environmental arena came to their positions from the position in the environmental movement which pressured for greater environmental protection during the Pinochet era. Carruthers (2001) has criticized this movement because it has resulted in a "brain drain" within the environmental movement. This change in position has resulted in good policy which has continued to alleviate many environmental problems. Albeit the gradual approach taken by the various ministries takes time and results are not easily noticeable but the institutions need the time to adjust and learn from their mistakes which is possible in Chile. Reform of state programs is plausible which allows for improved policy over time. Despite the rise in

certain environmental indicators the Chilean system is equipped to cope with the deleterious effects of environmental degradation if compelled to do so. The governing elite have been hesitant to enact reform which could alienate the military and possibly lead to another coup[19]. For this reason the Concertacion has intentionally designed policies to prevent the unification of the political parties on the right. This has kept the opposition fragmented and largely unable to prevent the state from pursuing its agenda.

This could easily change though. It is the fear of a military intervention and opposition to Pinochet that has kept the Concertacion unified. Pinochet was increasingly marginalized and the political right made progress in achieving a larger share of the electoral vote in congressional and executive elections. If the Concertacion were to lose the executive the position of executive level appointments would no longer hold and the coalition would be less capable of a unified front. Another weakness is the lack of oversight granted to the legislature *vis a vis* the bureaucracy. The legislature is granted the ability to petition ministers for questioning yet the minister can be as vague as he or she desires (Siavelis 2000, 76). The executive maintains sole control over the removal of ministers. This eliminates the ability of the legislature to reprimand individuals for poor performance. Again the lack of resources

[19] This is not a far fetched possibility in May of 1993 General Pinochet had public buildings in Santiago surrounded by the military in response to human rights investigations. Radical policies could have the same effect.

and staff granted to legislators further hinders oversight capability. Nevertheless, Transparency International has ranked Chile among the least corrupt states in Latin America with one of the most responsive bureaucracies (cited in Siavelis 2000, 94). This is subject to change when the Concertacion coalition loses the executive. Since democracy reemerged the Concertacion has controlled both branches of the state and there have been few issues of conflict between them.

The budgets of the two primary environmental protection agencies are largely dependent on presidential discretion (Berger 1997, 104). Aside from Guatemala being an economically poor state, environmental protection has not been a priority of any of the governing regimes. This is despite the desire of the people for environmental protection. For this reason most financing for environmental projects has come from USAID (ibid, 105).

Political parties in Guatemala are most concerned about patronage appointments not to ensure re-election but simply to earn money (Granados 1992, 103). Civil society can provide oversight of polluting industries by reporting violations to the National Environmental Commission. However, this commission is weak and not well funded to conduct the necessary investigations (Mumme & Korzetz 1997, 52). In addition, the military is the largest benefactor of illegal cutting of timber so any agency workers that attempt to issue citations are physically threatened (Berger 1997). The military once again prevents

environmental protection laws from being enacted with the exception of when there is international involvement. The military is often the only presence of the state in remote regions such as the Peten which is largely inhabited by indigenous but is home to the largest forests in the state (Finley Brook 2007, 104). The fear the indigenous have of the military prevents any oversight of military actions. When the international community is participating in an endeavor the military does not interfere out of fear of repercussions from the international community.

State capacity in Chile and Guatemala is largely hindered by the military. Chile has the capacity to protect the environment but military prerogatives override civilian concerns. Guatemala also has the military as an obstacle but even if the military were not an obstacle the capacity would still be lacking. In Chile there is a bureaucracy that has the human capital and the autonomy needed from the legislature to achieve its mandate. However, the resources of the bureaucracy are controlled by the executive who maintains control over the directors of the various branches and over the budget of the various agencies. Autonomy is hindered in so far as all social policy must begin with the executive. All executives since Pinochet have refused to push social reforms out of fear of military retribution. There is no life tenure system in place as is the case in Brazil however the expertise accumulated in the bureaucracy and the appointment of a cabinet member midway through an executive's term do grant the bureaucracy the autonomy needed to conduct its

affairs with impartiality. The problem with the Chilean system is fear of reprisals from the military. It is this omnipresent fear that prevents reform from taking place. Guatemala lacks capacity in every way possible. There is a dearth of expertise in the bureaucracy and unwillingness among the political elite to engage in reform. Similar to Chile this reluctance for reform is due to fear of military intervention. However, without the military there would still be the fragmented party system and the common practice of clientelism. Guatemala is the archetype of a "personalist" state (Weyland 1994). This is when actors within the state perform duties to enrich themselves not society as a whole (universalist) or even particular segments of society (segmentalists). Rampant corruption at all levels of the state would also prevent reform from occurring.

Civil Society

As has been stated civil society groups are often thought to be most effective when there are multiple avenues to influence policy. However, with power concentrated in the executive and that branch's unwillingness to alienate the business elite environmental pressure has faced stiff resistance. For this reason most pressure for greater environmental protection has come from abroad. Reasons for protecting the environment are more the result of projecting an international image than a true desire to protect the environment. It is believed free trade agreements will require stricter environmental protection as a result

Chile has continued the policies begun by Pinochet. The bi-lateral trade pact the United States has in place with Chile did not require stricter regulations it has simply required enforcement which Chile has done (AJIL 2003). Chile has lacked autonomous organizations willing to press the state on behalf of the people since democracy re-emerged (Oxhorn 1994, 63). The system that has emerged in Chile is largely identified by the strength of political parties and the imbalance of power between the executive and legislature. These two factors coupled with the hesitance to alienate the business elite have led to the marginalization of civil society groups which push for greater social welfare policies. Most experts left civil society groups to work for the state yet these people have served to implement policy not draft policy (Lambrou 1997, 112). The role that environmental organizations have been relegated to is monitoring compliance with laws. However, with the limited ability of the legislature to compel the executive to enforce the law this role has minimal significance.

Guatemalan civil society organizations like those in Chile encompassed many views and objectives. However, the transfer of power in Chile led to the incorporation of environmentalists within the state this has not been the case in Guatemala. Guatemalan environmentalists had just as much success under civilian rule as they had under authoritarian rule which is to say success has been elusive. Environmentalists joined the state and attempted to establish policy and

carry it out but as stated above most endeavors were met with objection by the military and the traditional elite. For this reason the relationship has not lasted and civil society organizations have been called upon by the state on an *ad hoc* basis to implement certain policies (Berger 1997, 114). Civil society is also expected to be able to contribute to better policy by mobilizing the masses but mass mobilization is sparse in Guatemala simply for safety reasons (Booth 2000, 60). Repression of social movements is still common in Guatemala and repression is not restricted to the indigenous. Gibson and Lehoucq (2003) found that the priority of local officials is water, education, and energy production (40-41). The emphasis on education is an avenue that civil society can use to educate the public about the benefits of environmental preservation as has been the case in Costa Rica. However, the fragmented nature of civil society has prevented such efforts from emerging. Furthermore, even if there was organization the military restricts all aspects of the policy process in addition to the implementation of policy. Therefore, the main influence area is the military which has completely ignored the environment in favor of economic development which benefits themselves in addition to the landed elite.

Conclusions

The comparison of a democratic state with a semi-democratic state has shown that as democracy emerges the importance of environmental protection increases. This comparison has shown the complete neglect of the environment by a military regime and a regime that does not necessarily want to protect the environment but has been forced to by international demands. Such demands have not been imposed upon Guatemala simply because human rights have been the priority of the international community. The belief that democracies will do a better job at protecting the environment is apparent if only for the disregard of an authoritarian rule. Conditions have steadily gotten worse in Guatemala even after the transition to democracy whereas conditions have gotten better in Chile on some indicators (see table 4). The reason for the improvement on some indicators and not others is the emphasis given to international demands. The international community has consistently placed greater emphasis on deforestation and less on local conditions. The same is true for Guatemala all international attention has been focused on deforestation and not on water sanitation which is the main priority of municipal governments.

Guatemala and Chile represent two ends of a continuum. Chile is among the richer states in all of Latin America while Guatemala is at the lower end of the spectrum. Guatemala can hardly be considered democratic while Chile has certain undemocratic features. However, the

democratic features that Chile does have has allowed for the successful petition of international NGOs in collaboration with local groups to ensure the continued protection of the environment. In contrast with the subservience of all branches of the state to military interests no organizations have been able to successfully implement environmental programs of any kind.

CHAPTER 5

SUMMARY AND CONCLUSIONS

This work began by exploring a single topic – the relationship between democracy and the environment. A few things have been discovered along the way about what democracy is and is not. It has been shown that the relationship between democracy and the environment is contingent on a few factors which are reviewed below.

The Importance of Institutions

Advocates of democracy often conceptualize democracy to be a panacea. This ignores political reality as it assumes all democratic states are representative when they are not. As the cases of Brazil and Chile show a state can be democratic and still not represent the interests of the masses. The two states do not reflect public opinion for different reasons though. Brazil is incapable of reflecting the interests of the people as a result of weak party systems; whereas Chile does not as a result of an excessive concentration of power within the executive branch. These cases show how the representative nature of democracy is contingent on the distribution of powers within the state. The founding of a state can largely determine how representative the state will be. Transitions take form a number of ways. There is transition from above whereby the political elite grant democracy to the population (i.e. Argentina and Chile) there is transition from below whereby the masses

have forced democratization despite objections from the elite (e.g. Venezuela and Mexico). These two processes typify Latin America however the latter is especially problematic because when democratization from above occurs there are individuals who know they can control the process. This is clearly the case with the transition for Chile where Pinochet knew he could shape the outcome of democracy to suit his interests. He may not have won the presidency but the democracy that emerged was largely his creation and not against his best interests. With democratization from below actors vying for political power are working behind John Rawl's "veil of ignorance" (1971). When this takes place a more just and open society can be expected to emerge. However, the states that have been most stable in Latin America have been transitions from above (Karl 1990, 9). In most instances actors do know their relative strength which makes bargaining and compromise more difficult if a group has too much power it can be expected that the political system that emerges will benefit that group more so than others.

In short the advocates of democracy focus too much on an idealized form of what democracy should be and not on what democracy is. Simply because a state has the procedural requirements of democracy does not guarantee the state will reflect the interests of the masses. State's that lack representativeness will not perform the function that Payne and others predict.

The case studies show the importance that political institutions have in shaping the environmental agenda. Many advocates of environmental protection propose working at the grass roots level to further the cause of environmental protection. However, the central government is where an abundance of resources lie. Even in states that grant strong powers to the local government power tends to shift toward the central government as has been the case in Costa Rica and the United States. This is not to say that grass root initiatives are futile it is simply to say greater power is centered in the central government. Therefore, it is at the federal level that petitions must take place.

The case of Brazil shows how institutional gridlock and rent seeking inhibit the ability of a democratic state with the resources and the will from protecting the environment. In other words, limited state capacity and institutional weakness at all levels have prevented civil society organizations from petitioning the state as effectively as democratic theorists predict. It also shows the importance of strong political parties in the democratic process. Guatemala is another example of weak political parties that if organized and disciplined might be able to counter the influence of the military in social affairs. This work agrees with Mainwaring and Scully (1995) insofar that parties "put order into what would otherwise be a cacophony of dissonant conflicts" (3). The strength of political parties has been to a large degree the source of state capacity in Chile and Costa Rica.

Do Democracies Protect the Environment Better?

The statistical analysis shows that democracies do not protect the environment better than non-democracies. However, the statistical analysis cannot account for the distribution of power within the state and the role that political institutions have on the policy process. This resulted in the needed for qualitative research. The case studies provided show that a regime dominated by the military (Guatemala) gives no regard to environment protection. The Guatemalan state has continually acted contrary to conservation efforts as a result of its reliance on a resource economy. Chile, which is also heavily dependent on its natural resources, is more democratic than Guatemala and has greater state capacity. However, in absolute terms Chile has degraded its environment more than Guatemala has. It must be taken into account though that economic development inherently requires pollution. There is no doubt that Guatemala, if the opportunity arose, would pollute just as much as Chile for economic gain. The environmental data indicate that pollution has continued to increase in Guatemala while Chilean data has mixed results. The mixed results of Chile indicate that given proper incentives it does have the capacity to protect the environment. The substantive difference is that Chile is attempting to protect the environment while Guatemala is not.

An even more democratic country than Chile is Brazil. Brazil has the capacity and the demand among the population to protect the environment. However, Brazil has not protected the environment as much as theorists predict. This is a result of the fragmented nature of the political system. In Chile there is too much power concentrated in the executive whereas Brazil has too much power concentrated in the legislature and local government. The Brazilian executive is unable to get legislation passed as a result of weak parties. The bureaucracy is used for rent seeking and maintains too much autonomy from elected officials. Bureaucrats are difficult to remove and appointments are the result of patronage not merit. In the Brazilian context the fragmented nature of the political system has led to clientelistic behavior in all sources of influence. As a result, the landed elite have continued to dominate the political process and ensure their interests are not adversely affected.

The most democratic of all the states studied herein is Costa Rica which has protected the environment more than any of the other states. This is the result of an equal balance of power between the executive and legislature which necessitates cooperation among branches to ensure objectives are met regardless of which party controls either branch. When democratic theorists are advocating the benefits of democracy Costa Rica is the idealized state that is being referred to. The state has the resources in terms of human capital and the demand from the populace to protect the environment and it has responded. Civil society

organizations have been effective at monitoring enforcement of regulations and at pushing environmental conservation initiatives. This is possible for two reasons. The first is there are several sources of influence as the legislature, the executive, and bureaucratic agencies are all susceptible to public pressure. The multiple avenues of influence are a key factor lacking in both Chile and Guatemala. The second reason is the lack of a threat from the military which is non-existent in Costa Rica. Civil society is able to be effective because reform is possible in Costa Rica. The ability to reform is in many ways a key variable to assure environmental protection. Reform is something done either sparingly as is the case with Guatemala or difficult to achieve as is the case with Brazil and Chile.

The cases above demonstrate the importance that institutions have on environmental protection. Without a system amenable to reform improvements in the environmental arena will not be possible simply because agencies will be unable to correct their mistakes. A legislature responsive to citizen demands is necessary for reform of any kind to come to fruition. The weak legislatures in Guatemala and Chile demonstrate the inability of civil society to petition the government. Brazil does not have a weak legislature rather it has a legislature that serve only particular segments of the population with no regard for government efficiency.

What Does this Mean for Democracy?

Democracy is an essentially contested concept. Just about every scholar has a different definition of the term. Democracy as the introduction demonstrations can be operationalized in a number of different ways. There are dichotomous forms, trichotomous forms, and scores along a number line ranging from negative 10 to plus 10, and from zero to one hundred. There are states that are clearly authoritarian (i.e. the Congo under Mobutu; Liberia under Taylor) however even these states represented the interests of some segments of the population. For instance the United States is categorized as a democracy in the 1800s by the Polity dataset despite widespread restrictions on suffrage; whereas South Africa during apartheid was considered semi-democratic for the same restrictions. What is the difference?

Many datasets continue to use a retrospective standard judging democracies based on the standards of their day not based upon procedural requirements (Paxton 2000). Such measures are underspecified and lead to confusion as to the transition to democracy. Democracy is best viewed along a never ending continuum. By viewing democracy along a never ending continuum we can account for gradations of democracy over time within the state and notice substantive differences in "representativeness." States should not be judged undemocratic simply because they do not meet the standards of the day; rather they should be judged based on their own history with

democracy. If a state has suffrage restricted based upon class but the next year eliminate that restriction they are clearly more democratic despite maintaining other restrictions. Democracy itself is in constant flux and as a result must be considered on a continuum that will never end (Markoff 1996). Mainwaring et al (2007) acknowledge the constant changes in democracy and the difficulty in classifying representativeness but refuse to attempt the measurement due to the high degree of difficulty (128).

While there are various gradations of democracy there are two discernible types of democracy. These are representative democracy and procedural democracy. The former is procedural yet it entails a representative function not inherent in the latter. Representative democracies are those democracies where public opinion matters. Procedural democracy has the electoral and civil liberties needed for elected officials to have legitimacy from the masses but without institutions responsive to the masses they cannot be considered representative. Several indices measure procedural democracy but none measure representativeness. For this reason statistical analysis that attempt to use democracy as an explanatory variable will have misleading results. The absence of an index that measures representativeness necessitates qualitative research to determine the source of responsive and effective government.

Conclusions

This study has shown that the establishment of a democratic state does not guarantee environmental protection. However, it should be clear that environmental protection will not be provided under authoritarian rule either. The military regime of Guatemala gives no regard to the environment and the Chilean military regime only protected the environment due to international pressure. The four case studies have differing levels of democracy and differing levels of environmental protection. It is noticeable that given the proper institutional structure, the resources, along with the demand for environmental protection democracies will protect the environment better than less democratic states. There are a number of prerequisites for environmental protection to occur. The first is the state must have the economic resources to make protection feasible, second is the citizenry demanding such protection, and finally is a state responsive to the populace. The final requirement makes democracy a *necessary* but not a *sufficient* condition for environmental protection.

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