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Darcy Sharp

Diversity on Earth, Diversity in Policy: A Comparison of the Styles of Environmental Governance

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Abstract

This paper examines the two main styles of environmental policies governments implement globally: protective and exploitive. It evaluates the effectiveness of both approaches as well as projects their popularity in upcoming years through analyzing individual policies, the national implementation methods, and the international community's reception. The focus will be case studies of Bolivia, the first country in the world to grant the Earth its own legal rights, and Brazil, which continues to exploit the scarce natural resources of the Earth in a bid to improve its economy. Both states are attempting to improve their citizens' lives, yet they reflect a stark policy contrast, allowing effective evaluation of the environmental policy styles in an applied setting.

Introduction

Four oceans with different salinities and creatures teeming under their waves; seven continents that host habitats ranging from icy tundra to lush river valleys; jungles and deserts, plains and mountains; sparsely populated steppes as well as cities with billions of people crowded into the streets; and over nine hundred thousand different types of insects alone… this planet called Earth is filled with diversity. Very few people will disagree that, of the more than one million species on this planet, humans are the most successful in terms of domination, and that they decide the fate of the Earth and her resources for good or ill. Humanity itself comes in a hundred thousand different shades, and within every single one of the seven-plus billion individuals living in the world today, a free and independent mind exists with its own unique ideas, code of conduct, and belief system. This paper studies governments, their actions, the effects on their own citizens, the effects on the people of the world around them, and the effects on future generations, effects which can affect the diversity of species and people's development in a myriad of ways.

The concurrent environmental opinions held by governments can be compressed into two general trends. The two main tendencies of environmental policies are either protective or exploitive in nature and this paper will examine two representative countries: Brazil (exploitive) and Bolivia (protective).

Both protective and exploitive ideologies are matters of international contention. There are many interested actors, including intergovernmental organizations such as the United Nations (IGOs); non-governmental organizations (NGOs), which are typically composed of private citizens and can be national or international in scope; and multinational corporations (MNCs), which are profit-seeking transnational enterprises. These entities seek to influence the environmental stances of various governments in the world.

While all of the aforementioned external influences shape the individual environmental policies of countries, a myriad of internal factors affect a country's policymaking, including, but not limited to, a country's history of independence and sovereignty, its economy, and its leadership initiatives in policymaking. Niccolò Machiavelli once wrote that "The one who adapts his policy to the times prospers, and likewise that the one

whose policy clashes with the demands of the times does not" (Coyle, ed., 2013). In using Machiavelli's belief as a guide and given that each nation's set of circumstances is unique, the following questions should be answered in this study: 1) How are protective and exploitive approaches different?, 2) How do protective and exploitive environmental policies manifest in the governance of states globally?, 3) Which policy style more expresses the sentiments of the international community?, and 4) Which style is likely to become the future global trend?

This paper does not consider the actual environmental ramifications of these policies and which policy ideology is better, as the term is highly contestable. Instead, the paper addresses the effectiveness of the policies individually and attempts to trace the trends' developments within international politics.

The Existing Schools of Thought on Environmental Policy and Research

Exploitive environmental policies have historically been an international tradition, reaching their zenith during the English Industrial Revolution. Exploitive policies refer to those that are mainly concerned with extraction of resources from Earth, de-emphasizing the conservation of resources, preservation of wilderness, and environmental quality improvements. The basic tenets of this policy style stress the economic possibilities within the environment, focusing on the possibilities of human expansion, expanding those economic possibilities, and improving human quality of life.

According to Ugelow and Walter, many of the more economically developed states are pressuring less developed states to temper practices considered environmentally harmful, such as burning cheap fossil fuels in factories while ignoring carbon emissions standards or logging in rainforests such as the Amazon Basin (Walter and Ugelow, 1979). Exploitive environmental policies produce a much lower short-run cost, allowing countries to stabilize their economies more rapidly and efficiently than protective policies. This situation often prompts developing states to question the true motives behind protective policy adoption requests from the more developed countries, given that these countries urging conservation usually used exploitive practices during their own economic development (Ellison, 2014).

Protective policies, conversely, emphasize the sustainability of natural resources and protecting biodiversity (Hatch, 2005). Protective

environmental policymaking is both very new and very old. Many cultures around the world, such as the Sioux of the American West who required all buffalo appendages to be used productively in an attempt to preempt over-hunting, and some Amazonian tribes that practiced crop rotation to avoid subsurface nutrient deficiencies, have practiced protective policies for generations (Bruns, 2012).

However, as an international movement in protective policy making, it is much more recent, rising in popularity in the 1960s, with major inspiration coming from Rachel Carson's revolutionary work, Silent Spring. The basic tenets of protective-style policymaking reside in the opinion that the Earth's bounty is found in more than those aspects that can be commoditized. This can take either an eco-centric view, that the Earth itself has rights and should be protected, or (the more common) anthropocentric view, that people need to preserve the Earth for future generations to enjoy (Kirkman, 2002).

Another anthropocentric view concerning protective policy proponents is a new branch of environmental research known as environmental security. Environmental security as a research area concerns human security in response to environmental changes (Detraz, 2011). Climate change and increased human consumption are leading to water shortages in many places, which could conceivably lead to increased violence as various groups of people struggle to survive. Environmental security researchers are concerned with the possible human conflict that might arise from these resource shortages (Detraz, 2011). To lessen the likelihood of potential conflicts, proponents of this approach recommend that states and the international system enact policies that embody protective environmental policymaking, so that critical amounts in the clean water and fresh air of human habituated regions are exceeded (Cleveland et al, 2001). A recurring theme in this situation is the disconnection between the policy makers and the people, who are unable to make informed decisions on environmental policies due to their limited knowledge of all other contributing factors.

Explanation of Methods

The two countries chosen are the Plurinational State of Bolivia, herein referred to as Bolivia, and the Federal Republic of Brazil, referred to as Brazil. These countries were selected due to their contrasting environmental policy styles and their regional comparability. Bolivia and

Brazil are both Latin American countries, and while having many unique aspects to their cultures, both are members of many of the same IGOs and NGOs, such as the Latin American Integration Association (ALADI, 2014). They are both classified as developing countries, or peripheral countries according to world systems theory, meaning that they are not in possession of many of the economic resources taken for granted by the core states such as the United States (Wallerstein, 1976). Both struggle against national poverty and pressures from international debtors and their environmental policies must be considered in accordance with developmental goals (Kaimowitz, 1996). Both states have a similar colonial history where many of their policy decisions were made by other countries that did not seek either state's best interests. They differ greatly in size, which might be problematic, however, that fact is far outweighed by the other similarities.

Environmentally, the international community has chastised both countries for unsavory environmental practices, and both have responded differently. Brazil, in line with the exploitive environmental school of thought, continues to engage in extensive logging and expansion of soybean cultivation and other agricultural products into the Amazon rainforest (Perez, 2007). Bolivia, conversely, is making a noticeable effort to develop more protective environmental practices, especially concerning sustainable development (Purdy, 2007). Their economic standings also greatly differ, reflecting the benefits and costs of the two policy styles while also demonstrating the two policy mindsets.

First Case Study: Brazil, Exploitive Policy in Action

A Historical Overview

While the purpose of this paper is to assess the different types of environmental policymaking, the political history of the two countries being analyzed remains relevant. Many scholars agree that the effects of colonization can persist in affecting policy decisions even after the country has achieved independence (Marker, 2003). These colonies were accustomed to trading with their former occupiers, even as they fought to form unique national identities (Marker, 2003). Some of these difficulties were predicted in Emmanuel Wallerstein's world systems theory and can constitute a dependency cycle. Often, former colonies go through their own industrial revolutions as they struggle with enhancing their production potential (Escobar, 1995).

Brazil, with the largest surface area of any South American country, has not always had autonomous political control, as it was colonized by a more developed state: Portugal.

Originally, the Portuguese discovered few natural resources that could be traded to further economic goals. Instead, they used Brazil as a new land for refugees fleeing from Portugal's own economic crisis. The only resource of any real export value was the wood of the brazil tree which creates a rich red dye. Exploitation of this resource started Brazil's tradition of allowing the forestry industry to operate unconditionally (Brazil, 2011). Gold was discovered in the 1690s, and Brazil experienced a gold rush, similar to the California and Alaska gold rushes later experienced by the United States. As the world approached the 18th century, however, it became clear that the gold deposits were limited and that, for the Portuguese at least, the abundant natural plant life of Brazil, as well as the ease of developing agriculture due to the climate and soil, remained the main assets of production. When Brazil finally achieved its independence in 1821, it boasted very few industrial assets, despite the Industrial Revolution which was occurring in Europe and America (Brazil, 2011).

Coffee and sugar became the two major industries of Brazil, dominating the economy and political system. In fact, in the 1800s, coffee magnates had enough power to help co-ordinate a military uprising, which ousted the traditional imperialist model, where a foreign government ruled. The new model was centered around commercial interests, specifically the coffee planters, serving as the de facto rulers of the country through a puppet government (Brazil, 2011). Due to the instability of economic factors and lack of governmental oversight, when the world entered the Great Depression, in roughly the 1930s, Brazil was particularly hard hit, setting the stage for exploitative environmental policy decisions to be made in an effort to catch up once more (Brazil, 2011).

The Environmental Problems Faced by Brazil

Brazil is a crucial state in regards to the planet's biodiversity and forest retention. Brazil has the largest amount of both tropical and primary forests and the second largest area of forest cover in the world, some 477 million hectares (Carvalho, 2006). Approximately 95 percent of Brazil's forest is located within the Amazon Basin, which also spills into Bolivia, Ecuador, French Guyana, Guyana, Peru, Colombia, Suriname, and Vene-

zuela. This means that any problem/attitude toward the forest has the potential to spread beyond Brazil's borders and cause conflict between Brazil and these other South American countries (McDermott et al, 2010).

In 2006, the Brazilian Amazon was broken up into five sections, each controlled by a different power group. See Figure 1 below.

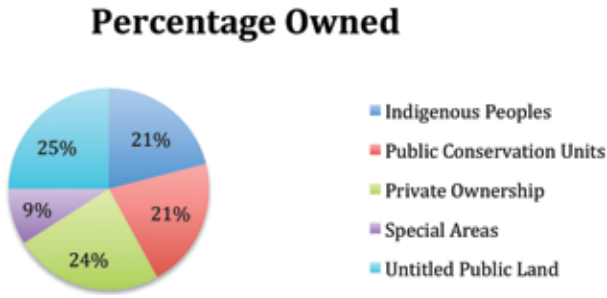

Figure 1.

As a result of massive deforestation, (for example, the Atlantic forest has gone from 120 million hectares to 10 million hectares in the last two decades (Gromko, 2013)), there have been large, negative effects on the world's biodiversity. The Amazon Rainforest is home to thousands of species of animals and plants which are found nowhere else in the world and account for 10 percent of the world's biodiversity ("Ecosystem Profile: Atlantic Forest Biodiversity Hotspot," 2001). Several of these species, some of which are extremely well-known such as the jaguar, giant anteaters, and spider monkeys, are counted as virtually extinct (Canale et al, 2012). In an exhaustive scientific study concluded in 2012, researchers examining almost 200 individual forest patches found only 767 mammal species out of an expected 3,528, indicating a staggering and unprecedented rate of extinction (Canale et al, 2012).

This loss in biodiversity is troubling for two main reasons. The first is that it contributes to global warming and climate change (Rich, 1999). The second is that scientists quite frequently use animal and plant by-products and systems to create products which greatly help humanity. These can include medication, such as making anti-toxin from distilled snake venom, and construction products such as modified steel cable fashioned after spider-silk.

Deforestation and its effects are not the only environmental problems facing Brazil. To the west, near the Bolivian border, the massive Pantanal wetlands are being drained in the name of hydroelectric power,

which is less costly, in monetary terms, to produce than other forms of energy, such as solar. Hydroelectric power can also be less harmful to the environment than burning fossil fuels; however, the cost of destroying an entire eco-system in order to produce it is a cost that is not currently being considered by the Brazilian government (United Nations University, 2008). Another challenge lies in the fact that drought a decade ago in the drier, northeastern portion of the country has turned almost 3 million hectares of forest into complete desert, further contributing to the deforestation of other regions besides the Amazon Basin. In addition, a population spike, despite the move outwards into the agrarian sector, in the major cities of Sao Paulo and Rio de Janiero has contributed to polluted water sources, which have had the effect of spreading disease throughout the population (Petta et al, 2013).

Policy: International and Domestic

Despite Brazil's pro-exploitive policy stance, to be further established and explained in the following section, the government has been a party to several international environmental protective international agreements. Though this might seem promising at first glance, it is important to note that many other countries have also signed these agreements and continue to exemplify exploitive policy-making. For example, China has signed several of these international agreements, and yet so little has been done to curb air pollution that the government has recently erected giant screens in Bejing designed to display the sunrise as it is now impossible to see the actual thing within the city limits due to the constant smog (Nye, 2014).

This is not to say that these international agreements are useless, because participation can prove to be a useful indicator as to a country's internal policy. It can also indicate the perceived political pressures both internal and external on a country, the possible trends in the development of policy-making, and the direction of international relations between specific countries. They also serve as indicators of international opinion and can be used to hold states accountable, depending on the wording of the original agreement and how far the international community wants to pursue matters (Chasek et al, 2011).

It is also important to look at agreements between just a few states, as these tend to be both more effectively monitored and more focused than those signed by large numbers of countries worldwide. Brazil has opened

dialogue with the European Union (EU), one of the more protective policy-based regions in the world. The EU has promised to send aid to Brazil in return for "improved" environmental policy, meaning a slightly more protective stance ("Trade: Brazil," 2013).

This might give the impression that Brazil has a protective policy stance but, before that assessment can be made, it is more important to look at a country's internal policy than at its international stance. To bridge between the external and the internal, we will look first at trade relations.

Trade agreements affect environmental policy in two ways. First, if one country refuses to work with another, it is usually because of either a specific disagreement between governments or because the first country does not agree with some aspect of the second's domestic policy. Often there is a human rights or security stance at issue, such as the United States' trade sanctions on Iran because of their developing nuclear program. However, as environmental concerns gain clarity through scientific development, the potential rises for environmental policy differences to become a trade issue (Jackson, 1992). Second, if a country has an industry that is particularly exploitive environmentally, such as the agriculture industry in Brazil, and then it establishes a trade agreement relying on that same industry, it indicates that a systematic industry overhaul and reform are not necessarily a priority.

Brazil, despite having relatively few environmental agreements with the EU, is the EU's largest Latin American trading partner, taking a full 37 percent of regional EU trade and 43% of EU investment (this includes privately-owned companies as well as governmental). This is especially relevant to this paper in regards to the fact that Brazil is EU's single largest source for agricultural goods (European Commission, 2013).

Brazil is also a member of Mercosur, a Latin American based trade group, and the World Trade Organization (European Commission, 2013). These organizations help broker a great many of Brazil's trade agreements and the negotiations around said agreements (European Commission, 2013). Almost all of Brazil's trade agreements rely on their agricultural and logging industries and do not, in return, offer to help increase the ability of the country to sustainably harvest/maintain their environments. (European Commission, 2013).

In 2012, the Brazilian Congress presented and passed the "Forest Code", a new set of laws which, in the words of Joao Capobianco, the former under-minister of Brazil's Ministry of the Environment, means "am-

nesty for people who cut down forests, [reduces] permanently preserved areas…and encourages new deforestation." Essentially, the new code eliminated many of the existing laws, especially on private lands, that restricted the amount of lumber that could be cut per year. It also cut deeply into the land rights of the indigenous populations, all the while lessening the penalty for those caught breaking the few surviving laws from possible jail to a hefty fine (Capobianco, 2012).

While Brazil does have a Ministry of the Environment, it does not wield very much power, either political or legal. If the President wishes, he or she can expand the Ministry's ability to protect the environment, but many crucial factors that affect the environment, such as agricultural practices, are technically under other departments. This greatly lessens the ability of even the most protective of minister's power to change policy in the light of a less than friendly administration (Capobianco, 2012).

Capobainco described Brazil's transition toward a more protective stance in the 1990s, mentioning several different protective policies pushed by the presidential administration including, but not limited to, attempting to expand the amount of sustainable farming practices, which took almost fourteen years to push through completely, and increasing the punishment for illegal logging, which took twelve years (Capobianco, 2012). This was a departure from Brazil's historical policy, and it has reverted to its exploitive style decision making under more recent administrations, particularly Dilma Rouseff. The former Minister of the Environment actually resigned under the current administration of President Dilma Rouseff due to the losing battle she felt she faced in trying to push any sort of protective environmental stance on both the Congress, which has historically resisted protective environmental policy, and President Rouseff herself (Capobianco, 2012).

President Rouseff is considered disinterested in environmentalism, approving practices that further the process of deforestation and destruction of ecosystems. These include pursuing hydroelectric projects that destroy the wetlands and loosening prior restrictions on logging and sustainable farming in the major agricultural districts (Rapoza, 2012).

In summation, Brazil's environmental policy has been almost exclusively exploitive throughout its history, both during the colonial days and as an independent state. There have been brief and relatively weak efforts made toward conservative use of resources, particularly during the 1990s when there was a pro-conservation administration in power and as a

part of international accords which have been ratified but largely unimplemented.

Reception and Exceptions

The movements and decisions of governments are not isolated or trapped in a bubble. Governmental policy does not just affect one group of people, or even one state's worth of people. In this increasingly connected, highly globalized world, the policy of one country can create a ripple effect that touches the people of other countries regardless of intent. Environmental policy decisions are no different. In fact, they can be considered even less isolated than any other policy as there is no way to keep them from affecting other countries. Air and water pollution will not stay simply in the country of origin but will travel to neighboring states. So, how are people reacting to Brazil's exploitive stance?

The world at large has given some very critical responses to Brazil's decisions. In recent years, the British paper The Guardian as well as The New York Times have both written scathing articles. The New York Times went so far as to question if Brazil's policies would lead to environmental problems for the entire world (Barrionuevo, 2012). The Guardian was a bit more reserved in its judgments, but still pointed out the necessity of Brazil shifting to a protective stance (Branford, 2014). This sentiment was echoed by Forbes magazine (Rapoza, 2012). Several scientists have written in journals as diverse as the online journal Environmental Protection to Ecological Applications to the Journal of Environmental Law, largely condemning the current, and historic, policy path from both a political viewpoint and a purely scientific stance. There are several international NGOs at work inside of Brazil, such as the World Wildlife Fund and the Institute for Environmental Research of the Amazon, attempting to create a more protective-policy friendly environment within the body of Brazilian lawmakers. Their goals are largely twofold, aiming both to stop Congress from passing new, exploitive laws and to lobby the president to expand the power of the Ministry of the Environment (Rapoza, 2012). These NGOs have not, however, been as successful at lobbying as the powerful agricultural interests within the country (Capobianco, 2012).

It is not just outsiders who are expressing displeasure at Brazil's policy, both current and historical. Brazilians themselves have been increasingly prone to vote for lawmakers who promise at least some sort of protective stance, even if they later deviate from it in action (Echegaray,

2013). In recent polls conducted by Market Analysis and the Brazilian Ministry of the Environment, over 90 percent of Brazilians believe that air pollution, biodiversity damage, global warming, and water-source degradation rate are very serious problems for both national policy and global concern (Brazilian Ministry of the Environment, 2012). This is actually 30 percent higher than the international average (Echegaray, 2013). Over 70 percent of citizens show an interest in corporate responsibility and sustainability, while over 50 percent say that they would pay more money in return for a sustainably made product ("Ministério Do Meio Ambiente," 2012). Those polled said that they would prefer it if their government started placing the environment over profit, and that they would support wide scale reform of the recycling process (Echegaray, 2013).

With such strong numbers, one might expect there to be other indicators of the power of majority opinion but such indicators simply are not there. There has been no mass public outrage at the new laws nor have there been any large scale protests over existing policy. One might also look for consumer action, such as boycotts or switching brands to reward the more sustainable companies in existence. However, less than 20 percent of all Brazilian consumers participate in such consumer action. Seventy percent of Brazilian households do not even take advantage of the existing waste management/recycling programs that aim for some level of environmental protection. This could be due to either apathy or simple lack of education, but it is most likely a mixture of both (Oliver, 2014).

This dichotomy presents an interesting conundrum when studying Brazilian reactions to its exploitive environmental policy. The general trend in thought appears to be toward a more protective stance, but the general trend in action is toward maintenance of the status quo. Many Brazilians tend to take full advantage of the improved economy while harboring the opinion that it should not be so immediately destructive.

To some degree, Brazil does guarantee the safety of certain areas of forest, an exception to the exploitive policy. The Tumucumaque National Park is one of the largest preserves in the world. Additionally, Brazil's indigenous tribes have historically had some measure of control over practices on their lands (Capobianco, 2012). However, these policies are in flux right now as the government argues over the scope of the new regulations (or deregulations) and how much of the forest will continue to be protected remains to be seen.

Before we attempt to draw conclusions, however, from Brazil's

policy, it is important that we get the full picture. To do this, we must move into our next case study, an example of protective policy and examine it in the same lights as we did Brazil's exploitive policy.

Second Case Study: Bolivia, Protective Policy in Action

A Historical Overview

Both Bolivia and Brazil have incredibly rich histories before, during, and after periods of European colonization. In so far as geographic area is concerned, Bolivia is much smaller than Brazil, measuring about 418,683 square miles, making it about the size of the combined states of Texas and California ("Bolivia Overview," 2013). Like Brazil however, Bolivia has had to work hard in an attempt to catch up in the global economy with more highly developed countries, partially because, while other countries were setting out to become players in the global economy, Bolivia, like many former colonies, was going through a period of great tension as it struggled to work out how it would determine its future as a newly independent state (Piette, 2009).

Bolivia was once inhabited by indigenous people who constructed advanced, agrarian-based societies with durable cities, many of which are still in existence. ("History of Bolivia: Ancient History"). Then, in 1532, the Spanish conquistador Francisco Pizarro claimed the land that is now Bolivia for Spain. The primary interest of the Spanish was in discovery of precious metals, especially gold. Following the complete subjugation of the natives, Spain dominated the area for close to 300 years. During this time, many natives were forced to work as slaves. A class system developed wherein Europeans and their descendants were favored by laws and custom. This history of division, which differentiates between indigenous peoples and the lighter skinned descendants of Europeans, still affects Bolivia today. ("History of Bolivia: Colonial Era"). Bolivia finally achieved independence in 1825, in large part due to the work of a revolutionary named Simon Bolivar, from whom the country also elected to take its name (Piette, 2009).

In the days of Spanish rule, Bolivia's major export to the Spanish empire was silver, and the country remained highly dependent on mineral exports for many years after independence, becoming the major exporter of tin to the Allied forces during World War II (Encyclopedia of Nations, 2014). However, the mining industry is completely dependent on the global market for certain minerals. Bolivia's mining has dropped off as

the global demand for its exports has decreased, which has, in turn, caused a period of fairly widespread unemployment. Bolivia has struggled economically, having been classified as a "highly indebted, poor country" in 2001 by both the World Bank and the International Monetary Fund (IMF) and receiving full assistance from the World Bank as it meets the World Bank's requirements for aid (World Bank, 2001). Since 2001, the country has made a strong attempt to diversify its economy, with oil and natural gas becoming key exports.

Agriculture has also emerged as a large sector, especially in the eastern regions of the country which are more agriculturally productive. This region is particularly suited to the growth of soybeans, Bolivia's main agricultural export ("Bolivia Overview"). While the country struggled for a time with illegal coca production (a basis for the narcotic cocaine), which harmed the overall economy in the country, that problem is being fought on many fronts due to the current regime's strong stance on the subject (Carroll, 2011).

Bolivia is also expanding its tourism industry, and has achieved prominence in what is becoming a swiftly growing sub-section of that industry: ecotourism. The country has several sought-after destinations for the ecotourist, such as Chalalán Ecolodge (Conservation International, 2014). This diversification of the economy has led to a slow but encouraging rise in overall GDP and annual per cap-ita income ("Bolivia Overview").

The Environmental Problems Faced by Bolivia

Bolivia has an incredibly diverse landscape. It is ranked as one of the eight countries of the world with the highest amount of biodiversity, encompassing about 3.5 percent of the world's rainforests. Living in the country are almost 3,000 species of vertebrates and more than 20,000 species of plants, 106 of which are found nowhere else in the world ("Bolivian Biodiversity").

Many of Bolivia's environmental concerns originate with the mining industry, especially when one takes into consideration the fact that Bolivia spent centuries with mining as the main source of national income. Bolivia is also home to an estimated half of the world's lithium reserves, has the second-largest proven gas reserves in South America, second only to Venezuela's, and is also home to the Mutún mine, an iron ore mine that promises to become the largest iron mine on Earth (Farthing, 2014).

Bolivia's environmental problems are largely related to the mining industry, especially since, before they began to be nationalized, they were all privately owned. There was very little governmental oversight of the mines, and conservation of the environment was not given a high priority by mine owners. Between 1990 and 2000, Bolivia lost an average of 270,400 hectares of forest per year, which is an average annual deforestation rate of 0.43% (Mongabay, 2006). While, due to the remote regions of Bolivia's interior, the loss of biodiversity is most likely not as staggering as Brazil's, it has proven difficult for researchers to form a complete picture of the toll enacted on the biodiversity of the region.

Other environmental difficulties that Bolivia has faced in recent history include a violent crisis related to water and water security. Cochabamba, Bolivia's third largest city, is located on what was once a lush valley in the Andes mountains. Though it remains an agricultural center for the country, a mixture of environmental damage, climate change, and population sprawl has made the area much drier than can be sustainably maintained ("Water War in Bolivia," 2000).

Bolivia also struggles with the long-term effects of unsustainable agricultural practices, primarily the slash and burn method of agriculture, as well as methods employed by the illegal coca industry (Cook, 2013). Some of the negative environmental effects caused by these farming practices include erosion and pollution of the water used for drinking and irrigation. The farms used primarily for export crops are more closely monitored by the Department of the Environment so these problems mainly affect the poor, rural farmers who rely on the land not only for their livelihoods but also for their daily food ("Enviornmental Sustainability Issues in Bolivia").

Policy: Internal and External

Up until recent years, Bolivia was not particularly a player on the global environmental stage. It was after the 2006 election of Evo Morales as President that Bolivia first began to garner international attention as a possible paragon of protective environmental policy. President Morales was elected on a radical new platform that promoted indigenous rights, recognized environmental concerns, and promised a departure from the corporatism that had taken away access to water for the Bolivian people. It is under his administration that Bolivia's environmental policy has taken a

departure from tradition and history and become the most radically protective in the world, as least in word (Glennie, 2011).

This radical position can be found in Bolivian law itself. Under the newly redesigned Bolivian constitution, enacted by the current Bolivian administration after a charge led by President Evo Morales, "Mother Earth" has rights all her own, only to be overrun if it is required for the good of the people of Bolivia (Aguirre and Cooper, 2010). To clarify this a bit further, the rights of the Earth do not actually outstrip the needs of human beings, so if it is for the good of the people, exploitive practices can and will still be used. That being said, the rights of the Earth have to be weighed carefully and a pressing need for humanity must be found before the government makes a decision.

As noted above, according to theorists, there are two main viewpoints from which to look at protective environmental policy. It can be either eco-centric or anthrocentric (Dalile, 2012). Anthrocentric preservation efforts concentrate on the benefits to humanity of conservation policies. These benefits are very diverse and can range from health benefits from reduced pollution to advancing human scientific knowledge to future/current human enjoyment of nature's physical beauty (Dalile, 2012). This is by far the most common viewpoint behind conservation efforts, especially at a policy level.

Eco-centric conservation efforts, however, are made based on the belief that the Earth itself has rights that are unrelated to the needs of mankind. While this is not an uncommon policy for NGOs, it is rare for this to be the predominant viewpoint behind actual governance (Dalile, 2012). This particular environmental stance is so rare, in fact, that Bolivia is the first country to hold it and it is explicitly expressed in the Bolivian constitution. By giving the Earth its own rights, its own personage, it espouses the idea that human considerations are not the only standards by which decisions and policies should be measured. Human well-being remains the most important consideration, which is why there is the aforementioned caveat. However, the arguments surrounding any exploitive decisions must be related to more dire circumstances than simple convenience or increased profit before any exploitive decisions are made.

During his time in office, President Morales has made numerous speeches before the United Nations concerning protective environmental policymaking and has gone on record as criticizing some of the more widely practiced exploitive policies (Morales, 2010). His main point has

been in chastisement of the involvement of corporations in some country's development, especially when their activities cause environmental damage which impacts the citizens of said countries negatively while providing the citizens with little in the way of direct profit (Morales, 2010). Morales has also criticized over-reliance on fossil fuels, especially in the more developed world, which has the resources, he claims, to explore other possibilities more fully.

Bolivia's premiere achievement in the international arena however, was in the Right to Water Resolution – Resolution GA/10967 passed by the United Nations in 2010. Bolivia was at the helm of this particular resolution, which formally recognized that access to clean, potable water is a fundamental human right, a right which was not originally recognized in the Universal Declaration of Human Rights (United Nations General Assembly, 2010). This raises the possibility of international corporations opening themselves up to international censure or chastisement for indulging in the unsafe practices that so often accompany corporate decisions, such as dumping chemicals, by-products, or other wastes into local water supplies (United Nations General Assembly, 2010).

To fully examine international policy, one must also look at trade agreements, as these frequently show a willingness to allow exceptions to stated policy. Almost all of Bolivia's trade agreements are through two trade organizations: Mercoursour and the World Trade Organization, although they also trade with the Andean community and the individual countries of Chile and Mexico ("SICE: Countries:Bolivia: Trade Agreements"). Bolivians do still rely heavily on their mining industry, with their main exports being natural gas, crude petroleum, zinc ore, and tin. However, in recent years, they have made an effort to improve and grow, sustainably, their agricultural sector and have begun exporting soybeans and soybean products ("South America: Brazil").

When examining Bolivia's trade agreements, however, it is also important to bear in mind that Bolivia is a very impoverished country. In fact, the World Bank International Development Association (IDA) and the International Monetary Fund (IMF) have recognized Bolivia as a Heavily Indebted Poor Country (HIPC) (World Bank, 2001). Because of this, Bolivia was qualified for a certain amount of aid and debt forgiveness. However, it had to meet certain conditions before these programs would be extended. The main condition was that the poverty level had to be reduced by a considerable amount in a comparatively short length of

time. In order to accomplish this goal, industries had to be expanded rather more quickly than the natural, planned, environmentally conscious growth provided for in the previously discussed codicil in the Constitution (World Bank, 2001).

Internally, it is true that Bolivia is having a hard time enforcing its policies and holding its position, though this is arguably less about hypocrisy than it is about the ideals of the country being inconsistent with its level of development and its available funds. Regardless of causation, the fact remains that Bolivia's internal policies do not always live up to its protective ideals. For example, the government has begun a series of highways, designed to facilitate trade that will cut through the Isiboro-Sécure Park. In addition, a hydroelectric project on the Amazon River is being built that will take a large toll on the environment during its construction (Friedman-Rudovsky, 2010). However, this series of dams is expected to help move Bolivia away from fossil fuels and reduce pollution eventually, thus furthering long term goals, even though the short-term effects might be negative.

Moreover, these projects are necessary for the good of the Bolivian people, according to Bolivian environmental experts. "Our Constitution," says Jenny Gruenberger, executive director of Bolivia's Environmental Defense League, "is meant to be viewed through the lens of living well [wholesomely] and not better [expensively]". The experts also stress the nationalism of these projects. They are being built by Bolivians and designed by Bolivians and are therefore going to be less harmful than if a contracted company came in, the inference being that Bolivians are going to be as careful to protect their home as possible (Friedman-Rudovsky, 2010).

Reception and Exceptions

As previously stated, Bolivia has lofty goals when it comes to protective policy decisions. That being said, how successful has it been in implementing these policies, and what has been the reception from the international community and the Bolivian people?

Much of the world is extremely pleased with Bolivia's policy stance. The British paper The Guardian has published several articles commending Bolivia; one of these articles claims "We Should Look to Bolivia for Inspiration" in its headline (Glennie, 2011). There are several non-profit NGOs who are hailing the country as a beacon of hope for those in favor

of protective policy (Morningstar, 2011). While some experts, such as Roberto Laserna, are critical of what can be perceived as some hypocrisy on the part of the Bolivian government, particularly due to the expansion of certain harmful industries, Bolivia continues to be hailed as an inspiration (Laserna, 2013).

Despite Bolivia's protective stance, it is clear that this impoverished country has to decide whether or not to cut corners in its environmental policy in order to grow its economy, and it is having a difficult time implementing many of its protective policies.

Part of the difficulty relates to the country's poverty and, therefore, its lack of means to implement any reforms that would require a substantial financial outlay. As mentioned above, Bolivia has rejected the more neoliberal policies of many of its neighbors, including Brazil, which has made it even more difficult for Bolivia to advance in the global economy. Another difficulty lies in Bolivia's need to for economic growth and the recognition of the fact that some of the loftier policy aims are very difficult to accomplish simultaneously. Thus, actual policy regulations are often less protective than could be expected if the country had a more robust economy.

In 2007, the Goteburg University's School of Economics and Commercial Law did a study on Bolivia's developmental goals and found that pollution from mining was not addressed in the policy changes. Moreover, President Evo Morales's forestry policies are much more inclusive of indigenous communities than former policies, in an attempt to share any new wealth with the poorest demographic within Bolivia (Jaldin and Slunge, 2007). This inclusion is concurrent, however, with increased strength in the logging industry, and new logging projects are creating paths through the primarily untouched lands belonging to the indigenous populations. This has not been met with a warm reception, putting Morales at odds with one of the larger groups on Bolivia. As Latin America's first modern indigenous president himself, Morales has to be careful not to overly upset the indigenous group, especially having cited them as a major reason that the policy sweep was so necessary (Morales, 2010). However, recently a ban has been imposed on exporting/damaging fifty tree species that are threatened historically by the logging industry, so attempts are still being made to balance the protective policies with the need to lift indigenous peoples from the extreme poverty, which they have suffered for many years (Jaldin and Slunge, 2007).

Another factor to consider when discussing the effectiveness of Bolivia's environmental policy is the matter of the actual construction of the Bolivian government. In Bolivia, the ministries have less power than in some other countries. It can be very difficult to enforce their policies and decisions, making them more like guidelines or suggestions when it comes to actual practice.

Analysis and Conclusion

Brazil and Bolivia, despite the size differences between the two, have a very similar history of colonialism and, due to their geographical proximity, have very similar environments and history of environmental problems. See Table 1 below.

Table 1. Comparison

	Brazil	Bolivia
History	Former colony of Portugal, achieved independence only to have to fight the coffee barons for the country's rule.	Former colony of Spain, achieved independence only to have to fight the tin and mining barons for national sovereignty.
Environmental Concerns	Primarily related to agriculture and lumber industries, in 2012, researchers examining almost 200 individual forest patches found only 767 mammal species out of an expected 3,528, loss of ecosystems to make way for hydroelectric power.	Primarily related to mining industry, average annual deforestation rate of 0.43%, water crisis in Cochabamba region.
Economic Standing	Strong economy globally, strongest in Latin America.	Ranked one of the poorest countries in the world by the World Bank.
International Policy	Signed several environmental UN treaties however, most of Brazil's trade agreements rest on its agriculture and timber industries, have never spearheaded any environmental issues and are not outspoken about them on the global stage.	Signed several environmental UN treaties and, though they still rely on exploitive industries, are making an effort to improve sustainability, have led the charge on two different issues, once against overwhelming dissention.
Domestic Policy	Recently passed legislation expanding exploitive policy in lumber industry, planning a new hydroelectric project that will destroy the Pantanel Wetlands.	Gave Mother Earth her own rights under the constitution, crippling debt and deadlines placed on aid by the World Bank, expansion of sustainable decisions but often unable to enact.
International Reception	International community is incredibly dismissive and scornful toward Brazil's domestic policy.	Many in the international community hail Bolivia and Morales as heroes of environmentalism.
Domestic Reception	Passive, population contends that it is concerned with environmentalism but does not make an effort to actually affect policy.	Passionate, indigenous peoples actually angry at concessions made to supposedly enhance their quality of life, want Morales to back down on the destructive projects.

Exploitive policy faces international criticism and potentially, censure, especially as environmental problems around the world worsen. This is because environmental problems do not stay within borders. For example, a problem within Brazil involving the dumping of waste into the Amazon River will spread to the neighboring states through which the river travels, and indiscriminate burning of fossil fuel contributes to global warming which affects the entire planet. The fluid nature of environmental problems has the potential to lead to conflict and has sparked a swiftly growing field of research.

On the positive side, exploitive policy is easier and less taxing on the government to maintain. As evidenced by both case studies, states that practice at least some measure of exploitive policy, especially if that measure is high, have an easier time competing in the global economy and flourishing. Brazil's embracing of exploitive policy is one of the reasons that it has been able to achieve and maintain the highest economic standard of living in South America, with most people ranking as middle class and with Brazil able to dominate the trade in the region. Obviously, in the case of Bolivia, their environmental policy is not the only thing that has caused the majority of its citizens to live in bitter poverty, but the government has been forced to compromise on its protective policy in order to hasten the remedy of their economic situation. If people are getting sick and starving due to poverty, due to something that is, essentially, fixable, the Bolivian government feels that it has more of a duty to them than it has to Mother Earth.

Protective policy's greatest drawback is that it can be prohibitive economically, especially for countries still developing a foothold in the global economy. For example, one of the primary stances of protective-policy-holding countries is the necessity of moving toward green energy and away from a dependence on fossil fuels. In the long run, protective-policy-approved energy projects can save money or break even with exploitive energy practices, but the short-term start-up costs can be prohibitive. Additionally, sustainable agriculture and timber practices can cost the consumer or taxpayer more, especially in the beginning. For example, wood from sustainably harvested forests has to be replaced, which means the industry must pay the upfront costs of new trees. In more developed countries, this is certainly possible, but it becomes less so as per capita income decreases. It also requires

that the citizens be on board with the policy, especially with an eco-centric view. Politicians need votes to stay in office and, as important as they think Mother Earth might be, she does not have an actual physical vote at the ballot box.

Many countries may, and have, decided that these costs were worth it. Germany, for instance, has one of the more aggressive protective policies in Europe, while also having one of the most stable and prosperous economies in the world, so these two are not mutually exclusive, especially for a country that has the means on the front end. There are major benefits to protective policies that such countries feel outweigh the cost. The first, as most clearly demonstrated by Bolivia, is an improved environment for the environment's own sake. The more commonly prioritized benefits are the human health benefits that come from lessening pollution as well as protecting the culture and heritage found in the natural world. Additionally, the adoption of protective policy can clearly lead to an increased standing in the international community as IGOs have begun a push toward protective environmental governance and are encouraging individual states to make the same shift. This increased standing is something that many countries care about as it can make policy changes easier to pass or make it easier to gain favors that can later be cashed in for favorable economic conditions or agreements (Sadecki 2013).

With both of these policies available, what then seems to be the biggest impetus behind states choosing one or the other? The answer is both very simple and very complex. From my research, I have found that the biggest drive toward policy-making style has been the people within the country. (I am basing my conclusions on countries whose citizens are free, or relatively free, to participate in the decision-making process. Countries where this is not the case have entirely different criteria for all of these things, and it is not in the scope of this paper to address them). In Brazil, for instance, the lumber industry has particularly powerful lobbyists that historically control much of the legislature. Unlike the barons of Bolivian history, however, the lobbyists of Brazil are, for the most part, Brazilian. The people of Brazil, despite ranking the environment as an area of concern, do not take advantage of, pursue, or actively push their lawmakers toward a more protective policy (Echegaray, 2013).

Contrarily, in Bolivia, the indigenous peoples (who make up a large part of the Bolivian population) are actively, even violently at times, pursuing protective policy. They have even protested measures that the

current government is making in an effort to improve the standard of living (Fuentes 2014). Therefore, in order to make a case for one over the other, we must move to the consequences for future citizens resulting from the use of each type of policy. It is here that protective policy emerges as clearly more beneficial. The quality of life enjoyed by future generations through policies that encourage conserving resources, keeping dangerous pollutants out of the water and air supply, and stopping the advance of global warming will clearly be better than that afforded by exhausting fuel supplies, stripping arable land of its nutrients, and allowing the ocean to swallow up huge sections of coastal land. It is these future generations that nations must consider when setting their environmental policies, just as it is of these future generations that individuals must think as they make every- day decisions on whether to live on the earth in a sustainable manner.

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