ASSESSING DOMESTIC INFLUENCES IN INTERNATIONAL CLIMATE CHANGE NEGOTIATIONS

by

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NEGOTIATIONS

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ABSTRACT

This study focused on the way economically dominant states cooperate in international climate change negotiations, focusing on the role of domestic politics. Specifically, the idea that environmental condition, through heighted public concern, has an effect on the way a government cooperates with climate change agreements. To study this, a media analysis was performed to focus on the way China and the United States cooperated in the context of the 2009 Copenhagen Summit. The hypothesis was supported in 2009 showing that environmental condition plays a significant role in defining public opinion to climate change. This, in turn, influences a government's willingness to cooperate. Most importantly, this study uncovered the key fact that cooperation is context dependent when it comes to international climate change action. While cooperation in the context of a conference is relevant, the most important factor is how a state is cooperating with international climate change agreements in practice.

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TABLE OF CONTENTS

INTRODUCTION

International climate change policies, like a range of other international issues, rely on the cooperation of the most powerful industrialized states. Without this cooperation, the policies are doomed as ineffective and essentially bound to fail. The 2009 15th Conference of Parties under the United Nations Framework Convention to Climate Change in Copenhagen (UNFCCC) saw the two top emitters of carbon dioxide, China and the United States, in a power struggle throughout the negotiations, leading to a non-binding and ineffective agreement. On the other hand, we saw other economically dominant states showing an increased willingness to lead and participate in the climate agreements. What factors explain why some leading countries embrace climate change agreements and others do not? Since the initial carbon reduction targets under the Kyoto Protocol have expired in 2012, the global community has been scrambling to find an internationally binding agreement to reduce greenhouse gas emissions to prevent further environmental degradation. Understanding the underlying motivations behind economically dominant states in their interactions with international environmental negotiations is crucial to finding a successful mechanism to combat climate change. Knowing this, I ask the question:

Under what conditions do domestic politics affect economically dominant states' resistance to cooperating in international climate change agreements?

First, this study will analyze the existing literature that applies to international climate change agreements to establish what we know about the topic at hand. I will then outline and discuss the research design, which uses a content analysis of media sources

during the time of the 2009 Copenhagen Summit and focuses on the interactions of the United States and China in the conference. In order to answer my question, I utilize a model that combines environmental conditions together with domestic politics to explain the levels of cooperation in international climate change agreements. Following this, I discuss the surprising findings that deviate from the original theory but still shine a light on an interesting contingency in the relationship between the United States and China. To analyze this contingency further, I will introduce measures of environmental condition in 2009 that suggest regime type may play a large role in determining the behavior of these two economically dominant states.

INTERNATIONAL ENVIRONMENTAL AGREEMENTS: WHAT WE KNOW

On the international stage, states are often seen as rational actors who act in their own best interest. The varying behavior of states when it comes to international agreements has been studied extensively throughout the literature. Challenges that arise with states cooperating with these agreements are especially pertinent, as studied by Chapman (2007) and Mitchell and Hensel (2007). The former focuses on international institutions and their informational role in domestic politics, while the latter insists that the international agreements need to be binding for the most compliance between states whose interests are opposed. These studies pave a substantial path when diving into the subject of environmental agreements in particular. Previous research in this field ranges in both methods and results. The analysis of powerful states and their motivations to participate in international climate change is approached in an almost entirely qualitative approach, due to the lack of quantitative data that is applicable to the topic. Most studies have followed three main research designs: an overarching theoretical approach, a one-

country case study approach and a two-country comparative analysis. Together, the studies that fall into these categories do not suffice in providing an explanation to our question above.

General studies about the nature of international agreements have produced a wealth of knowledge in which to base further research. Norm building on the international stage, whether on the issue of human rights, trade, or security, has pushed the boundaries of realist approaches to international agreements. Simmons (1998) insists that constructivism and its focus of third-party dispute settlement is the most explanatory of international agreements in general. Downs (2002) argues that reputation is not the key factor motivating most international agreements. Democracy also plays a large role in the acceptance of international treaties. As Congleton (1992) concludes, democracies are more likely to participate in environmental treaties than authoritarian regimes, mainly due to the lower costs of pollution control that a democratic leader experiences. Building off this, constructivism utilizes democracy to explain the adoption of international treaties as an impetus for international norm building (Hopf 1998, Mitchell 2002, Simmons 1998). This base of norm building through democracies is present throughout the literature. But if this is the case, what is causing the standstill we see today? Some leading democracies (i.e. the United States) are the most resistant to climate change agreement, a position shared with some authoritarian states such as China.

Many scholars have pursued a theoretical approach to the topic of international environmental policy. In this approach, they analyze different international relations theories and discuss which of these explain interactions in international climate change agreements most accurately. Terhalle and Depledge's 2013 study in this method insists

the lack of a new political bargain involving powerful nations is what stands in the way of progress, mainly blaming institutional factors of the United Nations for the lack of consensus. In this analysis, constructivist norms are not enough to overcome the uncertainty that makes states hesitant to cooperate in these agreements. Using the same theoretical method on an expanded population of all member states to the United Nations, Yamagata, Yang and Galakiewicz (2012) found that political and economic domestic factors and peer behavior were essential to the ratification of existing international climate policy like the UNFCCC and Kytoto Protocol. Additionally, these studies focused on the nature of the international agreement, classifying them into hard law (like the Kyoto Protocol) and soft law (like the UNFCCC). While both of these studies produce great theoretical information on both the US and China and existing environmental agreements, they do little to truly integrate the two cases together. While they provide a helpful general argument, these studies fail to uncover the contingencies that help to explain the variations in state behavior.

The question of support for international environmental agreements has also been examined in single case studies of various countries. The results of these studies focus on a few main independent variables, but the limited scope of the studies ignores shared factors and any emphasis on the requirement of mutual involvement. For example, both Tamura (2006) and Barressi (2011) in their study of the United States find domestic factors to be the main variable hindering the US from participating in international climate policy. They argue that increased tension in current domestic politics of the United States decreases a motivation to sign an international treaty on climate change. Tamura leans more toward the partisan nature of the two party system, while Barressi

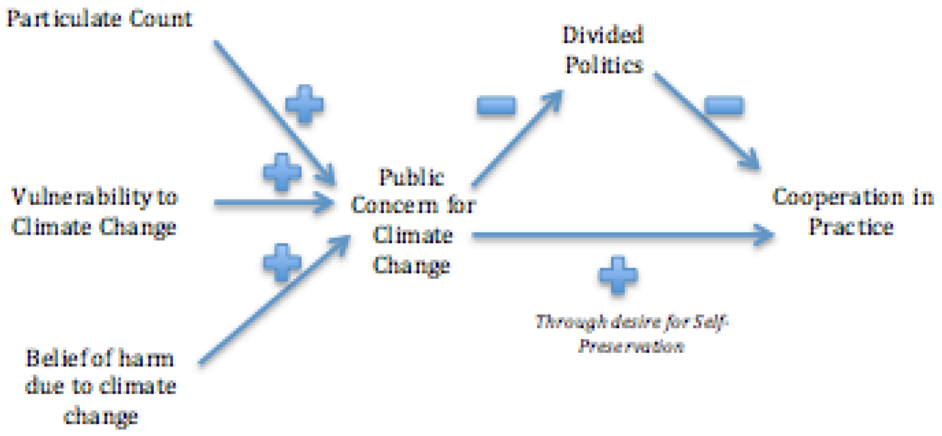
puts a larger burden on traditional US conservatism. Tension in the political field would be found in a state where environmental issues are contentious, causing much debate and controversy among elected officials. The method of focusing on the US to answer the question about climate change produces a lot of detail about the effect of domestic politics on negotiations that theoretical approaches tend to neglect. But, is the US just a deviant case? To what degree are the factors that explain US behavior common to the behavior of other countries?

When focusing on China-specific factors, the literature seems to eschew the in-depth analysis of domestic policies in China that are affecting these negotiations, quite possibly because the non-democratic structure of China complicates the study. In the analysis that does exist, Heggelund and Backer (2007) agree with Zhang (2011) that China's desire to implement domestic over international policy is a significant factor. In other words, China sees the need for policies encouraging emissions reductions on a domestic scale, but is unwilling and reluctant to transfer that action onto an international scale. Zhang also introduces a relative gains argument by insisting that mutual involvement between the US and China is necessary as well. With this, Zhang is arguing that states rely on each other's participation when it comes to international agreements like the Kyoto Protocol that may decrease a state's economic competitiveness in the name of improving the global commons, like the atmosphere. This mutual involvement argument has been played down in US-Centered approaches, perhaps because other factors are more relevant in the study of the US. A serious downfall of the one-case study is that it fails to truly analyze the interactions between countries, a factor that is very significant when it comes to the motivations of states in international agreements.

Individual case studies such as these provide helpful insights on what might be some idiosyncratic factors driving the behavior of those particular countries. Several studies embrace comparative case studies to offer a more precise approach to identifying the independent variables most influential in both states. For example, comparing China and the United States, Christoff (2010) echoes the domestic factors and institutional factors discussed above, while Buchner and Carraro (2005) point to mutual involvement and a desire by the US to implement its own domestic policy as the critical explanations. The latter of these studies is unique in its focus on economic as well as political incentives to signing treaties, a crucial factor to be carried forward in this project.

From this previous work, several factors appear central to understanding international environmental agreements. Of these, the most important are the nature and strength of the agreement, mutual involvement of competitive states, the condition of the domestic economy of that state, and the domestic political field of that state. This study focuses on this last factor, theorizing on the effects that domestic political pressures have on the level of cooperation in international climate change agreements. Applying this variable to a few specific cases will be especially helpful in delving into the details of these factors, and generating hypotheses to explain how these domestic pressures do affect the agreements.

Figure 1. Theory



Building on these preceding studies, I emphasize the effect of a state's public concern for climate change policy, as exemplified in figure 1. The effect of this variable on the domestic political divisions when it comes to the environment is an interesting contingency to study. Specifically, I believe the condition of the environment (as reflected by indicators such as particulate count, vulnerability to climate change, and belief of harm due to climate change) affects public concern for climate change and is an overlooked contingency in previous arguments. This theory follows that the worse the environment's condition (i.e., the higher the particulate count, vulnerability to climate change and belief of harm due to climate change), the more the public is concerned about climate change on an international scale. If public concerns are high, the government has a higher likelihood in cooperating in international climate change agreements in an effort to maintain governmental stability and control. If public concern is lower or more divided, this will lead to a decreased likelihood of actual cooperation in practice. Therefore, building on previous studies and applying existing theoretical work to focus in on domestic pressures, this study examines the contingencies of the most powerful

economically dominant states when it comes to their participation in international environmental agreements.

RESEARCH DESIGN

This theory will be examined in a theory-testing case study of China and the United States in 2009. These two countries are representative of economically dominant states that are seen as less likely to participate in international climate change policies. To gauge the impact of domestic politics, I analyze three periodicals discussing two states and their interactions in the 2009 United Nations Framework Convention on Climate Change (UNFCCC) negotiations in Copenhagen. A media content analysis is chosen due to the lack of comprehensive conference proceedings that can be easily systemized. Therefore, we will be measuring the way the global media responded to and reported on the 2009 Copenhagen Conference and will look at a systemized analysis of their view of China and the United States. This media content analysis will be supplemented with key statistics on environmental quality and public concern of climate change to more concretely represent the independent variables.

The United States and China are chosen as cases for their record of being more reluctant signatories or participants in UNFCCC negotiations. While the study of additional cases would be beneficial and should follow, due to time constraints and in order to produce more specificity I will focus on only two significant cases. Studying these two cases will be a useful first step in assessing this argument.

These countries were chosen due to many factors. The US and China are both dominant global economies, the US was ranked at number 1 in GDP by the World Bank

in 2009 and China is ranked number 3, slightly behind Japan at number 2.[1] Additionally, these two states' position as the top emitters of greenhouse gases, whose reduction is essential to the success of the UNFCCC, gives them bargaining power in negotiations. In 2009, China was ranked the number 1 emitter of Carbon Dioxide in the world, with 7,692,210 kt and the US was ranked number 2 with 5,311,840 kt.[2]

Next is the reduced willingness to participate in climate change negotiations that has been referenced throughout the existing literature. For example, the US has shown its opposition through never ratifying the Kyoto Protocol, the only binding agreement under the UNFCCC.[3] In comparison, China has ratified Kyoto, but has refused to take on carbon emission reduction targets, even though it holds the spot as the largest emitter of greenhouse gases in the world.[4] These factors justify China and the United States as similar cases with different outcomes, which allow the use of Mill's methods. Mill's method of agreement, when two cases have similar dependent and independent variables but differ in other respects, the cause of the different variables can be attributed to one another.[5] One caveat is the very different government structure of the two countries, which will make them very interesting to study and may affect the outcome. The combination of these factors qualifies the US and China as "economically dominant" and "less likely to participate" as applied to this research question. Therefore, this makes them appropriate cases to focus on as the set of countries that have a reduced willingness to sign climate change treaties.

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[1] The World Bank (2009) *World Development Indicators: GDP (current US$).*
[2] The World Bank (2009) *World Development Indicators: CO2 Emissions (kt).*
[3] While the United States did sign the Kyoto Protocol under the Clinton Administration, it was never ratified through the Senate.
[4] It should be noted that China was classified as an Annex B country in the Kyoto Protocol, which did not require China to reduce greenhouse gas emissions.
[5] Cox, E. (2010). Why enduring rivalries do--or don't--end (p. 29). Boulder, Colorado: FirstForumPress.

For the purpose of this study, the phrase "international climate change policy" will be operationalized to refer to the 2009 UNFCCC Conference of Parties negotiations in Copenhagen. This specific conference is focused on because of the extreme difficulties it had with major economic powers like China and the United States. This conference resulted in a non-binding, weak outcome called the Copenhagen Accord. Understanding some of the factors causing this undesired result will be helpful to future climate change negotiations.

The content analysis will be performed on three different news sources. Through this, these variables will represent how the media interpreted and reported the occurrences of the 2009 Copenhagen Summit. All three, The New York Times, South China Morning Post and The Washington Post, will be accessed through LexisNexis. These sources were chosen strategically: The New York Times for its international coverage, the South China Morning Post for its eastern view point, and The Washington Post for its inherently western viewpoint. [6] This type of content analysis of the media is an accepted method throughout social science, exemplified by Jeffrey Legro's two works (2000, 2005) surveying editorial responses from the New York Times and other newspapers for a measurement on foreign affairs. These sources will be analyzed on a paragraph-by-paragraph basis, noting the presence of the dependent variables.[7] If the article claims the presence of these factors in having an effect on the willingness to

[6] While Peoples Daily, the Chinese news source based in Beijing, may have given a more accurate view of how the Chinese view these issues, it is not included in the Lexis Nexis database for systematic review. Instead, the South China Morning post, based in Hong Kong, was the best eastern point of view included in Lexis Nexis.

[7] In an attempt to filter results to what is most pertinent to the Copenhagen Summit and to our selected cases, the search will be limited to the six months surrounding Copenhagen (September 1, 2009 to March 31, 2010) and the search terms will be: BODY(Copenhagen Summit OR Copenhagen Accord OR Copenhagen Conference) AND BODY(China OR United States).

cooperate in climate change agreement, then this variable will be recorded. The independent variables, 1) Cooperative in Conference, 2) Not Cooperative in Conference, 3) Cooperative in Practice and 4) Not Cooperative in Practice, will also be recorded to measure both cases.

These variables have been carefully operationalized before performing the content analysis. For the US, cooperative in conference is recorded when the paragraph is in reference to President Obama's leadership in conference or references the US's vital role in the Copenhagen Accord. Not cooperative in conference is any reference in denying the aforementioned claims. Cooperation in practice is recorded when the article discussed actual plans put in place to reach targets and moves towards green energy. Not cooperative in practice is recorded for any denial of the cooperation claims or any reference to emission reduction targets being contingent on passage in US Congress, because legislation of this type was never passed in the following years. China's factors are recorded similarly, with the addition of references of China accepting concessions while at Copenhagen to the cooperation in conference variable and references of increasing emissions to the not cooperative in practice variable.

For the independent variables, the factors claimed in each case will be recorded separately. Each includes 1) public preference between economy and environment 2) public concern for climate change 3) divided politics 4) influence of the industrial lobby 5) relative gains concerns and 6) other. While relative gains concern is not an exact political factor, its prevalence throughout the data required its inclusion. These factors are quite explicit throughout the articles and their presence was easily determined. This

careful measurement of all variables will allow for acceptable comparison in the analysis section.

ANALYSIS OF DEPENDENT VARIABLES

Executing the research design produced interesting results to apply to the study of international climate change agreements. Testing this theory against the evidence accrued; we will start with the dependent variable, cooperation in climate change agreements, and then proceed into analyzing its causes.

A brief survey of the existing literature would convey that both the United States and China are uncooperative when it comes to our dependent variable, international climate change agreements. (Christoff 2010, Buchner and Carraro 2005) In contrast, the content analysis outlined in the research design above actually revealed an interesting contingency in this claim. As shown in Figure 2 and 3, the dependent variable is not as easily defined as previously thought. It seems that cooperation comes in different forms, and the US and China resist cooperation in very different ways. Looking at the graphs above, we see that the US cooperates in conference negotiations, but doesn't transfer that to cooperating in practice, and China cooperates in practice, but resists cooperation in conference. While the graphs above are a fair representation of the information as a whole, a break down by source is illustrative of the different news sources surveyed. This will be discussed later in this section.

Figure 2:
United States' Cooperation through content analysis- all sources

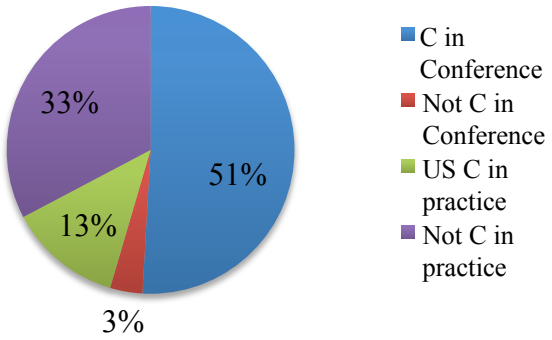
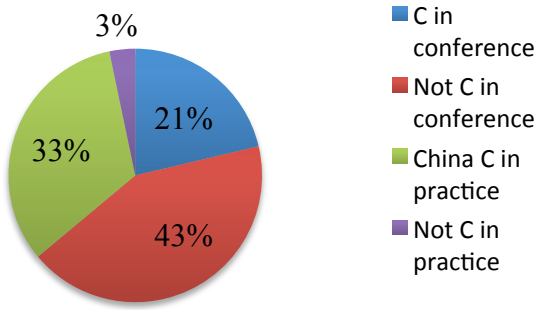


Figure 3:
China's Cooperation through content analysis- all sources



In all the articles included in the content analysis, the United States was mentioned as cooperating in practice only 3% of the time, while not cooperating in practice was mentioned 33% of the time. This result was expected, considering that the U.S. legislature never passed climate change legislation and has done very little to curb greenhouse gas emissions in accordance with their reduction targets pledged at the Copenhagen conference. The president went into Copenhagen pledging a 17% reduction of emissions below the 2005 levels over a decade. But, this promise was especially weak because it came with a caveat: pending passage in the US legislature. This passage was highly unlikely at the time, especially considering the extremely divided politics in the Senate. The New York Times reported, "The Senate is split on global warming policy into numerous factions divided by ideology, geography and economic interest… Republicans are united in opposition to the kind of legislation that would be needed to match Mr. Obama's ambitions."[8] The majority of the Senate seemed very against Obama's interactions with the UNFCCC, Senator James Inhofe insisted "unilateral action

[8] Broder, J. M. (2009, December 13). What's rotten for Obama in Denmark. *The New York Times.*

by the U.S. is unacceptable, because it will harm our economy and have virtually no effect on climate change."[9] This clearly divisive legislature and lack of progress to back up promises made the United States a very good case of being uncooperative in practice.

What was surprising was the amount of times the United States was cited as being cooperative in conference. 51% of the mentions of the United States praised their ability to bring the conference to an agreement, especially through President Barack Obama's last minute deal that saved the conference from total failure. Rhetoric touting the US's leadership in conference was strong throughout the analysis. For example, John Kerry, the Chairman of the Senate Foreign Relations Committee at the time, stated "history will record Copenhagen as the moment when America went from laggard to leader."[10] Additionally the New York Times claims that "President Obama deserves much of the credit," when explaining how he came to Copenhagen and "played hardball" with the Chinese in order to forge an agreement.[11] The United States indeed was very uncooperative in practice, but their leadership in conference was incredibly surprising. The independent factors discussed below may shine light on this unexpected behavior from this economically dominant state

In the other case, China was cited as being uncooperative in conference the majority of the time, 43% of the mentions of this variable characterized China as dragging their feet and being disruptive throughout the Copenhagen conference. Ed Miliband, the UK's environment minister, accused China, along with other nations, for

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[9] Broder, J. M. (2009 , November 26). Obama offers targets to cut greenhouse gas. *The New York Times.*
[10] Topic A. (2009 , December 20). *The Washington Post.*
[11] Copenhagen, and beyond. (2009, December 21). *The New York Times.*

"hijacking the summit" to prevent a deal.[12] Premier Wen Jiabao of China boycotted meetings, attempted to negotiate behind the US's back, and acted undiplomatically throughout the conference. This behavior was, according to French President Nicolas Sarkozy, "a breach of diplomatic protocol and indicative of China's go-it-alone approach."[13] China's fierce rebuttal to these claims, along with a few submissions for aid to developing nations, is to blame for the 21% of "cooperative in conference" found in the content analysis. While the lack of cooperation falls in line with the hypothesized dependent variable, China is actually substantially cooperative with efforts to reduce greenhouse gases in practice. Of the mentions of China's cooperation, 33% were for cooperation in practice, emphasizing the actual progress that China is making towards reducing their greenhouse gas emissions and investing in renewable forms of energy. The quickly expanding Chinese economy is of course an issue, but the government is taking large, credible steps towards transforming their economy that is so heavily dependent on coal at this point. It has set efficiency standards for coal plants, buildings and cars while shutting down the most inefficient power plants and boilers.[14] China's vice chairman of the National Development and Reform Commission, and a lead negotiator for China in Copenhagen, insists, "regardless of whether the United States passes its own legislation, China will take positive measures."[15] China's 12th Five-year economic plan implemented in 2011 also puts a significant stress on reducing greenhouse gas emissions.[16] Building off of this, claims of China not cooperating in practice was a very small result in the

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[12] Time for sincerity on climate change. (2009, December 22). *South China Morning Post.*
[13] Wen offers his personal account of Copenhagen climate summit snub. (2010, March 15). *South China Morning Post.*
[14] Mufson, S. (2009, October 24). China steps up, slowly but surely; driven by climate concerns and a desire to modernize its economy, Beijing has begun addressing the emissions issue. *The Washington Post.*
[15] Mufson, 2009.
[16] Jin, L. KPMG International Cooperative, KPMG Advisory- China. (2011). *China's 12th five-year plan: Sustainability.*

content analysis, at only 3%. This shows China disregarding negotiations, even being incredibly disruptive and uncooperative in them, but continuing on the path to sustainability and cooperation in practice. The reasons for this cooperation will be theorized upon in the independent variable analysis. The differing outcome between the United States and China seem to throw off the original research design of this study, but it shines light on an interesting contingency that merits further analysis.

DEPENDENT VARIABLE: SOURCE BREAKDOWN

It should be noted that the different news sources selected produced varying results in the content analysis. Shown below in figures 4 and 5, the New York Times (NYT), South China Morning Post (SCMP) and Washington Post (WP) covered cooperation in the Copenhagen conference in different ways.

First, the New York Times, which produced the largest number of articles covering the conference, covers the issues in a way that is most similar to the median. They push that the US is cooperative in conference (46%), but not in practice (37%) and China was not cooperative in conference (41%) but cooperative in practice (41%). This viewpoint is indicative of the international viewpoint of the New York Times and goes along with our theory above.

The South China Morning Post reacted very differently to the conference than the other media sources did. Its eastern viewpoint is seen in its majority reporting that the US was not cooperative in conference, but also slightly admits to cooperation in practice. When it comes to China, in 46% of the reports the South China Morning Post insisted that China was not cooperative in conference, like other sources insist, but also cite a few

other ways that they may have been seen as cooperative, making up 36% of the articles reviewed. The South China Morning Post reported China's cooperation in practice much less, with 8% of the claims citing that China did not cooperate in practice and 11% insisting that China did cooperate in practice.

The last source, the Washington Post, catered to its US domestic audience in reporting the conference, focusing very little on the dynamic between the US and China. As expected, the Washington Post agreed that the US was cooperative in conference, but not cooperative in practice. When it comes to China's cooperation, this source should be taken with a grain of salt. It only produced fifteen articles about the topic and doesn't mention China's steps to cooperate with climate change reduction in practice at all. The Washington Post does further cement the fact that China was not cooperative in the Copenhagen conference.

Figure 4: United States Cooperation, Broken Down by Source

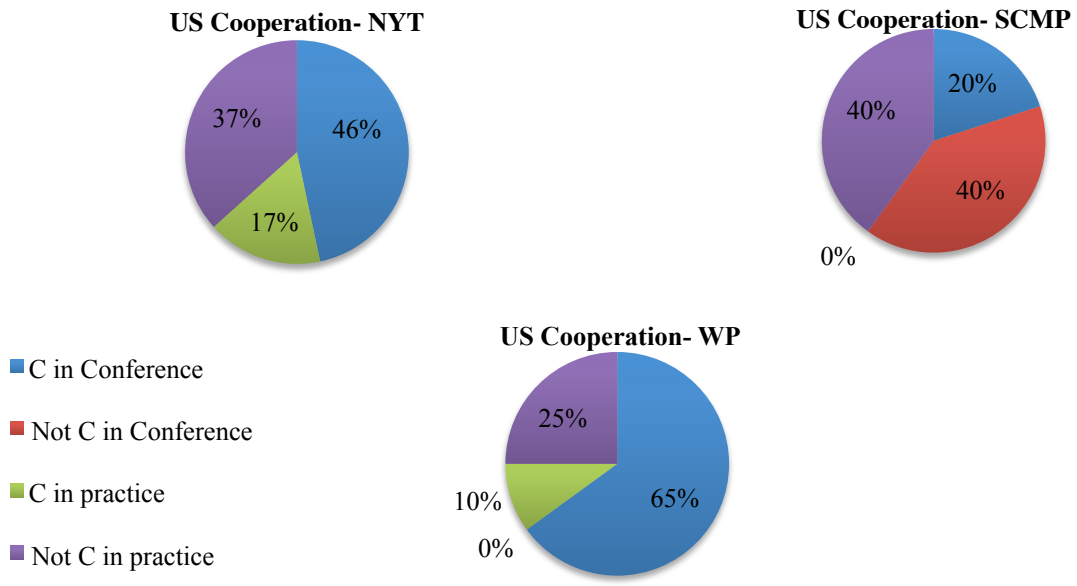
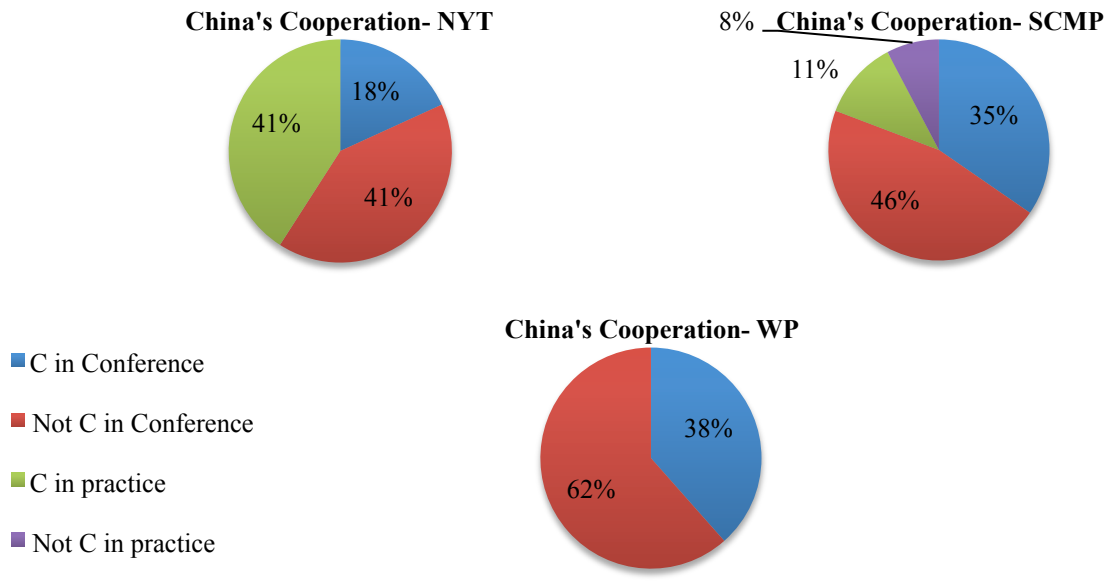


Figure 5: China's Cooperation, Broken Down by Source

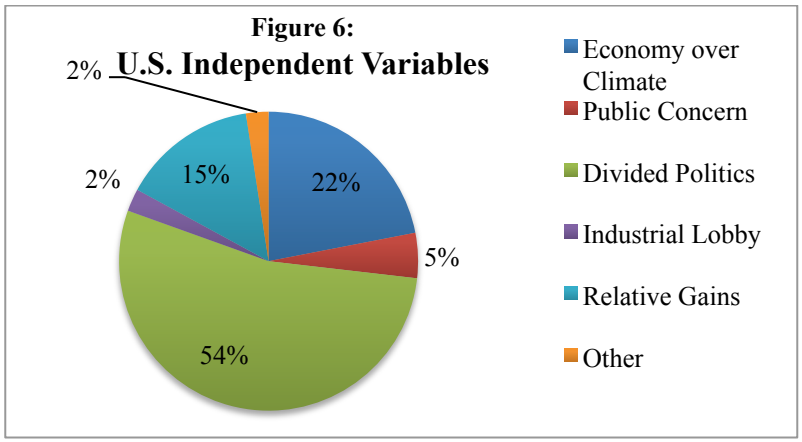


ANALYSIS OF INDEPENDENT VARIABLES

The unexpected outcome of the dependent variable makes it even more important to understand the underlying independent variables. It begs the question—in what way do domestic politics affect the level and *nature* of cooperation? What is required for cooperating with international environmental agreements in practice? These questions will be discussed through the analysis of our independent variables.

Testing our theory shown in figure 1, the United States seems to fit the mold quite well. The content analysis cited five main reasons for the United States' lower level of cooperation in practice following the 2009 Copenhagen Summit. Shown above in figures 2 and 3, divided politics appeared as the most commonly cited causal factor, followed by concerns for the economy over the environment, relative gains, public opinion and the

industrial lobby. It follows that in the case of the United States, divided domestic politics are seen as having a significant negative effect on the United States' cooperation in practice. This is characteristic of the domestic climate of the US in 2009, which was a time that climate change was a very divisive issue. President Obama was pushing for climate legislation, while congress was very divided on the issue and the Republican Party was very against it.



While environmental condition is not included in the content analysis, gathering statistics on the matter can give this hypothesis a bit more clout. Environmental condition, shown three ways through particulate count, vulnerability to climate change, and belief of threat due to climate, change could very well have an influence on the concern for climate change in a state. Particulate matter, measured by 2008 World Health Organization statistics for ambient air pollution in urban areas (PM 10), represents the pollution that the United States is experiencing in its most population dense areas. This is a relatively low number in the US, at 18 $\mu m/m^3$.[17] Vulnerability to climate change in 2009 was also very low in the US. According to the Center for Global Development, the

[17] World Health Organization. (2008). Exposure: Pm10 data by country. *Global Health Observatory Data Repository.*

US ranked 133 out of 169 countries in their overall direct risk of physical impacts of climate change.[18] This shows that the US public is not as exposed to the direct risks of climate change, thus when asked about its importance, they are less likely to note climate change's immediate dangers. To show this, in a 2009 survey by WorldPublicOpinon.org the percent of those who believe climate change is substantially harming people in the United States now was incredibly low—only 34%.[19] These three measurements of environmental condition seem to have a positive relationship with our second variable, public concern for climate change, meaning that the lower the environmental condition numbers, the lower the public concern for climate change. Because the American public is not exposed to poor environmental conditions, it is hypothesized that this causes decreased concern for climate change and international agreements on climate change. In 2009, when asked how high a priority the government should place on addressing climate change, only 44% of respondents said that the environment was a high priority. Additionally, in 2009 Gallup Polls found a preference for a focus on the economy over the environment in the United States for the first time in 25 years of asking that same question.[20] Gallup stated that 51% of Americans wanted the priority of the government to be the economy and 42% preferred the priority being on the environment. Together, these show a relatively low public concern for the environment and climate change. Combining these variables we can see that in the case of the United States, when the

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[18] Center for Global Development. (2013) *Mapping the Impacts of Climate Change.* Retrieved from http://www.cgdev.org/page/mapping-impacts-climate-change

[19] (2011). Public opinion on global issues; Chapter 5a: World opinion on the environment. *Council on Foreign Relations*, 1-55.

[20] Newport, F. (2009, March 19). *Americans: Economy takes precedence over environment*. Retrieved from http://www.gallup.com/poll/116962/Americans-Economy-Takes-Precedence-Environment.aspx

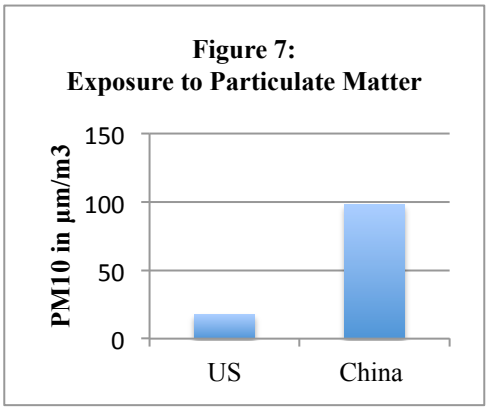
environmental condition is good (meaning low percentages of the measurements above) then public concern for climate change tends to be more negative.

Next, these lower public concerns for climate change seem to have an impact on divisive domestic politics. This kind of direct response can be expected in a democracy, where the thoughts and values of the public are transferred to their elected officials. For our case, the data for public concern in the US is split, 44% saw addressing change as a high priority and 42% saw it as a low priority. This clearly reinforces the divided politics that was mentioned so often in the content analysis. Relating this to our theory, it seems that the more split the political opinion, the more divided the political system will be. We see this clearly in the case of the United States. Congress is fatally divided in the US when it comes to issues on climate change, both between parties and within parties. This divided perception of climate change is being reflected by their elected officials' behavior in an inherently democratic way. Republican Senator James Inhofe is among many climate skeptics driving the division, stating "cap-and-trade legislation in the Senate is dying on the vine, and, as important, are recent revelations of leading climate scientists who appear to have manufactured the climate 'consensus' casting doubt over the entire global warming enterprise."[21] This rhetoric, which calls the science of climate change into question, is indicative of many Republicans, who are representing the ambivalence of their constituents. On the other side of the aisle, Democrats are accepting climate change and pushing towards action. In 2008 President Obama insisted, "Delay is no longer an option. Denial is no longer an acceptable response."[22] This stark contrast is only

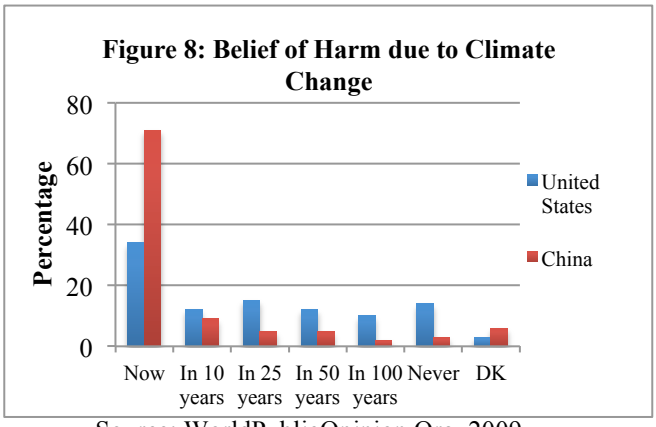
[21] Broder, J. M. (2009, December 13). What's rotten for Obama in Denmark. *The New York Times.*
[22] Broder, 2009.

complicated by the Democratic Party's inability to agree to a solution. The public perception transferred into government is creating an extremely divided political field.

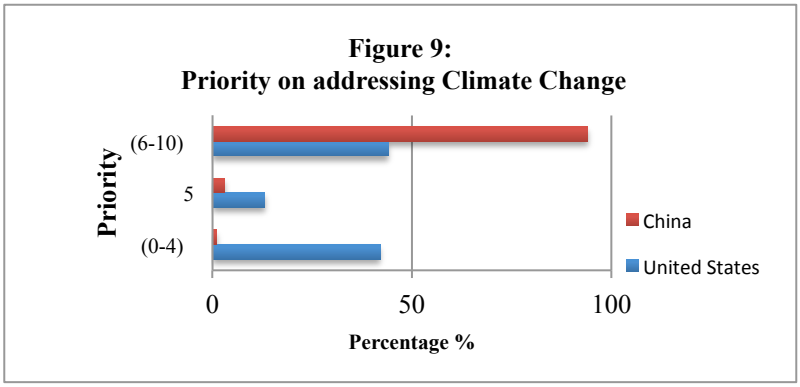
Finally, divided domestic politics will lead to a decreased willingness to cooperate with international climate change agreements in practice. While the Obama administration in the US fought for climate change legislation, a divided Senate and House of Representatives made this almost impossible. The cooperation shown in conference meant very little in the long run. Even through President Obama's leadership and promises, the US legislature has passed no legislation to enforce the promises made in the Copenhagen Accord. From this model, it seems that the US does fit this theory quite well, especially if you limit cooperation to only in practice instead of in conference.



Source: World Health Organization, 2008



Source: WorldPublicOpinion.Org, 2009



Source: WorldPublicOpinion.Org, 2009

In the case of China, the content analysis uncovered very little about the domestic political factors causing China's increased cooperation in practice when it comes to climate change. Relative gains was cited a handful of times, but nothing was significant enough to use for rigorous study. Possible causes for this is the nature of the Chinese government to control information, which would explain the lack of causal factors mentioned in the articles used. Instead of using this content analysis data, I must rely on statistics to show a correlation to the aforementioned theory. Using the same data to quantify environmental conditions, China had a particulate matter count of 98 $\mu m/m^3$ in 2009, an incredibly high score compared to the US.[23] It is ranked 1st out of 169 countries in the world by the Center for Global Development for direct physical risks due to climate change, excluding small island states.[24] Finally, 71% of the Chinese population in 2009 believed that climate change is substantially harming people in the country now.[25] These statistics show a dramatic increase from those in the United States, as seen in figures 7 and 8 above. According to my theory, this case of a decreased environmental condition will lead to an increased public concern for climate change. A wide range of the Chinese population is exposed to the direct risks associated with climate change, which causes them to have greater concern for climate change. To support this, we can look back at the 2009 World Public Opinion poll that asked how high a priority government should place on addressing climate change. 94% of Chinese respondents ranked climate change as 6-10 for high priority. Figure 9 on the previous page compares this response to the US viewpoint. A similar study to the 2009 Gallup poll referenced in

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[23] World Health Organization, 2008.
[24] Center for Global Development, 2013.
[25] (2011). Public opinion on global issues; Chapter 5a: World opinion on the environment. *Council on Foreign Relations*, 1-55.

the US case is available with 2012 data for the China case as well. While I admit that these statistics cannot be directly compared due to their different years, this study does show China having a preference for government policy centered on the environment over the economy. In this study, 57% of Chinese believed protection of the environment should be given priority, even at the risk of curbing economic growth. Only 21% responded that economic growth should be given priority. Combined, this supportive evidence in another case endorses the theory that higher indicators of poor environmental quality translate into higher public concern for climate change.

Because the structure of China's non-democratic government doesn't allow for much transparency on divided politics, it is almost impossible to strictly apply the second half of the theory about the US case to China. Instead, I hypothesize that the desire for self-preservation drives the Chinese government to become more cooperative when it comes to the practice of reducing greenhouse gases and investing in renewable energy. The international pressure doesn't seem to affect China as much, which allows it to be disruptive and uncooperative in actual climate change negotiations like the 2009 Copenhagen Summit. The New York Times illustrates this by reporting while China "might put down in writing its targets for slowing the growth of emissions, it will make clear that those efforts are voluntary steps it plans to take domestically that should not imply a binding international commitment."[26] Instead, domestic pressure from its massive population is what drives China to cooperate to better their climate change policies. The increase in concern for climate change in China, as seen in figure 9, and its correlation with an increase in cooperation in practice gives this theory some weight.

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[26] Wong and Ansfield. (January 10, 2010) China Insists That Its Steps On Climate Be Voluntary. *The New York Times.*

Furthermore, the environment is inherently tied to government legitimacy through economic growth. In order to maintain legitimacy, the Chinese government has relied on economic growth and development as a guiding ideology. Poor climate indicators are not only a health issue; they threaten economic growth. This can be seen through China's incorporation of a "Green GDP" that financially assesses the economic costs of environmental degradation.[27] As the party realizes that environmental quality is inherently linked to economic growth, they have increasingly committed to cooperating in climate change reducing measures in practice. This further insists the Chinese government is cooperating in an act of self-preservation.

Considering our data and analysis of the two cases of US and China, it seems that our theory holds up. A poor environmental condition leads to higher public concern for climate change. In turn, depending on government structure, this leads to either divided politics in our democratic case or governmental control in our authoritarian case leads directly to cooperation in practice. While not perfect, this analysis is telling of the role domestic politics play into cooperation in climate change agreements.

WHERE WE ARE NOW

While the 2009 Copenhagen Summit produced outcomes that were conducive to our study, it is important to compare this model to the most recent climate summit, held in Lima, Peru, in December 2014. This conference once again saw world leaders come together to discuss the challenges of climate change, but no longer was a binding agreement the main purpose or goal as it was in Copenhagen. Since 2009, the US and

[27] United Nations Environment Programme. (2008) Green Accounting Practice in China. *UNEP-Tongji Institute of Environment for Sustainable Development.*

China have both taken steps away from the patterns described from the media analysis of Copenhagen which merit further analysis and testing of my theory.

Using similar parameters as the research design above, I used a content analysis of the New York Times in the months surrounding the 20th Conference of Parties in Lima to give us a limited view point on what is occurring now in international climate change agreements.[28] The dependent variable reflected a very different outcome than the media analysis of the 2009 Copenhagen Summit.

Figure 10: US Cooperation 2014

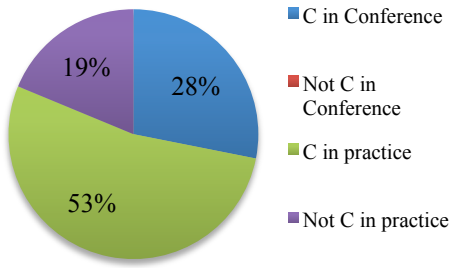
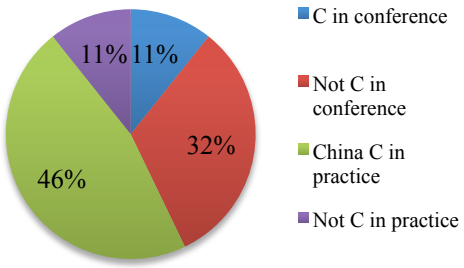


Figure 11: China Cooperation 2014



For the United States, cooperation in practice drastically increased to 53% of the reports in the wake of President Obama's executive actions on environmental issues regarding climate change and carbon emissions. The president's unilateral action on regulating coal-fired power plants, the nation's largest source of greenhouse gas pollution, has greatly increased the media's views on the United States as a cooperative actor in practice. This in turn, has allowed the reports on cooperative in conference to continue to be high. As expected, the US was still reported as being cooperative in

[28] In an attempt to filter results to what is most pertinent to the Lima Conference and to our selected cases, the search will be limited to the months surrounding Lima up to the time of this study (September 1, 2014 to February 11, 2015) and the search terms will be: BODY(Lima Summit OR Lima Accord OR Lima Conference OR Lima Climate OR Climate Talks) AND BODY(China OR United States).

conference, consisting of 28% of the statements in the New York Times. For the first time, the United States came to the negotiating table with an example of domestic policies that had been implemented, which allowed the U.S. to be seen as a credible actor and leader at the Lima Conference. In support, Yvo de Boer, the former executive secretary of the United Nations Framework Convention on Climate Change insisted that in past conferences "Countries got weary of negotiations with the U.S.; it got tough in negotiations, but it didn't deliver. Now the U.S. has policies in place to deliver on its word."[29] The progress by the United States is much different than it was in 2009, but it is important to note that this has all been done by executive order and can be repealed by its opponents in the Republican controlled Senate or overturned after the 2016 presidential election. This is consistent with the theory that public concern on climate change is so split that a future president could go either way on the issue.

China's media analysis results were very similar to the 2009 study, insisting that China was cooperative in practice much more than anything else, consisting of 46% of the statements. Furthermore, China has maintained its stance as a non-cooperative actor in international conferences on climate change. One major change for the Asian giant in 2014 was the landmark bilateral climate deal between the United States and China, announcing voluntary reduction targets. China pledged that its greenhouse gas emissions would peak by 2030, and would invest in alternative energy so that it would account for 20% of its needs by the same year.[30] This bilateral agreement can be the explanation of the increase in claims that China was cooperative in conference, from no claims of

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[29] Davenport, C. (2014, December 12) Strange Climate Event: Warmth Toward U.S. for Its More Assertive Role. *The New York Times.*
[30] Adams, M. (2014, December 6) China's Double-Edged Pact. *The New York Times.*

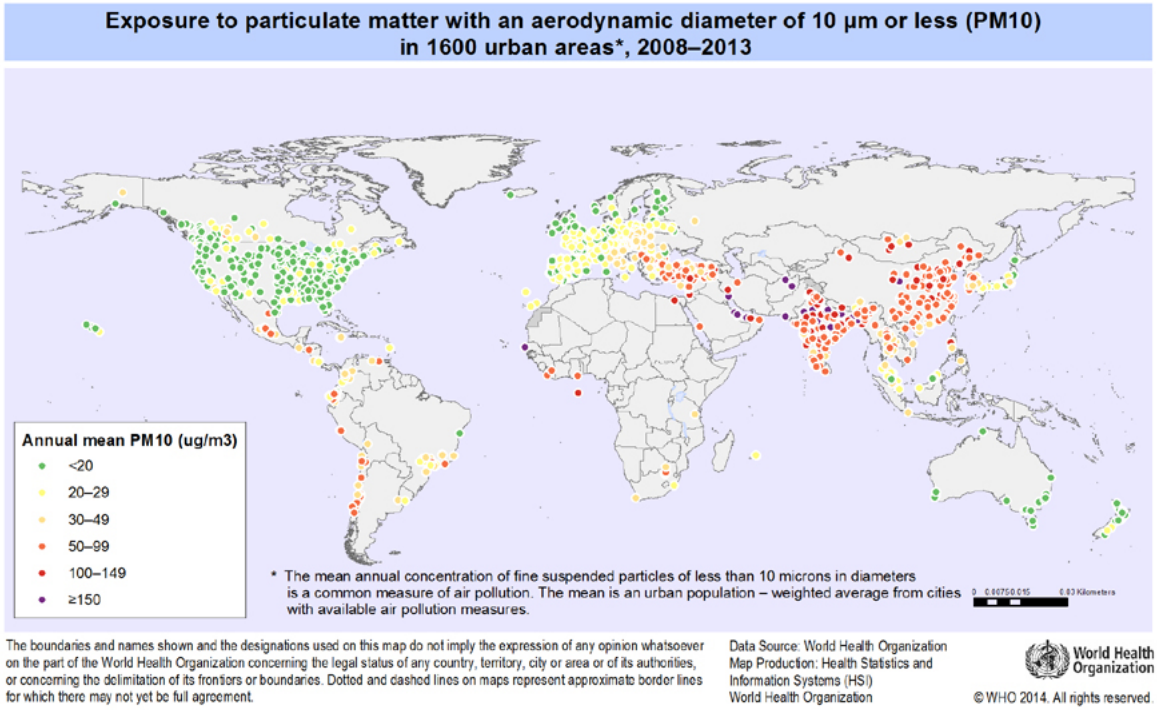
cooperation by the New York Times in 2009 to 11% of the claims in the 2014 study. Additionally, China has been putting the environment at the top of their agenda. President Xi Jinping has been quoted saying "we are going to punish, with an iron hand, any violators who destroy ecology or environment, with no exceptions."[31] This strict stance is telling of how serious the Chinese government is taking the environment in 2014 and 2015.

The independent variables presented in the first case have stayed relatively constant since 2009. With the most recent World Bank measures of exposure to particulate matter with an aerodynamic diameter of 10 μm or less (PM10), China's environmental condition continues to be much worse than the United States'. China's average exposure to particulate matter was 88 $\mu m/m^3$ in 2010 compared to 16 $\mu m/m^3$ in the US in 2012, this stark difference can be seen on the World Bank map in Figure 12.[32] While this measure of pollution has decreased from the 98 $\mu m/m^3$ in previous measurements, China has still been dealing with many issues with urban air pollution and environmental quality. This shows that China is still experiencing a poor environmental condition while the United States is experiencing a relatively better condition, which falls in line with my original theory.

[31] (2015, March 12) Xi's eco-protection footprint. *Ministry of Environmental Protection of the People's Republic of China.*

[32] While these measurements are years apart, the World Banks' data set of particulate matter is taken in 6-year segments. The 2008 to 2013 data set is the most recent numbers to represent the environmental condition in our case countries today.

Figure 12: Exposure to Particulate Matter



Following this, the condition of the environment would then influence the belief of harm due to climate change. This variable was not measured through the same survey format as it was in 2009, but similar questions were asked in both the United States and China in the following years. In the spring 2013 Pew Research Global Attitudes Project, 47% of Chinese respondents claimed that air pollution in China was a "very big problem" while 36% agreed that it was a "moderately big problem." These numbers follow the 2009 case of increased awareness and concern due to climate issues in China. In the case of the United States, Gallup News Service asked citizens in 2014 if they worried about Climate Change in the United States. These results also came up similar, showing that Americans were split on the issue. 49% of Americans responded that they worried about climate change a "great deal" or a "fair amount" and 51% responded "only a little/ not at all." This, in turn, reaffirms the idea of a divided public opinion on climate change in the

United States. This divided public opinion further indicates that the changes made toward cooperation in practice under the Obama administration could easily be reversed under a Republican administration.

In comparing the 2009 Copenhagen Conference to the Lima Conference, many differences arise. Of the most important is the changing nature of climate agreements in light of the 2014 deal between China and the United States. The bilateral climate deal changed many aspects of the Lima Conference, giving the United States more legitimacy in leadership. Going into the conference, many saw the U.S. and China deal as a variable that could actually solve the tenuous relationship between the two giant carbon emitters and "pull the rest of the world into a treaty," serving as a catalyst for more nations to accept binding cuts.[33] While Lima did not see a binding agreement formed, many look to the Paris Conference of 2015 for hope of consensus in carbon reductions. Beyond that, many sources in the media analysis insisted that climate agreements in the future will be on a smaller scale, whether regional or bilateral, instead of focusing on the broad international consensus that the UNFCCC has been seeking since Kyoto.

CONCLUSION

Drawing from the analysis above, it is clear that domestic politics do have an effect on a state's willingness to cooperate in practice in the case of the US and China. These states have many unique features, so this theory will need to be applied to other cases in order to gain further evidence. Avenues for further research in this field would be in discussing economic and relative gains issues and their effect on cooperation in

[33] Landler, Mark. (November 2014) To China, Shift in Obama's Political Fortunes Eclipses U.S. Economic Gains. *The New York Times.*

international climate change agreements. Broadening the scope of the study would be beneficial to truly understanding the motivations behind states in their interaction on the international stage.

In all, this theory of environmental condition affecting public opinion and government structure in turn affecting cooperation in practice proves an additional contingency in international climate politics today. From Copenhagen, to Lima and on to Paris in 2015, it is important to continue to watch these independent variables to understand the behavior of economically dominant states like the United States and China. This is especially relevant as we see the environment become a more salient issue internationally, accompanying extreme weather and other effects of climate change. Further analysis and study of this theory can help climate change negotiators further comprehend why states are resistant to international agreements in order to find methods to encourage cooperation in the future.

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