DISCOVERY OF RESOURCES AND CONFLICT IN THE INTERSTATE SYSTEM, 1816-2001

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This study tests a theory detailing the increased likelihood of conflict following an initial resource discovery in the discovering nation and its region. A survey of prior literature shows a multitude of prior research concerning resources and nations' willingness to initiate conflict over those resources, but this prior research lacks any study concerning the effects of the discovery of resources on interstate conflict. The theory discusses the increased likelihood of conflict in the discovering nation as both target and initiator. It further looks at the increased chance of conflict in the discoverer's region due to security dilemmas and proxy wars. The results show strong support for the theory, suggesting nations making new resource discoveries must take extra care to avoid conflict.

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CHAPTER 1

INTRODUCTION

Uganda and the Democratic Republic of the Congo (DRC), who had been involved in a major African conflict involving six other nations, began an era of peace between their two nations in 2003. Their peace was short-lived, however, when only four years later both nations' armies began amassing on their borders around Lake Albert, a border dispute that had been largely ignored in previous conflicts. What was the change that ended Uganda's and the DRC's four-year peace? Oil was discovered on the Ugandan shore of Lake Albert, the first time Uganda had ever dealt with oil production (Oketch 2009). Scholars anticipate a large increase in Uganda's revenue and an increased the importance of the before-ignored border issue following Uganda's initial discovery of oil. The DRC wants a share of the oil deposits under the lake and have proven willing to fight to get it, culminating in multiple military clashes in just a few months (Wasswa 2007).

This paper examines the question; *does the discovery of new sources of resources increase interstate conflict?* Is the new Uganda/DRC conflict an isolated event or is it just one small another example of a larger trend of conflict following the discovery of resources? With new resource discoveries still being made in the world, we would like to be able to anticipate their effect on the peace of the international system.

There is a great amount of research that has been done concerning resources' effect on inter- and intrastate conflict. Most of these studies have focused on conflict caused by scarcity due to depletion of resources. These look at conflict caused by scarcity creeping into systems that were seemingly stable in their distribution of resources that are now breaking down as output decreases (Kemp 1978; Homer-Dixon 2000; Wagner 2008). Other studies focus on

intrastate conflict caused by belligerent factions vying for control of the revenues a pool of resources brings into a nation (Ross 2004a; Humphreys 2005; Lujala 2009). Still others study interstate conflict caused by resources based upon local, territorial resource pools; these most often deal with rights and possession of water sources or territorial boundaries (Klare 2001). While these studies do well examining some aspects of the effects of resources on conflict in certain contexts, research concerning the discovery of resources is sparse, and discovery in the context of conflict is nearly nonexistent.

This study sought to delve into this research territory by examining the effect that the discovery of resources has on interstate conflict within the global system. I tested the effects of the discovery of a new source of resource on conflict concerning the nation in which the source is found and in the discoverer's region. While nations can and do fight over all manner of renewable and nonrenewable resources, my study focused on the latter, as discovery of such resources are more defined. I examined the effects in my tests using oil, for which there has been a large demand within the global system in the most recent era and also suffers from the problems of scarcity and the uneven distribution of resources. Also, there is greater amount of data concerning oil, allowing a more thorough examination of its effects on the system.

The results of my study have future value, as more discoveries of needed resources are found around the world. There are current situations in world politics for which the findings of this study could prove useful beyond the Uganda/DRC conflict discussed above. The Spratly Atolls in the South China Sea has been the location of heightened tensions between China and the Philippines due to their oil and mineral-rich potential. Tensions have also grown between Russia and the Western nation concerning Russia's claim to the North Pole for its potential for oil, gas, and gold. Azerbaijan has also more recently discovered a new source of natural gas.

This study could help predict whether or not conflict will arise concerning these resource sources, and from where the conflict will arise.

My study also broadens our understanding of the effects of resources upon discovery. Because political scientists like Klare (2001) believe resource wars to take precedence in the world's security issues in the near future, a better understanding of resources' effects on conflict will aid national leaders and policy makers to identify and mitigate conflictual situations. Further, an understanding of resources' effects on conflict will aide in the contemplation and creation of international and regional organizations built to monitor and negotiate resource issues around the world.

The second chapter of this paper examines previous research which helped to guide my theory of the effects of resource discovery on international conflict. As I previously mentioned, there is no prior research that focuses on the discovery of a new source of nonrenewable resources in a nation and its effects on conflict, yet there are previous areas of research and are very informative upon my theory. I first look at general policy motives pursued by nations in the international system and how a nation's level of capabilities affects these. I examine research on imperialism, both historically and today's neo-imperialism, which shows how nations are willing to fight and conquer (physically or economically) to gain access to another nation's resources. Next, I look at research over the effects of territory and resources on international conflict outside the context of discovery. Finally, I examine the effects of resources on regional politics and conflict.

The third chapter lays out the theory behind conflict arising over the discovery of resources. I begin by theoretically outlining why resources are so important to nations and how the need and distribution of resources leads to conflict. I then outline how a discovery of a new

source of resources will lead to increased international conflict for the discovering nation; these conflicts come with the discovering nation as a target of the conflict, as well as the initiator of conflicts. I then theorize that a new resource discovery in one nation will lead to an increase in conflict across that nation's entire region, through security concerns and arms build-up and through major power proxy conflicts.

Chapter 4 outlines how I constructed the models used to test my theories. I used data on oil as my proxy for resources because 1) they are considered a vital energy resource in today's world that nations have expressed willingness to fight over and 2) there is a large array of oil data to use, allowing me to most comprehensively ran my tests. I ran the models first for the effect of a new oil discovery on interstate conflict for the discovering nation and then for its effect on interstate conflict for the discoverer's region. Because my theory posits that the likelihood of conflict will rise due to the benefits of the production of the resource, I also tested both hypotheses using the first year of oil production since a delay in production would plausibly lead nations to choose to delay their conflict until the spoils of the discovery are available.

Chapter 5 presents the analysis of the results of the models, observing whether or not the hypotheses are supported by the evidence. The results are very supportive, finding strong, significant support for the variables for both hypotheses.

The last chapter begins with possible implications of my results, seeking to warn nations about their likelihood for conflict following a new resource discovery and a call for international organizations to take care to monitor such situations. I end by discussing possible future avenues of research that can be done with the discovery of resources and conflict.

CHAPTER 2

LITERATURE REVIEW

While there has been very little prior research that links the discovery of resources and interstate conflict, the previous research concerning resources and interstate conflict is important to consider. In regards to the theory presented, there are six areas of prior research to consider. The first section describes the nature of the international system through a lens of realism. This section leads to a better understanding of my theory of why and how nations act within the international system. The second area refers to prior research upon nations' capabilities and the effect these have on predicting interstate conflict. The third area discusses how old and new principles of imperialism lead the international community into conflict. The fourth area of previous research concerns resources and conflict. The fifth area of prior research discusses the idea of territory and its additional effect upon conflict. The final area explores the regional effects resources can have and the possibility for conflict within that region.

International Policy Motives

Inherent to any discussion of what and how conflict is derived is the question of what drives the entire interstate system. Realists identify relative power and national interest as drivers of policy; liberals look at the mitigating aspects of international organizations and economic interdependence. DiCicco and Levy (1999, 679) identify the principles tenants of realism as being: "assumptions: the key actors in world politics are sovereign states that act rationally to advance their security, power, and wealth in a conflictual international system that lacks a legitimate governmental authority to regulate conflicts or enforce agreement." Waltz, in examining the emerging structure in the international system following the Cold War, sees any

peace found within the global system as tentative at best (1993). He deconstructs many theories of what may create peace within the system; states will unite to balance the power of a superpower, but then states will also fight as their capabilities converge more to equal, either with the gain of capabilities by the weaker or the declining capabilities of the stronger. He further asserts that the theory that nations no longer fight because they have learned it is unprofitable is flawed; he avers that if this was true then World War I would have ended warfare with its massive casualties. Waltz even points out times when the democratic peace theory did not work, giving examples through history of democratic states coming into conflict with one another. In conclusion, Waltz refutes arguments that arise in placid times that the policy of power politics is ending. He asserts that the lull in power balancing by nations against the United States began because of the constraints placed on the United States by its major-power rival of the U.S.S.R., but, now that such constraints are gone, some scholars hope that internal preoccupations will dominate the United States' attention, though Waltz would not bet on it (1993, 79). In an earlier article, Waltz uses attempts at disarmament as an example that international cooperation is not developing as many international liberals would like to think (1959). Waltz mirrors many Hobbesian theories of why disarmament does not work; no nation is willing to be the first to disarm as it would leave its people vulnerable to attack. In response to liberals who point to the few disarmament successes, Waltz states, "Where disarmament has been achieved it has depended on highly special circumstances, and it is only by looking at them carefully that I can derive lessons of present relevance. If, however, one takes the line that the successes of the past have rested simply upon intelligence, courage, and good will, the failures can be explained in similar terms" (1959, 414).

Jack Snyder evaluates the realist position in relation to other international theories such as idealism and liberalism. As idealists (i.e. constructivists) identify culture as key to identifying and rectifying conflict within the international system, Snyder assesses culture against the importance of acknowledging anarchy in the global system (2002). While never disputing that culture is one element to consider when looking at models of the international system, Snyder criticizes idealists for focusing on culture alone, instead of within the prevailing system of anarchy; indeed, Snyder asserts that a consideration of the creation of culture should be secondary to a consideration of the logic nations use in the anarchic system. He also avers that idealists do not consider the adverse effects of trying to change culture. He cites counter-culture change tactic used within certain societies, especially when those in power are threatened by the new culture. Snyder also warns that focusing only on changing cultures could upset the balance held between nations and peoples within the global system more than what is already inherent in it. Snyder, in a related article, considers realism along with liberalism and idealism in today's global system (2004). While, in the end, Snyder concludes that a single theory cannot fully explain nations' policies in today's system, he states that realism is still an important theory to consider. Liberals fail to explain how international organizations can stop a hegemonic power from going its own way, or why budding democracies have a higher probability of being involved in inter- and intrastate conflict. Idealist fail to recognize strategic, institutional, and material conditions are present and which are necessary for a culture or idea to take hold. His only major critique of realism is that actors need to consider whether policy based on power projections will have the legitimacy to last through an extended period of time. As with the first article considered, Snyder believes that liberals and idealists need to consider power politics and system conditions (realist staples) within their theories. While there may be some basis for

international theories such as idealism and liberalism, Waltz and Snyder agree that nations will not stop considering policy based upon their national interests and that conflicting national interests can, and most likely will, lead to increased conflict between states.

Capabilities

While the realist camp agrees that power differentials are at the root of most interstate conflicts, there are two competing theories within realism to explain this: balance of power and power preponderance. Gellar tests these two theories, power parity vs. power preponderance, using rival dyads in his dataset (1993). He finds that the onset of war is twice as likely with power parity or a shift towards power parity as with power preponderance. He avers that this is consistent with his assumptions as with equality or a shift towards equality as both sides would then see the "potential for successful use of force" (Gellar 1993, 190). Schampel examined the effects of the speed of change of capabilities and the likelihood of the onset of conflict. His theorized that a "faster rate of change is perceived by decision-makers as threatening, and, thus, they prepare for and initiate war" (1993). He found that a slow velocity of change "approaches a sufficient condition for peace and moderately approaches a necessary condition for peace irrespective of nation size, contiguity, and century" while when wars do occur they are often preceded by a high-velocity change in capabilities, resulting in what some political scientists call a "trigger," "critical point," or "power situation" (Schampel 1993, 406). The models tested by both Gellar and Schampel show that relative capabilities are important in predicting the onset of interstate conflict and that a major shift in the relative capabilities increases the likelihood of conflict even further.

Power transition theory posits similar claims to Gellar and Schampel; the two ideas that are central to war are the importance of changing power distributions and the stabilizing effects of concentrations of power (DiCicco and Levy 1999, 682). In other words, conflict arises when relative capabilities undergo a change while peace reigns when the relationship is not changed. The theory posits that uneven industrialization leads to one nation to achieve a form of hegemony and power over others; as the hegemony's power plateaus or wanes, other nations power rises, bringing the two nations into a conflict for power over the rules of the international system (DiCicco and Levy 1999, 681). Organski and Kugler (1980) test the power transition theory and find that no war occurs without a major transition and that half of all the transitions are followed by war; Houweling and Siccama (1988) test the same theory with expanded data sets and still find significant results in favor of the theory. Many had criticized the power transition theory as being not generalizable because it originally dealt only with major powers and systemic hierarchies. Lemke and Werner (1996) find that the theory also works with sub-hierarchies at the regional and local levels, adding expanded scope to the theory.

Fearon (1996), Gartzke (1999), and Powell (2006) try not only to show that such processes do happen, but why. They explain conflict as a matter of incomplete or misrepresented cross-national information and commitment problems. Fearon (1996) believes that states have personal information concerning their power and policy preferences and have incentives to misrepresent themselves as more powerful or belligerent than they really are to try and gain bargaining power with other nations. As both sides present themselves as more powerful than they really are without accurate information about the other nation, they fall into conflict, which continues until the two nations have more accurate information concerning who is the stronger nation and the weaker concedes to the stronger's demands. Further, because

power and policies change, nations cannot credibly commit to long-term policies with other nations because as one nation becomes relatively more powerful, it will seek new policies that favor it more. Gartzke (1999) agrees with Fearon, but makes a few added observations. He asserts that commitment problems are really only an extension of information uncertainty, thus the most important leading factors to conflict are uncertainty and the incentive to bluff (578). Powell (2006) builds off the work of the previous two and concludes that large quick shifts in power distributions lead to conflict because of the uncertainty of information and the commitment problems which arise. This further supports the power transitions theorists, while adding further explanatory power.

Imperialism

Gaining increased capabilities is a major pursuit by states, one that they will pursue nearly any policy to achieve. Even if a shift in capabilities creates a possibility for greater conflict, states believe that if they have the larger share of capabilities, they can win any conflict that may arise. Controlling major natural resources add to a state's capabilities; it allows greater economic prowess, as well as the resources needed for a larger and more powerful military. Conversely, without a majority share of capabilities (with natural resources as a key component), nations are more prone to loss; indeed, Field Marshall Erich Ludenhoff claimed that Germany lost World War I because of its lack of oil (Whealey 1988, 114). The need for resources (and subsequent lack of many nations) to build capabilities has led nations to impose their needs upon other nations who have the resources desired. Such need led to the rise of imperialism, or "the policy of extending a nation's authority by territorial acquisition or by the establishment of economic and political hegemony over other nations" ("Imperialism" 2004). Imperialism

exhibited two forms across two distinct time periods: classic imperialism, known as the Age of Imperialism, spanned 1871 through the World Wars, while neoimperialism, or informal empire, began post-World War II (Wesseling 2005; Parenti 2005). This section explores further why nations feel the need to pursue imperialistic goals to attain resources, look at the historical effects of imperialism, as well as explore neoimperialism in today's international community and how it increases the chance of conflict within the international system.

The need for natural resources specifically (especially key resources such as oil) lead nations to pursue imperialistic policies, as does the desire for power and control generally. Scarcity of nonrenewable resources, especially energy resources such as oil, as vital to a state's security and growth; Lewis (1974, 72) asserts that "energy is probably the pivotal requirement for continuing growth" of a state's economy. As the demand for these resources increases within the international community, the problem of scarcity grows, leading states to be more forward and conflictive in meeting their resource needs. Maugeri (2004) states, "The worst effect of this recurring oil panic is that it has driven Western political circles toward oil imperialism or indirect control over oil-producing regions." Odell (1968, 97) wrote likewise that "as oil became more important, so ran the British and America argument, so greater control became more necessary." Not only is imperialism pursued in order to meet national resource demand, it also plays a key role in states' power and security strategies. McKay (2008) writes that "by expanding into new markets in new countries [via imperialism], a company can gain an advantage over its competitors as well as overcome limited markets and resources in the home nation." Vilas and Perez (2002, 75) contend that the need for imperialism is increased further in today's international system; due to the increased system of nation-states and limitations placed on military solutions and unilateral military interventions placed by the "international juridical

order…indirect control of peripheral states is much more important than in the past." A need for resources and the power they create push nations to pursue imperialistic policies.

Historically, nations sought to control not only the resources and trade of another territory, but instead to rule the entirety of the territory politically. Imperialism was much more profitable than simply building trade relations. Lenin (1939, 100) emphasized that imperialism provided Great Britain with an income of 90-100 million pounds, "five times greater than the amount obtained from the foreign trade of the biggest 'trading' country in the world." In the greater part Age of Imperialism, the continent of Europe was largely unscathed by wars and conflicts, yet that did not mean the European powers were not constantly engaged in conflicts elsewhere. Lenin was very specific in the fact that imperialism uses its military as the "bailiff" to control its colonial territories; domination of the colonies was achieved through constant warfare, both to colonize and control new areas, as well as to put down episodic revolutions (Lenin 1964; Wesseling 2005, 100). The grab for resources in the Age of Imperialism did not leave the Europeans unaffected by the continual conflict forever. Wesseling (2005, 106) contends that the scramble for colonial territories eventually led to not only the commencement of the First World War, but also the scope of its destruction. The continual conflicts in the colonies, as well as the resources gained from them led to an international arms race within Europe, as well as set up the offensive-oriented military philosophy that began WWI. McKay (2008) further blames both World Wars on imperialism as "the competition for markets and colonies reach[ed] a point when they [could not] be settled peacefully."

The events following the end of the Second World War began a transition from classic imperialism to neoimperialism, as most of the European powers began to give up their colonies, creating an explosion of newly formed independent states. Parenti (2005) is quick to point out

that independence is "not to imply that the plunder of natural resources has ceased." The definition of imperialism changed only slightly; instead of referring to the political domination of a separate territory, it became a process by which a powerful state pursues its own politico-economic interests through domination of a smaller state, by economic or military pressure, expropriating the land, labor, raw materials, and markets of another people (McKay 2008; Parenti 2005). Parenti (2005) sees this shift as granting the new states "the trappings of sovereignty" while the "Western financial capital" retains the majority control of its resources; in other words, "under neoimperialism, the flag stays home, while the dollar goes everywhere – frequently assisted by the sword." Though these new states are recognized as independent within the international system, the more powerful nations are still generally willing to use military threat or force to pursue their interests. Watson (2005) asserts that these nations are still seen to be "beyond the line," or a separate set of nations/territories from themselves, just as they were in the Age of Imperialism. Watson (2005, 352) states that the "oil war of today…resembles a colonial war…but with the aim of securing access to resources, rather than occupying territory. These are not interstate wars among equals but wars that pit proper sovereign states against weak states."

States may attempt to cover the neoimperialism today with statements proclaiming more acceptable reasons for their presence in politically weak, resource rich areas of the world, such as helping an "economically backwards nation" or freeing a people from a tyrannical dictator and bringing democracy (Watson 2005; McKay 2008). Lewis (1974) believes that while nations may actually try to improve the situations of the areas they dominate, they quickly drop the pretense of helping in "development" when the need for oil becomes paramount. Watson (2005, 353) avers that "what truly makes the oil war a successor of the colonial war is that the oil war is

justified by a spatial order, not a moral order – even though the moral order may be evoked publicly in justification."

One thing that the many authors writing about neoimperialism agree upon is the fact that the need for resources, especially oil, and the desire to control the source of oil, continually created tensions and conflicts between the resource-rich states and resource-seekers and between rival resource-seekers. Similar to the historical conflict in the Middle East, the discovery of oil in Africa sparked violent conflicts over control of the oil revenue, both intra- and internationally (Ghazvinian 2007, 17). Some of the conflicts arose as more powerful nations sought to maintain control over areas where they had previously achieved it, such as the Vietnam War, the Algerian War, the Gulf War, and so on (McKay 2008). Spain struggled against foreign companies for economic self-sufficiency through control of their oil, leading to a direct confrontation between the Spanish and French militaries (Whealey 1988, 114-115). The discovery of oil in India created tensions between India and the West for control and production (Ghosh 1992, 1301). Other times, the conflicts were between multiple major powers, seeking for control over the same source of resources. Indian oil exploration heightened tensions between the United States and the U.S.S.R. (Ghosh 1992, 1301). When the Spanish sought control over their own oil, their policies created tensions between Germany and the Anglo-American oil interested in the area (Whealey 1988, 115). Ghazvinian (2007, 287) asserts that Beijing's growing reliance on African oil has put it on a collision course with the United State's political priorities for the continent. Odell (1968) contends that in the Middle East, oil-rich/oil-seeker conflicts ran concurrently with oil-seeker/oil-seeker conflicts. He states:

> Countries and companies looked enviously at the oil wealth of the [Middle East] and viewed with disfavour the control exercised by a limited number of Anglo-American companies which, although producing oil cheaply, were able to sell it expensively because of their control over transport, refining, and marketing facilities. As a reaction

> against this, French, Italian, Japanese and other outside interests attempted to secure influence in the Middle East. The growing hostility of some of the nationalist groups in the Middle East (encouraged by diplomatic counter-offensives by the French, the Japanese, and the Italians), coupled with the greater commercial and economic attractiveness of the newcomers' proposals for oil acreage, eventually secured rights in the area for oil interests other than those of the United States and the United Kingdom. (99)

Some may argue that the production and sale of many of the important resources (such as oil) are controlled by private companies and not state governments; therefore, why would imperialism still apply when it is not the government gaining control of the resources? These powerful companies will seek governmental protection of their business interests overseas. In speaking of globalization as a form of imperialism, Vilas and Perez (2002, 73) states that "the globalization of capital requires decisive state intervention on the diplomatic and the military level. Transnational corporations do not hesitate to avail themselves of the services of their respective states-diplomatic pressure…or military or industrial espionage-when they are confronted by problems with the governments of the countries in which their branches operate." McKay (2008) writes much of the same, saying that force is always required to protect private capital. After all, "[a]t the international level, United States corporations need the government to insure that target countries are 'safe for investment' (no movements for freedom and democracy), that loans will be repaid, contracts kept, and international law respected (but only when it is useful to do so)." The respective governments of the powerful companies are happy to help out, if only to pursue their own goals. Whealey (1988, 112) argues that these imperial governments use the business arguments and interests for its own purposes.

Neoimperialism affects not only individual countries, but also helps shape relationships between major powers and regional neighbors. Odell (1968, 93) states:

> Oil has helped shape the policies and alignments of all the countries of the Middle East - not only with each other but also with the world's great powers. These outside powers, in

> their turn, have found their oil interests and their oil ambitions in the Middle East spilling over into their more general relationships with each other, thus helping a process which has made the region a centre of international tension over long periods of time.

Odell (1968, 108-109) does paint a dynamic effect of oil on the relationships within the region itself. Middle Eastern oil was very divisive and drove many tensions early after its discovery, but, since the creation of OPEC, has now worked to generally bring the nations closer together and more prone to working peacefully with one another.

Through all of this, one can make fairly easy claims concerning the policies nations are willing to pursue to gain control of the resources necessary for their needs. Imperialism continues on in the form of neoimperialism; stronger nations will impose upon weaker nations to gain dominance over resource control. These policies often bring the nations into direct conflict with each other, regionally and amongst the major powers of the international system.

Resources and Conflict

While the previous sections explored the policies nations pursue to attain the resources they need (or think they need), this section investigates the effect of resources on conflict more directly. Much of the prior research done concerning resources' effects on conflict deals with scarcity of resources by environmental degradation and/or civil conflict. Reuveny and Maxwell have written multiple articles together which address these issues. In one, they use game theory to depict a model that will predict the conflict of two nations who both have a need for the same source of a resource (2001). They assume that conflict is a rational choice option considered by both nations competing for the resource. They also assume that the resource competed over is essential to the survival of both nations; such a scenario sets the stage for a competition between the two nations in which the loser's very existence is at stake. Here, Reuveny and Maxwell find

two variables that affect the number and severity of conflicts which arise from this system: a growth in the population of either or both nations and scarcity of the resource through environmental degradation. The growth in population reduces the resource per capita that a nation gains, which increases the amount of the resource needed to fulfill the nation's need. Scarcity simply creates greater competition between nations as there is less resource to be split between the two to fulfill each nation's need. In the end, the comparative statistics show that changes enhancing the resource stock or the population raise conflicts (Maxwell and Reuveny 2001). In another article by the same authors, they examine the effects of renewable resource scarcity on conflict within developing countries (Maxwell and Reuveny 2000). They find that conflict due to resources tends to cyclical, with conflicts continuously beginning and ending as long as there is scarcity of the resource. This shows that resource wars cannot be continuous as long as scarcity remains, but also shows that the tensions concerning the resource never leave. They also find an interesting effect of technology upon resource conflict. Reuveny and Maxwell find that technology can both increase and decrease conflict, whether the technology concerns replacement or greater efficient use of the resource versus advancements in technology that require more of the resource (2000). While both of these articles are helpful in making assumptions concerning the discovery of resources and conflict and in driving its theory, these articles focus on inter- and intrastate conflict, scarcity of resource through environmental degradation, and renewable resources.

There have also been articles that compare past research concerning resources and conflict. Gleditsch identifies nine specific problems with past research, including reverse causality, overly-complex models, ambiguity over definitions, and a failure to distinguish between domestic and interstate conflict (1998, 381). Yet, for all of the issues that Gleditsch

finds with the previous research, one similarity is found through all of it that the author agrees to be true: greater scarcity leads to greater conflict. He also purports that "nations have often fought to assert or resist control over war materials, energy supplies, land, river basins, sea passages, and other key environmental resources" (1998, 381). Ross also authored an article that dealt with a comparison of past research, though his focuses on resources and civil war. Though his emphasis is on intrastate conflict, Ross still finds in his studies that nonrenewable fuel resources like oil increases the likelihood of conflict. Others, like gemstones, increase the duration of these conflicts, and renewable agricultural resources do not add as much to intrastate conflict (Ross 2004b).

The work of Leith discusses theories that most closely reflect those in this study, but Leith only theorized without ranning any analysis to test it. In one of his earliest essays, he asserts that the "have-not" states will seek a redistribution of natural resources to increase their own power and that they will seek this goal through force (1939). He purports that trading agreements for those nations that have the most need for the resource will not be enough to assuage the "have-not's" fear of losing access to that resource. Writing on the eve of World War II, Leith believed that appeasement would not be enough to halt Germany, as it would only serve to increase their capabilities and need. He was later proven correct as Germany continued its military advance towards Romania to acquire its mineral resources. Leith (1947) later writes more on the effect of mineral resources on the international system. He blames the uneven distribution of resources for most of the conflict. As demand grew for resources, major powers had to stretch further abroad to meet their needs. This created greater conflict outside of the resource zones as major powers had to fight over control of waterways to protect their shipments of resources back home. He also predicted that small, industrializing states would grow slowly

in the shadow of the major powers, but as they grew more powerful, with a greater need of resources also, that conflict would arise from the smaller nations competing over resources that the major powers had long since monopolized. He also theorized that commercial interest groups and interstate organizations that controlled resources would add to the tension over resources as they could control the level of supplies and create artificially high prices in the global system. Leith believed that the only chance to avoid conflict over resources was to put the crucial resources under international control, yet he realized, "Any form of international ownership or control of minerals will ran counter to the stubborn fact of sovereignty. Control of natural resources lies close to the heart of sovereignty and no nation will want to release its control. The hope for agreement on any system of world control seems yet to be largely in the realm of wishful thinking" (Leith 1947).

Territory

Many articles explore the causation of conflict; many scholars agree that territory is often a primary reason that nations fight with each other. Paul Hensel explored what it is about certain territories that make them central to more and more severe conflict. He determined that issue salience is important to the nations involved with the territory; the more important a territory is to a nation, the more willing it will be to allocate greater resources to possess or not to lose it (Hensel 2001). He identifies six categories that determine salience; among these is a territory's possession of a large pool of resources. His tests show that the greater the resources that a territory has, the greater the likelihood that conflict will arise because of it. Diehl and Goertz studied the relation between territory changes and militarized conflict. They find that conflict is likely to arise both if the territory is and is not contiguous to the nations involved in the territory

change (1998). They also find that territory changes are also likely to cause conflict when the change is due to nations competing over resources or worried about relative power capabilities. They assert that the chance of conflict is higher when the nation taking the territory is a major power and the nation losing the territory is a minor power. Like Diehl and Goertz, Mitchell and Prins focus on issues that cause conflict over territory beyond simple contiguity (1999). They aver that such conflicts that concern contiguous territory has waned in the last two centuries; this is especially true when looking at the decades since the Second World War. They identify other issues for which nations fight over territories, such as ideology and nationalism. Along with these Mitchell and Prins identify one of the primary causes for conflict, even among democratic nations, is competition over maritime boundaries and sea resources such as oil and fish. Although contiguity has a correlation to conflict amongst nations, these studies show that resources and power capabilities, especially among major powers, also have a significant effect upon whether or not nations will go to war over a piece of territory. Gleditsch addresses the concept of territory in his article mentioned previously (1998). He accepts the fact that territory is tied to a majority of interstate conflicts, though he points out that conflict over territory drops from fifty-percent in the pre-WWII era to one-third in the post-WWII era. Within territory-based conflict, Gleditsch points out the possibility that many of these conflicts could be less concerned with the land itself, but more concerned with the mineral resources within the territory (1998, 386).

Regional Effects

Possession of resources affects not only the country that owns the resource, but it can have lasting effects on the relations and peace of an entire region. Iyer (1998) states the implications of such effects simply, stating:

> The thesis, broadly stated, is that natural resource scarcities are likely to lead to conflicts and violence; that these have security implications; and that these implications could translate into regional security problems…It is clear enough that what one country does or fails to do in relation to natural resources and the natural environment in general can have serious consequences in other countries. 1168

Heisler and Peters (1983) are more cautious in their assessment of the effects of resources in a region. They profess that regional relationships from resources could have two paths of development; resources can add a bargaining tool for regional neighbors to use in seeking peaceful relations, or they can lead a government to devalue their "conflict-mitigating aspects," seeking more hard-line policies as they have an insular form of revenue. Evidence from the Middle East, the nations of the Caucasus, and the East Asian nations lend more credence to Iyer's assertion.

In the Middle East, oil discoveries did not seem to begin many of the disputes in the region, yet it served to exacerbate those disputes and make them far more costly, such as territory disputes between Saudi Arabia and Abu Dhabi (Issawi 1973, 116). The creation of OPEC superficially seems to mitigate many of these conflicts and foster better cooperation amongst the oil rich nations of the Middle East, yet within the organization the countries still vie for primacy, seeking to make deals even at the expense of other members (Issawi 112-113). Regional tensions are also exacerbated by the pursuits of major powers over access to Middle Eastern oil, such as the United States, China, Japan, and Russia. As different Middle Eastern nations make

deal with the different major powers, they become part of the rivalries between these major powers (Issawi 1973, 120; Iyer 1998).

More recently, the nations of the Caucasus have mirrored the regional relationships seen in the Middle East since their growing importance in oil and natural gas. The conflicts over resources in the Caucasus take three faces: conflict over control, conflict over transportation, and conflict due to major power trading partners. The discovery of oil has exacerbated territorial issues that were already present, such as the conflict between Armenia and Azerbaijan over Nagorno-Karabakh (Turnock 2001). Also, the discovery of energy resources under the Caspian Sea has led to conflicts over the control and rights of those resources among all the nations bordering the sea (Hunter 2003). The pipelines to carry the energy resources also are a source of conflict, where to build them and who will benefit from it. For example, if Caspian oil goes through Iran, its power would grow, necessitating a realignment of Russia and Iraq to block further Iranian power (Aras 2002, 95; Turnock 2001). Kazakhstan has created close ties with Russia and Iran while Azerbaijan and Armenia have pro-West leanings; such dichotomies are common through the Caucasus, as different trading partners create interregional rivalries (Hunter 2003; Kim and Eom 2008; Aras 2002; Turnock 2001).

The need for more energy resources in East Asia has created many tensions and conflicts over access to those resources. Manning (2000) claims that many of these conflicts can be managed peacefully if nations would act geoeconomically (working mutually beneficial deals) rather than geopolitically (ensuring security through political or military means), yet he acknowledges that most nations still pursue geopolitical strategies more often, leading to the possibility of China or India sending out their navies to protect the oil tanker shipping lanes. The Spratly Islands are prime examples of regional tensions over resources rich territory. Chinese

experts estimate the potential oil production levels for the Spratlys to be about 1.9 million barrels per day ("Spratly Islands" 2009). This has led to decades of conflict over territorial claims to the Spratly Islands; five nations have claims over all or part of these islands, including China, the Philippines, Vietnam, Taiwan, and Malaysia. These conflicts led to a 1988 showdown between China and Vietnamese navies, ending with the sinking of several Vietnamese sailors and over seventy dead sailors (Ibid.).

Analysis of Literature

While there has been no previous literature that has directly explored the effects of a resource discovery upon interstate conflict, all the literature discussed in this chapter inform my topic and are needed to form a well-developed theory. The first section, international policy motives, informs my theory of the conditions that drive state action, especially conflict. Nations will pursue any policy that further their national interest, such as security and wealth, as well as any policy that increases their relative power, regionally or in the international community. Due to the lack of an international governing body, nations work within a system of anarchy. In order to pursue their interest, nations can act however they see fit, even to the encroaching upon another nation's sovereignty or war, without fear of repercussions from an international police force. Thus, in the context of a new resource discovery, there is no international mechanism from stopping a powerful nation from encroaching upon a smaller nation to expropriate its newly found resources, nor to stop a newly empowered discovering nation from pursuing more aggressive policies than were previously possible.

The second section of literature, capabilities, informs my theory by showing that a shift in relative capabilities creates a dangerous situation for nations. A shift towards power parity

creates the most likely situation for conflict, though any major shift is shown to increase its likelihood. A larger increase in the likelihood of conflict is caused by the power shift moving rapidly, rather than slow economic growth over several years. While many of the tests showed that power transitions caused conflict only looked at major powers at the systematic level, Lemke and Werner's (1996) tests showed that the same principle held true at the regional level as well. The weakness of the literature was a failing to prove whether the conflict was primarily initiated by the nation whose power is growing or by the nation trying to keep the growing nation from surpassing its own strength. For the purpose of this study, the direction of the conflict is unimportant; rather, finding that the likelihood of conflict is greater is our primary goal. In regards to this study's theory, the power transition literature is important to show that the increase capabilities gained by increased access to major resources creates an interstate condition that is more prone to conflict.

The third section, concerning classic and neoimperialism, shows that nations in the past did not stop their resource/power-building at the borders of their own nation. In conjunction with the past literature on realism, anarchy and power building, imperialism shows that in order to gain necessary resources for their national interest, nations are willing to impose upon the sovereignty of weaker nations. Historically and today, imperialistic policies have held a key role in nations' power and security strategies. The imperialism literature shows that conflict will arise from imperialistic policies on two fronts: conflicts between the imperial nation and the colonial/resource nation as well as conflicts between imperial nations vying for more control over more areas and resources. The literature also contends that looking at the announced motives of nations in today's neoimperialism will often hide their true motives; many neoimperial nations often engage in imperialism under the guise of helping to modernize or

democratize the colonial/resource nation. This means that in my theory we cannot focus on conflicts by issues, such as resource conflicts, because conflicts that may have had resources as their true motivating motives may be mislabeled as something else. Finally, the literature is cohesive in its assertion that home government are not afraid to involve their strength, diplomatically, economically or militarily on behalf of major corporations seeking to assert an imperialistic relationship within a resource nation. Because the literature concerning imperialism was mainly historical, there were no empirical tests ran to see how generalizable the principles of imperialism are; the past has shown flagrant and subtle imperialism in the search for more resources, and thus, more power, yet I plan to study whether the phenomena are now purely historical and outdated or whether today's neoimperialism is as conflict prone as in the past.

The literature section on resources and conflict are important in theorizing the possible effects a resource discovery will have on interstate conflict. Multiple articles showed through formal modeling and empirical tests that scarcity and demand for a resource increases the chance for conflict. There were also myriad prior studies that looked at the link of resource abundance and conflict; while many are criticized on one aspect of their methods or theory, one finding was constant across all the studies, lending it credence: a nation that has a scarce, unevenly distributed resource has a greater likelihood of conflict, especially concerning energy resources such as oil and natural gas. Leith (1939, 1947) focuses on the theory of why resources may cause conflict; he avers that great powers will have to continue to expand their circles of influence to acquire all the resources they require, eventually overlapping their expanding circles with another's. Simultaneously, small nations are seeking to grow also, and their budding circles of influence will ultimately be involved in the system of great power influences. The weakness of this literature is that none of the previous studies is that none of them deal with resource

discovery. There is a lot of study of resource rich nations and the effect of resources intrastate and internationally, but the topic of discovery and its effects is overlooked. While Leith's work is the closest to considering resource discovery and its effect on conflict, he does no empirical tests at all. This literature informs my theory as it shows that the mere presence of resources increase the likelihood of conflict, especially when multiple nations are vying for control.

The fifth section on territory expands the premise that contiguous territory has one of the highest predictive values concerning conflict. The literature shows that while territory still has important implications when studying resources, the need for the territory to be contiguous between contenders has declined in the decades since the Second World War. Further, to expand on general territorial conflict, the chance for conflict is raised further when the value of the territory grows, such as from resource discoveries. In line with the literature from the second section of literature, the territory literature also shows that the chance of conflict over a piece of territory increases when the contending nations are involved in power calculations that are heavily influenced by the gain or loss of the territory. The empirical tests in the literature show that while contiguity is correlated with conflict, the escalation of the conflict to war is caused by the implications of power and resources found in the acquisition of the territory. Again, while the territory literature does not directly implicate the topic of this study, the discovery of resources and conflict, it does inform us as to the conflictual nature of territorial disputes, especially those concerning resource rich territories.

The final area of literature explored within this chapter concerns the effect of resources upon relations and conflict at a regional level. The presence of resources carries security and power implications for all the nations in a region, whether the other nations are also resource rich or suffer from resource scarcity. An exploration of the relations in the regions of the Middle

East, the Caucasus and Caspian Sea, and East Asia illustrates similar patterns. The literature seems to show two avenues for increased conflict with the presence of resources in a region. First, resources can exacerbate longstanding tensions and conflicts within the area, especially conflict over disputed boundaries and territory. As shown in the fifth literature section, an increase in the value of the territory increases the risk and resources nations are willing to put into the acquisition of the territory. A conflict over territory that had ceased being violent could very easily flare back up into violent conflict and war with the discovery of new resources. The second avenue for increased conflict comes from the influence and presence of major powers in the region pursuing their resource needs. Different nations in a region may choose rival major powers trading partners, leading an extension of the major power rivalry to exist between the regional neighbors. The major weakness in this literature as it relates to my present study is the lack of empirical tests; the literature is drawn heavily from historical and political relations reports. The relations seem to be somewhat constant across the three regions studied, but there are no tests to show that this pattern is a general phenomenon and not simply scattered events upon which researchers focus. Again this literature is informative to my theory, showing that the presence of resources can increase the likelihood of conflict within a region, but it does not focus on the discovery of resources and whether this increases the likelihood even further.

Conclusion

This previous research provides good groundwork for my theory, but still does not address the root of our issue. None of the previous research has explored the effects of the *discovery* of a new source of resources on the onset of interstate conflict. Similarly, the previous research discussed above will help in our predictions of the results from the discovery of new

sources of resources. In chapter three, I will explore how nations depend upon resources to maintain and expand their capabilities and how the competition for resources will strain relations within the global system. The examination of the effects of resource discovery upon interstate conflict will further the research done previously to allow a larger view of the importance of resources, their affect upon calculations of power and conflict, and their overall effects on international relations in the regional and global systems.

CHAPTER 3

THEORY

Since the beginning of human interaction, they have conflicted with each other concerning the scarcity of resources; since the creation of nation states, this conflict has changed only in the size of the units involved. This paper investigates the question of whether the discovery of resources by states will lead to greater interstate state conflict for that state, for other states in need of the resource, and for the regional neighbors of the discovering states.

Resources and Power

What is meant by "resources"? A resource is any "source of supply, support, or aid, especially one that can be readily drawn upon when needed" ("Resource" 2004). More specifically, in the discussion of resources for nation states, resources are "the total means available for economic and political development…[and] increasing production or profit" ("Resource" 2004). Resources can be further divided by whether or not they are renewable. A renewable resource is any that can be replenished by either human or natural contrivance; these would include such things as water, timber, or even labor. Conversely, nonrenewable resources are any resources that cannot be replenished once used, such as coal, oil, diamonds, or other precious metals. This study focuses on the latter of the two; I believe nonrenewable resources plausibly create greater conflict due to a nation's inability to continue to replenish the resource if the state has it within their own territory, as renewable resources can be through wise policy. For example, renewable resources can be held at a level at which the stores do not deplete through conservation and moderate use. Even if a nation discovers its own store of a nonrenewable

resource, it must still look to find greater supplies outside itself, foreseeing the day when their own stores ran dry.

One must understand the importance of these resources to the nation states. Nearly any task undertaken by a nation will require the use of some resource, whether it is a domestic activity or an international affair. Thus, the development of any project and, therefore, the political and economic development of the state are directly tied to a state's possession of the resources needed for such projects, or their ability to import such resources from other states or regions of the world. Without access to needed resources, a state's government will atrophy, being unable to provide the necessary goods needed by its inhabitants domestically, and unable to compete internationally, economically or defensively. Consequently, all nations have need of resources for their own survival (Klare 2001, 14).

The importance of resources to nations, domestically and internationally, in time of peace and conflict is well established. I further examined why nations would choose to begin interstate conflict because of resources found in other nations. First I studied the effect of scarcity and the uneven distribution of resources around the world on nations' choices to enter interstate conflict. I then examined two different theories of power arrangements that would affect nations' decisions to enter interstate conflict over resources; the first deals with international relations dwelling upon nations' absolute power, while the second understands international relations through the lens of relative power among nations.

While I have shown that all states have great need of resources, the fact is that not all states possess all of the resources they need within their own borders to satisfy the consumption by the state, while other nations have far more of a resource than which the state has demand for it. Examples of this are plentiful: the Middle East is known for its large oil reserves while

Europe traditionally cannot provide even a majority of the oil it consumes. Likewise, North America has the largest proven coal reserves while the Middle East, Africa, and South and Central America have very little (Schneidermann 2008).

This problem is commonly referred to as the uneven distribution of resources. This principle creates an international environment in which nations are dependent upon other nations for the support of its needs. These nations without sufficient resources within their own borders must seek a foreign policy that will allow it to gain the resource elsewhere, either by negotiation or by force. In addition to the uneven distribution of resources, the principle of scarcity compounds the problem. While some nations may have excess of a certain resource, this excess may still not equal the deficiency of the resource found in the demand of nations who do not have adequate of the resource. This will create competition between the nations that do not have sufficient resources (have-nots) in order to gain their needs from the nations that do have the resources (haves) in order that one have-not nation may have its resource needs met, even to the detriment of other have-nots.

On the surface, such a situation favors the haves greatly, as their needs are met while also positioning them to make large economic benefits from the competition of the have-nots for their resources, yet it also makes the have's nations the center of possible conflicts by the have-nots, who are trying to meet their needs. Leith (1947) elucidates this principle as such: "The less favored nations, therefore, are doing everything possible to improve their position while the more favored ones are doing their utmost to retain, consolidate, and increase the natural advantages they have." If a have-not becomes desperate enough for a given resource, it may be willing to initiate violent policy to ensure its acquisition of the resource. If there is more than one nation with such levels of desperation, the resulting foreign policies will lead to conflict

amongst the have-nots with the haves in the middle. Thus, the uneven distribution of resources may lead to desperation to find the resource elsewhere, while the principle of scarcity has the ability to change the multiple have-not states' desperation to conflict.

It is outside the scope of this study to determine who is correct in their view of international relations, the absolute power theorist or the relative power theorists. It could be true that the absolute power theory better explains international relations in times of greater peace such as the 1920s or the post-Cold War era, while the relative power theory better describes international relations through large wars, such as World Wars I and II, or when tensions are high between nations, such as the Cold War period. Sufficient for this study is the fact that both theories support the fact that nations are willing to fight over resources in other nations when their own resources are not sufficient for their needs.

The history of nations is replete with examples of conflict due to a have-not power seeking to forcefully take resources from a have nation. During World War II, Hitler charted a course for his armies that would lead them to the oil-rich fields in Romania. Germany did not have the resources needed to power Hitler's war machines, so he had to take special action to find them elsewhere. Even though Hitler's main opposition came from the French and British to the North-West and Russia to the East, the scarcity in resources mandated that Hitler focus some part of his forces to the South-East in order to reach the oil fields requisite to continue his propagation of war. In a similar vein, the Japanese were forced to take similar actions during World War II to provide the resources necessary for their part in the war. Japan has very little oil resources of its own and due to the harsh embargos placed upon it by the Allied nations, Japan had to focus its attention on the mainland of Asia, forcing them to focus part of their military strength South to the Dutch East Indies, though it antagonized Britain further against them and

took military resources away from the East, from where most of their opposition came. These examples are highly stylized and take place in the midst of a larger conflict, yet both show that resource scarcity forced two of the Axis nations to focus part of their military strength away from their primary oppositions in order to secure the needed resources for their campaigns. More recently, the first Gulf War was based on conflict over resources. Iraq was nearly bankrupt after concluding its conflict with Iran; oil is one of the only resources that Iraq has so plentifully that it drives a large portion of their economy. Kuwait, also a nation rich in oil resources, raised its production of oil in opposition to the Organization of Petroleum Exporting Countries' quotas, wreaking havoc on oil prices and hurting the Iraqi economy even further. Iraq invaded Kuwait on the premise that Kuwait had been slant drilling across the Iraq-Kuwait border and, thus, stealing Iraqi oil. Whether one accepts Iraq's given premise or believes that it had more to do with increasing Iraq's own oil revenues and supplies, both rationales place resources at the heart of the conflict. Though these examples represent only a small fraction of examples of conflict over resources, they are sufficient to illustrate of the fact that nations are willing to fight for control of resources.

Discovery and Conflict

I have now shown that resources can be instrumental in nations' decisions to initiate interstate conflict; to narrow my discussion nearer to my aim, I examine why the discovery of new sources of resources would contribute further to these conflict over resources. I have previously examined the principles of uneven distribution of resources and scarcity, which drive have-not nations to compete over excess resources controlled by have nations. While prior research has shown that simply the presence of resources will increase the likelihood of conflict,

I believe that the time of initial discovery increases this chance even further. Some scholars believe that conflict is the result of an incomplete knowledge of another nation's information (power, policy preferences, etc.) and commitment problems (Fearon 1995; Gartzke 1999; Powell 2006). The initial discovery of a new important resource has the potential to quickly change a nation's revenues and power. Conflict over known resources will eventually reach an equilibrium, as more have-not states lay claims to the excess resources, either by concluding agreements with the have state that are in their favor or, at the extreme, taking imperialist (or neo-imperialist, in today's global environment) control over the have state's government (or economy) and driving its policies for the large power's own benefit. Such equilibrium is reached because nations have now relearned each other's information and can now deal more peacefully with one another. While increasingly desperate nations may later upset this equilibrium to try again to gain access to needed resources, the equilibrium of information should again decrease the chance of conflict, if not always to the level it was before the discovery was made. When an initial resources discovery is made, it begins the process once more, upsetting nations' knowledge of each other, but in a different nation. An initial resource discovery allows a clean slate of competition for access to the resource. Because no prior agreements have been made concerning access to the new resource have been made, it increases have-not nations willingness and belief that they could win such agreements. A discovery of a new source of a resource following the initial discovery may also temporarily increase the chance of conflict, but I still believe that this will not have the same effect as the initial discovery. A new, non-initial discovery adds importance to a nation's reputation as a resource provider, but because of previous contracts and alliances following the initial discovery, the effect will be dampened. Nations have previous information on how a nation reacts and awards contracts to their resource,

reducing the learning curve and possibility of conflict. Following an initial discovery, the discovering nation will not have yet promised access to any nation; this decreases the have-nots' knowledge of how the discovering nation will proceed and leads them to pursue whatever means necessary to gain such promises, increasing the likelihood of pursuing conflictual means of access. I believe that the discovery of a new source of resources will increase the chance of international conflict at two levels: for the discovering nation alone, as well as increasing conflict within the discoverer's region.

Increased Conflict for the Discoverer

While numerous studies have shown international conflict to be more prevalent within nations rich in natural resources (Gleditsch 1998; Ross 2004), I believe that when a nation makes a new resource discovery, the chance of international conflict is significantly greater for two reasons: first, other nations who are in need of more of the discovered resource or who are seeking better arrangements to attain the discovered resource will seek any strategy to achieve access to the newly discovered resource. The change in a nation's information will leave have-not nations in a position where they do not know how the discovery nation will act towards their bid for access and will drive some to go as far as pursuing neo-imperialistic or conflictual policy to gain the needed access. Second, a new resource discovery will add a significant means of revenue to the discovering nation, adding a free source of resources to meet the nation's own need, as well as adding a lucrative export to sell to other nations in need of the resource. This added revenue will increase the nation's power in its regional sphere as well as in the international system, allowing the discovering nation a better position to pursue its international

goals, which may lead to conflict with other nations. This section outlines how the discovery of new resources within a nation will increase the chance it will experience international conflict.

The first way that a new resource discovery will increase the odds of international conflict within the discovering nation is increasing the likelihood of a discovering nation being a *target* of conflict by other nations. Resources, as discussed earlier, are important in every nation's development and power; as such, outside nations will always be seeking more of a needed resource, as well as the best deal they can achieve at gaining access to the resource. Articles written on neo-imperialism detail how nations are willing to apply military pressure upon resource-rich nations who are otherwise unwilling to broker a deal favorable to the outside nation (Lewis 1974; Watson 2005). Indeed, Leith (1939) even says that a written agreement to which both nations do agree may not be strong enough to keep the outside nation from still applying military pressure to ensure the deal is kept, or even to seek a more favorable deal. This corresponds with Fearon (1995) and Gartzke's (1999) idea of commitment problems, which highly increase the likelihood of conflict. Even if nations that enter into trade agreements and alliances with the discovering nation may be secure in their promises, those excluded by these agreements and alliances may be more likely to attempt a militarized conflict to gain access to a similar agreement or to incite the discoverer to break one of their newly minted agreements. So whether Leith is correct or not in assuming that trade agreements are not enough to satiate have-not states energy security, these same agreements will always leave some have-not states on the outside who may be willing to try more desperate measures to gain access to the newly found resources. A new resource discovery increases the odds of international conflict more than other times because no one nation has reached a deal to gain access to the discovery, as may be the case in a nation that has been rich in a given resource for some time. No nation has information

on how the discovering nation will act, leading them to often go as far as representing their willingness to pursue conflict for access, even if their willingness is simply overrepresented (Gartzke 1999). Thus, one would not expect the neo-imperialistic pressure to come from only a single have-not nation, but rather for multiple nations who want access to the resource to take whatever steps they deem necessary to ensure preferential access to the resource. This competition for access may begin as simple bargaining and bribery, but as the pressure to out-bid other have-not nations increases, a nation may turn to less civil forms of negotiation. These nations may not always resort to full-scale combat, but threats of force and military maneuvering may be all that is necessary to bring bargaining back into an aggressor state's favor. The discovering nation then must choose how to respond to even these low-levels of conflict, to arm and reciprocate or to comply with an aggressor's demands. Arming will affect not only the discovering nation, but also the security nexus of its entire region. Compliance shows that it can be bullied, increasing the likelihood of the discovering state being the target of more aggressive behavior. These conflicts may not occur immediately following an initial discovery, allowing for the time it takes bargaining nations to try and negotiate peacefully and then to mobilize in such a way to influence its chances of gaining access to the new discovery. Still, I expect these conflicts should take place relatively soon (within the first few years) after the initial discovery. Thus, a discovery of a new source of resources will increase the likelihood of international conflict with the discovering nation as the target.

Examples of nations using military might to gain control of or access to new sources of vital resources are replete in history. In the period following World War I, oil was discovered in Mesopotamia, leading many nations, those from the West most notably to do all they could to gain control of these new resources. Indeed, history shows that "throughout this phase, as in all

later phases of Iraq's oil history, major international powers combined national military force, government pressure and private corporate might to win and hold concessions for [Mesopotamia's] oil" (Paul 2002). In 1972, the Addis Abeba peace agreement split Sudan into two independent territories. Later, when oil was discovered north of the border of the two Sudanese nations, Southern Sudan abrogated the Addis Abeba peace agreement and attacked Northern Sudan to gain control over the oilfields. Many believe that the conflict in Sudan today is still a continuation of the conflict begun over control of Sudan's oil (Derks, et al. 2008). In the same time period, Argentina and the UK argued over control of the Falkland Islands. It was not until oil was thought to have been discovered in the Falklands that Argentina invaded the islands, beginning the battle over ownership of the Falklands (Willis 1982). More recently, following the discovery of oil in the Albertine Basin on the Ugandan side of and beneath Lake Albert, "both the Ugandan and Congolese armies have been deploying heavily around the shores, with some observers saying there is now a threat of all-out war" (Wasswa 2007).

The probability of international conflict in a nation that has newly discovered a resource will also increase due to the discovering nation acting as the *initiator* of the conflict. The discovery of a new resource will add to the discovering nation's power in two ways: first, the newly discovered resource will add to the resources available for the nation to use. Not only will it save the nation money since it will not have to continue to purchase the discovered resource from another nation, it will also be able to apply the discovered resource domestically in the development of its own policies. Nonrenewable natural resources, especially those that are energy resources, are a key to the development of military power (Whealey 1988; Klare 2004; Ghazvinian 2007). On top of using the discovered resource to aid in the development of key policies, especially the growth of military power, the discovery of a new resource will further

add to the discovering nation's revenue by adding a new, highly demanded export. The added revenue will also add to the nation's power to develop and pursue its own policies. With the added power from the new resource discovery, a nation can begin to assert itself more aggressively in the international sphere. Where a more powerful nation may have been setting international policies, or "rules" either regionally or globally, the discovering (and now more powerful) nation will be able to vie for policies that better favor it (Organski and Kugler 1980; Lemke and Werner 1996). As in the case of the discovering nation as the target of conflict, negotiations may begin peacefully around a bargaining table. But as the newly empowered nation now strives for new international arrangements that differ from the status quo, it will find itself in a better position to apply military pressure, threaten conflict, and even engage in conflict in order to ensure that it receives the more favorable policies it seeks (Heisler and Peters 1983). The discovering nation also has many incentives to misrepresent its new power (Fearon 1996); other nations will be unsure about the new strength of the discovering nation and these misrepresentations can increase the discovering nation's barraging power. Gartzke (1999) contends that the uncertainty of other nations of the discovering nation's true new strength can lead them to also misrepresent their willingness to use or threaten force, adding to the already volatile environment. New resource discoveries subsequent to the initial discovery will also increase the revenue a nation has to spend on to increase their power, yet I believe that because the initial oil discovery increases the likelihood of the discovering nation being a target of conflict, that more of the revenue from the initial discovery will go towards military power rather than economic power. Because further resource discoveries will be framed by prior interactions and contracts with other nations for access to the resource, the nation will feel less threat militarily following these discoveries. However, because the initial discovery has no such

framework, military power will be the more likely investment for resource revenues. This decision will influence the discovering nation's subsequent bargaining in its regional sphere. The choice to build military power following an initial discovery will give leaders of that nation incentive to flex their new military muscles when trying to obtain more favorable foreign policy. Thus, the discovering nation may be quicker to use force to gain its policies rather than economic bargaining, as a sign of its new power and policy objectives and to ensure more cooperation in the future. Contrarily, a the decision to spend resource revenue on economic power following further resource discoveries, due to the lower state of conflict threat (and better information of nations' actions), will put a nation in a better position to bargain for more favorable foreign policy through economic deals and incentives.

The time frame of the conflicts caused by the discoverer will likely ran on a different timetable than the conflicts which come into the discovering nation. As it will take time for a nation to convert its newfound resources into military might, we expect that the conflicts coming out from the discoverer will occur not in the immediate years after the initial discovery, but may be staggered a few years out. However, even a nation beginning to build up their military might will change the security nexus of its region, causing more nations to be willing to preemptively fight, hoping to best the discovering nation in a militarized issue before it is able to fully develop its might using its new resources. So while I predict most of the conflict coming out from a discovering nation will be staggered a few years from the discovery, the act of building up military might may drive it to conflict even sooner. Thus, a discovery of a new source of resources will increase the likelihood of international conflict with the discovering nation as the initiator.

Examples of nations using the new revenue from a newly discovered resource to increase their military might to both protect their new find and to increase their power in regional and global politics are numerous even today. A prime example of a nation using its newly discovered oil to ensure military strength is Saudi Arabia. When oil was first discovered in Saudi Arabia in the 1930s, the Saudi government made quick alliances with the United States, obtaining American arms as quickly as possible. The King of Saudi Arabia built up its military, fearing threats from Jordan and Iraq (Ottaway 2009). Saudi Arabia did find itself embroiled in conflicts soon after, though the beginning of World War II creates a large debate over whether Saudi Arabia's conflicts were due to oil or the larger war. The fact that the need for oil directed many of the axis nations' strategy makes it likely that these conflicts had some basis over gaining Saudi Arabia's oil. A recent report out of Africa also shows that resource discoveries lead to build-ups of military might; it states, "The vast mineral wealth…provides both an incentive to fight and the money to buy weapons" (Molele 2009). Furthermore, with the discovery of resources in the arctic, Canada has proclaimed its willingness to defend its sovereignty in the Arctic by increasing its military there, increasing its likelihood of encountering conflict as Russia follow suit (Asher 2008).

The purpose of this study is not to try and determine whether the likelihood of conflict is greater for the discovering nation as the target or the initiator, but simply to prove that both roles of the discovering nation will lead an initial resource discovery to increase its likelihood of international conflict. Depending on the status of the nation making the resource discovery, which role is most prominent in a discovery's increase of the chance of conflict may vary. If a more powerful nation makes a new initial resource discovery, it may worry less about being the target of the conflict, but be more inclined to use its new additional strength to pursue more

favorable foreign policy that it did not have the strength previously to pursue. On the other hand, if a very weak state makes a new initial discovery, it may still not have the power to change its position in its regional hierarchy, but its low power may lead more nations to believe that they can bully it into favorable agreements, leading it to be the target of more conflict. Gartzke (1996) contends, anyway, that a preventative war is the same as a war of conquest. Thus, no matter the power or status of the discovering nation, I believe an initial resource discovery will increase its chance of interstate conflict in the years following. I believe that the combined effects of the discovering nations as both the target and the initiator of conflict will show strong support for my first hypothesis.

Hypothesis 1: The discovery of a new source of resources will increase the likelihood of international conflict for the nation that made the new resource discovery.

Regional Conflict

The discovery of a new source of resources will not only affect the likelihood of conflict within the discovering nation, but I believe it will also increase the likelihood of conflict between all the sovereign nations in the region in which the discovery was made. The discovery of a new source of resources will add to the likelihood of conflict within the region for two main reasons: first, the balance of power will be upset in the region and will lead to an increase in military development in the name of defense that will increase the chances of conflict. Second, any conflict concerning the newly discovering nation will also bleed out into its allies, whether those allies are aligned regionally or with major powers. This section will outline how the discovery of a new source of resources within a nation will increase the chance of international conflict between all the nations in its region.

First, though the discovery of a new source of resources may be limited to a single nation, the security implications of the new discovery spiral out into the entire region. As previously discussed, the discovery of a new source of resources within a nation will greatly add to that nation's power, both monetarily and militarily. This new gain in power will affect the other nations in the discovering nation's region; as the discovering nation grows in power, the neighboring nations must also prepare to strengthen themselves militarily to prevent the newly empowered discovering nation from being able to bully them into policies that favor the newly empowered nation to their own detriment. Other nations' information concerning the discovering nation's power and its policy actions based on that power will now be reset and incomplete; not knowing how the new discovering nation will act, nations will take the safe course of action and prepare for the event of the discovering nation pursuing conflict. While only those nations that oppose the discovering nation would feel an immediate need to build up their military might, their arming would then lead to security risks to the other nations were not initially threatened by the increased power of the discovering nation. Thus in this spiral, the gain in power of the discovering nation will lead to security risks and eventual arming of all the other nations in the region, whether friendly or adversarial to the discoverer. As the nations begin to vie for position in the regional hierarchy and seek to show their military might, the possibility of conflict would increase significantly. Indeed, Powell (2006) finds that due to information and commitment problems, large quick shifts in the distribution of power will lead to conflict. The effects of the new resource discovery on regional conflict due to security risks and regional arming will not necessarily be seen immediately following the discovery and may be staggered out a few years following the discovery.

Regional and major power allies will also lead to an increased chance of international conflict within a region following a discovery of a new source of resources. Major power influence extends the furthest and strongest across the globe, as other nations tend to ally themselves with one of the major powers. Major power nations also tend to always look to increase their power and capabilities, seeking more resources and the best deals to gain access to them. This makes major power alliances a major factor in determining conflict in a region following a new resource discovery. When a nation makes a new resource discovery, no nation will exert more attention to gain favorable access to the new resource than major powers. Often, the discovering nation's choice of whom to ally with and thus grant access to the new resource is seen as a zero-sum game amongst major powers (Ghosh 1992; Ghazvinian 2007). Whichever major power is chosen to have access to the new resource will have gained in power while the other(s) will have lost a chance to build their power. Military pressure and conflict may increase between the discovering nation and major powers, but more likely is regional pressure and conflict emanating from the allies of the different major powers already in the region. For example, as different Middle Eastern nations make deal with the different major powers, such as the United States, China, Japan, and Russia, they become part of the rivalries between these major powers (Issawi 1973; Iyer 1998). More recently, a similar pattern has emerged in the region of the Caspian Sea where Kazakhstan has created close ties with Russia and Iran while Azerbaijan and Armenia have pro-West leanings when they have made new resource discoveries (Hunter 2003; Kim and Eom 2008; Aras 2002; Turnock 2001). This heightened tension amongst the conflicting allies of different major powers increases the volatility of the entire region in which the resource discovery is made and increases the likelihood of conflict between the members of the region.

Again, the purpose of this study is not to determine the which reasons have the greatest impact on increasing the likelihood of international conflict between all the sovereign states in the region of discovery, but simply to prove that the discovery of a new source of resources will increase the chance of conflict overall. This discussion of regional security risks and conflicting alliances leads us to our second hypothesis.

Hypothesis 2: The discovery of a new source of resources will increase the likelihood of international conflict within the region in which the new resource discovery was made.

CHAPTER 4

RESEARCH DESIGN

In testing the effects of the discovery of a new source of resources on conflict in the interstate system, my tests were ran with the nation states as the actors. It is conflict between the states that is important to my theory. While some may argue that conflict begins with actions by individuals within the states, it is the states as a whole who contend with one another. All independent states are included within the data set (Small and Singer 1982)[1]. Though some states discover natural resources before they gain their independence, these cases are not included within the data set. As colonies of other nations, the discovery of resources before independence is outside of my theory; the discovery would already be "owned" by another nation who already has control of the governing of the colony.

Two hundred fifteen nation states are included within the data set. Each state was tested by year; data on conflict is most often coded by year, as is many other data sets which will allow the inclusions of a greater number of control variables to test the robustness of my model. The data set looks at each nation either from 1816 to 2001 or from a nation's year of independence to 2001, which allowed for up to 187 years to be included. Data after 2001 is not as readily available or reliable, but the years since 2001 do not hold important information since few discoveries of the kind I are considering have been made since 2001. I made the choice of my range of years because it matches the range of years for which I have available data for many of my variables; even so, this window of time allows us to include all discoveries of my tested resource. The unit of analysis to be used in my test will be *country-years*. Each year of

[1] Samples are generated by Bennet and Stam's (2000) EUGene program.

independence for a given state from 1816 until 2001 is counted as an individual observation, which gives us 13,403 observations in my data set.

Dependent Variable

My main concern within my theory is to see what if any effect the discovery of a new source of resources has upon conflict within the interstate system. I tested conflict using the Militarized Interstate Dispute data set compiled by the Correlates of War project (Ghosn, Palmer and Bremer 2004). Here, conflict is considered as anytime one or more states threaten, display, or use force against one or more other states. I code conflict as a dummy variable, coding a 0 if no conflict occurred for a given country-year and a 1 if conflict began in the given year. Ongoing conflicts are not counted further years in the data, ensuring that conflict s are not counted more than once to influence the outcomes of my models. While the Militarized Interstate Dispute (MID) data gives information concerning how many conflicts occur in a given country-year, as well as the intensity of each given conflict, I ignore this data. My hypotheses do not ask if the discovery of a new source of resources increase the number of conflicts or the intensity of conflicts; it simply asks whether or not a new discovery increases the likelihood of any conflict. As I discussed in my theory, nations need not go so far as to engage in military battles and wars to gain access to a discovering nation's new resource; a nation will use as little force as it finds necessary to obtain its ends. If a discovering nation buckles under the mere threat of conflict, the aggressor nations will not need to pursue it further. Yet, that threat, which is captured under the MID dataset, is still a show that a nation is willing to fight to gain its desired resources. While number and intensity may be variables that would be interesting to test at a later time, for this test, I only examined whether or not conflict occurs. The MID data fits

my concept of conflict very well. It codes conflict at a low point that only needs the threat or display of force to be a conflict. Because my theory states that there are many have-not states that will be interested in gaining access to the new discovery within another nation, conflict will not necessarily have to escalate to full war, especially if the new discovering nation is weaker than the have-not nations that want its resources. I tested this assumption by ranning the models twice, once with all MIDs included, from threat to use force through all-out war. I then ran the models again using only the higher levels of conflict, actual use of force and war. If the results of the models strengthen in the high conflict models, I can assume that the discovery of resources actually causes more high level conflicts than just threats and displays of force. Conversely, if the results weaken, I can assume that the discovery of resources causes more low level conflict. If the models do not significantly alter, I can assume that the discovery of resources causes both high and low conflict fairly evenly. In the models, the dependent variable is simply labeled *Conflict*. The MID data set has a value for every country-year observation included within my data set, giving us 13,403. Because I am treating conflict as a dummy variable, the only possible values are 0 and 1. Within the years considered, conflict occurs in 14% of the country-years. More descriptive statistics concerning conflict can be found in Table 1.

Independent Variables

My hypotheses propose that the discovery of a new source of resources will have a significant effect on conflict in the interstate system. Though the nonrenewable resources that are important for the workings and survival of nations are varied and many, I chose oil as my resource to use in my tests. The discovery and use of coal primarily happened before good

Table 1. Descriptive Statistics.

	Observations	Minimum	Maximum	Mean	Std. Deviation	Frequency*	Frequency %**
Conflict	13,403	0	1			1,799	14.02
Discovery	13,403	0	1			53	0.41
Production	13,403	0	1			57	0.44
Democracy	10,379	0	10	3.28	3.92		
Development	13,020	3.59E-07	0.384	0.015	0.039		
Major Power	12,834	0	1			1,090	8.49
Alliances	13,406	0	53	2.79	5.89		
Neighbors	13,406	0	17	1.56	1.75		
Rivalry	14,123	0	1			2,153	15.24
Past Conflict	14,123	0	20	2.28	3.59		
Trade Dependence	5,435	2.52E-05	0.999	0.131	0.152		
Regional Democracy	11,489	0	9	3.28	1.96		
Regional Development	13,020	5.13E-06	0.174	0.015	0.015		
Regional Major Power	12,834	0	1			8,734	68.05
Regional Count	13,020	1	47	25.46	11.57		

*Frequency is the number of occurrences of that variable (x=1)

** Frequency % refers the percentage of total cases where the variable occurs (x=1/n)

data on conflicts in the interstate system is available, while natural gas is still new enough as a major resource that there would be fewer discoveries to test in the models. The data for the

discoveries of oil fits within my spatial limits for which I have data about conflict, while also providing a plethora of quantifiable data. Oil does, however, have a few drawbacks. Oil is a fairly rare commodity, which holds a very prominent position in the world economy. The results from our tests with oil may show stronger results than we may predict with a less important resource. Yet, while other resources may not be as strategic a resource as oil, I still believe that nations will see an increase in the likelihood of conflict following the initial discovery of any nonrenewable resource that is unevenly distributed across the globe and has a demand in the global market (i.e. coal, natural gas, diamonds, etc.) The data which I use for my tests concerning oil comes from The International Peace Research Institute, Oslo's Centre for the Study of Civil War's new Petroleum dataset (Lujala, Rød and Thieme 2007). This dataset coded the initial year of petroleum discovery for every nation in the world. Their dataset codes initial oil discoveries from Azerbaijan's initial discovery in Azerbaijan "at least by 13th century" and in Italy in 1480 through 2003. The years I use are bounded by the Correlates of War data beginning in 1816 until 2001 as previously discussed. A list of the year of initial oil discovery for each nation is in Table 2. As discussed previously, some of these initial discoveries occur before a nation has gained independence and so are not included within the models. It also possible that a state may discover a second, new oil field within its boundaries after it has already been producing oil from a first. I do not include such discoveries in the models, as we are concerned only with the initial discovery of oil in a nation. As I discussed previously, a new, non-initial discovery of a resource may increase the likelihood of conflict in the discovering nation, but not to the extent that an initial discovery does, due to previous contracts and dealing with other nations

Table 2. Initial Year of Oil Discovery and Production.

Nation	Discovery	Production
Afghanistan	1956	1967
Albania	1918	1918
Argentina	1907	1907
Austria	1930	1934
Belarus	-[1]	1991
Benin	1968	1982
Bolivia	1925	1925
Brazil	1939	1940
Bulgaria	1951	1954
Cambodia	1990	-[2]
Cameroon	-	1978
Chad	1974	1975
Chile	1945	1950
China	1897	1907
Colombia	1918	1918
Congo	1970	1975
Cuba	-	1902
Czecholovakia	-	1970
Democratic Republic of Vietnam	1981	1986
Denmark	1966	1972
Ecuador	1913	1917
Egypt	1868	-
Ethiopia	1972	-
Germany	1880	1880
Ghana	1977	1978
Greece	1972	1981
Guatemala	1930	1976
Guyana	1976	-
Hungary	1937	1937
Iran	1908	1911
Ireland	1971	1978
Israel	1955	1956
Ivory Coast	1970	1975
Japan	1883	1887
Jordan	1984	1984
Libya	1956	1961

Table 2 continued.

Nation	Discovery	Production
Lithuania	-	1991
Mexico	1869	1901
Mongolia	1945	1950
Netherlands	1945	1945
Niger	1975	-
Norway	1969	1971
Papua New Guinea	-	1991
Peru	1868	1883
Philippines	-	1979
Russia	-	1893
Saudi Arabia	1938	1938
Senegal	1960	1995
South Africa	1969	1992
Spain	1979	1992
Suriname	-	1982
Switzerland	1889	-
Syria	1956	1968
Thailand	1921	1959
Tunisia	-	1966
Turkey	1940	1948
United Kingdom	1919	1919
United States of America	1859	1859
Venezuela	1914	1917
Yemen	1984	1986
Yugoslavia	1949	1952

Notes: 1. A missing discovery year may mean that a nation discovered oil before 1816 or before it gained independence.

2. A missing production year may mean that the oil discovery was too small to be cost-effective to produce or that it had yet to start production by 2001.

concerning access to the resource. In the models, this independent variable is labeled *Discovery*. Discovery is coded as a dummy variable; it is given a 0 for any year which an initial discovery is not made and a 1 for any year in which there was an initial discovery in a country. Some may raise the concern of a dummy discovery variable treating a nation that produces a tiny amount of oil the same as countries where their national economy is dominated by oil production.

Regarding this concern, I remind the reader that Saudi Arabia did not have an oil based economy in the year it first discovered oil. It was only after years of infrastructure building and more non-initial discoveries that Saudi became an oil giant. The importance of an initial oil discovery is its potential to produce oil and other nations' access to that oil. While the Falkland Islands have never produced any significant amount of oil, the conflict over possession of the islands by Argentina and Great Britain began after the belief that there were large reserves of oil. Thus, the use of a dummy variable does not create problems concerning discovery size. Though many of the initial discoveries occurred while a nation was a colony of an imperial power and thus not in my data set, the data set includes 53 different discoveries. There is a value for discovery in every country-year observation in the data set, giving the set 13,403. Other descriptive statistics for discovery can be found in Table 1.

My theory rests upon the premise that nations will be more likely to experience conflict following the new discovery of a resource in a nation either due to other nations seeking access to that extracted resource or as a result of the revenue that come from the resource; either way production of the resource is a key step in fostering a more conflict-prone environment. Some nations, such as the United States, began their production of oil in the same year it was discovered, but other nations had a severe lag between discovery and production. For example, oil was first discovered in Benin in 1968 but production of its oil did not begin until 1982, twelve years later (Lujala, Rød and Thieme 2007). To ensure that this delay in some states does not bias the results of the my models, I ran the models a second time using dates of initial production in place of initial discovery. Using this data also screens out nations whose initial oil discoveries were too small to viably work to produce. The dates for initial production are also found in the Centre for the Study of Civil War's Petroleum dataset (Lujala, Rød and Thieme 2007). A list of

the initial year of oil production for each nation is in Table 2. In the models, this independent variable is labeled *Production*. Production is also coded as a dummy variable; it is given a 1 for any year which initial production of oil began in a nation and a 0 for any year in which there was not. The dataset includes 57 different years of initial production. There is a value for production in every country-year observation in the data set, giving the set 13,403. Other descriptive statistics for production can be found in Table 1.

While I theorized that only initial discoveries would have a large impact upon the likelihood of conflict for a discovering nation, I ran my models using data for continuing discoveries as well. The results of these tests can help me determine whether the likelihood of conflict is only affected by the initial discovery of oil or if continuing discoveries have similar effects. I use the Centre for the Study of Civil War's Petroleum dataset for continuing discoveries (Lujala, Rød and Thieme 2007). They code the year of discovery for all major oil fields around the world. Their dataset is limited by only coding discovery dates for continuing discoveries from 1946 to 2001. In that time frame, Lujala, Rød and Thieme (2007) code 448 discoveries of new oil fields around the world. A list of these discoveries can be found in Table 3.

Another issue is how long it may take for conflict to erupt after the initial discovery of a new resource. As discussed in my theory, it may take a have-not nation some time to be able to plan and mobilize against the discovering nation, as well as a few years before a discovering nation can pursue more conflict-prone policies due to their increased revenue and power from the discovered resource. In order to compensate for both of these issues, I create more models to include windows of discovery years to test my models. The windows will include the years of discovery and production alone, a window of years after the initial discovery or initial production

Table 3: Continuing Oil Discoveries, 1946-2001

Nation	Year of Discovery	Nation	Year of Discovery
Afghanistan	1956	Australia	1984
Afghanistan	1977	Australia	1984
Afghanistan	1979	Australia	1984
Algeria	1946	Austria	1986
Algeria	1956	Bangladesh	1955
Algeria	*1956	Belarus	1954
Algeria	1959	Benin	1968
Algeria	1960	Bolivia	1960
Algeria	1963	Bolivia	1968
Algeria	1967	Bolivia	1991
Algeria	1976	Brazil	1950
Angola	1955	Brazil	1950
Angola	1955	Brazil	1950
Angola	1969	Brazil	1950
Angola	1969	Brazil	1950
Argentina	1949	Brazil	1950
Argentina	1949	Brazil	1959
Argentina	1965	Brazil	1969
Argentina	1965	Brazil	1972
Argentina	1983	Brazil	1973
Australia	1953	Brazil	1974
Australia	1956	Brazil	1977
Australia	1961	Brazil	1977
Australia	1961	Brazil	1978
Australia	1963	Brazil	1981
Australia	1964	Brazil	1985
Australia	1964	Brazil	1987
Australia	1964	Brazil	1987
Australia	1964	Brazil	1988
Australia	1964	Brazil	1993
Australia	1965	Branei	1955
Australia	1965	Branei	1963
Australia	1981	Bulgaria	1951
Australia	1981	Bulgaria	1962
Australia	1981	Burma	1991
Australia	1984	Burma	1992

Table 3 continued.

Nation	Year of Discovery	Nation	Year of Discovery
Burma	1995	China	1975
Burma	1995	China	1977
Burma	1999	China	1978
Cambodia	1997	China	1983
Cameroon	1955	China	1985
Cameroon	1972	China	1987
Cameroon	1972	China	1988
Cameroon	1980	China	1988
Canada	1950	China	1989
Canada	1965	China	1989
Canada	1965	China	1997
Canada	1971	China	1997
Canada	1972	China	1997
Canada	1973	China	1997
Canada	1976	China	1997
Canada	1978	China	1999
Canada	1979	China	1999
Canada	1979	China	1999
Canada	1979	Colombia	1956
Canada	1982	Colombia	1959
Canada	1984	Colombia	1969
Chad	1974	Colombia	1974
Chad	1974	Colombia	1980
Chad	1975	Colombia	1985
Chad	2003	Colombia	1988
Chile	1958	Colombia	1989
Chile	1960	Congo (Brazzaville)	1951
China	1956	Congo (Brazzaville)	1969
China	1958	Congo (Kinshasa)	1970
China	1958	Congo (Kinshasa)	1972
China	1959	Cote d'Ivoire	1970
China	1960	Cote d'Ivoire	1970
China	1962	Croatia	1952
China	1964	Croatia	1997
China	1964	Czech Republic	1996
China	1969	Denmark	1966
China	1970	Denmark	1995
China	1971	Ecuador	1967
China	1975	Egypt	1953

Table 3 continued.

Nation	Year of Discovery	Nation	Year of Discovery
China	1975	Egypt	1961
Egypt	1965	Iran	1956
Egypt	1969	Iran	1958
Egypt	1971	Iran	1960
Egypt	1971	Iran	1961
Egypt	1974	Iran	1965
France	1954	Iran	1966
France	1958	Iran	1966
Gabon	1956	Iran	1967
Gabon	1962	Iran	1967
Gabon	1969	Iran	1975
Georgia	1975	Iraq	1949
Germany	1954	Iraq	1971
Germany	1955	Iraq	1973
Germany	1961	Iraq	1975
Germany	1978	Iraq	1976
Germany	1980	Ireland	1971
Ghana	1970	Ireland	1997
Ghana	1977	Israel	1955
Greece	1972	Israel	1959
Greece	1989	Italy	1954
Greece	1997	Italy	1958
Guatemala	1977	Italy	1975
Guatemala	1985	Italy	1979
Guatemala	1985	Italy	1980
Guyana	1982	Japan	1972
Hungary	1954	Japan	1972
India	1958	Japan	1972
India	1974	Japan	1972
India	1978	Japan	1976
India	1979	Jordan	1984
India	1985	Kazakhstan	1961
India	1988	Kazakhstan	1966
India	1997	Kazakhstan	1968
Indonesia	1946	Kazakhstan	1974
Indonesia	1965	Kazakhstan	1978
Indonesia	1969	Kazakhstan	1978
Indonesia	1970	Kazakhstan	1979
Indonesia	1974	Kazakhstan	1984

Table 3 continued.

Nation	Year of Discovery	Nation	Year of Discovery
Indonesia	1975	Kazakhstan	2000
Indonesia	1986	Kazakhstan	2001
Kuwait	1960	New Zealand	1986
Kyrgyzstan	1955	New Zealand	2000
Kyrgyzstan	1974	Niger	1975
Latvia	1965	Nigeria	1956
Libya	1956	Nigeria	1963
Libya	1956	Nigeria	1967
Libya	1959	Nigeria	1967
Libya	1967	Norway	1969
Libya	1970	Norway	1972
Libya	1974	Norway	1980
Libya	1974	Norway	1981
Libya	1976	Norway	1982
Libya	1984	Norway	1994
Libya	1997	Oman	1956
Lithuania	1965	Oman	1972
Malaysia	1963	Oman	1974
Malaysia	1971	Oman	1978
Malaysia	1971	Oman	1978
Malaysia	1972	Oman	1978
Malaysia	1972	Oman	1983
Mexico	1948	Pakistan	1966
Mexico	1953	Papua New Guinea	1956
Mexico	1953	Papua New Guinea	1986
Mexico	1958	Peru	1946
Mexico	1966	Peru	1955
Mexico	1966	Peru	1957
Mexico	1974	Peru	1960
Mexico	1975	Peru	1971
Mexico	1976	Peru	1971
Mexico	1979	Peru	1974
Mexico	1979	Peru	1977
Moldova	1957	Philippines	1963
Morocco	1957	Philippines	1976
Morocco	1966	Poland	1961
Morocco	1980	Poland	1972
Netherlands	1953	Poland	1981
Netherlands	1968	Qatar	1960

Table 3 continued.

Nation	Year of Discovery	Nation	Year of Discovery
Netherlands	1972	Qatar	1971
Netherlands	1982	Romania	1963
New Zealand	1969	Romania	1987
Russia	1949	Senegal	1961
Russia	1953	Senegal	1967
Russia	1953	Serbia/Montenegro	1952
Russia	1960	Slovakia	1996
Russia	1960	Slovakia	1998
Russia	1962	South Africa	1980
Russia	1964	South Africa	2000
Russia	1966	South Africa	2000
Russia	1968	Spain	1964
Russia	1970	Spain	1970
Russia	1971	Sudan	1979
Russia	1971	Sudan	1980
Russia	1972	Sudan	1982
Russia	1974	Sudan	1998
Russia	1975	Suriname	1981
Russia	1975	Sweden	1975
Russia	1976	Syria	1956
Russia	1977	Syria	1968
Russia	1977	Syria	1984
Russia	1977	Tajikistan	1969
Russia	1978	Thailand	1973
Russia	1979	Thailand	1973
Russia	1980	Thailand	1973
Russia	1985	Thailand	1973
Russia	1986	Thailand	1973
Russia	1989	Thailand	1973
Russia	2001	Thailand	1973
Saudi Arabia	1948	Thailand	1981
Saudi Arabia	1951	Thailand	1981
Saudi Arabia	1957	Thailand	1981
Saudi Arabia	1966	Thailand	1987
Saudi Arabia	1968	Thailand	1988
Saudi Arabia	1969	Trinidad and Tobago	1954
Saudi Arabia	1972	Tunisia	1948
Saudi Arabia	1973	Tunisia	1948
Saudi Arabia	1979	Tunisia	1948

Table 3 continued.

Nation	Year of Discovery	Nation	Year of Discovery
Saudi Arabia	1982	United States of America	1954
Saudi Arabia	1989	United States of America	1956
Saudi Arabia	1992	United States of America	1957
Senegal	1961	United States of America	1962
Tunisia	1971	United States of America	1967
Tunisia	1974	United States of America	1975
Tunisia	1979	United States of America	1981
Turkey	1958	Uzbekistan	1953
Turkey	1958	Uzbekistan	1964
Turkey	1960	Venezuela	1948
Turkey	1968	Venezuela	1979
Turkey	1970	Venezuela	1983
Turkey	1976	Venezuela	1987
Turkey	1976	Vietnam	1981
Turkmenistan	1955	Vietnam	1985
Turkmenistan	1956	Yemen	1982
Turkmenistan	1956	Yemen	1984
Turkmenistan	1966	Yemen	1987
Turkmenistan	1968	Yemen	1991
Turkmenistan	1971		
Ukraine	1950		
United Arab Emirates	1958		
United Arab Emirates	1958		
United Arab Emirates	1972		
United Arab Emirates	1980		
United Kingdom	1959		
United Kingdom	1965		
United Kingdom	1970		
United Kingdom	1974		
United Kingdom	1977		
United Kingdom	1992		
United States of America	1946		
United States of America	1947		
United States of America	1949		
United States of America	1949		
United States of America	1950		
United States of America	1954		

*Nation-years listed more than once refer to more than one major oil field discovered in the given year.

of oil to control for a few years lag leading to conflict, as well as a window of years before initial production of oil to see if nations try to vie for access to the oil as the nation prepares to make contracts for it.

Control Variables

To ensure that any results from my models really show a connection between discovery and conflict, I included several control variables to ensure that the effects of discovery are not truly an effect of some other factor. Rousseau, et al. believe that the degree of democracy of a nation effects how likely it is to be involved in conflict, using the common title of the "democratic peace" (Rousseau, et al. 1996). In order to test "democraticness," I used the Polity III data set that assesses how democratic a nation is in a given year by collecting data on a nation's institutional characteristics (Jaggers and Gurr 1995). Polity III gives a nation a score between zero and ten; higher scores are considered to be more democratic. The Polity III data set only includes 10,494 observations that match with my data set of conflict and discovery; many of the missing values are due to Polity III ending in the year 1994. The missing values do not include any observations in which there is a discovery, but I ran the models with and without this variable to ensure that the fewer values do not affect my results. I label this variable as *Democracy*.

For the second hypothesis, I created a regional democracy variable. The democratic score of a single nation in a region will have a much less significant effect on conflict in the nation than the level of democracy of the region as a whole. To create this variable I again used the Polity III dataset (Jaggers and Gurr 1995), and then took the average democracy score of all nations within a region, using the Correlates of War's Interstate System Membership and

Regional List to differentiate regions (Small and Singer 1982). The democratic peace theory posits that democracies are less likely to fight with one another (Rousseau, et al. 1996), so the more democratic a region is a whole, the less likely we would expect conflict to break out within the region. The aggregated Polity III data set includes 11,489 observations that match with my data set of conflict and discovery. I label this variable as *Regional Democracy*.

Rousseau, et al. (1996) also include military capability and development as important variables when testing conflict. I chose to use the Correlate of War's National Material Capabilities (NMC) data set to include both of these concepts. The National Material Capabilities data set is comprised of six indicators: military expenditure, military personnel, energy consumption, iron and steel production, urban population and total population (Singer 1987). These indicators are amalgamated together into a Composite Index of National Capability (CINC) score, which range from zero to one. I used the single score for both military capability and development because the separate date sets have more holes in them than the NMC data set, allowing us to use them in my tests without needing to sacrifice more observations to do so. The CINC scores are the most widely used dataset to test for national capability. The NMC data includes 12, 983 observations that fit in my conflict and discovery dataset, only forcing to lose less than half a percentage point of my observations. I label this variable as *Development*.

I again created a regional variable based upon a simple national variable. Using the CINC data (Singer 1987), I again averaged these scores according to region, using the regions in the Correlates of War's Interstate System Membership and Regional List (Small and Singer 1982). The more developed a region is, the lower the impact a new resource discovery will make on the power structure within the region. The revenue and bargaining power brought by

control of a new resource discovery will be a greater prize when nations are relatively less developed and have fewer other sources of revenue and power. The aggregated NMC data includes 13,020 observations that fit in my conflict and discovery dataset. I label this variable as *Regional Development*.

Corbetta and Dixon propose that the major power status of a nation affects how and when it will pursue conflict (Corbetta and Dixon 2004). The MID dataset includes a variable that assigns whether or not a nation is considered a major power on a yearly basis (Ghosn, Palmer and Bremer 2004). Some argue that major power status is not a good variable because such status is determined by experts and researchers rather than by quantifiable data. Part of theory purports that a discovery in a major power state changes how conflict is waged, so I feel it better to include the major power status variable despite its shortcomings rather than to ignore the concept altogether. The major power status of each nation is coded as a dummy variable, with a value of zero when it is not a major power and one in each year when it is a major power. The MID dataset includes an observation for each country-year in my dataset, giving 13,019 observations. This variable is labeled *Major Power*.

I next created a major power variable for my regional hypothesis. Using the Ghosn, Palmer and Bremer (2004) data, I created a variable which shows whether or not a major power is present in a region in any given year. When the top of the regional hierarchy is a major power, one would expect conflict to be less likely. A major power is labeled as such because it has enough power to be able to influence action anywhere on the globe; in its own region, its influence would be felt even more strongly. The major power will have the ability to regulate such conflicts, ensuring the access of the new resource will be distributed according to its will. The major power status of each region is coded as a dummy variable, with a value of zero when

there is not a major power and one in each year when there is a major power in the region. The MID dataset includes an observation for each country-year in my dataset, giving 13,834 observations. This variable is labeled *Regional Major Power*.

To the models for my first hypothesis, I added a control variable for the number of defensive alliances each nation has in a given year. Alliances can be thought to either increase or decrease conflict. Some scholars believe that alliances are used for power balancing and conflict deterrence (Smith 1995; Christensen and Snyder 1990), while others believe building alliances is similar to arms buildups which increase the likelihood of conflict (Colaresi and Thompson 2005). I used the Correlates of War's alliance data for this variable (Gibler and Sarkees 2002). I kept only the alliances which were coded as "defensive pacts," following Leeds' (2003) study that one must account for different types of alliances. Neutrality agreements and ententes may reduce conflict between the two nations, but I do not believe them to be strong enough to reduce conflict in a nation's general environment. I then summed up the number of defense pact alliances a nation had in a given year and used this number for my variable. The COW dataset for alliance rans from 1816 to 2000, giving me a value for nearly every year of my dataset at 13,406 observations. This variable is labeled *Alliance*.

To the models for my first hypothesis, I also added a count of contiguous neighbors for each nation. Contiguity has consistently been shown as the strongest predictor of conflict, though there is still debate over whether this is because of proximity or increased interaction or opportunity (Vasquez 1995). There has been debate over the nest way to measure proximity, whether by land borders, distance, etc. (Gleditsch and Ward 2001; Lemke 1995). I chose to use one of the simplest (thus less controversial) definitions; I counted the number of contiguous land borders a nation shares and also include anything within 1-12 miles of water to not exclude

relevant neighbors, such as Great Britain and France (Small and Singer 1982). My data for contiguity rans from 1816-2000, giving me 13,406 observations. I label this variable as *Neighbors*.

For the models for my second hypothesis, I also included a count of the number of nations in a region for any given year. A greater number of nations in a region increases proximity, opportunity, and interaction, which are considered to be the driving factors for conflict in contiguity research (Vasquez 1995). The variable is created by simply summing the number of nations in a region for each year according to Small and Singer's (1982) regional coding. The resulting variable adds 13,020 observations to the models. This variable is labeled as *Regional Count*.

For the first models, I included interstate strategic rivalries. Studies have shown that a majority of conflicts often occur between rivals (Goertz and Diehl 1992; Thompson 2001). Using Thomson's (2001) data on rivalries, I included a variable which notes whether a nation is involved in a rivalry or not in any given year. While many rivalry datasets use a conflict density measure to determine rivalries, Thompson uses a more rigorous approach, labeling nations as rivals for every years that a nation's leader considers it nation to be in a rivalry. Using this approach removes any question of tautology of using a rivalry set defined by conflict to predict conflict. The variable is measured as a dummy variable with an observation being labeled 1 if a nation is in a rivalry in a given year and a 0 if it is not. The resulting variable adds 14,123 observations to the models. This variable is labeled as *Rivalry*.

For the models for my first hypothesis, I also included the past conflict history of a nation. Some authors believe that being involved in recent prior conflicts lead a nation to war-weariness, where they are less prone to desire more conflict and are thus more apt to try and

resolve disputes peacefully, though little empirical support has been found for this theory (Levy and Morgan 1986; Pickering 2002). Conversely, it may be that nations who have been involved in multiple conflicts in the recent past have their militaries at ready and so are more likely to be pulled into a new conflict. For this variable, I created a count of the number of conflicts in which a nation has been involved for twenty years prior to the considered year. I believe twenty years to be enough to shape current interstate conflict policy while going further back begins to decrease the importance of the conflicts in the minds of decision makers. The resulting variable adds 14,123 observations to the models. This variable is labeled as *Past Conflict*.

Finally I included a variable for trade dependence. Russet and Oneal (2001) posit that nations who depend more upon trade are less likely to involve themselves in conflict because such conflict could disrupt their trade. For this data, I constructed a variable using Gleditsch's (2002) Expanded Trade and GDP Data. I created a variable of total trade dependence by calculating the percent of total trade by a nation relative to its GDP. Unfortunately, Gleditsch's data is only available from 1950 to 2000, which is to narrow to include in my initial discovery and production models. Thus, this variable is only included in the models for continuing discoveries. The resulting variable adds 5,435 observations to the models. This variable is labeled as *Trade Dependence*. Other descriptive statistics for all of the control variables are included in Table 1.

There are, of course, many other variables that have been attributed to increasing the likelihood of conflict. Many of these variables are not suited for my models. Systemic level variables, such as multi-/bipolarity and power balancing, are too large for my nation level models. Dyadic variables, such as trade dependence or joint democracy, also do not fit my monadic models. Ray (2003) does not find this to be a problem; he purports that there will

always be omitted variable bias. No matter how many variables one includes in their models, there will always be more that they have forgotten. One must be aware of this bias, but be willing to move forward anyways. It follows that especially when one is looking specifically at the effects of a single variable, fewer control variables are acceptable. Because my hypotheses focus solely on the effects of resource discovery, I chose five control variables that represent the larger variables that help us understand the occurrence of conflict.

Methods

Because the dependent variable conflict has only two possible values, zero and one, I used the logit function of a logistic regression to test the impact of oil discovery on the likelihood of conflict in the discovering nation for my first hypothesis.[2] Because of the possible time lags between the initial discovery or production of oil and the emergence of conflict, I ran the logit test using five different models for each discovery and production. The five models include: the first year a nation discovers/begins producing oil, a model with two years after the discovery/ production, and models with five, ten and fifteen year windows after discovery/production. I included two more models for the production variable: a one year window before production begins and a five year window before production begins.

The data I used in the models are binary time-series-cross-section (BTSCS) observations and are thus likely to violate the independence assumption of the logit model. Because the observations are temporally related, the results of my models may be misleading if not corrected. Beck, Katz, and Tucker (1998) provide a simple diagnostic for temporal dependence, and a simple remedy based on the idea that BTSCS data is identical to grouped duration data. I employed their BTSCS diagnostics in all of my models, adding a peace-years counter and three

[2] Statistical models are ran using Stata/IC 10.0

spline variables, ensuring that my results are not biased by my temporally dependent data. The peace-years variable can be found in all of the results tables.

The first models ran included only the dependent variable, conflict, with my main independent variable, discovery. I ran these alone in order to include all the country-year observations in my original data set. The results from the discovery models are found in Table 3 and the results for the production models are found in Table 4.

In my next models, I included my control variables, democracy, development, alliances, neighbors, and major power status, along with conflict and discovery. The results of these full models are also found in Table 3 for discovery and Table 4 for production. Finally, I split my dataset in two, one for the pre-World War II era and the second for the post-World War II era. Many cite World War II as a natural break when examining events in the global system. The post-World War II era ushered in a time of contention for positions as new international leaders, the emergence of nuclear arms, the emergence of many new nation-states, and an increase in international organizations (Stoll 1982). The split WWII models also acts as an initial test of my theory of how demand effects conflict after discovery. The demand for oil increases dramatically during and after WWII. Thus, if my results are stronger in the post-WWII model, I can assume that a greater demand for oil increases the likelihood that conflict will begin due to its discovery. To test whether these changes in the system after World War II change my results concerning discovery and conflict I keep the same variables as were used in the full models, but I ran the models twice: one with all observations before 1946 and the second including all observations from 1946 to 2001. The results from these models can be found in Table 3 for discovery and Table 4 for production.

Table 4. Conflict for the Discovering Nation - Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.691 (.353)*	.656 (.359)*	-.199 (.669)	.783 (.475)
2 Years	.391 (.258)	.529 (.262)*	.268 (.429)	.489 (.351)
5 Years	.259 (.167)	.381 (.174)*	.296 (.273)	.370 (.231)
10 Years	.090 (.125)	.087 (.133)	.046 (.210)	.079 (.174)
15 Years	.093 (.107)	.011 (.112)	-.024 (.180)	.001 (.144)
Democracy[+]		.020 (.008)*	.020 (.013)	.020 (.010)
Development		2.86 (.828)**	2.64 (.956)*	3.47 (2.34)
Major Power		.247 (.130)	.286 (.166)	.451 (.232)
Alliances		.005 (.006)	-.048 (.034)	.005 (.007)
Neighbors		.084 (.019)***	.074 (.028)*	.089 (.025)**
Rivalry		.584 (.077)***	.299 (.141)*	.767 (.100)***
Past Conflict		.119 (.010)***	.139 (.017)***	.109 (.013)***
Peace Years		-.325 (.042)***	-.306 (.060)***	-.357 (.082)***
Pseudo R^2	0.149	0.231	0.207	0.249
$P>\chi^2$	0.0005	0.0005	0.0005	0.0005
N	12,915	10,445	4,694	5,651

Note: [+]For all the models, the control variables' values are within .01

*$p<.05$, ** $p<.005$, *** $p<.0005$

Table 5. Conflict for the Discovering Nation - Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	.054 (.372)	.146 (.393)	.790 (.541)	-.543 (.630)
2 Years	.259 (.252)	.401 (.261)	.417 (.398)	.364 (.343)
5 Years	.065 (.167)	.164 (.176)	.283 (.264)	.099 (.235)
10 Years	.161 (.121)	.137 (.131)	.254 (.199)	.071 (.173)
15 Years	.200 (.101)*	.074 (.110)	.089 (.173)	.088 (.141)
PreProduction				
1 Year	-.102 (.414)	.126 (.429)	.296 (.638)	-.018 (.578)
5 years	.274 (.178)	.274 (.186)	.443 (.269)	-.037 (.267)
Democracy^{+}		.020 (.008)*	.020 (.014)	.020 (.010)
Development		2.86 (.827)**	2.66 (.957)*	3.45 (2.33)
Major Power		0.245 (.130)	.285 (.166)	.455 (.232)
Alliances		.004 (.006)	-.046 (.034)	.005 (.007)
Neighbors		.084 (.019)***	.074 (.028)*	.089 (.025)**
Rivalry		.586 (.077)***	.299 (.141)*	.771 (.100)***
Past Conflict		.119 (.010)***	.138 (.017)***	.109 (.013)***
Peace Years		-.324 (.042)***	-.306 (.060)***	-.356 (.083)***

Table 5 continued.

	Simple Models	Control Models	Pre-WWII	Post-WWII
Pseudo R^2	0.149	0.231	0.208	0.249
$P>\chi^2$	0.0005	0.0005	0.0005	0.0005
N	12,834	10,445	4,694	5,651

Note: [+]For all the time windows, the control variables' values are within .01
* $p<.05$, ** $p<.005$, *** $p<.0005$

As discusses previously, I then ran all the models a second time, this time using only the high level conflicts. The results for the high conflict discovery models are found in Table 6, and the results for the high conflict production models are found in Table 7.

Finally, I also ran the models for continuing oil field discoveries. Using continuing discoveries, I ran the models with no control variables, again with control variables, and for high conflict. The results of these models are found in Table 8.

For all of the discovery models, the null hypothesis would state that the discovery of a new source of oil will have no significant impact on whether or not conflict occurs in the discovering nation. For the production models the null would state similarly that the initial production of a new source of oil will have no significant impact on whether or not conflict occurs in the discovering nation. In the tables I report the regression coefficients and z-scores; additionally, I note the p-values of those variables that are considered to be significant. I will reject the null hypothesis if my p-values are less than .05.

For my second hypothesis, I test the effect of an initial oil discovery on the likelihood of conflict within the region of the discovering nation. In these models, each nation is designated to be a member of a region according to the Correlates of War's Interstate System Membership and Regional List (Small and Singer 1982). This assigns each nation a value according to their home region: Europe, the Middle East, Africa, Asia, and North and South America. Choosing to use

Table 6. Conflict for the Discovering Nation - High Conflict Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.713 (.382)	.608 (.392)	-.323 (.780)	.700 (.528)
2 Years	.513 (.276)	.592 (.280)*	.254 (.471)	.569 (.376)
5 Years	.305 (.180)	.387 (.188)*	.257 (.298)	.396 (.251)
10 Years	.119 (.136)	.069 (.145)	-.001 (.232)	.066 (.189)
15 Years	.111 (.116)	-.017 (.123)	-.111 (.201)	-.004 (.157)
Democracy^{+}		.016 (.009)	.010 (.015)	.018 (.011)
Development		2.20 (.828)*	2.48 (1.03)*	2.11 (2.20)
Major Power		.193 (.131)	.179 (.181)	.451 (.235)
Alliances		.009 (.006)	-.024 (.052)	.007 (.007)
Neighbors		.084 (.018)***	.073 (.031)*	.087 (.026)**
Rivalry		.584 (.083)***	.380 (.151)*	.714 (.108)***
Past Conflict		.124 (.010)***	.149 (.019)***	.111 (.013)***
Peace Years		-.336 (.042)***	-.248 (.054)***	-.357 (.063)***
Pseudo R^2	0.146	0.227	0.184	0.255
$P>\chi^2$	0.0005	0.0005	0.0005	0.0005
N	12,915	10,445	4,694	5,651

Note: $^{+}$For all the models, the control variables' values are within .01

* $p<.05$, ** $p<.005$, *** $p<.0005$

Table 7. Conflict for the Discovering Nation - High Conflict Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	-.258 (.453)	-.321 (.491)	.160 (.666)	-.803 (.751)
2 Years	.155 (.287)	.221 (.298)	.146 (.470)	.262 (.381)
5 Years	.152 (.182)	.188 (.191)	.288 (.290)	.147 (.253)
10 Years	.150 (.133)	.060 (.144)	.101 (.223)	.054 (.188)
15 Years	.203 (.112)	.040 (.120)	-.031 (.192)	.107 (.153)
PreProduction				
1 Year	-.408 (.497)	-.210 (.510)	.298 (.693)	-.710 (.765)
5 years	.283 (.193)	.237 (.202)	.428 (.290)	-.114 (.293)
Democracy^{+}		.016 (.009)	.010 (.015)	.018 (.011)
Development		2.19 (.828)*	2.49 (1.03)*	2.09 (2.19)
Major Power		0.192 (.131)	.180 (.182)	.453 (.235)
Alliances		.008 (.006)	-.024 (.036)	.007 (.007)
Neighbors		.084 (.018)***	.073 (.031)*	.087 (.026)**
Rivalry		.586 (.083)***	.380 (.150)*	.719 (.108)***
Past Conflict		.124 (.010)***	.148 (.017)***	.111 (.013)***
Peace Years		-.334 (.042)***	-.247 (.054)***	-.355 (.063)***

Table 7 continued.

	Simple Models	Control Models	Pre-WWII	Post-WWII
Pseudo R^2	0.146	0.227	0.184	0.255
$P>\chi^2$	0.0005	0.0005	0.0005	0.0005
N	12,915	10,445	4,694	5,651

Note: [+]For all the time windows, the control variables' values are within .01
* $p<.05$, ** $p<.005$, *** $p<.0005$

Small and Singer's (1982) regional designations, I understand that many may wish to see small regions used, but as Goldsmith (2007, 539) explains, "I choose to follow relatively standard practice and examine these large, roughly continental groupings. While some nuance may be lost, this provides a *conservative* test of the regional-differences hypothesis in the larger the grouping…But for the specific purposes here, and given the contentious nature of any operationalization of 'region', broad groupings are appropriate precisely because they provide a difficult test of the proposition that region matters." To create the independent variable, I use the discovery and production variable used in the models for the first hypothesis and create a dichotomous regional variable which takes the value of 1 if any nation in the region makes an oil discovery/begins production in a given year and a 0 if no nation in the region made an oil discovery/began production in that year. A breakdown of the occurrence of conflict as well as initial oil discoveries and initial year of oil production by region is found in Table 9. I then ran models similar to those used for the first hypothesis, again using a logit function, but this time using our regional discovery/production variables and clustering according to region to account for any variance between them. Tables 10 and 11 show the results for all of the models for discovery and production, respectively. I then ran all of the models a second time, using only the high level conflicts for my dependent variable. The results of the high conflict regional discovery models are found in Table 12, and the results for the high conflict regional production

Table 8. Continuing Oil Discoveries and Conflict for the Discovering Nation.

	Coefficient (Std. Error)		
	Simple Models	Control Models	High Conflict Models
Discovery			
Year of	.645 (.128)***	-.142 (.186)	-.373 (.201)
2 Years	.475 (.103)***	-.095 (.146)	-.208 (.157)
5 Years	.518 (.080)***	-.002 (.112)	-.081 (.122)
10 Years	.536 (.072)***	.016 (.099)	-.058 (.108)
15 Years	.545 (.070)***	-.007 (.097)	-.005 (.105)
Democracy[+]		.018 (.012)	.017 (.013)
Development		6.65 (2.67)*	4.05 (2.41)
Major Power		.498 (.276)	.450 (.279)
Alliances		-.003 (.008)	.001 (.008)
Neighbors		.039 (.030)	.047 (.031)
Rivalry		.823 (.112)***	.711 (.121)***
Past Conflict		.096 (.014)***	.103 (.015)***
Trade Dependence		.413 (.341)	-.076 (.390)
Peace Years		-.375 (.089)***	-.413 (.068)***
Pseudo R^2	0.158	0.258	0.267
$P>\chi^2$	0.0005	0.0005	0.0005
N	7636	4908	4908

Note: [+]For all the models, the control variables' values are within .01
* $p<.05$, ** $p<.005$, *** $p<.0005$

Table 9. Conflict, Oil Discovery, and Initial Oil Production by Region.

Region	Conflict	Initial Oil Discovery	Initial Oil Production
Europe	645 (35.9%)	15 (28.8%)	18 (31.6%)
The Middle East	202 (11.2%)	9 (17.3%)	10 (17.5%)
Africa	194 (10.8%)	9 (17.3%)	8 (14.0%)
Asia	282 (15.7%)	6 (11.5%)	8 (14.0%)
The Americas	476 (26.5%)	13 (25%)	13 (22.8%)
Total	1,799	52	57

models are found in Table 13. Finally, I also ran the models for continuing oil field discoveries, the results of which are found in Table 14.

For all of the discovery models, the null hypothesis would state that the discovery of a new source of oil will have no significant impact on whether or not conflict occurs in the region of the discovering nation. For the production models the null would state similarly that the initial production of a new source of oil will have no significant impact on whether or not conflict occurs in the region of the discovering nation. In the tables I report the regression coefficients and *z*-scores; additionally, I note the *p*-values of those variables that are considered to be significant. I reject the null hypothesis if my *p*-values are less than .05.

With all of my models I ran further diagnostic tests to ensure the reliability of my models and the robustness of my results. I check the specification of my model and variables, test for multicollinearity between my variables, analyze the data for outliers, and check the fit of the models (Chen et al. 2009). The results of these tests are discussed in the next section.

Table 10. Conflict for the Discovering Region - Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.004 (.159)	.017 (.158)	.151 (.147)	-.084 (.131)
2 Years	-.054 (.099)	-.049 (.081)	-.167 (.063)*	-.090 (.096)
5 Years	.023 (.106)	.021 (.102)	.264 (.090)**	-.218 (.090)*
10 Years	.146 (.121)	.152 (.087)	.208 (.105)*	.022 (.117)
15 Years	.150 (.118)	.180 (.072)*	.188 (.078)*	.034 (.131)
Regional Democracy[+]		.070 (.036)*	.160 (.032)***	-.035 (.042)
Regional Development		-2.66 (3.14)	1.03 (5.65)	-29.91 (22.64)
Regional Major Power		.048 (.113)	.064 (.261)	.545 (.245)*
Regional Count		-.006 (.007)	-.008 (.024)	-.008 (.011)
Peace Years		-.541 (.036)***	-.463 (.010)***	-.688 (.060)***
Pseudo R^2	0.152	0.151	0.149	0.148
N	12,915	11,562	5,127	6,315

Note: [+]For all the time windows, the control variables' values are within .01

* $p<.05$, ** $p<.005$, *** $p<.0005$

Table 11. Conflict for the Discovering Region - Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	.230 (.068)**	.218 (.085)*	.495 (.090)***	.132 (.057)*
2 Years	.109 (.072)	.118 (.117)	.168 (.135)	.087 (.117)
5 Years	.285 (.068)***	.345 (.062)***	.530 (.114)***	.243 (.076)**
10 Years	.336 (.146)*	.362 (.107)**	.377 (.117)**	.280 (.131)*
15 Years	.388 (.159)*	.387 (.149)*	.235 (.076)**	.485 (.118)***
PreProduction				
1 Year	.231 (.044)***	.235 (.059)***	.308 (.098)**	.165 (.081)*
5 years	.179 (.090)*	.216 (.078)*	.244 (.157)	.052 (.069)
Regional Democracy[+]		.067 (.034)*	.157 (.029)***	-.037 (.040)
Regional Development		-2.37 (2.98)	1.50 (5.12)	-30.30 (22.03)
Regional Major Power		.047 (.114)	.054 (.258)	.557 (.241)*
Regional Count		-.006 (.007)	-.008 (.023)	-.008 (.010)
Peace Years		-.541 (.035)***	-.462 (.012)***	-.687 (.060)***
Pseudo R^2	0.153	0.151	0.152	0.148
N	12,915	11,562	5,127	6,315

Note: [+]For all the time windows, the control variables' values are within .01
* $p<.05$, ** $p<.005$, *** $p<.0005$

Table 12. Conflict for the Discovering Region - High Conflict Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.033 (.187)	.027 (.179)	.149 (.130)	-.082 (.149)
2 Years	-.047 (.123)	-.062 (.113)	-.114 (.073)	-.167 (.095)
5 Years	.075 (.134)	.049 (.112)	.375 (.093)***	-.255 (.121)*
10 Years	.231 (.153)	.215 (.076)**	.207 (.108)	.095 (.118)
15 Years	.248 (.167)	.253 (.086)**	.147 (.077)	.158 (.132)
Regional Democracy[+]		.072 (.039)	.180 (.027)***	-.040 (.053)
Regional Development		-6.55 (5.16)	-1.25 (7.82)	-28.06 (26.35)
Regional Major Power		.120 (.131)	.187 (.273)	.543 (.309)
Regional Count		-.008 (.007)	-.011 (.021)	-.011 (.013)
Peace Years		-.533 (.027)***	-.367 (.051)***	-.619 (.055)***
Pseudo R^2	0.146	0.143	0.123	0.154
N	12,915	11,562	5,127	6,315

Note: [+]For all the time windows, the control variables' values are within .01

* $p<.05$, ** $p<.005$, *** $p<.0005$

Table 13. Conflict for the Discovering Region - High Conflict Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	.327 (.085)***	.287 (.119)*	.614 (.071)***	.182 (.088)*
2 Years	.218 (.081)*	.198 (.142)	.323 (.132)*	.134 (.157)
5 Years	.371 (.077)***	.406 (.046)***	.596 (.112)***	.309 (.100)**
10 Years	.392 (.154)*	.427 (.134)**	.381 (.119)**	.367 (.161)*
15 Years	.459 (.176)*	.449 (.182)*	.230 (.081)**	.571 (.152)***
PreProduction				
1 Year	.243 (.043)***	.227 (.087)*	.439 (.070)***	.069 (.125)
5 years	.200 (.117)	.207 (.096)*	.247 (.215)	.003 (.126)
Regional Democracy[+]		.068 (.038)	.177 (.025)***	-.042 (.052)
Regional Development		-6.10 (4.94)	-.704 (7.05)	-28.21 (25.56)
Regional Major Power		.118 (.132)	.182 (.258)	.555 (.300)
Regional Count		-.009 (.007)	-.012 (.021)	-.012 (.012)
Peace Years		-.533 (.028)***	-.363 (.050)***	-.620 (.058)***
Pseudo R^2	0.147	0.144	0.124	0.154
N	12,915	11,562	5,127	6,315

Note: [+]For all the time windows, the control variables' values are within .01
* $p<.05$, ** $p<.005$, *** $p<.0005$

Table 14. Continuing Oil Discoveries and Conflict for the Discovering Region.

	Coefficient (Std. Error)		
	Simple Models	Control Models	High Conflict Models
Discovery			
Year of	.132 (.068)*	.244 (.101)*	.246 (.106)*
2 Years	.093 (.116)	.235 (.213)	.226 (.180)
5 Years	.413 (.353)	.522 (.549)	.643 (.547)
10 Years	.691 (.459)	1.05 (.557)	1.26 (.494)*
15 Years	.843 (.541)	2.08 (.414)***	2.04 (.434)***
Regional Democracy[+]		-.030 (.040)	-.025 (.055)
Regional Development		-19.78 (20.84)	-19.6 (25.45)
Regional Major Power		.397 (.293)	.377 (.332)
Regional Count		-.005 (.009)	-.009 (.012)
Peace Years		-.683 (.060)***	-.618 (.056)***
Pseudo R^2	0.155	0.149	0.155
N	7636	6315	6315

Note: [+]For all the time windows, the control variables' values are within .01

* $p<.05$, ** $p<.005$, *** $p<.0005$

CHAPTER 5

ANALYSIS

Within the study, I explored whether or not the initial discovery of a new resource will increase the likelihood of conflict in that year and the years following. My first hypothesis states that the discovering nation will see an increased chance of conflict following a new initial discovery. Because resources are limited by scarcity and unevenly distributed, there are many *have-not* nations that need a resource for political survival, yet lack the resource within their own borders. In such cases, these *have-not* nations will always have their proverbial eyes open for any new source of resources to which they can gain access. As Leith (1939) stated, a written agreement will not be sufficient for *have-not* nations to ensure that they continue to have access to the resources they need. Klare (2001) gave multiple examples of nations' leaders stating their willingness to enter into conflict to gain access to the resources their nations need. Further, a new discovery of resources will increase the power of the discovering nation, allowing it to pursue more conflictual foreign policies while also increasing the security dilemma of other nations in the region.

My second hypothesis states that nations in the region in which a new initial discovery of resources is made will also see an increased chance of conflict in the years following the discovery. A new initial discovery will increase the security dilemma in the region, leading nations to build up arms and creating a more volatile environment. The added revenue from the new discovery will also allow the discovering nation to pursue more of its foreign policy in its sphere of influence, using its newfound power to possibly conflict with its region status quo.

Finally, a new resource discovery will bring in major world powers, creating an increased possibility for proxy wars in the discovering region. Using the year a nation discovers oil as well

as the initial year of oil production as our baseline for discovery, and also testing with windows of time around the year of discovery to catch any time lags in the conflict resulting from the discovery, we ran our models to find what effect an initial resource discovery has on interstate conflict.

Conflict in the Discovering Nation

The results of the tests show strong support for my first hypothesis. The discovery models show a strong argument that a nation will increase its chances of an interstate conflict following its initial discovery of oil. Interestingly, both the coefficients and the significance of the discovery variable get larger when the control variables are added to the models. The results are significant for all the windows of time except the ten-year and fifteen-year windows The chance of conflict in the initial year of discovery nearly doubles from a year with no oil discovery, rising from a probability of 0.09 to 0.17. While results are significant for some of the models other than the initial year of discovery, the probability of conflict drops the further away one goes from the year of discovery, with fifteen years after the resource discovery raising the chance of conflict by less than one percent. A graph of the probability of conflict in the discovering nation across all of the windows of time can be found in Figure 1.

The models which split the models into pre- and post-WWII eras show interesting difference in the patterns of conflict concerning initial oil discoveries between the two eras. All coefficients in the pre-WWII models loose significance. All of the time windows also decrease in substantive strength. In the more modern era, the coefficient for the initial year of discovery increases by nearly a fifth and but does not retain significance. Other windows of time lose significance and strength. The increased substantive effect in the year of discovery may be

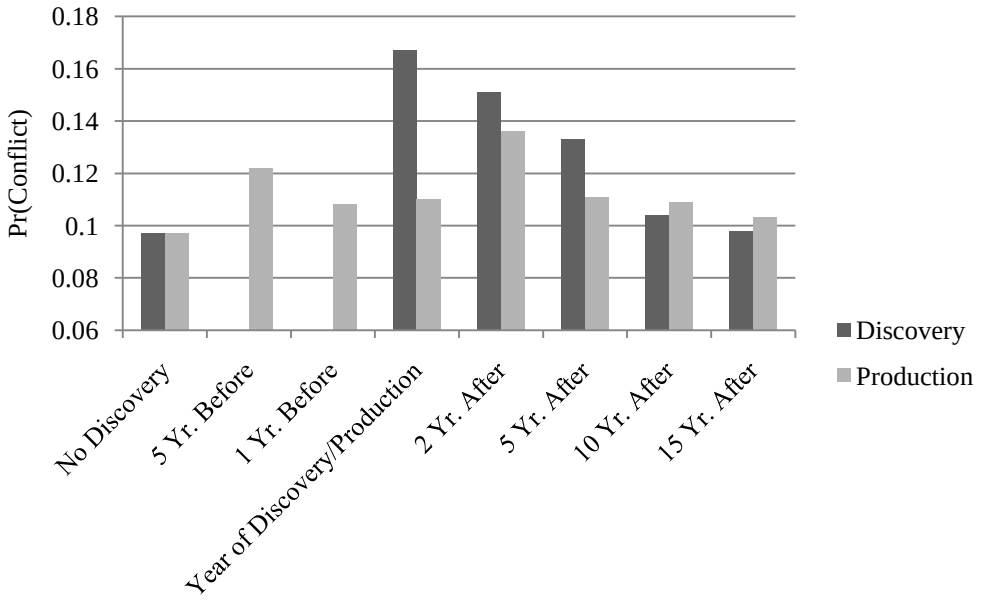

Figure 1. Probability of Conflict for the Discovering Nation.

caused by an increase in military technology and travel. Moving military strength from a home nation to threaten the discovering nation would have been a slower process, where the modern era's increase in technology has made it much easier to move military might quickly. The results may also reflect the increase in demand of oil in the modern era, inciting *have-not* nations to move more quickly to try and gain a stake in the discovered oil before other competitors.

The high conflict models show similar, but striking results. The two-year and the five-year windows keep their significance. While the year of discovery coefficient drops slightly in strength and significance, the other two windows slightly increase. A similar occurrence appears in the post-WWII era. The year of discovery drops in strength, but two-year and five-year time windows increase. Again, I believe this to be a sign of increased delay between discovery and the use of force. The full models include threats and displays of force which can be done with fairly little build-up; the use of force takes more time to prepare. The fact that significance drops by a small amount demonstrates that it is likely that more of the conflicts that occur following an

oil discovery are probably low-level conflict. Still, the fact that significance is retained, as well as a rise in the strength of coefficients leads me to conclude that there are still plenty of occurrences of escalation to the use of force following an oil discovery.

In order to check whether my models were correctly specified, I consider the link function of my chosen test and also ensure that I have not left out any relevant variables. In order to do so, I ran link tests on all of my models in Stata (Chen et al. 2009). The results show that I have not misspecified my models. The high significance ($p<.0005$) of the *_hat* variable shows that the logit models do provide the right link function for my tests, while the strong insignificance of the *_hatsq* variable confirms that I have not left out any relevant variables, such as interactive or nonlinear variables. The results of these tests can be found in Table 15.

I further check all of my variables for multicollinearity. I check both the variance inflation factor and tolerance for the variables for both hypotheses (Chen et al. 2009). For the all of the variables, there is strong evidence that no multicollinearity exists between any of them. As would be expected, Major Power and Development do show some relationship in their occurrence patterns, but not enough to cause my models any problems (Chen et al. 2009). Both the variance inflation factors and tolerance values hover at or very close to 1 for my independent variable, showing that none of the other variables exert any influence over its occurrence. The results of these tests can be found in Table 16.[3]

Checking the fit of the models shows support for my hypothesis and tests. The R^2 values for the full models are .231 and increases to .249 in the post-WWII era. These results show that my models do account for some of the variance in conflict. Further, the chi-squared values show that my models are significant as a whole ($p<.0005$). I have never believed that resource

[3] Because none of the independent or control variables change between the full conflict and high conflict models, the results of the multicollinearity tests are exactly the same for both sets of models.

Table 15: Specification Tests.

	_hat Discovery	*_hat* Production	*_hatsq* Discovery	*_hatsq* Production
Full Conflict Models				
Hypothesis 1				
Simple Models	0.000*	0.000	0.884	0.613
Control Models	0.000	0.000	0.955	0.828
Pre-WWII Models	0.000	0.000	0.624	0.514
Post WWII Models	0.000	0.000	0.021	0.029
Continuing Discoveries Models	0.000		0.290	
Hypothesis 2				
Simple Models	0.000	0.000	0.608	0.900
Control Models	0.000	0.000	0.432	0.786
Pre-WWII Models	0.000	0.000	0.887	0.666
Post WWII Models	0.000	0.000	0.153	0.247
Continuing Discoveries Models	0.000		0.180	
High Conflict Models				
Hypothesis 1				
Simple Models	0.000	0.000	0.736	0.435
Control Models	0.000	0.000	0.574	0.456
Pre-WWII Models	0.000	0.000	0.866	0.841
Post WWII Models	0.000	0.000	0.062	0.075
Continuing Discoveries Models	0.000		0.678	
Hypothesis 2				
Simple Models	0.000	0.000	0.486	0.744
Control Models	0.000	0.000	0.080	0.171
Pre-WWII Models	0.000	0.000	0.334	0.751
Post WWII Models	0.000	0.000	0.025	0.031
Continuing Discoveries Models	0.000		0.151	

*Note: *p>|z|*

Table 16: Multicollinearity Tests.

	VIF	Tolerance
Hypothesis 1		
Major Power	3.09	0.324
Democracy	1.14	0.877
Development	2.96	0.338
Alliances	1.18	0.849
Neighbors	1.58	0.634
Rivalry	1.59	0.628
Past Conflict	2.33	0.430
Trade Dependence	1.10	0.911
Discovery*	1.00	0.997
Production**	1.00	0.997
Hypothesis 2		
Regional Major Power	5.62	0.178
Regional Democracy	2.38	0.420
Regional Development	4.84	0.207
Regional Members	1.49	0.627
Regional Discovery	1.01	0.987
Regional Production	1.01	0.991

Note: *All Discovery values had equal results
**All Production values had equal results

discovery accounted for all the variation in conflict, though these results positively show that resource discovery is important enough to add to the probability of conflict for a nation.

In assessing the models for any outliers, I found no significant outliers for either Pearson residuals or deviance residuals. In checking for leverage, I did find significant outliers for all of the models. While the outliers for the simple models account for nearly fifteen percent of the total observations (1,975), they only account for 2-15 of the observations for the more complicated models. I tabulated these outliers across many different criteria and found no pattern for those that had greater leverage on the models. When testing the models without these outliers, the support for my first hypothesis concerning conflict in the discovering nation only

increases. The coefficient for the initial year of discovery increases nearly fifty percent. The only models that decrease in strength with the outliers removed are the pre-WWII discovery models. These show no significance, so do not affect my support of my first hypothesis. The altered values of the independent variable in the models with outliers removed are found in Table 17 for the discovery models.[4]

The production models show different patterns of support for the hypothesis. None of the production variables find a significant effect on the likelihood of conflict. The production coefficients are slightly lower than those in the discovery models in the earlier models, but show slightly stronger results in the ten and fifteen year models. The effects of these variables can be seen in Figure 1. The delay in significance for the initial production models may reflect the differing reasons I predicted for increased likelihood of conflict in the discovering nation. The discovering nation as the target of conflict may have been seen in the discovery models' results of conflict in the immediate years, while the results in these production models may reflect the discovering nation as the initiator of conflict. It may take the discovering nation up to fifteen years to translate new resource revenue into military might to impose favorable foreign policy. The pre-WWII models mirror these substantive results, though none of the variables are significant. Conversely, the post-WWII era maintains no significance and drops in strength for all of its values. This may indicate that it is the action of the pre-WWII years that drive the substantive results in our full models, with production not being a major cause of conflict for the discovering nation in the modern era.

The high conflict models likewise show no significance and less strength than the full conflict models. The only increases we find in these models are for the coefficients of the five

[4] The diagnostics for outliers were similarly ran on the Discovery High Conflict models with the same resulting pattern as in the Full Conflict models. Results for the High Conflict models with their outliers removed can be found in Table 21 at the end of the text.

Table 17. Conflict for the Discovering Nation - Fixed Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.788 (.345)*	.994 (.401)*	-.728 (1.05)	1.27 (.666)
2 Years	.644 (.275)*	.659 (.280)*	.208 (.473)	.429 (.422)
5 Years	.390 (.195)*	.421 (.179)*	.275 (.282)	.326 (.248)
10 Years	.284 (.145)*	.098 (.135)	.027 (.214)	.031 (.181)
15 Years	.227 (.125)	.017 (.113)	-.040 (.182)	-.034 (.148)
Pseudo R2	0.082	0.231	0.207	0.249
P>χ2	0.0005	0.0005	0.0005	0.0005
N	10,859	10,433	4,691	5,633

Note: * $p<.05$, ** $p<.005$, *** $p<.0005$

and fifteen-year models in the post-WWII era. While these do not show significance, they do seem to indicate that there is an increased trend of high conflict in years farther out from the initial production of oil. Overall, the changes from the full conflict models to the high conflict models are small enough that they do not indicate a large difference between the types of conflicts which follow the initial production of oil in a nation.

In order to check whether my models were correctly specified, I consider the link function of my chosen test and also ensure that I have not left out any relevant variables. In order to do so, I ran link tests on all of my models in Stata (Chen et al. 2009). The results show that I have not misspecified my models. The high significance ($p<.0005$) of the *_hat* variable

shows that the logit models do provide the right link function for my tests, while the strong insignificance of the *_hatsq* variable confirms that I have not left out any relevant variables, such as interactive or nonlinear variables. The results of these tests can be found in Table 15.

I further check all of my variables for multicollinearity. I check both the variance inflation factor and tolerance for the variables for both hypotheses (Chen et al. 2009). For the all of the variables, there is strong evidence that no multicollinearity exists between any of them. As would be expected, Major Power and Development do show some relationship in their occurrence patterns, but not enough to cause my models any problems (Chen et al. 2009). Both the variance inflation factors and tolerance values hover at or very close to 1 for my independent variable, showing that none of the other variables exert any influence over its occurrence. The results of these tests can be found in Table 16.[5]

Checking the fit of the models shows support for my hypothesis and tests. The R^2 values for the full models are .231 and increases to .249 in the post-WWII era. These results show that my models do account for some of the variance in conflict. Further, the chi-squared values show that my models are significant as a whole ($p<.0005$). I have never believed that resource discovery accounted for all the variation in conflict, though these results positively show that resource discovery is important enough to add to probability of conflict in a nation.

In assessing the models for any outliers, I found no significant outliers for either Pearson residuals or deviance residuals. In checking for leverage, I did find significant outliers for all of the models. While the outliers for the simple models account for nearly fifteen percent of the total observations (1,975), they only account for 5-15 of the observations for the more complicated models. I tabulated these outliers across many different criteria and found no

[5] Because none of the independent or control variables change between the full conflict and high conflict models, the results of the multicollinearity tests are exactly the same for both sets of models.

pattern for those that had greater leverage on the models. When testing the models without these outliers, the support for my first hypothesis concerning conflict in the discovering nation only increases. While the strength of the coefficients rise in the control models, I find that these similar increases in significance only occur in the pre-WWII period. This shows that the pre-WWII era is still driving the results for my control models, with no significant relationship found between oil production and conflict in the modern era. The altered values of the independent variable in the models with outliers removed are found in Table 18 for the production models.[6]

The control variables acted variably depending on the era one examines. The number of contiguous neighbors has a significant across all the models, though it is less strong in the pre-WWII period; the more contiguous neighbors a nation has, the more likely it will encounter conflict. More developed nations had a higher probability of conflict in any given year; while the effect is greater in the modern era, it does not show significance in the post-WWII models. Being a major power increased the likelihood of conflict, but failed to show significance in the control models. The number of defensive alliances a nation has had no significance, but reduced conflict in the pre-WWII period but increased conflict with significance in the full control models and the post-WWII era. Democracy showed a constant effect of all the models, slightly increasing the chance a nation will encounter conflict the more democratic it is. If a nation is part of an enduring rivalry, my models find strong support that such nations are at an increased, significant risk of conflict. Finally, the more conflicts a nation has had in the past two decades, the more likely it is to encounter conflict in any given year. Beck, Katz, and Tucker's (1998) peace-years variable show that the more years of continuous peace a nation has enjoyed, the lower the chance is that it will encounter conflict in a given year.

[6] The diagnostics for outliers were similarly ran on the Discovery High Conflict models with the same resulting pattern as in the Full Conflict models. Results for the High Conflict models with their outliers removed can be found in Table 22 at the end of the text.

Table 18. Conflict for the Discovering Nation - Fixed Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	.183 (.368)	.270 (.462)	1.72 (.611)*	-.452 (.754)
2 Years	.382 (.269)	.492 (.280)	.630 (.431)	.485 (.356)
5 Years	.061 (.202)	.181 (.182)	.342 (.272)	.139 (.240)
10 Years	.234 (.144)	.145 (.133)	.284 (.203)	.091 (.174)
15 Years	.289 (.121)*	.078 (.111)	.105 (.175)	.101 (.142)
PreProduction				
1 Year	.036 (.546)	.125 (.429)	.297 (.638)	-.019 (.578)
5 years	.347 (.226)	.273 (.186)	.444 (.269)	-.038 (.267)
Pseudo R2	0.081	0.231	0.209	0.248
P>χ2	0.0005	0.0005	0.0005	0.0005
N	10,859	10,434	4,685	5,646

Note: * $p<.05$, ** $p<.005$, *** $p<.0005$

The results from the continuing discoveries models show strong support for my supposition that only initial discoveries would significantly increase the likelihood of conflict for the discovering nation. While the simple models seem to show that continuing discoveries do add to the risk of conflict, such support disappears and even reversed when the control variables are added. None of the time windows finds any significance in the full conflict or high conflict models. Substantively, the direction of the relationship shown is wrong; it shows that a

continuing discovery actually dampens the risk of conflict. High conflict is dampened further than all conflict. In these models, the only variables that find strong support are rivalry, past conflict, and peace years; all showed strong significance, with a rivalry and past conflict increasing the chance of conflict, and continuous peace-years dampening the risk of conflict.

My theory purports that an increase in revenue and strength from the resource discovery may be a driving factor in their increased risk of conflict. In my models, I have included the CINC score, which includes military strength and energy use, as a proxy for development. While I believe that the likelihood of conflict will increase due to a quick shift in a nation's power, not its absolute level of power development, I still ran a few robustness checks on with this variable to ensure that my models are not being biased by the CINC score. The CINC score give a percentage of the world's power a nation controls in a given year (Singer 1987); to ensure that this measure does not affect how development is seen in the models, I ran the models again using a logged composite of the energy and iron/steel consumption values within the CINC score. In doing so, the coefficients and significance of the discovery/production variables, as well as the insignificance of the new development variable do not change. I then ran all of my control models again without any development variable, to make sure that it is not covering up any effects it may have in taking strength from the discovery/production variable's effect on conflict through its change in power. Again, no change was found in any of the other variables. Thus, our development variable has no effect on the increased likelihood of conflict a nation encounters due to a new oil discovery.

The results of my many models seem to support my hypothesis that an initial discovery of a resource in a nation increases the chance of conflict for that nation in the year of discovery as well as in the succeeding years as well. On the other hand, the initial year of production of oil

in a nation seems to have no significant bearing on its likelihood to encounter conflict in the modern era.

Conflict in the Discoverer's Region

My second hypothesis concerning the likelihood of conflict in a region where a new resource discovery was not supported in the discovery models. All coefficients in the discovery models except the two year window show directional support for my hypothesis, but only the fifteen year window reached any significant level. Though the fifteen year window showed significance, its absolute effect on conflict was extremely small, only increasing the likelihood of conflict by one percent. The effects of the initial discovery of oil on a region's conflict are shown in Figure 2. The pre/post-WWII models again show an interesting development. The pre-WWII windows find significance in all but the year of discovery. The significance in the pre-WWII fifteen-year window drives the significance found in the control models without carrying into the modern era. In the post-WWII era, the models from the year of discovery through five years after the discovery showed that there was actually a *lower* likelihood of conflict following a discovery in a region; the coefficient for the five year window also showed significance. This may be caused by the increase in multinational institutions helping to try and broker deals in the years following an oil discovery, stopping or at least delaying conflict due to the discovery.

The high conflict models show a change in the relationship. The coefficients in the ten and fifteen-year models increase by fifty-percent in coefficient strength and a higher level of significance. The increase in coefficients also extends to the post-WWII period. This suggests that while conflict in the earlier years following an oil discovery is mitigated by institutions and

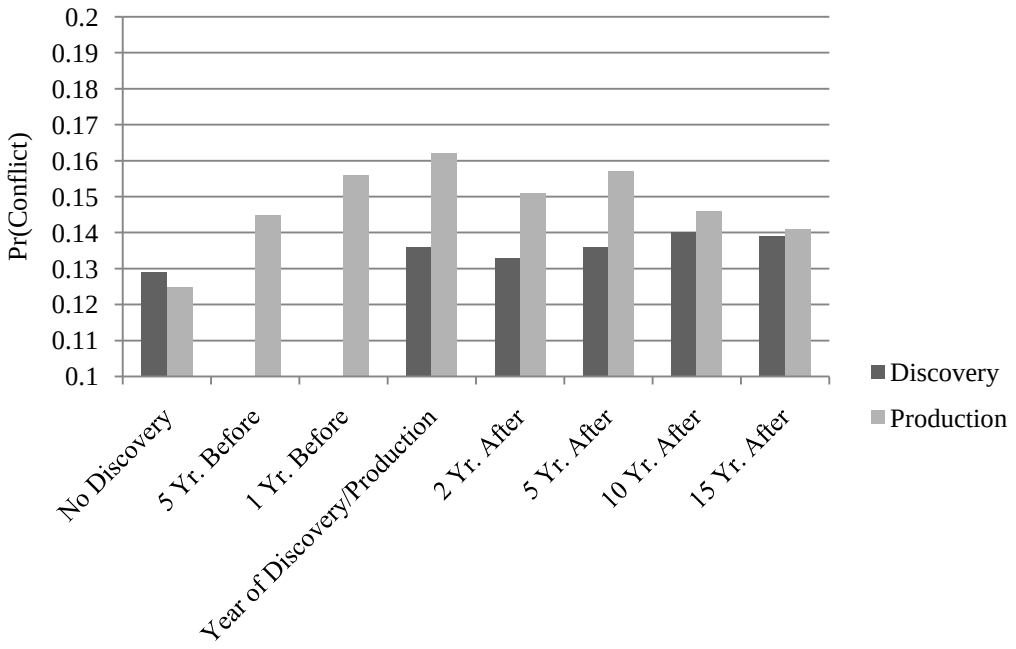

Figure 2. Probability of Conflict for the Discovering Region.

diplomacy, when the mitigating effects wear off, nations in the discovering region do not encounter merely threats and displays, but actual use of force to a larger degree.

In order to check whether my models were correctly specified, I consider the link function of my chosen test and also ensure that I have not left out any relevant variables. In order to do so, I ran link tests on all of my models in Stata (Chen et al. 2009). The results show that I have not misspecified my models. The high significance ($p<.0005$) of the *_hat* variable shows that the logit models do provide the right link function for my tests, while the strong insignificance of the *_hatsq* variable confirms that I have not left out any relevant variables, such as interactive or nonlinear variables. The results of these tests can be found in Table 15.

I further check all of my variables for multicollinearity. I check both the variance inflation factor and tolerance for the variables for both hypotheses (Chen et al. 2009). For the all of the variables, there is strong evidence that no multicollinearity exists between any of them. As previously seen, Major Power and Development do show some relationship in their

occurrence patterns, but not enough to cause my models any problems (Chen et al. 2009). Both the variance inflation factors and tolerance values hover at or very close to 1 for my independent variable, showing that none of the other variables exert any influence over its occurrence. The results of these tests can be found in Table 16.[7]

Checking the fit of the models shows support for my hypotheses and tests. The R^2 values for the full models are .148. These results do show that my models do account for some of the variance in conflict. Again I reiterate that I have never believed that resource discovery accounted for all the variation in conflict, though these results positively show that resource discovery is important enough to add to probability of conflict in a region.

In assessing the models for any outliers, I found no significant outliers for either Pearson residuals or deviance residuals. In checking for leverage, I did find significant outliers for all of the models. While the outliers for the simple models account for nearly fifteen percent of the total observations (1,794), they only account for 15-40 of the observations for the more complicated models. Again, though I tried many methods to find a pattern among the observations that pulled an increased weight in the models, no such pattern arose. When testing the models without these outliers, the support for my second hypothesis concerning conflict in the discovering nation does not change. The likelihood of conflict in any the models does not significantly change, if at all. The level significance of the results does not change in any of the models. The altered values of the independent variable in the models with outliers removed are found in Table 19 for the discovery models.[8]

[7] Because none of the independent or control variables change between the full conflict and high conflict models, the results of the multicollinearity tests are exactly the same for both sets of models.

[8] The diagnostics for outliers were similarly ran on the Discovery High Conflict models with the same resulting pattern as in the Full Conflict models. Results for the High Conflict models with their outliers removed can be found in Table 23 at the end of the text.

Table 19. Conflict for the Discovering Region - Fixed Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.146 (.155)	.054 (.146)	.151 (.147)	-.006 (.106)
2 Years	-.009 (.116)	-.029 (.076)	-.167 (.063)*	-.048 (.085)
5 Years	.074 (.145)	.027 (.094)	.264 (.090)**	-.194 (.079)*
10 Years	.158 (.133)	.151 (.082)	.208 (.105)*	.041 (.111)
15 Years	.105 (.158)	.175 (.068)*	.188 (.078)*	.048 (.128)
Pseudo R2	0.089	0.151	0.152	0.146
N	11,040	11,451	5,127	6,225

Note: [+]For all the time windows, the control variables' values are within .01
* $p<.05$, ** $p<.005$, *** $p<.0005$

The production models show a strikingly different story. Most of the production variables are significant; they also have much larger coefficients than the variables in the discovery models. The initial year of production of oil show large increase in the probability of conflict in the region, rising nearly twenty-five percent compared to a year with no initial oil production. These effects can be seen graphically in Figure 2. In the pre-WWII era, the coefficients are stronger and more significant. The effect peaks at the five-year window, suggesting a time delay for conflict to really start following initial oil production for a nation in the region. In the post-WWII models, the strength of the results decrease in all the models except for the fifteen year window, while significance remains in all of the same models and

even increases in the fifteen year window. This again suggests that multinational institutions may delay conflict following oil production, but only stems the tide for an additional ten years before conflict again hits a peak. The pre-production models also show significant coefficients, with the year directly preceding the initial output of oil having a stronger effect than the five year pre-production model. The effects of the one year pre-production model are even slightly larger than the effects following the initial production of oil. Overall, the results show strong support for my hypothesis; it does seem that the likelihood of conflict rises for an entire region surrounding the initial production of oil by a regional member.

When one looks at the results for high conflict in a region following the initial production of oil by a regional member, the results strengthen in every model by thirty-three to fifty percent! The same patterns are seen as in the control models with the pre-WWII period peaking at five years and the post-WWII period peaking at fifteen. The only slackening in results are in the preproduction variables, which probably occurs because of the increased time it takes to mobilize and deploy troops rather than simply threatening with them. There is no doubt that these results show that high conflict is more likely in a region following the initial production of oil by one of its members.

In order to check whether my models were correctly specified, I consider the link function of my chosen test and also ensure that I have not left out any relevant variables. In order to do so, I ran link tests on all of my models in Stata (Chen et al. 2009). The results show that I have not misspecified my models. The high significance ($p<.0005$) of the *_hat* variable shows that the logit models do provide the right link function for my tests, while the strong insignificance of the *_hatsq* variable confirms that I have not left out any relevant variables, such as interactive or nonlinear variables. The results of these tests can be found in Table 15.

I further check all of my variables for multicollinearity. I check both the variance inflation factor and tolerance for the variables for both hypotheses (Chen et al. 2009). For the all of the variables, there is strong evidence that no multicollinearity exists between any of them. Again, Major Power and Development do show some relationship in their occurrence patterns, but not enough to cause my models any problems (Chen et al. 2009). Both the variance inflation factors and tolerance values hover at or very close to 1 for my independent variable, showing that none of the other variables exert any influence over its occurrence. The results of these tests can be found in Table 16.[9]

Checking the fit of the models shows support for my hypotheses and tests. The R^2 values for the full models are .148. These results do show that my models do account for some of the variance in conflict. Again I reiterate that I have never believed that resource discovery accounted for all the variation in conflict, though these results positively show that resource discovery is important enough to add to probability of conflict in a region.

In assessing the models for any outliers, I found no significant outliers for either Pearson residuals or deviance residuals. In checking for leverage, I did find significant outliers for all of the models. While the outliers for the simple models account for nearly fifteen percent of the total observations (1,767), they only account for about 20 of the observations for the more complicated models. When testing the models without these outliers, the support for my second hypothesis concerning conflict in the discovering nation does not change. The likelihood of conflict in any the models does not significantly change, if at all. The level significance of the

[9] Because none of the independent or control variables change between the full conflict and high conflict models, the results of the multicollinearity tests are exactly the same for both sets of models.

Table 20. Conflict for the Discovering Region - Fixed Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	.386 (.099)***	.217 (.084)*	.495 (.090)***	.124 (.059)*
2 Years	.223 (.092)*	.115 (.116)	.168 (.135)	.077 (.116)
5 Years	.314 (.048)***	.339 (.061)***	.530 (.114)***	.229 (.071)**
10 Years	.367 (.144)*	.350 (.106)**	.377 (.117)**	.249 (.119)*
15 Years	.400 (.129)**	.369 (.150)*	.235 (.076)**	.435 (.100)***
PreProduction				
1 Year	.313 (.039)***	.232 (.059)***	.308 (.098)**	.158 (.079)*
5 years	.153 (.125)	.208 (.076)*	.244 (.157)	.039 (.065)
Pseudo R2	0.095	0.151	0.152	0.146
N	11,067	11,468	5,127	6,225

Note: [+]For all the time windows, the control variables' values are within .01
* $p<.05$, ** $p<.005$, *** $p<.0005$

results does not change in any of the models. The altered values of the independent variable in the models with outliers removed are found in Table 17 for the production models.[10]

The control variables do not have a very strong showing in these models. The average regional democracy shows a small, significant effect of increasing the likelihood of conflict,

[10] The diagnostics for outliers were similarly ran on the Discovery High Conflict models with the same resulting pattern as in the Full Conflict models. Results for the High Conflict models with their outliers removed can be found in Table 24 at the end of the text.

though most of this result comes from the pre-WWII models, while the effect is reversed in the post-WWII models, but loses significance. Average regional development does not show significance in the models. It does show have a small positive effect in the pre-WWII period, with more developed regions having a higher likelihood of conflict, but a large negative effect in the modern era, with development decreasing conflict. The presence of a major power also only finds significance in the post-WWII era, where the presence of a major power shows a fairly strong increase in the likelihood of conflict. The number of nations in a region shows neither significance nor a substantial effect in any of the models. Again the Beck, Katz, and Tucker (1998) peace-years variable shows strong significant and substantive results. The more years a nation has gone without encountering conflict, the lower its risk of conflict in a given year.

The effect of continuing discoveries of oil on regional members' chance of conflict shows an interesting pattern. The control models show that the chance of conflict is significantly higher for the year of the discovery and for fifteen years after the discovery. This seems to suggest that regional members of the discovering nation encounter greater conflict immediately following the discovery, which may be more knee-jerk reactions to the discovery and the upheaval of security information within the region. Then, conflict is not significantly affected until a fifteen-year window is considered. These may be more planned conflicts over power distribution in the region. The high conflict models show a similar pattern with slightly larger coefficients. This means that the pattern for high conflict stays the same, while high conflicts are slightly more likely to be seen than conflicts in general.

Referring to the same concerns of the CINC variable I addressed in the models for the first hypothesis, I likewise tested the models for the second hypothesis with the energy/iron/steel composite variable and without any development variable. Again, the coefficients and

significance of the other variables in the models did not change, leading me to conclude that the inclusion of the CINC variable in the models did not alter or bias my results.

We find mixed results in our models for my second hypothesis. Regional conflict does not seem to center around the actual discovery of a new resource, but rather upon the beginning of its production in the region. This makes sense; conflict enters the discovering nation following a discovery as other nations vie for access to the rights of producing that resource. Much of my theory for why regional conflict is more likely following a discovery dealt with power politics and security in the region, which would not be able to develop until revenue is coming into a discovering nation from the resource's production. This inference is strengthened by the fact that the strongest significance is found in the larger year models, showing that the development of the resource revenue into power takes a few years to accumulate.

CHAPTER 6

CONCLUSION

While there are still many facets to explore concerning the relationship between the discovery of resources and interstate conflict, my preliminary tests show support for the assertion that both nations and regions are at a higher risk of conflict following an initial discovery of an important resource in a nation. For the discovering nation, the greatest threat of conflict comes in the year the discovery is made. I believe this is because other nations are willing to do whatever is necessary to assure some access to this resource for their own benefit, often putting themselves in a situation where they feel the threat or use of force is the only way to get the policies they want. For the region in which the discovery is made, conflict is more likely in the years following the initial production of the resource. This also follows my theory, as regional conflict would arise due to changes in military and power distribution, which would only be possible after the nation begins to bring in revenue from its resource find. Regional conflict following initial production also shows an increase in high conflict (i.e. use of force and war) rather than simply threats and displays of force.

Implications

Overall, these tests have shown a strong support for my hypotheses that a discovery of a new resource can have profound effects on the likelihood of conflict not only in the discovering nation, but also in the discoverer's region. These finding have serious implications for a nation's foreign policy choices when a new resource discovery is made in the nation or in its region. Nations must weigh the consequences of their actions in creating alliances and making deals to

allow access to a new resource within their borders, determining the effect of leaving certain nations out of the deals and their desperation to gain access. These nations must also look to the consequences of using their new resource revenues to build up their military and its effects on its own security as well the effects its military buildup may have on the security considerations of other nations in its region. Even a nation who is just trying to use some of its newfound power to change the rules of its region's status quo must understand that such policies can lead to conflict. Klare (2001) paints a pessimistic picture of the situation, believing that nations already make these calculations and that they are willing to brave the possibility of conflict in order to meet their needs (resources, security, favorable regional policies, etc.). Thus, it is up to international organizations to be aware of the heightened likelihood of conflictual situations and environments following a resource discovery. It is likely that the only way to ease the chance of conflict following a resource discovery will be for an international organization, regional or global, to change the cost/benefit calculations, making it a better option to peacefully negotiate access to a new resource or to lower security concerns in a region. An understanding of the possibility of conflict following a resource should put these organizations onto a heightened watch, looking to prevent conflict before it begins. It is up to the leaders of nations to agree to form such organizations before the situation arises and give them enough power that they can halt conflict rather than simply delay it by a few years.

Future Research

While my tests show strong support for my hypotheses, there are a number of issues that will want to be considered for future tests concerning the effect of resource discoveries on interstate conflict. First, I chose to use oil as my proxy variable for resources. As discussed in

the research design, oil holds a particularly strong position in the world economy due to both the large demand for it and its scarcity. While I believe that my theory would be supported using other important nonrenewable resources as proxy, future studies may want to check the generalizability of my results using my same tests with other resources such as coal, natural gas, or future possible energy resources like uranium. My tests also treat all discoveries as equally important; some initial resource discoveries may have much smaller reserves, making them less important for other nations to gain access to them. Also, discoveries made during periods where global demand for oil was larger may make access to new resources more vital to outside nations. To account for these variables, further studies may test the different effects of facets of the different discoveries on interstate conflict. Finally, the Correlates of War's Interstate System Membership and Regional List (Small and Singer 1982) provides very broad definitions of regions. Some political scientists prefer more narrowly defined regions, and my tests could be checked against these regional divisions as well to provide further proof of my theory.

Due to the lack of any prior research on the effects of resource discovery on interstate conflict, my study has only looked at the tip of the iceberg. There are still a number of facets of this question to explore. Many initial oil discoveries occurred during periods of colonialism, so one could look at the effects of an initial resource discovery in a colonial possession and see how these tests may add to one such as my own. Because many discoveries were found in colonial holdings, and so were excluded from my models, it is possible that we could garner much more information concerning resource discoveries and conflict, especially between major powers, by delving further into colonial resource discoveries. Further, many discoveries are made as large resource corporations, generally located in and sanctioned by major power nations, make deals with smaller countries to look for a resource. When a resource is found, that corporations, and

by default its home nation, generally makes a large claim to the newly discovered resource, which is contested by other large nations. Studying the effect of how and by whom a resource is discovered and the effect of resource corporations sanctioned by major powers on discovery and conflict could add a great deal to our knowledge of their complicated interaction. One could further look into the initial discoveries themselves to examine why conflict may arise following one but not another, try and disaggregate the conflicts found in my study, whether they predominantly arise with the discovering nation as the target or the initiator and why, or study to what level these conflicts over initial discoveries escalate. One could also turn the research lens inward, studying the effects of an initial resource discovery on intrastate conflict, from riots and demonstrations to full civil war. There is still much work to do before we can say we have exhausted the research over the discovery of resources.

Table 21. Conflict for the Discovering Nation - Fixed High Conflict Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.807 (.372)*	1.12 (.427)*	-.552 (1.04)	1.33 (.771)
2 Years	.815 (.282)**	.809 (.295)*	.265 (.502)	.671 (.447)
5 Years	.506 (.204)*	.457 (.193)*	.260 (.305)	.401 (.268)
10 Years	.322 (.154)*	.094 (.147)	-.006 (.236)	.044 (.196)
15 Years	.262 (.134)*	-.002 (.124)	-.118 (.202)	-.021 (.161)
Pseudo R2	0.071	0.228	0.184	0.256
P>χ2	0.0005	0.0005	0.0005	0.0005
N	11,211	10,432	4,692	5,634

Note: * $p<.05$, ** $p<.005$, *** $p<.0005$

Table 22. Conflict for the Discovering Nation - Fixed High Conflict Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	-.101 (.447)	-.001 (.612)	.745 (.775)	-.873 (1.03)
2 Years	.279 (.299)	.420 (.318)	.363 (.510)	.385 (.402)
5 Years	.104 (.220)	.259 (.197)	.373 (.299)	.191 (.258)
10 Years	.238 (.155)	.093 (.147)	.139 (.227)	.074 (.190)
15 Years	.328 (.129)*	.061 (.121)	-.008 (.194)	.121 (.154)
PreProduction				
1 Year	-.460 (.737)	-.212 (.510)	.295 (.693)	-.711 (.765)
5 years	.366 (.236)	.235 (.202)	.424 (.290)	-.116 (.293)
Pseudo R2	0.071	0.227	0.184	0.255
P>χ2	0.0005	0.0005	0.0005	0.0005
N	11,212	10,434	4,688	5,647

Note: * $p<.05$, ** $p<.005$, *** $p<.0005$

Table 23. Conflict for the Discovering Region - Fixed High Conflict Discovery Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Discovery				
Year of	.190 (.184)	.058 (.168)	.149 (.130)	.038 (.131)
2 Years	.021 (.141)	-.051 (.111)	-.114 (.073)	-.059 (.143)
5 Years	.142 (.139)	.046 (.105)	.375 (.093)***	-.179 (.129)
10 Years	.280 (.128)*	.202 (.072)**	.207 (.108)	.132 (.098)
15 Years	.242 (.154)	.233 (.082)**	.147 (.077)	.195 (.120)
Pseudo R2	0.08	0.143	0.123	0.157
N	11,365	11,398	5,127	6,137

Note: [+]For all the time windows, the control variables' values are within .01

* $p<.05$, ** $p<.005$, *** $p<.0005$

Table 24. Conflict for the Discovering Region - Fixed High Conflict Production Models.

	Coefficient (Std. Error)			
	Simple Models	Control Models	Pre-WWII	Post-WWII
Production				
Year of	.464 (.105)***	.280 (.117)*	.625 (.067)***	.164 (.083)*
2 Years	.340 (.131)*	.186 (.139)	.329 (.130)*	.112 (.150)
5 Years	.411 (.047)***	.384 (.044)***	.598 (.114)***	.279 (.087)**
10 Years	.410 (.126)**	.386 (.122)**	.382 (.119)**	.305 (.132)*
15 Years	.434 (.121)***	.391 (.175)*	.232 (.081)**	.475 (.117)***
PreProduction				
1 Year	.269 (.042)***	.214 (.087)*	.438 (.070)***	.055 (.117)*
5 years	.144 (.143)	.184 (.091)*	.246 (.216)	-.024 (.117)
Pseudo R2	0.09	0.144	0.126	0.152
N	11,386	11,409	5,116	6,198

Note: [+]For all the time windows, the control variables' values are within .01

* $p<.05$, ** $p<.005$, *** $p<.0005$

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