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Master's Thesis of International Studies

**NUCLEAR COERCION WITH
CHINESE CHARACTERISTICS**
– Prospect Theory and China's Nuclear Signaling
In Territorial Disputes –

중국 핵강제의 특성:
전망 이론과 영토 분쟁에서의 중국의 핵신호

August 2019

**Graduate School of International Studies
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NUCLEAR COERCION WITH CHINESE CHARACTERISTICS:

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Abstract

China's growing power and attitude toward its coercive use has profound implications for regional stability in the Asia-Pacific. One critical component to that stability is China's crisis behavior in key territorial disputes throughout the region. This paper seeks to understand the nature of China's nuclear deterrent threats in the post-Cold War era by identifying the conditions under which Chinese leaders choose nuclear coercion over other viable policy alternatives. Second, the paper explores the utility of applying prospect theory to China's crisis behavior to identify those conditions within a new prospect theory model. The findings suggest that, first, the decision to engage in nuclear coercion is influenced, in large part, by considerations about the status of one's own territorial sovereignty and integrity. Second, the findings challenge realist predictions about China's military trajectory by suggesting that, as China's power grows, Beijing will be placed in fewer disadvantageous positions, thereby limiting the need to adopt coercive policies like nuclear threats. Finally, these findings suggest that prospect theory has significant explanatory and predictive power, both in international relations as well as China's crisis management behavior.

Keywords: Nuclear Deterrence, Nuclear Coercion, Diaoyu/Senkaku Islands, China, Japan, East China Sea, Prospect Theory, Sovereignty

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Table of Contents

Abstract	i
CHAPTER I: INTRODUCTION.....	1
1. Study Background.....	1
2. Research Purpose and Objectives	2
3. Thesis Structure	7
4. Literature Review	8
CHAPTER II: RESEARCH DESIGN.....	29
1. Major Concepts: Establishing Working Definitions.....	29
2. Theoretical Framework.....	35
3. Hypotheses.....	56
4. Case Study Design	57
CHAPTER III: CASE STUDY	63
1. Senkaku/Diaoyu Islands Dispute 2012-2013.....	63
2. Senkaku/Diaoyu Islands Dispute 2014-2018.....	94
CHAPTER IV: ANALYSIS & CONCLUSION	117
1. Summary of Research Objectives, Findings and Implications ...	117
2. Limitations and Areas of Future Research	126
Tables and Figures	128
Bibliography.....	137
초록	152
Acknowledgements.....	153

CHAPTER I: INTRODUCTION

“At 15:00 on October 16, 1964, China detonated an atomic bomb and successfully carried out its first nuclear test. This is a major achievement made by the Chinese people in the struggle to strengthen national defense forces and oppose US imperialist nuclear blackmail and nuclear threats.

Protecting oneself is an inalienable right of any sovereign state.” –

People’s Republic of China, Official Statement, October 16, 1964¹

1. Study Background

Beijing’s desire to resist nuclear blackmail is widely regarded as one of the catalysts for China’s detonation of an atomic bomb on October 16, 1964. The epigraph suggests, then, that China’s pursuit of the bomb was “just,” in the sense that it exercised the inalienable rights of self-defense afforded to all sovereign states. This sentiment sets an appropriate tone for the rest of this paper: First, China has—in many ways—come full circle since 1964 in terms of its nuclear thought, and second, issues of sovereignty are more important to Chinese leaders than ever before. China’s evolving security environment—characterized by a return of great power competition—as well as its growing military, economic, and political power have also heightened the significance of the country’s territorial sovereignty and nuclear deterrence strategy, bringing these issues to the fore of the country’s national security strategy.

¹ “Zhonghua renmin gonghe guo zhengfu shengming” (The Statement of the Government of People’s Republic of China), October 16, 1964, <http://cpc.people.com.cn/GB/64184/64186/66675/4493741.html>

Consequently, the last two decades of rapid change have given the country an opportunity to revisit the utility of nuclear weapons, if not for military use then potentially for implicit coercion. Has China's position on nuclear coercion evolved? Beijing's nuclear military activities, much like US or Russian nuclear activities, carry with them important messages that have intended (and unintended) meanings for domestic and international audiences. What kind of nuclear signals does China send to neighbors? To rivals? Do these nuclear signals carry different meanings in times of crisis? While a handful of scholars have answered the "when" and "how" China has engaged in nuclear coercion, little attention has been given to a potentially more impactful question: *under what conditions does China engage in nuclear coercion?* While the former is explanatory in nature, the latter is predictive, and potentially more useful for both scholars and practitioners. The answer to this research question could have profound implications for China's military trajectory, the security of its neighbors, and the future of stability in East Asia.

2. Research Purpose and Objectives

While research on China's nuclear signaling is limited, scholarship on China's crisis behavior is vast and thorough. Indeed, research on China's crisis behavior during both the cold war and post-cold war periods is well documented, and scholars have applied novel theories and produced important

insights. In particular, scholars have been transfixed on China's use of diplomatic and military coercion. As a powerful state with ambitious national goals, many believe China's use of that power to seek favorable outcomes in international relations is inevitable. From China's military coercion against Vietnam in the 1970's, to a two-pronged strategy of military and economic coercion against Taiwan during the 1995-1996 Taiwan Strait crisis, China is no stranger to coercion. But while a lack of research on the country's nuclear coercion is limited, this is not because China does not engage in the cold war pastime. On the contrary, recent scholarship has identified a staggering amount of evidence that Beijing has exploited the political power of nuclear weapons—on numerous occasions—to influence the outcome of events.²

As scholarship on China's nuclear coercion grows, one of the most consequential areas in this budding academic enterprise will be to explain why China chooses to do so. On one hand, answering the “why” question will help make sense of the empirical evidence and generate novel findings. On the other hand, this approach is prone to ad hoc and post hoc arguments that have less than powerful predictive capacities. Furthermore, such explanations contribute variables that are likely only one of many that influence China's decision-making during crises, making it difficult to discern which are more

² See, for example, Zhang, Baohui. *China's Assertive Nuclear Posture: State Security in an Anarchic International Order*. (London: Routledge, 2017).

important than others. This is not to say that those variables are not important at all, only that they are primarily explanatory and neither sufficiently predictive in nature nor systematic enough in employment. In other words, while answering why China engages in nuclear threats is important, it is at least equally important to understand why China chooses them over other viable options. Such an approach provides not only explanatory, but also predictive power, in a systematic way. How can scholars fill this gap in the literature and provide more predictive power to the study of China's crisis behavior?

This paper establishes its place in the literature by exploring China's nuclear coercion using a model that is both predictive and systematic. By introducing a novel theoretical framework based on prospect theory, I demonstrate how one can apply different variables in a systematic way that not only explains China's behavior, but also predicts how Beijing might behave in the future, thereby filling a gap in contemporary literature. This novel approach is part of an active, ongoing body of literature on China's crisis management, one that seeks to understand and predict China's behavior in territorial disputes.

First and foremost, this paper seeks to answer the question, "under what conditions does China engage in nuclear coercion?" To this end, I first analyze one of the most widely studied international disputes in China's post-

cold war history, the Diaoyu/Senkaku islands dispute in the East China Sea (ECS). By performing case study analyses of the dispute during the periods of 2012-2013 and 2014-2018, I shed light on China's decision-making and nuclear signaling behavior in times of crisis. Finally, I compare these periods of the ECS dispute to understand why China chose implicit nuclear deterrence threats during one period but not in the other. In order to effectively analyze China's crisis behavior, that is, Beijing's actions under conditions of risk and uncertainty where the chance of military conflict is relatively high, I define and operationalize important terms to develop working definitions in the context of the research question.

Next, I employ a unique prospect theory (PT) model as a theoretical framework to both explain and predict China's behavior in a systematic manner. Prospect theory is a rigorous cognitive decision-making theory based on extensive empirical evidence. PT is widely used by economists and political scientists for its ability to explain how individuals make decisions under conditions of risk and uncertainty, and it is becoming increasingly common in the study of international relations. The theory posits that individuals are more likely to engage in risky behavior when their situation is framed in terms of loss, and more cautious in their actions when framed in terms of gains. When applied to the behavior of states in times of crisis, prospect theory predicts that countries will take risks to avoid losses (or

recover them) rather than to obtain gains of equal or greater value. To apply prospect theory to China's nuclear signaling, I employ a prospect theory model originally developed by political scientist and security expert, Kai He, to explain China's behavior in high-severity and low-severity crises,³ replacing his variables with my own, and thus providing an alternative explanation for China's behavior during crises.

To develop and operationalize an appropriate set of variables to analyze with prospect theory, I borrow insights from the neorealist school of international relations (IR). As an explanatory theory, neorealism's insights about the nature of state behavior and international structural forces offers a powerful causal mechanism to explain the connection between international society and state behavior in foreign policy decisions. Structural realism posits that relations between states are defined and shaped by the international system's ordering principle, the distribution of capabilities, and most importantly, the inherent presence of anarchy – that is, lacking a central authority, states rely on self-help to pursue self-interests, like security or power maximization.⁴ In the context of territorial disputes, neorealism helps inform the selection of appropriate measurements with which to explain how

³ He, Kai. *China's Crisis Behavior: Political Survival and Foreign Policy after the Cold War* (Cambridge University Press, 2016).

⁴ Mearsheimer, John J. *The Tragedy of Great Power Politics* (New York, NY: Norton, 2001), 3.

the the independent variable, China's domain of actions, affects the dependent variable, China's nuclear coercion.

I apply three variables—threat perception, territorial authority, and crisis severity—to a new prospect theory model that follows an identical process outlined in political scientist Kai He's "political-survival prospect theory" model. From here, I develop five hypotheses based on the model's findings and perform a congruence test to examine whether the predictions accurately reflect China's behavior during various periods of the dispute. If my model is correct, it means I have accurately and systematically identified key variables that contribute to explaining the conditions under which China engages in nuclear coercion. In sum, I evaluate existing explanations for China's crisis management behavior by exploring the ECS dispute to identify which set of situational, structural, or environmental variables play the *most important* role in determining why China chooses certain policy options, such as nuclear threats, over others. In this way, the conditions under which China engages to nuclear coercion are revealed.

3. Thesis Structure

This thesis is structured in the following order. First, I provide an overview of the research topic before thoroughly exploring and critically analyzing the major literature in the following section. Here, I connect relevant literature, discuss their strengths and weaknesses in terms of the research question, and

demonstrate the need for my research on the topic by identifying a gap in the literature, as well present my plan for filling this gap. In Chapter 2, I discuss in detail the paper's research design and theoretical framework. In this chapter, I explain relevant concepts, define important terms, introduce my theoretical model, and present my case study design. In this chapter, I explain how the data will be analyzed, how hypotheses will be developed, and how findings will be derived. In Chapter 3, I analyze two case studies, interpreting observations through my theoretical model to produce unique insights. Finally, in Chapter 4, I summarize the key findings and insights derived from the previous chapter, discuss their implications in detail, and then identify my paper's contribution to the field in relation to the research question.

4. Literature Review

4.1 Introduction

While much has been written on particular types of crisis behavior, there is one subfield of this research topic still relatively unexplored. Within the study of conflict and crisis management lies China's crisis behavior, a subject of much analysis.⁵ Within this subfield lies nuclear coercion, this paper's primary subject of analysis. While a great deal of research has explored China's

⁵ See, for example, Andrew Scobell, *China's Use of Military Force: Beyond the Great Wall and the Long March* (Cambridge: Cambridge University Press, 2003); and Mark Burles and Abram Shulsky, *Patterns in China's Use of Force: Evidence from History and Doctrinal Writing* (Santa Monica, RAND, 2000).

coercive use of power⁶ and China's nuclear signaling,⁷ few scholars have attempted to combine the two to explore China's use of nuclear threats. Baohui Zhang's pathbreaking book on China's implicit nuclear deterrence turned the field on its head by presenting the first exhaustive and persuasive account of China's nuclear coercion.⁸ Building off of Zhang's work, one of the most common academic directions in reaction to this development is to answer the "how" and "why" questions regarding China's decision to engage in this type of crisis behavior. As a consequence, scholars tend to ignore an equally important question: "under what conditions does China engage in nuclear deterrent threats?" I begin answering this question by drawing insights from the wealth of literature on China's crisis behavior to see how academics have answered similar questions in the past. For example, when, why, and how has China engaged in risky foreign policy crisis behavior, such as nuclear threats, in the past? Armed with this knowledge, I can identify and apply the most appropriate theoretical framework in a way that overcomes previous limitations.

⁶ Godwin, Paul H., and Alice L. Miller. "China's Forbearance Has Limits: Chinese Threat and Retaliation Signaling and Its Implications for a Sino-American Military Confrontation." Center for the Study of Chinese Military Affairs Institute for National Strategic Studies. *China Strategic Perspectives*, No. 6 (2013). Doi:10.21236/ada584671.

⁷ Evan S. Medeiros, "Evolving Nuclear Doctrine," in Paul J. Bolt and Albert S. Willner, eds, *China's Nuclear Future* (Boulder, CO: Lynne Rienner, 2005).

⁸ Zhang, Baohui. *China's Assertive Nuclear Posture: State Security in an Anarchic International Order*. (London: Routledge, 2017).

This literature review seeks to compare and contrast the different theoretical approaches scholars have used to study China's crisis behavior in order to 1.) reveal and fill a gap in the literature regarding the importance of China's nuclear signaling in crisis situations; 2.) inform selection of an appropriate theoretical framework for understanding the conditions under which China chooses particular policies, like nuclear deterrent threats, over others in crisis situations; and 3.) bring attention to the advantages and disadvantages of applying various theories to understand the conditions under which China's crisis behavior takes place. Looking at the topic through a multidisciplinary lens that incorporates rational actor theory, cognitive psychological theory, and various sociocultural theories, this review demonstrates how these different approaches have particular strengths and weaknesses in characterizing China's crisis behavior.

4.2 China's Crisis Behavior: Existing Explanations for China's Coercion

Historical Approaches

Some of the more mainstream explanations for China's crisis behavior in territorial disputes focus on China's unique historical experience. The atrocities of Japan's imperial conquests, for example, remain etched in the collective consciousness of many countries throughout East and Southeast Asia, and in particular have greatly influenced China's perceptions of Japan's intentions in the region. Chinese scholars like Ma Yong note that, in the past,

Japan had “used war to reverse China’s rise,” first in 1884 and then in 1937; consequently, Yong argues that it is not unreasonable to expect that given the opportunity, Tokyo may decide to do the same again⁹ if it were believed to be in Japan’s best interests. The argument follows that Japan may be using territorial disputes as an excuse to justify a preventive or preemptive attack, warranting the escalation of a small crisis into a full-blown military conflict.¹⁰ Tim F. Liao et al., note that China’s crisis behavior is affected not only by the issue of territory – if this was the case conflict should have broken out years earlier – but by historical experience. The authors argue that crises, especially ones like the Senkaku/Diaoyu islands dispute, are often “deeply rooted in history.”¹¹ Furthermore, Japan’s perceived neglect or misrepresentation of historical issues, such as recent concerns about sanitizing history textbooks, denials regarding the Nanjing massacre, refusals to take legal responsibility for war-time atrocities like the “Comfort Women” issue, and visits to the Yasukuni Shrine by Japanese politicians¹² ultimately heightens China’s threat perceptions and shapes its policy decisions.

As a result, China’s behavior toward Japan leans on the more aggressive side of the spectrum, and therefore has a propensity to engage in

⁹ Zhang, *China’s Assertive Nuclear Posture*, 122.

¹⁰ *Ibid.*

¹¹ Liao, Tim F, Wiegand, Kristia E., and Kimie Hara, *The China-Japan Border Dispute: Islands of Contention in Multidisciplinary Perspective* (London: Routledge, 2015), 32.

¹² *Ibid.*, 32.

more aggressive behavior. While historical approaches provide a powerful and persuasive lens for understanding China's behavior, they face a number of limitations. First, the above explanations can appear fatalistic and individuals interpret history through the lens of their own personal experiences, as evidenced by that fact that some Chinese leaders have chosen to prioritize progress over historical animosity. For example, Deng Xiaoping chose to shelve the Senkaku/Diaoyu islands dispute in favor of normalizing ties,¹³ and Xi Jinping recently met with Japanese President Shinzo Abe to announce a "new historical direction" in Sino-Japanese relations, all while in the midst of unprecedented assertiveness by both parties in the ECS.¹⁴ While issues of territorial sovereignty alone do not appear to spark crisis, historical animosities, too, by themselves appear to be only one piece of the puzzle.

Cultural and Sociocultural Approaches

Scholars like Wang Xu take a primarily cultural approach to understand China's crisis behavior. Xu argues that China's foreign policy crisis behavior is affected by "more sophisticated political tradition, a longer history, and a

¹³ Kleine-Ahlbrandt, Stephanie. 2013. "A Dangerous Escalation in the East China Sea." The Wall Street Journal. Dow Jones & Company. January 4, 2013.

<http://www.wsj.com/articles/SB10001424127887324461604578189160657533462>.

¹⁴ Fifield, Anna. 2018. "China and Japan Pledge to Take Their Relations in 'New Historic Direction.'" The Washington Post. WP Company. October 26, 2018.

https://www.washingtonpost.com/world/asia_pacific/china-and-japan-pledge-to-take-their-relationship-in-new-historic-direction/2018/10/26/0aeb5a32-d90f-11e8-83a2-d1c3da28d6b6_story.html?noredirect=on&utm_term=.30c1292a45f7.

prouder civilization” that shapes decision-maker’s thinking, and therefore the policy options they consider.¹⁵ In practice, the impact of culture and tradition can be seen in the three guiding principles of China’s conflict and crisis management philosophy since Mao Zedong, known as “on just grounds,” “to our advantage,” and “with restraint” (youli, youli, youjie), which emphasizes self-defense and restraint based on China’s traditionally Confucian-based values that cover political, economic, and military domains. John Fairbank notes that Confucian culture can also act as a constraint to China’s foreign policy during crises. The use of force, for example, is often seen within Beijing as a “last resort” because of the self-perceived defensive nature of Chinese culture.¹⁶ One major criticism of cultural approaches, however, is that they are better equipped to describe the unique characteristics of China¹⁷, not explain changes observed over time or predict behavior.

Alastair Ian Johnston opens a comprehensive inquiry into China’s dispute behavior by arguing that this dominant view of China’s crisis behavior is based upon relatively unfounded claims predicated on a “pacifist” Chinese culture that did not historically exist. In other words, scholars tend to take at

¹⁵ Wang and Xu, “Pattern of Sino-American Crises,” 141–2 in “Michael D. Swaine et al., eds, *Managing Sino-American Crises* (Washington, D.C.: Baltimore, MD: Carnegie Endowment for International Peace; Hopkins Fulfillment Service, 2006)

¹⁶ John Fairbank, “Varieties of the Chinese Military Experience,” in Frank Kierman and John Fairbank, eds. *Chinese Ways in Warfare* (Cambridge: Harvard University Press, 1974), 7.

¹⁷ Xinbo Wu, *Managing Crisis and Sustaining Peace between China and the United States* (Washington DC: United States Institute of Peace, 2008).

face value the notion that China is inherently pacifist or defensive in nature (i.e. only engaging in “limited aggression” as a “last resort”) as a result of uniquely Chinese or Confucian cultural values.¹⁸ Building on this point, Andrew Scobell observes a “cult of defense” within China’s military and political tradition.¹⁹ Scobell argues that such a tradition, build around perceptions of a defensively-natured China rooted in Chinese cultural values, gives Chinese leadership incentives to hide offensive military operations behind defensive rhetoric, ironically increasing the likelihood China might use force. In terms of territorial disputes, cultural approaches can explain the Chinese strategies of “reactive assertiveness,”²⁰ and “gray-zone deterrence,”²¹ strategies that are defensive/restrained on the surface, but which are coercive and escalatory in practice. Both strategies advocate avoiding using force first, but center around justifying the exploitation of aggression in order to escalate, with the intention of changing the status quo.

Other scholars focus on sociocultural factors such as identity to explain China’s crisis behavior. In her review of China’s behavior during the 2012-2013 ECS crisis, Anna Costa at the University of Hong Kong presents an

¹⁸ Alastair Iain Johnston, “China’s Militarized Interstate Dispute Behavior 1949-1992: A First Cut at the Data,” *The China Quarterly*, No. 153 (Mar., 1998), 1-30, 6.

¹⁹ Scobell, *China’s Use of Military Force*.

²⁰ “Dangerous Waters: China-Japan Relations on the Rocks”, International Crisis Group, Asia Report N°280, April 8, 2013, <https://d2071andvip0wj.cloudfront.net/dangerous-waters-china-japan-relations-on-the-rocks.pdf>, 79.

²¹ Green, Michael et al., “Countering Coercion in Maritime Asia: The Theory and Practice of Gray Zone Deterrence”, Center for Strategic and International Studies Report (2017), 3-4.

exhaustive list of contemporary explanations, demonstrating that a combination of ideational, historical, and identity-related factors are some of the most prevalent approaches.²² Some of these factors touch on the historical memory and identity clashes between Japan and China; differing interpretations of history; generational changes in leadership that saw Xi Jinping and Shinzo Abe assume power; China's growing confidence as a consequence of its meteoric rise; as well as historic shifts in the regional balance of power, culminating in a clash of national identities between the US and China.

Where sociocultural approaches shine is their ability to explain state preferences and interests in terms of national identity. For example, that states like Russia or China tie their national identities as world powers, and thus their preference for actions and outcomes, on nuclear weapons and prioritize military spending around achieving this goal²³ speak to the importance of identity. In terms of territorial disputes like those in the ECS and SCS, identity issues are an important factor in discussions about sovereignty. The US government for instance has tied China's national sovereignty and territorial

²² Costa, Anna. *The China-Japan Conflict over the Senkaku/Diaoyu Islands: Useful Rivalry*. Routledge Security in Asia Series, no. 12. (Abingdon, Oxon; New York: Routledge, 2018) ISBN 978-1-138-30873-2.

²³ Kowert, Paul A. *The Peril and Promise of Constructivist Theory*. Ritsumeikan International Research Institute, Ritsumeikan University.
<http://www.ritsumei.ac.jp/acd/cg/ir/college/bulletin/vol13-3/13-3-12Kowert.pdf>, 157-170, 13.

integrity to the country's perceived identity as a great power.²⁴ The combination of factors which constitute identities, however, are difficult to determine or rank, and approaches based on national identity critically overlook the importance of individual leaders in crisis situations, which is particularly true in the case of China.²⁵

Rational Actor Approaches

Another major approach to China's crisis behavior is grounded in rational actor theory. In their investigation into Beijing's foreign policy behavior, political scientists Kai He and Huiyun Feng, explore rational choice. In response to China's coercive behavior during the 1995-96 Taiwan Strait crisis, the authors demonstrate how rationalists argue that the country's show of force was designed to demonstrate resolve and enhance credibility.²⁶ In other words, contrary to many analyses that characterized Beijing's behavior as reckless, Chinese leaders were neither reckless nor belligerent. He points out a common critique of rational actor theory, however: an assumption of rationality, despite the fact that actors do not and cannot *always* act rationally. Actors cannot be expected to act rationally when operating under conditions of incomplete

²⁴ United States Department of Defense, *2016 Annual Report to Congress: Military and Security Developments Involving the People's Republic of China*, 41.

²⁵ He, *China's Crisis Behavior*, 13.

²⁶ He, Kai and Feng, Huiyun. *Prospect Theory and Foreign Policy Analysis in the Asia Pacific: Rational Leaders and Risky Behavior*. (New York, NY: Routledge, 2013) 75-76.

information, suffer from cognitive biases, or are pressured by time constraints that alter cost benefit analysis calculations.²⁷

The problem with the rationalist argument above is the post-hoc nature of its analysis: by arguing that decision-makers all act rationally based on some defined interest (i.e. some action always intentionally serves some purpose) anything can be rationalized for the sake of convenience. A more effective explanation for behavior involves explaining *why* some actions are considered more rational than others, that is, “what makes a rational choice.”²⁸ As He demonstrates, rationalists consider interests fixed and therefore, similar behavior should be observed across multiple crises of a similar nature. However, interests are not fixed and vary depending on a number of factors including emotions, biases, and lack of information. Furthermore, due to the uncertain, complex, and risky nature of crises, states have incentives to conceal their true motives.²⁹ As a result, we do not observe China engaging in nuclear deterrent threats during the 2012 Scarborough Shoal Crisis, but did so in the Senkaku/Diaoyu islands dispute in 2012.³⁰

National Interest Approaches

²⁷ He, *China's Crisis Behavior*, 11.

²⁸ *Ibid*, 12.

²⁹ Fearon, James, “Rationalist Explanations for War,” *International Organization* 49, no. 3 (1995), 379–414.

³⁰ Zhang, *China's Assertive Nuclear Posture*, 123.

Among the security-oriented explanations are those based on realist interpretations of international relations that emphasize state power and national interests. In a broad survey of Chinese literature of the country's crisis management, Johnston argues that the driving force behind China's crisis behavior is informed primarily by calculations regarding threats to China's core national interests, such as national sovereignty, territorial integrity, and national unity.³¹ As Johnston notes, a significant portion of the Chinese strategic community believe that threats to these core interests require "resolute methods to counter the adversary," namely, the willingness to use violence, particularly in territorial crises. Johnston presents a list of answers to the question "what might explain China's greater willingness to use violence in territorial crises?" and offers up one key condition shaping China's behavior: the zero-sum nature of territorial issues."³² Michael Green et al. argue that China's coercive behavior during crisis is chiefly the product of national interests, specifically, core national interests such as territorial sovereignty.³³ The authors, however, demonstrate that domestic political or individual leadership preferences may also drive the propensity for coercion during territorial crises. China scholar and security expert M. Taylor Fravel,

³¹ Johnston, Alastair Ian "The Evolution of Interstate Security Crisis-Management Theory and Practice in China," *Naval War College Review*, Vol. 69, No. 1 (Winter 2016), pp 28-71, 34, 40-41, 45.

³² Johnston, "The Evolution of Interstate Security Crisis-Management", 43.

³³ Green et al., "Countering Coercion in Maritime Asia," 1-2.

for example, notes that regime insecurity is closely correlated to behavior in territorial disputes. Furthermore, Fravel implies that as China's power grows, it will be able to force compromises it was unable to in the past.

While each of the theoretical approaches reviewed offer important insights into China's behavior, they suffer from several limitations. First, each approach has difficulty indicating which variable(s) plays the most important role in shaping China's crisis behavior. Second, these approaches are primarily descriptive in nature and while they are adept at identifying the unique characteristics of China's crisis behavior, they lack a 'crisis management mechanism' and a systematic way of predicting why China chooses particular policies over others in crises.³⁴ Finally, each is prone to ad-hoc and post-hoc arguments that justify variable selection without providing a systematic explanation for their employment and selection. Consequently, the above approaches lack predictive power. In order to convincingly explain the conditions under which China engages in particular types of crisis behavior, a systematic and predictive approach is necessary.

4.3 Nuclear Coercion and Signaling: Identifying a Gap in the Literature

China scholar and nuclear policy expert Evan S. Medeiros once wrote that future research should attempt to understand China's nuclear posture by

³⁴ He, *China's Crisis Behavior*, 8-9.

observing its behavior during crisis situations.³⁵ Similarly, the use of nuclear threats can be better understood by observing China's crisis behavior. And while Scholars have largely answered the "how," and "why" states engage in nuclear coercion, little attention has been paid to the "when" (i.e. the conditions that lead) states to choose nuclear threats over other viable policy alternatives. Filling this gap in the literature will deepen both the literature on nuclear coercion and China's crisis behavior.

Signaling

According to Gartzke et al., "signaling is the purposive and strategic revealing of information about intent, resolve, and/or capabilities by an actor A to alter the decisions of another actor B to improve the chances that an outcome desired by A is reached when the desired outcomes of A and B are dissimilar."³⁶ By this logic, signaling is a strategic decision designed to alter the behavior of the receiver to the benefit of the sender. Countless examples of signaling exist. States can bluff to alter perceptions of their capabilities or resolve (known as 'cheap talk'), reveal private information to avoid costly contests, craft an image of themselves as a powerful military state by announcing their capabilities, "parading them through the streets," conducting

³⁵ Medeiros, "Evolving Nuclear Doctrine," 73.

³⁶ Erik A. Gartzke, Shannon Carcelli, J Andres Gannon, and Jiakun Jack Zhang, "Signaling in Foreign Policy," *World Politics Online* (Aug 2017), 3.

exercises, or mobilize and deploy forces – all of which are signals designed to “shape perception and influence current or future bargains...”³⁷ Paul Huth and Bruce Russett detail other strategies for signaling deterrence.³⁸ For example, diplomatically, a state can bully, accommodate, or employ a mix of the two. Militarily, a state can pursue a policy of strength and escalate the situation, behave cautiously by not responding to provocations, or match without exceeding an opponent’s escalation. These types of signaling during foreign policy crisis aim to secure a better bargaining position.

Nuclear Coercion

Gartzke et al., write that “signaling is the only technique that brings the enormous power of nuclear weapons to bear on political competition, without requiring their use.”³⁹ In the context of nuclear weapons then, nuclear signaling is the strategic communication of information about intent, resolve, or capabilities in order to achieve a desired outcome. How and why do states send nuclear signals and what kind of outcomes are nuclear weapons employed to serve? The greatest barrier to answering “why” states engage in nuclear coercion is that it is difficult to determine the state’s objectives, their

³⁷ Arthur Chan, Michael J. Mazarr, Alyssa Demus, Bryan Frederick, Alireza Nader, Stephanie Pezard, Julia A. Thompson, Elina Treyger, and Michael J. Mazarr *What Deters and Why: Exploring Requirements and Effective Deterrence of Interstate Aggression*. (Santa Monica, CA: RAND Corporation, 2018), 7.

³⁸ Paul Huth and Bruce Russett, “Deterrence Failure and Crisis Escalation,” *International Studies Quarterly*, Vol. 32, No. 1 (Mar., 1988), 29-45, 36-37.

³⁹ Gartzke et al., “Signaling in Foreign Policy,” 6.

true resolve, and the vast number of intervening variables at play during any crisis. Yet, as Sechser and Fuhrmann note in their survey of literature on nuclear coercion, "... most thinking about nuclear weapons have been devoted to a single idea: the ability... to deter aggression."⁴⁰ From here, states can essentially choose from among several other secondary objectives. States can employ nuclear signals to intimidate, blackmail, or demonstrate resolve, to name a few. The underlying assumption being that nuclear weapons provide states with coercive leverage due to their destructive power.⁴¹ Ultimately, states are thought to send nuclear signals, such as threats of massive retaliation, to compel or persuade adversaries to alter their behavior.

But how is nuclear coercion accomplished? Nuclear signals can be observed in "official suggestion that nuclear weapons may be used if the dispute is not settled on acceptable terms," such as public statements by officials, diplomatic back channels, internal leaks, military preparations or exercises beyond normal peacetime activity, or deliberative announcements.⁴² For example, in order to credibly prepare for war in a way that signaled resolve to the Soviet Union just after the Second World War, the US placed its nuclear forces on high alert and chose to fly a squadron of B-29 bombers to

⁴⁰ Sechser, Todd S., and Matthew Fuhrmann. *Nuclear Weapons and Coercive Diplomacy*. (Cambridge, United Kingdom: Cambridge University Press, 2017), 4.

⁴¹ Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 7.

⁴² Betts, Richard K. 1987. *Nuclear Blackmail and Nuclear Balance*. (Washington, D.C.: Brookings Institution), 6.

Germany.⁴³ The Soviet Union engaged in extended nuclear deterrence to protect China from veiled nuclear threats by the US during the late 1950's, as evidenced by Nikita Khrushchev's comment that the US should not forget that the Soviet Union also possesses atomic weapons and has the "appropriate means to deliver them" and that "the aggressor will at once get a rebuff by the same means."⁴⁴

While the "how" and "why" states engage in nuclear coercion has largely been addressed in the foundational works of Betts and Sechser et al., heretofore reviewed, the "when" (i.e. the conditions) nuclear coercion can be expected to be employed has only been alluded to or tangentially touched upon. This critical gap in the literature can be filled by shedding light on the conditions under which nuclear coercion takes place, so that we may be able to better understand when nuclear threats are prioritized over other equally viable policy options. Betts, therefore, remarks that because the outcome of nuclear coercion is often difficult to determine, understanding *decision-making processes* "may be more important for estimating whether nuclear threats will occur again."⁴⁵ This paper endeavors to do exactly that.

⁴³ Betts, *Nuclear Blackmail and Nuclear Balance*, 25-26.

⁴⁴ *Ibid*, 31.

⁴⁵ *Ibid*, 18.

4.4 Prospect Theory: Overcoming Limitations and Filling the Literature Gap

Based on a literature review of nuclear coercion and China's crisis behavior, critical gaps in the literature were identified. First, literature on nuclear coercion lacks dedicated research on the conditions under which states choose nuclear threats over other viable policy options. Second, review of literature on China's crisis behavior revealed a need for alternative explanations to China's foreign policy crisis behavior. Therefore, a systematic and predicative approach is critically needed to investigate these literature gaps. To this end, I have identified prospect theory as an effective and empirically tested tool to systematically analyze and predict patterns in behavior under conditions of risk, elements characteristic of nuclear coercion.

Prospect Theory (PT)⁴⁶ is a descriptive, predictive, and empirically tested model of human behavior, one that holds powerful predictive and explanatory power. PT posits that people are more likely to engage in risk-acceptant behavior when their situation is framed in a domain of losses and more risk-averse when located in domain of gains. Originally developed by Daniel Kahneman and Amos Tversky based on lab experiments, prospect theory is based upon a cognitive psychological understanding regarding how

⁴⁶ For a comprehensive guide on prospect theory and its application to international politics, see McDermott, Rose. 2001. *Risk-Taking in International Politics: Prospect Theory in American Foreign Policy*. (Ann Arbor: University of Michigan Press).

individuals make decisions.⁴⁷ Applied more prominently to the field of economics, it has transformed from a useful behavioral economic theory that explains how individuals make decisions with money into a powerful political theory to explain how individuals and states make foreign policy decisions. As Jack Levy, another prospect theory pioneer of the political science field states, PT is “the leading alternative to expected utility as a theory of choice under conditions of risk.”⁴⁸

PT is a useful tool “for understanding political decisions made under circumstances of high uncertainty, uniqueness, and complexity,” especially through empirical case study work which can readily test results.⁴⁹ PT is powerful because if, when tested, the model accurately predicts political decision making, “it then becomes possible to predict risk propensity in certain situations.”⁵⁰ The implications for international relations and political science are clear – PT assists in identifying and explaining causal mechanisms behind foreign policy decisions made by states. According to McDermott, PT helps explain issues like diplomatic bargaining between states, conflict negotiation and resolution, as well as crisis management, which are typically risky

⁴⁷ Daniel Kahneman and Amos Tversky, “Prospect Theory: An Analysis of Decision under Risk,” *Econometrica* 47 (1979), 263–91.

⁴⁸ Jack Levy, “Loss Aversion, Framing, and Bargaining: The Implications of Prospect Theory for International Conflict,” *International Political Science Review* 17, no. 2 (1996), 179–95, 28

⁴⁹ McDermott, *Risk Taking in International Politics*, 8.

⁵⁰ *Ibid*, 9.

situations where political decision making is most evident.⁵¹ Prospect theory, therefore, provides both “explanatory and predictive insight into complex, uncertain decision making under conditions of risk.”⁵²

In sum, when people believe they are situated in a domain of losses, they engage in risk-acceptant behavior in a bid to either reverse or mitigate greater losses, even if the probability of losses outweighs the probability of gains. Conversely, when people perceive themselves to be located in a domain of gains, they engage in risk-averse (cautious) behavior, protecting their gains and avoiding unnecessary losses. Thus, people do not always seek to maximize utilities (fulfillment of an individual’s preferences) as expected utility theory predicts. Instead, individuals weigh their choices in a rather counterintuitive way: people value what they already possess and, empirically speaking, take risks to avoid those losses as opposed to taking risks to acquire gains.

PT possesses several advantages. First, PT offers an alternative explanation for risk-oriented behavior, filling a gap that expected utility theoretical calculations have never been able to. As mentioned above, individuals violate expected utility predictions and engage in seemingly irrational “risky” behavior. PT provides logic based on extensive empirical

⁵¹ Ibid.

⁵² Ibid.

testing to explain this anomaly. Second, PT does not require knowledge of a state's preferences beforehand because it is a cognitive behavioral theory that relies on observations about human decision-making in general. As a result, prospect theory offers structured explanatory and predictive power: it systematically demonstrates when and why individuals take risks, all without knowledge of actor preferences. PT accomplishes this by determining the domain of actions predicted by the theory. Third, prospect theory is excellent for analyzing behavior under conditions of high uncertainty and complexity, making it well suited for understanding decision-making in a situation that involves risk.

Prospect theory possesses a few notable weaknesses. The primary criticism of PT in the study of international relations is that the process of applying cognitive psychological theories identified at the individual-level to the state-level of analysis is subjective. However, as Taliaferro notes, growing literature on the topic has demonstrated the accuracy and appropriateness of prospect theory in organizational and group decision-making models.⁵³ Second, critics will likely argue that PT is only a "snapshot" of decision making "rather than the back-and-forth negotiations between parties."⁵⁴ To be sure, PT does not account for every situation and variable. However, the

⁵³ Taliaferro, Jeffrey W. 2004. *Balancing Risks: Great Power Intervention in the Periphery*. Ithaca, NY: Cornell University Press, 231.

⁵⁴ Kai and Feng, *Prospect Theory and Foreign Policy Analysis in the Asia Pacific*, p 24.

limitation of its scope does not detract from the importance of its insights: PT is a theory of choice under conditions of risk and therefore seeks to explain and predict behavioral trends in risk propensity

CHAPTER II: RESEARCH DESIGN

“We are strongly committed to safeguarding the country's sovereignty and security and defending our territorial integrity.”

- President Xi Jinping

“Provocations against Japan's sovereign sea and land are continuing, but they must not be tolerated.”

- President Shinzo Abe

1. Major Concepts: Establishing Working Definitions

1.1 Territorial Sovereignty & Integrity

According to international law, *Sovereignty* refers to the “status of a state that is not subject, within its territorial jurisdiction, to the governmental, executive, legislative, or judicial jurisdiction of a foreign state or to foreign law other than public international law.”⁵⁵ Thus, sovereignty means that supreme power, authority, and jurisdiction is vested in the state. Territorial sovereignty, therefore, refers to the geographic area within which a state exercises exclusive authority.⁵⁶ In other words, the concept refers to a state's inalienable and exclusive right to exercise power within the space it claims as its own territorial land, waters, and airspace, not subject to outside forces.⁵⁷ Importantly, territorial sovereignty differs from jurisdiction: where the former denotes ownership and thus possession of a specific territory more broadly, the latter denotes a state's ability to *exercise authority* over “people's,

⁵⁵ H Steinberger, ‘Sovereignty’, in Max Planck Institute for Comparative Public Law and International Law, Encyclopedia for Public International Law, vol 10 (North Holland, 1987) 414.

⁵⁶ J.L. Brierly, *Law of Nations*, 4th ed., Oxford (1949), 142.

⁵⁷ M. N. Shaw, *International Law*, pp. 1-2, 5th ed., Cambridge (2003), 1-2, 424.

properties, and events within a territory.”⁵⁸ “Occupation” is the most common form of territorial sovereignty and the subject of this analysis.

Occupation of a territory to prove ownership under international law requires effective control over the territory. Possession by occupation involves two key components: “intention or will to act as a sovereign” and “the adequate exercise of sovereignty.” Intentions can be deduced from official statements and the exercise of sovereignty can be observed in “explicit or symbolic” acts by “legislative or administrative measures affecting the claimed territory... by treaties with other States recognizing the sovereignty of the claimant State... or demarcating boundaries.”⁵⁹ Some examples of exercising sovereignty include governing the islands pursuant to national law, repelling illegal incursions, and arresting intruders, all of which maintain the *integrity* of the territory. Administrative control is often defined as the “absolute administrative control over state territory and the power to exercise jurisdiction over its land, people, resources, and other interests without interference from other countries.”⁶⁰

⁵⁸ Abdulrahim, Walid, Introduction to Public International Law, Chapter 6, State Territory and Territorial Sovereignty. <https://sites.google.com/site/walidabdulrahim/home/my-studies-in-english/6-state-territory-and-territorial-sovereignty>

⁵⁹ Ibid.

⁶⁰ Dallen J. Timothy, Jaume Guia & Nicolas Berthet (2014) Tourism as a catalyst for changing boundaries and territorial sovereignty at an international border. *Current Issues in Tourism*, 17:1, 21-27, DOI: 10.1080/13683500.2012.71209, 21-22.

1.2 Balance of Threat

The level of threat a state perceives naturally influences its behavior. Stephen M. Walt famously explored this proposition in *The Origins of Alliances*, concluding that the level of threat a state perceives is determined by a combination of several factors: aggregate power, proximity, offensive capability, and aggressive intentions.⁶¹ Unlike Hans Morgenthau⁶² and Kenneth Waltz's⁶³ classic Balance of Power theory, Walt's Balance of Threat finds that events and behaviors are the consequence of more than the distribution of aggregate capabilities, they are the result of several interrelated systemic and unit-level variables.

1.3 Coercion

Todd S. Sechser and Matthew Fuhrmann write that, “[a]t its core... coercion is about behavior modification. A coercer aims to persuade a victim to alter its behavior by taking actions that serve the coercer’s interests.”⁶⁴ Alexander L. George eloquently refers to diplomatic coercion as “forceful persuasion,” employing both military action and threats of it in concert with diplomacy to persuade a state to alter its behavior. In the classic works of scholars like

⁶¹ Stephen M. Walt, *The Origins of Alliances* (Ithaca, NY: Cornell University Press, 1987), p 22-25.

⁶² Hans Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York, NY: Random House, 1948).

⁶³ Kenneth N. Waltz, *Theory of International Politics* (Reading, Massachusetts: Addison-Wesley, 1979)

⁶⁴ Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 22-23.

Thomas C. Schelling and Glenn H. Snyder, coercion is a concept from which two strategies are derived: deterrence and compellence.⁶⁵ This paper uses the definition of coercion as it was employed in classic works like Schelling's *Arms and Influence*, challenging an emerging contemporary definition that separates deterrence from coercion. Consistent with Schelling's definition, I also define coercion broadly: coercion is any attempt to persuade a party to alter its behavior by taking actions that serve the coercer's interests to the detriment of the receiver.⁶⁶

Deterrence vs. Compellence

The two forms of coercion observed in international relations are deterrence and compellence. Compellence refers to a state's ability to force another to undertake some action by threatening punishment.⁶⁷ In other words, a compellent threat is a threat aimed not at preventing action but *prompting* it. In contrast, deterrence refers to the ability of a state to discourage another from performing a specific action by threatening punishment. In other words, deterrence is "dissuasion by means of threat"⁶⁸ in such a way that the receiver believes "the perceived benefits do not justify the estimated costs and risks"

⁶⁵ See Schelling, Thomas C., *Arms and Influence* (New Haven, CT: Yale UP, 1966).

⁶⁶ Schelling, *Arms and influence*, 71.

⁶⁷ *Ibid.*

⁶⁸ Paul Huth and Bruce Russett, Deterrence Failure and Crisis Escalation, *International Studies Quarterly*, Vol. 32, No. 1 (Mar., 1988), pp. 29-45, 30.

of the action to be deterred.⁶⁹ Both concepts can also be thought of in terms of the status quo. While compellence is a threat that attempts to alter the status quo, deterrence is an attempt to prevent another state from upsetting it.⁷⁰ Additionally, compellence is considered more difficult to achieve than deterrence,⁷¹ although both seek to alter an opponent's behavior in a way they would not have chosen to do absent the threat.

Importantly, both concepts are heavily dependent upon the perceptions of the party to be deterred as well as the credibility of the threats. As Schelling notes, one must understand what an adversary wants and what scares him to effectively alter their behavior via threat.⁷² According to Robert Jervis, effective deterrence requires "both understanding the other side's view of the state and predicting its view of the state's policy. Unfortunately, often each side will have a different view, with the result that the actual impact of the policy greatly differs from the expected one."⁷³ Coercion, therefore, can be affected by factors such as the level of the adversary's motivations, the nature

⁶⁹ John J. Mearsheimer. *Conventional Deterrence* (Ithaca, NY: Cornell University Press, 1983), 14.

⁷⁰ Stephen L. Quackenbush. General Deterrence and International Conflict: Testing Perfect Deterrence Theory, *International Interactions* 36:1, 2010, 60-85, DOI: 10.1080/03050620903554069, 1.

⁷¹ Schelling, *Arms and influence*, 98.

⁷² Thomas C. Schelling, *The Strategy of Conflict*. (Cambridge, Mass.: Harvard University Press, 1980), 3.

⁷³ Robert Jervis, "Perceiving and Coping with Threat," in Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, eds., *Psychology and Deterrence* (Baltimore, MD: Johns Hopkins University Press, 1985), 30.

of its intentions, or the personality of leaders.⁷⁴ The focus of this paper is on deterrence. Specifically, the paper investigates the conditions under which nuclear deterrence threats occur. As a form of coercion, this paper will refer to nuclear threats and nuclear coercion synonymously.

1.4 Foreign Policy Crisis

To shed light on China's nuclear coercion, I examine the country's crisis behavior over several crises. What types of crisis exist and how are they categorized? I employ the same crisis typology and corresponding risk properties as outlined in Kai He's paper, "China's Crisis Behavior: Political Survival and Foreign Policy after the Cold War."⁷⁵ Crises are divided into two categories, "near crises" and "militarized interstate disputes" (MIDs). A near crisis describes a diplomatic conflict that possess a low possibility of military conflict.⁷⁶ Such crises are characterized by tensions and distrust that can spiral or escalate quickly, crossing the threshold into military conflict unexpectedly. More drastically, MIDs refer to the "threat, display or use of military force short of war by one-member state... explicitly directed towards the government, official representatives, official forces, property, or territory of

⁷⁴ Arthur Chan et al., *What Deters and* (Santa Monica, CA: RAND Corporation, 2018), 11-14

⁷⁵ He, *China's Crisis Behavior*, 18.

⁷⁶ Michael Swaine, "Understanding the Historical Record," in "Michael D. Swaine et al., eds, *Managing Sino-American Crises* (Washington, D.C.: Baltimore, MD: Carnegie Endowment for International Peace; Hopkins Fulfillment Service, 2006), 2-3.

another state.”⁷⁷ The difference between near crises and MIDs is the probability of armed conflict.

In this paper, I define “crisis” as a combination of both near crises and MID events because the probability of military conflict has fluctuated throughout China’s territorial disputes. This definition most accurately reflects the dynamic and rapidly nature of the China’s crisis and crisis-like disputes. As in He’s PT model, I employ the concept of “foreign policy crisis” to describe this comprehensive definition. A foreign policy crisis is a primarily diplomatic crisis that possesses a relatively high probability of military conflict due to inherently dangerous behavior and rhetoric associated with them.⁷⁸ Therefore, this paper seeks to identify trends and patterns in China’s crisis behavior through an examination of the country’s coercive behavior, specifically its nuclear signals, in foreign policy crises where the stakes are high, response times are short, and the probability of military conflict is significant

2. Theoretical Framework

2.1 Validity of Model Assumptions & Variable Selection: Neorealism

To identify an appropriate set of variables to analyze the conditions under which China employs nuclear signals, such as nuclear threats, I employ

⁷⁷ He, *China’s Crisis Behavior*, 6.

⁷⁸ *Ibid*, 5-6.

insights from the neorealist school of international relations (IR) in crafting a three-factor prospect theory model. *Importantly, to avoid the arbitrary selection of variables, an overarching theory is necessary.* Neorealism's insight on the impact of structural factors offers a powerful causal mechanism that explains the connection between international society and state behavior in foreign policy decision-making. At its core, neorealism posits that relations between states are defined and shaped by the international system's ordering principle, the distribution of capabilities, and most importantly, the inherent presence of anarchy—that is, lacking a central authority, states rely on self-help to pursue self-interests.⁷⁹ I use these insights to inform my selection of two independent variables for a prospect theory model designed to explain and predict China's crisis behavior.

First, neorealists view the state as an independent, unitary, and rational actor primarily concerned with the pursuit of self-interests like power or security.⁸⁰ ⁸¹ Second, state interactions, absent a central authority, are characterized by fierce competition and a zero-sum environment.⁸² Third, as

⁷⁹ Mearsheimer, John J. *The Tragedy of Great Power Politics*. (New York, NY: Norton 2014), 3

⁸⁰ Keohane, Robert O. "Realism, Neorealism and the Study of World Politics," in *Neorealism and its Critics*. (New York: Columbia University Press, 1986), 9-10.

⁸¹ David Singh Grewal, "The Domestic Analogy Revisited: Hobbes on International Order," 618-620 (2016)

⁸² Stephen M. Walt, "The Enduring Legacies of the Realist Tradition," in Ira Katznelson and Helen V. Milner, eds, *Political Science: The State of the Discipline* (New York: W. W. Norton, 2002), p.-200

the distribution of capabilities varies from state to state, perceptions of insecurity fuel interstate competition. Fourth, when combined, these factors make states hyper-sensitive to changes in relative power – the growing power of a neighbor threatens one’s own security. Therefore, in an effort to maximize self-interests and minimize threats to those interests^{83 84}, states possess great incentive to achieve self-interests through the use of force. Thus, Kenneth Waltz and other structural theorists argue that the international system’s *structure* makes conflict inevitable.⁸⁵ Consequently, state behavior is not a product of human nature, but of the anarchic structure of the international system, which shapes state preferences and conditions their actions.⁸⁶

Applied to China’s crisis behavior in territorial disputes, I argue that neorealism—which uses broad, systemic observations to explain state-level behavior—is best suited to explain risk-acceptant foreign policies. In an anarchic international order where states must rely on self-help for survival, competition is fierce, sensitivity to relative power is great, insecurity is systemic, and a zero-sum game characterizes state interaction, the degree of uncertainty and risk in state-level interactions is high. As a result, risk-taking behavior in foreign policy crisis are inevitable. Therefore, I argue that

⁸³ Morgenthau, Hans J., *Politics among Nations: The Struggle for Power and Peace* (New York: Alfred A. Knopf, 1948), 7.

⁸⁴ Keohane, *Realism, Neorealism and the Study of World Politics*, 7-10.

⁸⁵ Waltz, Kenneth N. *Man, State, and War: A Theoretical Analysis*. (Cambridge, UK: Columbia University press, 1959), 160.

⁸⁶ Waltz, *Theory of International Politics*, 105

territorial dispute crises, which are characterized by risk and uncertainty, are defined by variables that speak directly to the impact of power and security. Subsequently, I use these neorealist insights to inform the selection of independent variables as well as an appropriate reference point in my prospect theory model.

2.2 Building a Prospect Theory Model

To identify the conditions under which China chooses to engage in nuclear coercion over other viable coercive policy options, I employ a prospect theory (PT) model first developed by political scientist Kai He for the purpose of examining China's crisis behavior.⁸⁷ To increase the reproducibility and validity of my model, I adhere strictly to the processes and rules He outlines in his model. Like He, I endeavor to provide an alternative explanation for when, why, and how China chooses certain policies over others under conditions of risk and uncertainty. However, unlike He, I only examine coercive behavior (such as nuclear signals) to understand the variety of coercive policy decisions observed among three cases, whereas He compares coercive and accommodative behavior to understand a variety of crisis behaviors across eight cases.

⁸⁷ He, *China's Crisis Behavior*, 41.

Analyzing China's Nuclear Signaling Behavior with Prospect Theory

At its core, prospect theory provides “explanatory and predictive insight into complex, uncertain decision making under conditions of risk”⁸⁸ and is thus a useful tool “for understanding political decisions made under circumstances of high uncertainty, uniqueness, and complexity,”⁸⁹ such as nuclear signaling behavior in crisis situations. But why is PT an appropriate tool for analyzing China’s coercive crisis behavior? First, as demonstrated in the literature review, alternative explanations that possess systematic and predictive power are needed to better explain and predict China’s crisis behavior, in particular, often ignored behaviors such as nuclear signaling. Second, PT is a powerful, flexible, and empirically-tested theory that explains decision-making under conditions of risk in a systematic manner. When analyzing foreign policy crises, which are inherently complex, uncertain, and unique events, other theories have difficulty systematically identifying the conditions under which certain behaviors should be expected to take place, let alone when some behaviors are prioritized over others. PT, on the other hand, is a universal behavioral theory that can explain risk propensities in decision-making, regardless of actor preferences or interests.⁹⁰ Third, PT is uniquely designed to explain and predict policy decisions under conditions of uncertainty and

⁸⁸ McDermott, *Risk Taking in International Politics*, 9.

⁸⁹ *Ibid*, 8.

⁹⁰ *Ibid*, 31.

risk, and China's nuclear coercion satisfies this criterion exceptionally well due to the uncertainty and risk associated with nuclear signals, like nuclear threats. Finally, I am simply applying an established theory to a novel problem. I do not contend that other theories are wrong, only that prospect theory has utility in explaining the more unique aspects of China's crisis behavior.

PT Step 1: Employing a Crisis Behavior Typology

The dependent variable under investigation in this paper is China's coercive crisis behavior, specifically, its use of nuclear coercion. Based on He's PT model, I utilize a "coercion" and "accommodation" typology for classifying different crisis behaviors. In a foreign policy crisis, states choose between two broad policy strategies, coercion or accommodation, which predisposes them to four specific foreign policy behaviors (see figure 1). A state that chooses coercion aims to achieve political or military goals through escalation⁹¹ and can employ diplomatic or military coercion to those ends. The former can involve severing diplomatic ties, calling ambassadors back, lodging formal protests, or implementing sanctions, to name a few.⁹² The latter can include mobilizing the military, performing exercises, or making implicit/explicit threats of violence. He notes that a strategy of accommodation seeks to de-escalate the situation in hopes of resolving the dispute and accomplishes this

⁹¹ Ibid.

⁹² He, *Crisis Management Behavior*, 33.

through either complete or conditional accommodation. Complete accommodation refers to fully conceding to an opponent’s demands, while conditional accommodation refers “partially or conditionally” conceding to one’s demands.⁹³ In crises, states tend to employ a mixture of coercive and accommodative strategies.⁹⁴

Figure 1. China’s crisis behavior typology

1. Full Accommodation	2. Conditional Accommodation
3. Diplomatic Coercion	4. Military Coercion

*Each cell reflects the relative risk propensity of the different foreign policy behaviors available to states during crisis. Cell 1 represents the least risky behavior and Cell 4, the riskiest. (Source: Kai He, “China’s Crisis Behavior.”)

PT Step 2: Operationalizing Risk – Identifying Crisis Behavior Risk Propensities

Following He’s model, I measure risk by employing political scientist Rose McDermott’s “magnitude” measurement, based on the economic definition of risk.⁹⁵ In economics, risk is often analyzed in terms of the variance between best and worst outcomes. The riskiest decision, therefore, is one where the outcome of an event stretches between two extremes—a best and worst-case scenario—possessing the greatest variance of outcome. Because of the greater

⁹³ Ibid.

⁹⁴ Glenn Snyder, “Crisis Bargaining,” in Charles Hermann, ed. *International Crises: Insights from Behavioral Research* (New York: The Free Press, 1972), 218.

⁹⁵ McDermott, *Risk-taking in International Politics*, 39.

variance, such an option is more prone to suffer the worst outcome and is therefore risky. Such behavior is considered “risk-acceptant.” Conversely, the least risky option is the one that neither offers the best, nor the worst outcome, and possesses less variance and thus less risk.⁹⁶ This type of behavior is “risk-averse.” This definition of risk allows me to classify the four foreign policy behaviors—full/conditional accommodation and diplomatic/military coercion— as either more risk-acceptant or risk-averse, revealing different levels of risk propensities.

In this paper, the best outcome in a foreign policy crisis is the de-escalation or elimination of the threat causing the crisis and, conversely, the worst outcome deepens the threat or escalates the crisis toward conflict.⁹⁷ Combining the four foreign policy crisis behaviors and the concept of risk, we can infer that the greater the variance of outcome in a foreign policy crisis, the greater the chance of military conflict. In other words, “we can measure the ‘risk’ level of crisis behavior with reference to the possibility of military conflict or war.”⁹⁸ As noted earlier, due to the higher probability of military conflict, coercion is riskier than accommodation. Thus, the higher the probability of armed conflict, the higher the risk associated with that behavior. For example, military coercion is the riskiest behavior, diplomatic coercion

⁹⁶ Ibid, 39-40.

⁹⁷ He, *China's Crisis Behavior*, 34.

⁹⁸ Ibid.

less so, and so on (see figure 1). In sum, coercive behavior is risky because the escalation associated with it increases the probability of military conflict (risk-acceptant), whereas accommodative behavior cautious in nature because it is associated with a low probability of military conflict (risk-averse).⁹⁹

PT Step 3: Setting a Reference Point

A reference point is an analytical tool used in PT to define and evaluate an actor's domain of gains and losses, allowing for predictions regarding when China is more likely to choose a more or less coercive during crises. According to prospect theory, people tend to evaluate their situation and weigh their choices based on their perceived position relative to a reference point. If an individual perceives themselves above the reference point, they are located in a domain of gains and if below it, in a domain of losses. Following He, I also *set* the reference point as the status quo. In other words, China views its situation and chooses its actions based on its position, whether advantageous or disadvantageous, relative to the status quo.

Borrowing insights from neorealism, I contend that states are chiefly concerned with their nation's physical security and sovereignty as a result of the structural pressures inherent in the international system. In the context of a territorial dispute, therefore, states prioritize the security of their claimed

⁹⁹ Ibid.

territory and the enforcement of their sovereignty claims. Thus, I *define* the status quo in terms of China's perception of the status of its territorial sovereignty and integrity. In other words, the reference point is China's confidence in (advantageous position), or perceived threat to (disadvantageous position), its territorial sovereignty and integrity (TSI). According to PT, if China perceives itself in an advantageous position relative to its TSI status, the country can be said to exist in a domain of gains and thus more likely to behave cautiously; if, however, China perceives itself in a disadvantageous position, the country is located in a domain of losses and more likely to behave in a risk-acceptant manner. In the context of foreign policy crises, a state in an advantageous position is more likely to de-escalate a crisis while states in a disadvantageous position are likely to escalate. To measure the reference point, I identify a domain of actions.

PT Step 4: Establishing the Domain of Actions

Domain of action refers to whether a particular action China takes operates in a perceived state of gains or losses relative to a reference point.¹⁰⁰ Indeed, foreign policy decision-making is heavily influenced by this framing effect – that is, how policy options are framed in an advantageous or disadvantageous position affects behavior.¹⁰¹ To establish a domain of actions, I introduce a 3-

¹⁰⁰ McDermott, *Risk-Taking in International politics*, 37.

¹⁰¹ *Ibid.*, 7.

factor prospect theory model using variables derived from neorealist assumptions about the manner in which states interact in territorial disputes. Specifically, I inform variable selection by taking into account both structural factors (such as the distribution of capabilities) as well as unit-level factors (such as threat perception) in a way that measures the reference point, a state's territorial sovereignty and integrity status. I argue that the primary factors shaping China's TSI status are 1.) China's threat perception of rivals; 2.) territorial authority in a given dispute; and 3.) crisis severity of a given dispute. Each of these variables is framed in terms of whether China sees itself as being in an advantageous (domain of gains) or disadvantageous (domain of losses) position relative to the reference point, TSI status. Combined, these variables measure China's TSI status, which constitute the country's domain of actions in territorial disputes. This allows "the conditions under which risk-averse or risk-acceptant behavior" occur to "become clear and predictable," producing "systematic, predictable tendencies in risk propensity."¹⁰²

2.3 The 3-factor Territorial Sovereignty & Integrity (TSI) Prospect Theory Model

When a foreign policy crisis threatens or damages the integrity of a state's claimed territory, challenging its sovereignty, it puts the country's core national interests at stake. How does China respond in such a scenario?

¹⁰² McDermott, *Risk-Taking in International Politics*, 9.

Borrowing from the conceptual framework laid out in He's "political survival" PT model, I develop a new model that conceptualizes the link between TSI status and risk propensity of different foreign policy crisis behaviors. According to my 3-factor TSI prospect theory model, the policy options China considers in the midst of territorial disputes depends on the country's perception of the status of its territorial sovereignty and integrity. I have identified China's TSI status as composed of three elements: China's threat perception of rivals, its level of control over claimed territory, and the severity of the crisis.

The TSI prospect theory model inserts itself into an ongoing scholarly debate that seeks to understand, explain, and predict China's crisis behavior. This unique model also comes at a critical time by analyzing the behavior of the most powerful country in Asia against the backdrop of an evolving geopolitical environment and international order characterized by insecurity. By understanding the factors that shape China's crisis behavior, this model can shed light on how countries can better manage territorial disputes with Beijing. Finally, the TSI prospect theory model tries to explain China's crisis behavior from the pragmatic and scientific perspective founded on empirically-tested human behavior, as well as the power realities and structural forces at play in international relations as articulated by the

neorealist school of IR, as opposed to cultural, emotional, or ideational discussions of national pride or ancient tradition.

1. *Level of Crisis Severity*

As a measurement of China's TSI status, crisis severity is an important variable because it is representative of a major subject of analysis in this paper, crises. Using an established measurement employed by several prospect theory models that analyze China's crisis management behavior¹⁰³ I measure a crisis level of severity by *the level of violence or potential violence, measured either as high or low*. If a crisis involves direct violence or threats of violence, it is coded as "high" in severity. Conversely, the less violence used or threatened reflects a "low" crisis severity. In other words, high severity crises are characterized by a heightened probability for military conflict and low severity crises are characterized by a relatively low probability of military conflict. The logic here is simple: the more violence or threatened violence in a crisis, the more threat to China's TSI status. Therefore, a high level of severity (high probability of conflict) is negatively correlated with TSI status and is represented by a (-) in figures 2 and 3. A low level of severity (low probability of conflict) is positively correlated with TSI and is represented by a (+) in figures 2 and 3. The probability of military conflict can be measured

¹⁰³ He, *China's Crisis Behavior*, 37.

by analyzing the content of official speeches, identifying verbal threats, violent incidents, or near-incidents, and public opinion polls.

2. Threat Perception

When a foreign policy crisis threatens or damages a state's core territorial interests, its threat perception regarding the source of the problem is high. It follows, then, that a state's subsequent behavior is influenced by threat perception. Indeed, Stephen Walt demonstrates in his classic balance of threat theory that when threat perception is high, states tend to ally with or balance against the threat.¹⁰⁴ How a state determines the level of threat to its values or interests is influenced by several factors, such as aggregate power, geographic proximity, offensive capabilities, and aggressive intentions.¹⁰⁵ Based on these four measurements of threat perception, we can predict that the higher China's threat perception, the greater the threat to China's TSI status. A high threat perception reflects insecurity, and is negatively correlated with TSI status – that is, insecurity has a negative impact on a state's sovereignty as well as its ability to maintain the integrity of its borders. We can observe the effect of threat perception on risk propensity and behavior by examining figure 5.1. As threat perception increases, a state finds itself in a domain of losses, and is thus more likely to engage in risky behavior.

¹⁰⁴ Walt, *The Origins of Alliances*, 9.

¹⁰⁵ *Ibid*, 21.

First, aggregate power will be measured by the size of Japan's economy, its population, its technological prowess, and its offensive military capabilities and capacities. Second, geographic proximity can be measured by the relative distance from Japan's territory to China's mainland, in comparison to China's neighbors. Third, offensive capabilities will be measured by an adversary's ability to amass large, mobilize military capabilities that threaten China's territorial sovereignty and integrity. Finally, aggressive intentions will be measured by the perceptions of the Chinese public, its leaders, and its strategic community's beliefs about the threat an adversary poses to China's TSI; this measure of threat level will establish a connection between physical threats and subjective fears.¹⁰⁶

In the model, threat perception is coded either low or high. How this variable is coded depends on how many of the four measurements accurately reflect China's threat perception of an adversary. For example, if only one to two measurements accurately reflect China's threat perception, the variable will be coded "low" and represented by a (-) symbol in figures 2-3 because a low level of threat is positively correlated with TSI status. If three to four measurements accurately reflect China's threat perception, the variable will be coded "high" and represented by a (+) in figures 2-3 because a high level

¹⁰⁶ He, Kai and Feng, Huiyun, "Why is there no NATO in Asia?" Revisited: Prospect theory, balance of threat, and US alliance strategies", *European Journal of International Relations*, 2010, 18(2) 227-250, DOI:1354066110377124, 235

of threat is negatively correlated with TSI status – that is, high threat perception reflects a low degree of confidence and a high degree of insecurity regarding a state’s TSI. Consequently, the more the four measurements accurately depict threat perception, the greater confidence we can have in establishing a high level of threat and vice versa.

3. *Territorial Authority*

Territorial disputes are often seen as more salient and serious than other types of disagreements. Indeed, international security expert and political scientist Robert A. Pape, for one, notes that the “principal issue in serious international disputes” tends to be “control over territory”¹⁰⁷ and Paul Huth and Fuhrmann et al. find that issues over territory are more likely to end in conflict and long-term animosity than other issues, making them more dangerous.¹⁰⁸ It follows that the degree to which a state can exercise authority over a territory has a profound impact on that state’s ability to protect its core territorial interests. This concept defines the next variable in my TSI prospect theory model, “territorial authority.”

Territorial authority is measured by 1.) China’s maritime military power relative to an adversary; and 2.) the level of China’s effective control

¹⁰⁷ Pape, Robert A. *Bombing to Win: Air Power and Coercion in War*. (Ithaca, N.Y.: Cornell University Press, 1996), 16, 37.

¹⁰⁸ Huth, Paul K. *Standing Your Ground: Territorial Disputes and International Conflict*. (Ann Arbor, Mich.: University of Michigan Press, 1996).

over the disputed territory, coded as either strong (+) or weak (-). In short, strong territorial authority means that a state exercises substantial control over the dispute and possesses great confidence in its ability to influence the outcome of the dispute in favorable way. Weak territorial authority means that a state does not exercise much control over the territory and possesses little confidence in its ability to influence the outcome of events favorably. The stronger the territorial authority, the stronger a state's territorial sovereignty and integrity and vice versa. In other words, this variable reflects China's ability to secure and maintain its core territorial interests and is indicative of Beijing's confidence in its level of control over the dispute.

The relative balance of naval power between China and its adversaries can be measured by comparatively analyzing defense budgets, naval military strength in terms of the number of superior naval vessels and their armaments, as well as primary and secondary accounts from and officials regarding their country's perception of each other's naval capabilities. Should Japan's naval and maritime military power match or exceed China's own in the area around the Senkaku/Diaoyu islands, for instance, we can infer that Beijing possesses a weak territorial authority. A naval disadvantage inhibits a state's ability to exact control over the outcome of the dispute or deter serious challenges to its

territorial sovereignty.¹⁰⁹ Thus, weak territorial authority is negatively correlated with TSI status territorial and is coded as (-) in figures 2-3. Conversely, if China's naval and maritime military power exceeds that of Japan's in the ECS, China can be said to possess a strong territorial authority. Strong territorial authority is reflected by a (+) in figures 2-3 because it is positively correlated with a state's TSI. China's confidence in the ability of its naval and maritime forces to satisfy the security needs of core territorial interests is important – a shift in this variable changes China's perception of its TSI status, which could have an important impact on framing the country's situation in terms of gains or losses. For example, if China lacks confidence in its ability to control the dispute, Beijing could perceive its situation in terms of losses and more likely to take risk-acceptant actions. Thus, China's TSI status is shaped by its military's ability to protect core national interests, thereby maintaining control over the dispute.

In terms of China's effective control over a disputed territory, this is often measured by a state's "administrative control" over a territory. Administrative control refers to a state's ability to maintain a constant and

¹⁰⁹ Fravel, Taylor M. *Strong Borders Secure Nation: Co-operation and Conflict in China's Territorial Disputes*. (Oxford and Princeton: Princeton University Press, 2008), 20-21. Fravel's theory bases territorial claim strength on territorial control, which I use synonymously with 'authority'. Fravel notes that control is transformed into bargaining power and increases the possibility of a favorable outcome, whether diplomatically or militarily, as he defines control as "the ability to project military power over all contested areas." Therefore, territorial control is not only a legal concept, but a military one based on a state's military strength and power projection.

permanent presence in and around the territory, regulate activities within its jurisdiction, and enforce sovereignty by either military or law enforcement, pursuant to national law.¹¹⁰ Furthermore, control over a territory is critically important. M. Taylor Fravel asserts that based on empirical evidence from both China's history and that of other states, "shifts in its claim strength ... explain decisions to use force."¹¹¹ The logic here is as follows: if a state possesses administrative control over a territory, it can exercise greater power over the territory and therefore the dispute. Subsequently, administrative control is positively correlated with territorial sovereignty and integrity because it reinforces a state's sovereignty.

¹¹⁰ Dallen J. Timothy, Jaume Guia & Nicolas Berthet, "Tourism as a catalyst for changing boundaries and territorial sovereignty at an international border, *Current Issues in Tourism*, 17:1, (2014), 21-27. DOI: 10.1080/13683500.2012.71209, 21-22.

¹¹¹ Fravel, *Strong Borders Secure Nation*, 301.

Figure 2. 3-Factor TSI Prospect Theory Model – High Severity Crisis

Territorial Authority		Threat Perception	
		High (-)	Low (+)
	Strong (+)	1. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)	2. <u>High</u> Territorial Sovereignty & Integrity (Doman of Gains)
	Weak (-)	3. <u>Lowest</u> Territorial Sovereignty & Integrity (Domain of Losses)	4. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)
		High severity crisis (-)	Aggregate = (-)

*Each Cell represents China’s domain of actions in relation to its TSI status. Measured from Lowest, Low, High, and Highest, each Cell represents the level of threat to the country’s territorial sovereignty and integrity status. For example, Cell 3 demonstrates that when TSI status is very low (Lowest), China finds itself in a domain of losses. According to prospect theory, China is more likely to engage in risk-acceptant behavior, defined in this paper as either diplomatic or military coercion. Conversely, Cell 2 depicts a situation in which China is very confident in its TSI status, perceives itself in a domain of gains, and is more likely therefore to engage in cautious behavior.

Figure 3. 3-Factor TSI Prospect Theory Model – Low Severity Crisis

		Threat Perception	
		High (-)	Low (+)
	Territorial Authority	Strong (+)	5. <u>High</u> Territorial Sovereignty & Integrity (Domain of Gains)
Weak (-)		7. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)	8. <u>High</u> Territorial Sovereignty & Integrity (Domain of Gains)

Low severity crisis (+) **Aggregate = (+)**

The result of this model is (8) triads that together depict China’s TSI status. Reading the model is simple. The negative and positive signs demonstrate the relationship between the variable and China’s TSI status; for ease of use and comprehension, I have simplified the model by assigning the same value (weight) to the impact of all three variables. For example, in Figure 2, Cell 3 we observe that China’s threat perception of its rival is HIGH (-), its authority over the disputed territory WEAK (-), and the severity of the crisis is HIGH (-). The aggregate effects of these three factors on China’s TSI status is negative, as evidenced by the three negative signs – that is, China’s TSI status

is very low. A low TSI status reflects that China perceives itself in a domain of losses. According to prospect theory, China is more likely behave in a risk-acceptant manner.

3. Hypotheses

By linking the domain of actions demonstrated in the 3-factor TSI prospect theory model with the risk-propensity policy choices outlined in Figure 1, we can infer the following logic. If China perceives itself in a domain of losses—that is, its TSI status is low or lowest—prospect theory predicts that Beijing will act in a risk-acceptant manner. Based on earlier analysis of the foreign policy crisis behavior typology in Figure 1, risk-acceptant foreign policy behaviors involve coercive strategies like economic and military coercion. If, however, China perceives itself in a domain of gains—that is, its TSI status is coded either high or highest—Beijing is more likely to engage in risk-averse behavior, employing strategies like full or conditional accommodation. Consequently, I develop five hypotheses from the propositions expressed in the model:

H1. When China’s TSI status is framed in a domain of gains, Beijing is more likely to choose risk-averse policies in territorial disputes.

H2. When China’s TSI status is framed in a domain of losses, Beijing is more likely to choose risk-acceptant policies in territorial disputes.

H3. The higher the TSI status in a domain of gains, China will behave more cautiously –choosing an accommodative policy.

H4. The lower the TSI status in a domain of losses, China will behave in a riskier way – choosing a coercive policy.

H5. When China is located in the “lowest” TSI status, Beijing will engage in the most extreme forms of foreign policy risk-taking behavior, such as employing nuclear threats.

4. Case Study Design

4.1 Research Objectives

In short, this thesis seeks to explore China’s coercive behavior in foreign policy crises, specifically in territorial disputes, to understand when and why Beijing chooses nuclear deterrent threats over other viable policy options. This investigation answers the research question by determining the conditions under which China engages in nuclear coercion. The goal of this research design, therefore, is to analyze the most relevant domain-specific cases that reveal whether the dependent variable, China’s nuclear coercion, differs or coincides with prospect theory’s predictions along the independent variable, China’s domain of actions, by three factors: crisis severity, threat perception, and territorial authority.

4.2 Validity and Appropriateness of Case Study Analysis

Case study analysis is the most widely used method of applying prospect theory to international politics,¹¹² and case studies are the “preferred strategy” in these situations.¹¹³ This is because qualitative methods, such as empirical case study analysis, are the most appropriate tool for studying complex and unique phenomena, such as coercive nuclear signaling during crises, as well as determining factors and discerning trends. With regard to testing hypotheses, case studies are also the standard approach in the social sciences and humanities. Consistent with previous literature, I will analyze China’s coercive behavior over several cases. In terms of this paper’s research question, case study methodologies possess a few notable limitations that need to be addressed. Critics will likely argue the limited number of case studies is not generalizable. While this is true to an extent, the advantages of utilizing prospect theory act to mitigate these concerns. Findings are generalizable to an extent because 1.) the model’s predictions are based on empirically-tested human behavior; and 2.) the model systematically identifies the *conditions* under which certain policies are more likely to occur than others.

Regarding the first point, the PT model used to analyze the cases is universal in the sense that its predictions are based on both the unit-level

¹¹² McDermott, *Risk-taking in International Politics*, 8.

¹¹³ Yin, R. K. *Case Study Research: Design and Methods* (2nd ed.). (Newbury Park, CA: Sage Publications, 1994).

factors, like the decision-making processes of individuals generally, as well as structural factors, such as neorealist assumptions about the way state interactions in the international system. Although a number of intervening variables can and do influence behavior, case study analysis using the 3-factor TSI PT model offers the most scientific and systematic barometer for understanding how decisions are made during crises, and therefore, unlike other variables, is the most likely factor in consideration when decisions under conditions of risk are made. In other words, findings will, at the least, be more generalizable than other qualitative approaches or theories not founded upon vast empirical data. Additionally, the purpose of a PT case study is not to explain or generalize all crisis behavior, but instead to “document that domain and framing can have a profound and predictable... effect on the substance and content of decision making under conditions of risk.”¹¹⁴

Second, unlike ad-hoc and post-hoc arguments, PT case studies identify the conditions under which certain actions take place – as long as a reference point and domain of actions are reasonably established, case study results can be applied to China’s crisis behavior in the past, present, and future, as well as other countries under similar conditions. Finally, critics may argue that qualitative case studies are not rigorous enough to derive significant value. To combat this perception, I have adhered strictly to the framework outlined

¹¹⁴ McDermott, *Risk-taking in International Politics*, 44.

in He's "political survival" prospect theory model as well as the rules and processes laid out in McDermott's primer on using prospect theory in international politics.¹¹⁵ As a result, the model is systematic and highly reproducible.

4.3 Case Selection

To identify and analyze the most relevant domain-specific cases studies that reveal whether the dependent variable, China's nuclear coercion, differs or coincides with prospect theory's predictions along the independent variable, China's domain of actions, I select cases based on three basic criteria. First, cases must be territorial disputes that fall under the category of "foreign policy crises" as defined in Chapter III. The 3-factor TSI PT theory specifically explores territorial disputes because China's nuclear coercion has only been well documented in territorial disputes. Second, cases must be in the East China Sea. To minimize differences and maximize control, I sample from the same area. Finally, cases must have occurred in the period between 2009 and 2018. This period is chosen because I aim to comparatively analyze the most similar crises that directly preceded and followed China's nuclear deterrent threats in 2012-2013. There are a few reasons for this. First, cases should reflect China's considerable power and the shifting regional power dynamics

¹¹⁵ See McDermott, *Risk-Taking in International Politics*.

created by that, and therefore must avoid time periods where its power and trajectory were less assured. Second, selecting cases in this way ensures the greatest similarity between cases – this is particularly important when trying to control for variables like threat perception, which varies over time. Based on these criteria, I identify two cases for analysis:

1. 2012-2013 Senkaku/Diaoyu Islands Dispute
2. 2014-2018 Senkaku/Diaoyu Islands Dispute

4.4 Data Collection

To answer the research question, I locate data as guided by the 3-factor TSI prospect theory model and stipulated in Rose McDermott’s prospect theory primer, “Risk-Taking in International Politics.” For example, to collect data on the TSI model’s threat perception variable during the 2012-2013 ECS crisis, I located data on the four measurements of threat perception: aggregate power, proximity, offensive capabilities, and aggressive intentions. For aggregate power, I collected data on Japan’s economy, population, tech industry, and military capabilities. I employ a wide variety of data from both primary and secondary sources including government documents, official statements, think tank reports, military white papers, media commentary, editorials, and scholarly articles. In regard to China’s nuclear signaling, much of the data has already been collected by China expert Baohui Zhang, and I sample heavily

from Zhang's work for the hard data. The data is then clustered according to the typologies laid out in the TSI PT model. Finally, collected data will be interpreted according to the 3-factor TSI prospect theory model's predictions.

4.5 Hypothesis Testing: Congruence Test

I test my five hypotheses by performing a congruence test. A congruence test seeks to establish whether the empirical facts agree or coincide with the hypotheses derived from my model. I test the hypotheses by analyzing China's coercive crisis behavior, paying special attention to its nuclear signaling behavior, over two separate cases from 2012 to 2018. The test will proceed in three steps. First, I will introduce the crisis and identify China's available policy options, framing them in terms of whether they are risk-averse or risk-acceptant. Second, I refer to the status of China's territorial sovereignty and integrity, according to the 3-factor TSI model, during each case. Here, I identify the domain of actions, whether a domain of gains or losses, China is positioned in during each crisis. Finally, I compare whether the hypotheses accurately reflect China's policy behavior, that is, whether the facts are congruent with the predictions. If they are congruent, the model is accurate for that case study. However, if the results are not congruent, the model is not correct for that case study and new variables should be discussed.

CHAPTER III: CASE STUDY

“外事无小事”

“There is no small issue in foreign affairs.”

- Zhou Enlai, China's first premier and foreign minister

1. Senkaku/Diaoyu Islands Dispute 2012-2013

Figure 6. Map of the East China Sea and overlapping claims



1.1 Crisis Background

The East China Sea crisis over the disputed Senkaku/Diaoyu islands lasted a grueling 14 months, from September 2012 to December 2013, bringing China and Japan to the brink of war. The dispute, over sovereignty and possession of eight (mostly barren) islands in the ECS, has a painful past, further complicated by deep historical animosities, fiery nationalist sentiment, and rich resources underneath the seafloor bed around the islands. Indeed, the dispute dates back over 100 years and has yet to find resolution – and prospects for resolution still look dim as of this writing. Japan first annexed the islands in 1895, and later fell under U.S. control following Japan’s defeat in World War II. In 1972, around the time China and Japan normalized relations, the U.S. reverted possession of the islands to Japan. The two powers enjoyed a “honeymoon” period throughout the 1970s and 80s, characterized by Japan’s generous official development assistance (totaling 30 billion USD), low interest loans, and other forms of assistance to the impoverished neighbor, in addition to signing the “Treaty of Peace and Friendship” in 1979.¹¹⁶ One critical component to this stability can be attributed to China’s official policy on the islands since 1972, which had been a “gentleman’s agreement” to shelve the sovereignty debate until future generations could solve it

¹¹⁶ Zhang, *China's Assertive Nuclear Posture*, 116.

peacefully.¹¹⁷ However, the island china also possesses great economic and strategic value. For its part, Chinese naval analysts consider control of the islands as “critical to accessing the Pacific Ocean.”¹¹⁸ For Japan’s part, the islands offer a platform for monitoring Chinese activities in the ECS¹¹⁹ as well as security for the oil that travels its waterways. Economically, the ECS is believed to possess “large hydrocarbon deposits,” 60 to 100 million barrels of oil, and 1 to 2 trillion cubic feet of natural gas.¹²⁰ As a result, neither can agree on their exclusive economic zones (EEZ) and China refuses to allow an international body to adjudicate on the issue.¹²¹ The crisis was sparked when the governor of Tokyo announced intent to “purchase” the islands from a private owner, sending the Chinese media into a frenzy and drawing the ire of Beijing. In an attempt to “preempt” the governor’s purchase, the Japanese government bought the islands in September 2012, “nationalizing” them.¹²² This purchase would set off a spiral of actions that would bring the two countries to the brink of war.

¹¹⁷ See Chinese Ministry of Foreign Affairs, “Gezhi Zhengyi, Gongtong Kaifa [Shelve Dispute, Seek Joint Development],” www.mfa.gov.cn/chn//gxh/xsb/wjzs/t8958.htm.

¹¹⁸ See Xu Qi, “Maritime Geostrategy and the Development of the Chinese Navy in the Early Twenty-First Century”, *Naval War College Review*, vol. 56, no. 4 (Autumn 2006).

¹¹⁹ International Crisis Group, “Dangerous Waters: China-Japan Relations on the Rocks, Part of Asia” Report N°245, April 8 2013, <https://d2071andvip0wj.cloudfront.net/dangerous-waters-china-japan-relations-on-the-rocks.pdf>, 1

¹²⁰ U.S. Energy Information Administration “East China Sea,” Report. 25 September, 2012.

¹²¹ International Crisis Group, “Dangerous Waters,” 2-3.

¹²² International Crisis Group, “Dangerous Waters,” <https://d2071andvip0wj.cloudfront.net/dangerous-waters-china-japan-relations-on-the-rocks.pdf>, 6.

1.2 China's Domain of Actions: Determining TSI Status in Terms of Gains or Losses

The purpose of applying prospect theory to analyze this case study is to determine whether the China's nuclear coercion (dependent variable) differs or coincides with the predictions of prospect theory along China's domain of actions (independent variable). First, I examine China's domain of actions, that is, whether China perceives itself to be located in a domain of gains or losses. Second, I examine policy options available to Beijing during the crisis. Here, I identify available policy options and determine their risk propensity relative to the status of China's territorial sovereignty and integrity. Third, I evaluate the risk propensity of China's actual policy choices, either risk-acceptant or risk-averse. Finally, I describe the outcome of China's actual decision, including implications, reasons why other policies why other options were not chosen, and how it is consistent with prospect theory. Here, analysis is based upon the relationship between domain and risk, not the success or failure of China's behavior. As McDermott notes, the "purpose of case study [in prospect theory] is to document that domain and framing can have a profound and predictable... effect on the substance and content of decision-making under conditions of risk."¹²³

¹²³ McDermott, *Risk-taking in International Politics*, 44.

1.3 Threat Perception – High

Walt measures aggregate power by a state's total resources, including population, industrial and military capability, and technological prowess.¹²⁴

These four measurements of power reflect the aggregate power a state wields in terms of the threat it can pose to others; Walt writes, "states with great power have the capacity to either punish enemies or reward friends. By itself, therefore, a state's aggregate power may provide a motive for balancing..."¹²⁵

Next, threat perception is influenced by geographic proximity. The logic here is simple: nearer states "pose a greater threat than those that are far away."¹²⁶

In other words, the closer a state is, the greater its ability to project power and threaten. Conversely, power projection decreases with distance and threat declines. Threat perception is also affected by the offensive power of a state.

On offensive capability, Walt asserts that "states with large offensive capabilities are more likely to *provoke*... than those that are incapable of attacking because of geography, military posture, something else."¹²⁷ Walt reasons that offensive power provokes because it possesses the ability to "threaten the sovereignty or territorial integrity of another state..." and can be

¹²⁴ Walt, *The Origins of Alliances*, 22.

¹²⁵ Ibid, 23.

¹²⁶ Ibid.

¹²⁷ Ibid, 24.

measured by a state's capacity to amass large, mobile military capabilities.¹²⁸ Offensive capabilities, therefore, provoke and give nearby states strong incentive to act. Finally, the level of a state's aggressive intentions greatly impacts threat perception. Walt argues that "[t]he more aggressive or expansionist a state appears to be, the more likely it is to trigger" a response.¹²⁹

Aggregate Power – Low

China is one of the largest countries in the world, both in total land size and population, as well as one of the most powerful economies in world history. From 2011 to 2014, the year before and after the ECS crisis, China was still much a manufacturing and industrial powerhouse, experiencing high growth and surpassing Japan's economy in terms of GDP in 2010 (see figure 7) to become the world's second largest economy.¹³⁰ Even in 2012, China's economy was nearly 25% larger than Japan's economy.¹³¹ According to an economic survey of Japan by the OECD in April 2013, however, Japan's economy slowed to a crawl following the 2008 global financial crisis and 2011 Great East Japan Earthquake, stagnating growth.¹³²

¹²⁸ Ibid.

¹²⁹ Ibid, 25.

¹³⁰ MGM Research, January 15, 2019, <https://mgmresearch.com/china-vs-japan-gdp-indicators-comparison/>

¹³¹ World Bank Data, <https://data.worldbank.org/country/china?view=chart>.

¹³² OECD, Economic Survey of Japan, April 2013, p 2.

<http://www.oecd.org/eco/surveys/Overview%20Japan%202013%20English.pdf>

Second, in terms of population, Japan's economic productive or military mobilization capacities are far weaker than China's. While China already had a population over 1 billion, Japan's population remained stagnant 120 million (see figure 8). Combined with the country's stagnant economic growth aging population,¹³³ Japan does not have a large enough population to pose a serious threat to China. In terms of its impact on Japan's aggregate power in relation to China's threat perception, this factor likely plays only a small role in China's threat perception.

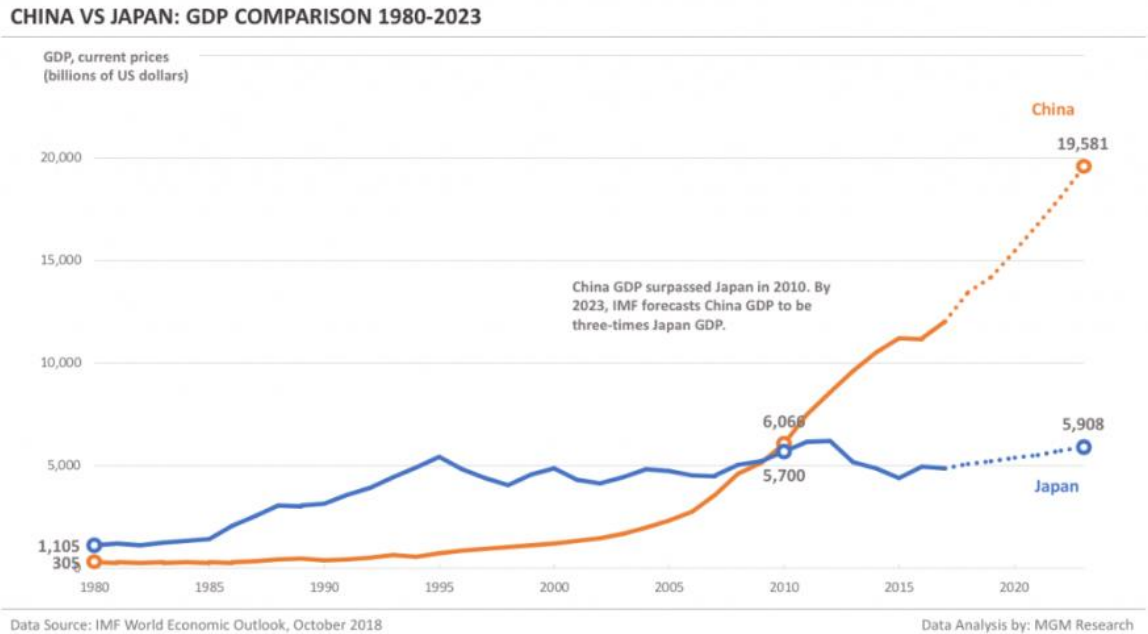
Despite Japan's tech and car-making industry prowess and comparative economic maturity (Japan still possesses a greater GDP per capita), the world's third largest economy is less powerful and less stable than China's economy. In terms of the effects of economic power on aggregate military power, China can also outproduce Japan across the military spectrum, and it is: China is replacing the US as Asia's military titan in large part due to its economic prowess.¹³⁴ Even if Japan could match China's economic power, Japan does not have a dedicated military-industrial base as a result of the constraints Article 9 of the Japanese Constitution places on the size and nature

¹³³ OECD, *Economic Survey of Japan*, p 2.

¹³⁴ Lague, David, and Kang Lim, Benjamin, "How China is Replacing America as Asia's Military Titan," Reuters, April 26, 2019. <https://www.japantimes.co.jp/news/2019/04/26/asia-pacific/china-replacing-america-asias-military-titan/#.XRSffOgzbb0>

of the country's military in addition to self-imposed defense equipment export bans.¹³⁵

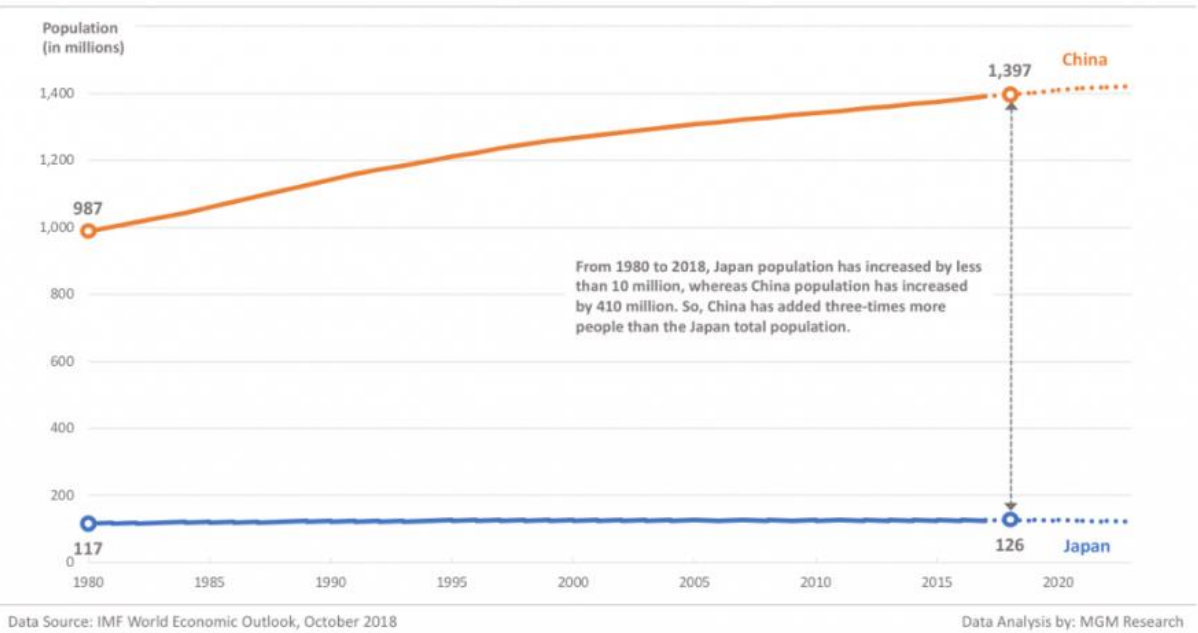
Figure 7: China vs. Japan GDP Comparison



¹³⁵ Koto, Masaya, "Japan's Defense Industry Still Lacks Bang Overseas," Nikkei. May 23, 2019. <https://asia.nikkei.com/Politics/International-relations/Japan-s-defense-industry-still-lacks-bang-overseas2>

Figure 8. China vs. Japan: Population Comparison

CHINA VS JAPAN: POPULATION COMPARISON 1980-2023



Finally, aggregate power is measured by Japan’s military capabilities and capacities. While China does indeed surpass Japan’s Self-Defense Forces (JSDF) in terms of quantity, the JSDF edges out the People’s Liberation Army (PLA) in terms of the quality of forces. Chinese analysts were aware of this reality before and after the crisis. As one PLA writing demonstrates, China is concerned that the Japan’s growing military capabilities will exceed “...the need of self-defense and will acquire an offensive posture. A Japanese military arming to the teeth will once again let the world’s peace-loving people see the shadow of militarism.”¹³⁶ China is also concerned about Japan’s optimism for

¹³⁶ Zhang Wei and Hu Wenjia, “An bao san jian yongxin xian e” (The Evil Intentions of the Three Darts of Defense and Security), Huangqiu junshi, January 2014, p. 17.)

military success against China, as demonstrated by China's admission of the superiority of its Air force as well as the strong response to an October 2012 JSDF naval war simulation that predicted Japan would destroy China's Eastern Fleet.¹³⁷ Importantly, the US-Japan military alliance tips the scales in Japan's favor (see figure 9). Japan's overall military capabilities are buttressed by the world's most powerful military and this factors heavily into China's threat perception, evidenced by Chinese fears over a US military alliance system policy of containment.¹³⁸ However, because of the failure of the size of Japan's economy, population, and technological prowess to contribute greatly toward China's threat perception of the country, Japan's aggregate power is not a significant factor in China's threat perception in the ECS crisis.

Geographic proximity – High

Geographic proximity can be measured by the relative distance between Japan's territory and the Chinese mainland, relative to China's neighbors as well as the number of territorial disputes and overlapping borders. Distance plays a subtle yet powerful role in threat perception. According to Walt, nearby states "pose a greater threat than those that are far away." In other words, the closer a state is to another, the greater its ability to project power

¹³⁷ Zhang, *China's Assertive Nuclear Posture*, 129.

¹³⁸ Zhang, *China's Assertive Nuclear Posture*, 116.

and therefore, to threaten. Conversely, power projection decreases with distance and threat declines. The disputed Senkaku/Diaoyu islands are located 410 km from Japan's nearest population center in Naha, 330 km from China's nearest population center in Wenzhou, and 170 km from Taipei. Additionally, although China does not share a land border with Japan, these historical and geographic neighbors have dozens of competing territorial claims in the East and South China Seas, as well as overlapping EEZs and ADIZs. Consequently, Japan's ability to project power, and therefore the threat it can pose to China, is significant.

Offensive Capabilities – High

Despite the constraints that Article 9 places on its military power, Japan has proven adept at reinterpreting its constitutional shackles to create a world-class military in all but name. According to Walt, “states with large offensive capabilities are more likely to provoke...” because offensive power has the ability to threaten sovereignty and territorial integrity. Offensive power includes the capacity to amass large, mobile military capabilities. Because of the maritime nature of the ECS dispute, I focus solely on the offensive naval capabilities Japan can bring to bear in a territorial dispute to represent Japan's offensive power. In this respect, Japan is formidable.

First, Japan controls five times more ocean area than China and has been a global maritime power for a century.¹³⁹ Second, Japan's Coast Guard, a "quasi-military force"¹⁴⁰, while numerically inferior to China's naval and maritime forces, are quantitatively superior.¹⁴¹ Japan's navy was one of the most formidable during the time of the dispute, having "the strongest navy and air force in Asia except for the U.S.," according to defense analyst Larry Wortzel.¹⁴² This is further evidenced by Japan's belief, and China's concern, that it can destroy China's East Sea Fleet with only minimal losses.¹⁴³ But any discussion of Japan's military capabilities necessarily involves the US-Japanese military alliance: Chinese strategists and PLA officials see the ECS crisis as fundamentally a contest between the US and China.¹⁴⁴ While JSDF are too small to contain China alone, their offensive capabilities augmented by the US-Japanese military alliance are. With US navy capabilities, Japan is able to overcome its numerical inferiority and win naval engagements

¹³⁹ Tim F. Liao, Kristia E. Wiegand, and Kimie Hara. *The China-Japan Border Dispute: Islands of Contention in Multidisciplinary Perspective*. (Routledge: London, 2015), 27.

¹⁴⁰ Richard Samuels, "New 'Fighting Power!' for Japan?", *Audit of Conventional Wisdom, MIT Center for International Studies*, vol. 7, no. 14 (September 2007).

¹⁴¹ Mizokami, Kyle. "The Five Most-Power Navies on the Planet." *The National Interest*. June 6, 2014, <https://nationalinterest.org/feature/the-five-most-powerful-navies-the-planet-10610?page=0,1>

¹⁴² Freedberg, Sydney J. "China's Dangerous Weakness, Part 1: Beijing's Aggressive 'Self-Defense,'" *Breaking Defense*. September 26, 2013. <https://breakingdefense.com/2013/09/chinas-dangerous-weakness-part-1-beijings-aggressive-idea-of-self-defense/>

¹⁴³ Zhang, China's Assertive Nuclear Posture, 128-129.

¹⁴⁴ *Ibid*, 122-123.

decisively.¹⁴⁵ As a result, Japan's offensive capabilities pose great threat to China's military and therefore plays a large role in China's threat perception.

Aggressive Intentions – High

Finally, aggressive intentions can be measured by the perceptions of the Chinese public, its leaders, and the strategic community's perceptions about the threat Japan poses to China's core interests; this measure of threat level will establish a connection between physical threats and subjective fears, thus reflecting threat level as an appropriate domain of action. As mentioned earlier, Chinese strategists and PLA officials see the ECS crisis as fundamentally a contest between the US and China.¹⁴⁶ The US pivot to Asia at the time of the crisis gave the US an opportunity to "let Japan out of the cage" according to Peng Guangqian of the PLA, ostensibly to contain China. By this logic, the US rebalancing and "China threat" theories are designed and directed by the US to help Japan remilitarize, allowing the US to reap the benefits of instability.¹⁴⁷ In the US's pursuit of remilitarizing Japan, according to this theory, the US provides material military support while encouraging Japan's remilitarization to combat China.¹⁴⁸ China also blames the "China threat"

¹⁴⁵ O'Rourke, Ronald, "China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress", Congressional Research Service, Report. August 5, 2014 <https://fas.org/sgp/crs/row/RL33153.pdf>, 64

¹⁴⁶ Zhang, Baohui. China's Assertive Nuclear Posture, 122-123.

¹⁴⁷ Ibid, 123.

¹⁴⁸ Ibid.

theory on Japan, claiming it simply exaggerates China's intentions to rebuild its war capacities.¹⁴⁹ Since the end of the Cold War, China has feared Japan's pursuit of greater global influence, its burgeoning nationalism, and its calls for a more expansive military doctrine. Furthermore, based on Japan's past behavior, war-time atrocities, and handling of sensitive historical issues,¹⁵⁰ some believe that China could fall back into nationalist militarism or seek to halt China's ascendancy by once again attacking China. Chinese strategists argue that the JSDF's behavior, such as arming maritime vessels and forcefully evicting Chinese ships from China's claimed territory, implies that Japan is preparing to use military force to resolve the dispute.¹⁵¹

In sum, analysis of the aggregate power, geographic proximity, offensive capabilities, and aggressive intention measurements reveal that China perceives Japan's behavior and intentions as aggressive and dangerous. Consequently, China's threat perception will be considered "high" in the 3-factor TSI prospect theory model and is denoted in figure 2 cells 1 or 3.

¹⁴⁹ Ibid, 124.

¹⁵⁰ Liao, Tim F. et al., *The China-Japan Border Dispute*, 32

¹⁵¹ Ibid, 127.

1.4 Territorial Authority – Weak

Maritime Military Power – Weak

Territorial authority is measured by both China's maritime military power relative to Japan as well as the status of its administrative control over the disputed territory, and is coded as either "weak" or "strong." As discussed in the "offensive capabilities" section above, the naval balance of power in Asia leans in favor of Japan. Despite fielding a smaller number of naval forces, Japan possesses a higher quality navy as well as the force multiplying power of the US-Japan military alliance to buttress it. In the event that conflict broke out around the Senkaku/Diaoyu islands, Japan would likely win a decisive naval engagement, Chinese strategists have voiced their concern. As a result, China is unable to exert authority over the disputed territory by either intimidation or force. At best, China can only harass Japan's fishing and maritime vessels, which it does regularly. Consequently, China's territorial authority with respect to maritime military power is weak.

Administrative Control – Weak

In the case of the East China Sea crisis, Japan has exercised *de facto* control over the disputed Senkaku/Diaoyu islands since 1972 because it *exercises* administrative control over the territory. Additionally, scholars have long

considered Japan to be the authority over the islands.¹⁵² While both China and Japan have made their intentions and will to act as a sovereign over the islands clear, such as submitting claims to the UN, naming the islands, drawing maps, and announcing territorial borders and zones, only Japan has demonstrated “adequate exercise of sovereignty” over the islands through legislative and administrative measures. And while China regularly tries to alter the status quo by repeatedly aggressive incursions into Japan’s claimed territory, Japan has successfully repelled them and administer the islands without genuine fear of losing that ability. Some examples of Japan’s exercising sovereignty include governing the islands pursuant to Japanese national law, repelling illegal incursions, and arresting intruders,¹⁵³ to name a few.

In sum, Japan exercises sovereignty and has the greater ability to enforce its sovereignty claims over the disputed islands than does China. Thus, it can be said that Japan possess “strong” authority over the islands while China possesses “weak” authority over the islands. Within the 3-factor TSI prospect theory model, this places China in a domain of losses and is reflected in figure 2 as cells 3 or 4.

¹⁵² Allen S. Whiting, “China’s Use of Force, 1950–96, and Taiwan,” *International Security* 26:2 (Fall 2001), 103–31; and Mark Burles and Abram Shulsky, *Patterns in China’s Use of Force: Evidence from History and Doctrinal Writings* (Santa Monica, Calif.: RAND, 2000).

¹⁵³ Glenn D. Hook. Japan’s Risky Frontiers: Territorial Sovereignty and Governance of the Senkaku Islands, *Japanese Studies*, 34:1, 2014. 1-23, DOI: 10.1080/10371397.2014.893809, 14.

Severity of Crisis – High

To measure the level of crisis severity, I use established measures employed by several prospect theory models in terms of China's crisis management behavior,¹⁵⁴ that is, the level of violence or potential violence, measured either high or low. If a crisis involves direct violence or threats of violence, it can be coded as "high" in severity. High severity crises are characterized by a heightened probability of military conflict, whereas low severity crises are not.

The ECS crisis is rife with threats of violence, both implicit and explicit. From China's rapid testing of nuclear-capable missiles to fiery calls for military action by PLA generals,¹⁵⁵ to Japan's plans to shoot down Chinese UAVs and firing warning shots at Chinese vessels, the potential for catastrophic miscalculation and military escalation was considerable. Zhang portrays the seriousness of the crisis when he wrote that, "when asked about the difference between the Diaoyu/Senkaku disputes and the Scarborough Shoal crisis, one Chinese scholar gave an interesting analogy – China saw itself as the victim in both crises: China was robbed by the Philippines in the Scarborough Shoal crisis but felt raped by Japan in the Diaoyu/Senkaku one."¹⁵⁶ Therefore, while the dispute did not become a military conflict, it possessed considerable potential to turn into one and is coded as a high

¹⁵⁴ He, *China's Crisis Behavior*, 37.

¹⁵⁵ Zhang, *China's Assertive Nuclear Posture*, 100.

¹⁵⁶ *Ibid*, 123.

severity crisis. In the 3-factor TSI Prospect theory model, a high severity crisis will be denoted with a (–) symbol at the bottom of figures 2.

Prospect Theory Predictions: A Risk-Acceptant Posture

Based on my analysis of the three territorial sovereignty and integrity measurement, I determined that China perceived a HIGH level of threat, possessed a WEAK territorial authority, and the dispute was a HIGH severity crisis. This outcome is represented in Figure 2, cell 3 below.

Figure 2. 3-Factor TSI Prospect Theory Model – High Severity Crisis

		Threat Perception	
		High (–)	Low (+)
Territorial Authority	Strong (+)	1. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)	2. <u>High</u> Territorial Sovereignty & Integrity (Doman of Gains)
	Weak (–)	3. <u>Lowest</u> Territorial Sovereignty & Integrity (Domain of Losses)	4. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)
		High severity crisis (–)	Aggregate = (–)

*Each cell represents China’s domain of actions in relation to its TSI status level, measured from Lowest, Low, High, Highest. Cell 3 demonstrates that when TSI status is very low, China finds itself in a domain of losses and according to PT is more likely to engage in risk-acceptant behavior.

According to the model, when China's threat perception of Japan is HIGH (-), its authority over the disputed territory WEAK (-), and the severity of the crisis HIGH (-), China is in a domain of losses. Note that the value of each variable is weighed equally. When the values of each variable are combined (represented by either a - or a + sign), the aggregated effects of all three factors on TSI is negative (three negative signs). This demonstrates that China's TSI status is the "lowest" possible, reflecting a tremendous perceived threat to China's territorial sovereignty and integrity. Based on these measurements, Beijing was in a more extreme domain of losses than any of the other seven scenarios and therefore, the 2012-2013 ECS crisis was a severely threatening position for China to be in: China perceived its situation to not only be disadvantageous, but dire.

Beijing's Decision: Implicit Nuclear Deterrence and a Full Spectrum Coercive Strategy

According to prospect theory's predictions, China, perceiving itself in a disadvantageous position framed by a high threat perception and fear of attack, feeling itself possessing weak authority and control over the dispute, and pressured by the considerable potential for military conflict, should behave in a risk-acceptant manner to reverse its losses. Based on the foreign policy behavior typology of Figure 1, Beijing is likely to employ either diplomatic or

military coercion, or a combination of the two. This process is visualized in Figure 4. Are prospect theory's predictions correct? More importantly, based on my hypotheses, China is more likely to engage in nuclear coercion during times of great threat to, and insecurity regarding, the nation's territorial sovereignty and integrity. In other words, when Chinese leaders perceive the nation to be in a dire position in relation to the status of the country's TSI status, decision-makers are willing to reverse losses by adopting more extreme positions, such as nuclear threats, to resolve the dispute favorably.

In terms of policy options available to Chinese leaders and their respective risk propensities, China could have chosen full accommodation to de-escalate the situation. This would likely have involved limiting actions to official protest and keeping the media out. However, this was unlikely as China's leaders and media had already dug their heels in on the issue, with Wen Jiabao stating emphatically that "China will never yield an inch on the sovereignty issue."¹⁵⁷ For the same reason, conditional accommodation to de-escalate was equally as unlikely. The crisis centered around China's core national interest and felt slighted by Japan's attempt to upset the status quo. Feeling compelled to punish Japan for its actions, China would likely choose more risk-acceptant policies that escalated the crisis in order to force change or punish. Diplomatically, China could levy sanctions in hopes of pressuring

¹⁵⁷ He, *China's Crisis Behavior*, 174.

China to apologize or reverse its nationalization purchase of the islands. Alternatively, China could escalate the crisis further and engage in a game of brinkmanship to dissuade China from exercising the control it got used to around the islands by threatening war or creating the conditions for unmanageable conflict to provoke Japan into one, validating China's concerns and justifying its harsh response. What did China actually do?

China responded swiftly and severely, employing both diplomatic and military coercion. First, the Foreign Ministry called the purchase "illegal and invalid" and theft of Chinese territory;¹⁵⁸ a Defense Minister stated that the Chinese military "reserves the right to take further actions,"¹⁵⁹ and violent anti-Japanese protests erupted nationwide, damaging Japanese shops.¹⁶⁰ Next, Beijing threatened economic sanctions, canceled state visits, ordered boycotts of tourism to Japan, refused to attend the annual International Monetary Fund and World Bank meetings hosted by Tokyo, and announced the demarcation of its territorial waters in the disputed area.¹⁶¹

¹⁵⁸ Jane Perlez, "China Accuses Japan of Stealing after Purchase of Group of Disputed Islands," *The New York Times*, September 11, 2012.
<https://www.nytimes.com/2012/09/12/world/asia/china-accuses-japan-of-stealing-disputed-islands.html>

¹⁵⁹ International Crisis Group, "Dangerous Waters," 64-66.

¹⁶⁰ Stephanie Kleine-Ahlbrandt, "Dangerous Escalation in the East China Sea," International Crisis Group. January 5, 2013.
<https://www.crisisgroup.org/asia/north-east-asia/chinajapan/dangerous-escalation-east-china-sea>

¹⁶¹ *Ibid.*

The Japanese and Chinese governments continued to trade barbs and threats for the next year, but the situation quickly spilled over into the military domain. Immediately following the Japanese government's purchase of the islands, China began conducting combat drills in the Yellow Sea and dispatched regular maritime patrols into the contiguous waters around the islands¹⁶² to challenge Japan's control. Combined with China's new naval and maritime military reorganization¹⁶³ as well as its willingness to engage in risky naval/air encounters, the situation seemed to be on the path toward spiraling out of control. According to experts, however, China's behavior reflected a "well-planned campaign with multi-agency coordination and high-level decision-making."¹⁶⁴ A number of close calls raised the international profile of the dispute. The crisis reached its fever pitch from October to December 2013, when a combination of coercive threats, naval and airspace encounters, dangerous radar lock-on incidents, in addition to the suspension of communication channels, threatened to send the states careering toward conflict.¹⁶⁵

¹⁶² Xinhua News Agency, "Zhongguo haijian chuanbo bianwei dida diaoyudao haiyu kaizhan wuquan xunhang zhifa" (China's Maritime Surveillance Ships Arriving in the Waters of Diaoyu Islands to Defend Rights), September 14, 2012, at http://news.xinhuanet.com/politics/2012-09/14/c_113073244.htm

¹⁶³ Rory Medcalf, Raoul Heinrichs and Justin Jones, "Crisis and Confidence: Major Powers and Maritime Security in Indo-Pacific Asia", Lowy Institute for International Policy, June 2011, 15.

¹⁶⁴ International Crisis Group, "Dangerous Waters," 23.

¹⁶⁵ Stockholm International Peace Research Institute (SIPRI), "Promoting Crisis Management in the East China Sea," 2014. <https://www.sipri.org/research/conflict-and-peace/asia/promoting-crisis-management-east-china-sea>

In October, the Japanese government approved a plan to shoot down drones violating its airspace, as Chinese drones had begun to conduct surveillance around the islands.¹⁶⁶ China responded with fiery resolution that escalated the crisis: the downing of one of its drones would constitute “an act of war,” and Beijing would respond militarily. In November 2013, the situation intensified when China announced the delineation of its air defense identification zone (ADIZ) in the ECS, overlapping with Japan’s ADIZ.¹⁶⁷ This action sharply increased the danger the crisis posed by creating the conditions where the risk of collision could escalate out of control. Finally, in retaliation for Abe’s visit to the Yasukuni Shrine in December 2013, which caused a considerable deterioration in already poor bilateral relations, China announced two preconditions to normalize diplomatic ties: 1. that Japan recognize the existence of the islands dispute, which it refused to do as a matter of policy; and 2. that Japanese leaders promise to no longer visit Yasukuni shrine.¹⁶⁸ Throughout the latter half of 2012 into December 2013, China probed Japan’s defense of the islands with repeated air and sea incursions. The sudden high frequency of air and sea incidents between the two created dozens of opportunities for accident, increasing the risk of an accident, escalation and unintended military conflict. However, likely in a bid to avert war, China

¹⁶⁶ Zhang, *China's Assertive Nuclear Posture*, 128.

¹⁶⁷ SIPRI, *Promoting Crisis Management in the East China Sea*, 2014.

¹⁶⁸ *Ibid.*

would employ an intimation tactic to dissuade Japan from meeting China's provocations head on.

1.5 Upping the Ante – China's Use of Implicit Nuclear Threats

Implicit Verbal Threats

First, in response to the JSDF's October 2012 war simulation game, PLA General Luo Yuan commented that China could possibly employ nuclear weapons to prevent the destruction of its East China Sea and North Sea naval fleets.

¹⁶⁹ Zhang argues that Yuan's comment was likely designed to "neutralize possible Japanese impulses to escalate the crisis" after predicting success based on the simulation. Second, PLAN Admiral Yin Zhuo warned, in the context of Japan's possible decision to allow the US to base nuclear weapons on its territory, "Japan has only 300,000 square kilometers of land. If attacked by nuclear weapons, this nation will no longer exist."¹⁷⁰ Third, Chinese Rear Admiral Li Jie told media that the "debut of China's nuclear submarines is also designed to send a warning to countries that are now provoking China: If you dare to shoot first, you will have to consider the consequences."¹⁷¹

¹⁶⁹ Zhang, *China's Assertive Nuclear Posture*, 129. Luo's comment: "Moreover, we have nuclear forces that are feared by Japan. Although we have repeatedly stated that we will not use nuclear weapons first and will not use them against non-nuclear countries, nuclear weapons nonetheless provide a guarantee that we will not lose this war." "For the full text of Luo's comments, see "Beihai donghai jiandui ruo zao zhongchuan zhongguo jiang ji chu hedan" (If the North Sea Fleet and East China Sea Fleet Are Destroyed, China Will Use Nuclear Weapons), Duowei News, October 30, 2012, at military.dwnews.com/news/2012-10-30/58932751-all.html"

¹⁷⁰ *Ibid*, 136.

¹⁷¹ *Ibid*, 139.

Flexing Nuclear Muscle: Implicit Shows of Forces

Military Tests

Throughout July and August 2012, China tested its newest strategic and nuclear capable weapons systems “at an unusually rapid rate.”¹⁷² These included nuclear capable DF-41, JL-2, and DF-31As. As for intent, Zhang argues that “given the broader context, the frequency, and the timing of the tests, which just preceded Japan’s island nationalization decision, they could not have been designed for pure testing purposes. They represented China’s nuclear signaling. In fact, it was the first time that China had tested its new DF-41 ICBM, which is supposed to be the most powerful Chinese strategic missile due to its reported ability of carrying up to 10 independently guided warheads.”¹⁷³ Additionally, a Hong Kong newspaper used by China as a mouthpiece specifically referred to it as sending a signal to the US and Japan.

High-Profile Announcements

First, Chinese propaganda on the PLA Second Artillery’s new nuclear-capable tactical missiles were positioned across Chinese media throughout the second half of 2012, at the height of the crisis.¹⁷⁴ Additional context helps to establish intention. The brigade’s primary purpose was conventional military warfare,

¹⁷²Gertz, Bill “Chinese Missile Tests Continue: China Conducts Fourth Flight Test of Mobile ICBM,” *The Washington Free Beacon*, September 4, 2012.

¹⁷³ Zhang, *China’s Aggressive Nuclear Posture*, 135.

¹⁷⁴ *Ibid*, 134.

whereas tactical nuclear weapons not only change their mission which is big news by itself, but they hint at changes to China's nuclear posture. Tactical nuclear weapons are used for deterring both conventional and nuclear wars and have more battlefield utility than high-yield nuclear bombs. This move seemingly lowers the nuclear threshold for the sake of enhancing China's deterrence strategy.¹⁷⁵ Second, in response to Japan's approval of a plan to shoot down China's Unmanned Aerial Vehicles in October 2012, Beijing declared any such move an act of war.¹⁷⁶ Several leading Chinese newspaper also simultaneously published front-page news about China's newly operational nuclear submarine forces, the type 094, equipped with nuclear JL-2 missiles. This is corroborated by the verbal threat above, made by Rear Admiral Li Jie who said explicitly that the announcement was meant as a warning to Japan's plan to shoot down Chinese UAVs.¹⁷⁷ This interpretation is further corroborated by the fact that overseas China news mouthpieces made the same connection.¹⁷⁸ Finally, Chinese media reported that China's DF-25 missiles would become armed with nuclear warheads in October 2012 at the crises height.¹⁷⁹

Military Exercises

¹⁷⁵ Ibid.

¹⁷⁶ Ibid, 139.

¹⁷⁷ Ibid, 114.

¹⁷⁸ Ibid, 140.

¹⁷⁹ Ibid 72-73.

According to the Japanese Ministry of Defense, in July 2013, China conducted its *first military* flight through the Miyako Strait, a strategically important waterway between Okinawa and Miyako Island.¹⁸⁰ Most importantly, in September, China conducted its first long-range bomber flights through Strait with several nuclear capable H-6 bombers flying through the Strait then back into the East China Sea. Japan sees this as nuclear signaling because Japan has identified the H-6 nuclear capable bombers as part of China’s nuclear deterrent as far back as 2007.¹⁸¹

Evidence of Nuclear Coercion

How do we know China intended to threaten possible nuclear attack with its signaling? For example, what if China was simply testing those missiles based on schedules made before the crisis was ignited? First, we must determine how intent is measured. Some scholars, like Mearsheimer, even argue that “intentions are essentially unknowable and thus only capabilities matter.”¹⁸² Among some of the reasons that it is argued state’s intentions are difficult to discern include psychological and cognitive biases of leaders¹⁸³, lack of

¹⁸⁰ Japanese Ministry of Defense, Joint Staff, “Statistics on Scrambles Through Fiscal Year 2016,” Press release, April 13, 2017.

¹⁸¹ Japanese Ministry of Defense, NSS Part 1 Security Environment Surrounding Japan, Section 3. China, 2007, 55.

¹⁸² Mearsheimer, *The Tragedy of Great Power Politics*.

¹⁸³ Robert Jervis, *Perception and Misperception in International Politics* (Princeton, NJ: Princeton University Press, 1976).

complete information¹⁸⁴, or general ambiguity, to name a few.¹⁸⁵ Still, intentions play a central role in “threat perception, deterrence, and the outbreak of war.”¹⁸⁶ Without the ability to read an opponents’ mind, states must interpret messages and intentions from signaling behavior. Intent is often determined by interpreting the costliness and clearness of the signal, to derive sincerity and truthfulness of the message.¹⁸⁷ In international law: “sometimes intent means purpose and sometimes it means knowledge.”¹⁸⁸ One theory asserts that a state can be said to act with intent when it consciously disregards the risk associated with its actions and the logical outcome of those actions.¹⁸⁹ Another theory asserts that a state acts with intent when it possesses knowledge regarding how its behavior could be perceived,¹⁹⁰ that is, engaging in an action that one knows carries a particular meaning beforehand.

In terms of China’s nuclear signaling behavior, intent can be derived from establishing that Beijing understands (i.e. has knowledge of) what the signal means or can be construed to mean. For example, if China interprets a US flight of nuclear-capable B2 bombers or the deployment of aircraft carriers

¹⁸⁴ Gartzke et al., *Signaling in Foreign Policy*, 1.

¹⁸⁵ Andrew H. Kidd, *Trust and Mistrust in International Relations* (Princeton, NJ: Princeton University Press, 2007).

¹⁸⁶ Todd Hall and Keren Yarhi-Milo, “The Personal Touch: Leaders' Impressions, Costly Signaling, and Assessments of Sincerity in International Affairs,” *International Studies Quarterly*, Vol. 56, No. 3 (September 2012), 560-573, 561.

¹⁸⁷ Hall and Milo, *The Personal Touch*, 561.

¹⁸⁸ Ohlin, Jens David, “Targeting and the Concept of Intent” (2013). Cornell Law Faculty Publications. Paper 774. <http://scholarship.law.cornell.edu/facpub/774>, p 128

¹⁸⁹ Ohlin, “Targeting and the Concept of Intent,” 88.

¹⁹⁰ *Ibid*, 89.

through the Taiwan Straits as carrying a message of military flexing, saber-rattling, or intimidation, but then later engages in similar behavior, we can infer that China understood that its behavior carried a similar message and suggesting a reasonable level of intent. China does, in fact, understand that the signals sent in the evidence provided earlier are nuclear signals carrying implicit nuclear threats because it possesses prior knowledge regarding that type of behavior. China's knowledge comes from the fact that it has faced threats of nuclear attack on at least six separate instances. For example, President's Harry S. Truman¹⁹¹ and Dwight D. Eisenhower¹⁹² each threatened to use any means necessary, including nuclear weapons, to resolve the Korean War and China's plans to invade the island of Quemoy, respectively. More specifically, China observed when the U.S. dispatched over 20 nuclear-armed B-36 bombers to Japan's Kadena air force base in 1953 in an attempt to intimidate Chinese and North Korean forces to accept an armistice, and we know this message was received because the US invited media to report on the bomber's arrival and China accepted terms shortly after.¹⁹³ Similarly, China understands the gravity of a nuclear show of force as evidenced by its reaction to President Bill Clinton's ordering two nuclear-capable aircraft carriers and a fleet through the Taiwan Strait during the 1996 Taiwan Strait

¹⁹¹ Gerson, Joseph. *Empire and the Bomb: How the U.S. Uses Nuclear Weapons to Dominate the World* (Pluto Press, London, 2007), 1-336, 83

¹⁹² Gerson, *Empire and the Bomb*, 85.

¹⁹³ *Ibid*, 83.

Crisis.¹⁹⁴ On the other side of the fence, China has engaged in nuclear deterrent threats in the past. During the same crisis, China also implicitly threatened a nuclear attack, this one on Los Angeles. In 1996, a senior PLA official communicated to Assistant Secretary of Defense Freedman that China would proceed with its military bombardment of Taiwan because the U.S. “care more about Los Angeles than they do about Taiwan,”¹⁹⁵ and that China was prepared to “sacrifice ‘millions of men’ and entire cities’ to assure the unity of China.”¹⁹⁶ Therefore, China employed nuclear signals, such as verbal threats by officials and shows of force, that it understood could be perceived as nuclear threats, even by Beijing’s own definition as it had experienced in the past.

1.6 China’s Crisis Behavior: Results of Analysis

Prospect theory posits that when a crisis’ outcome is framed in terms of loss, that is, when leaders “clearly perceive a tangible loss” relative to their reference point, they will take “considerable risks” to reverse those losses and return to their preferred status quo.¹⁹⁷ According to my territorial sovereignty and integrity prospect model, China perceived itself in a domain of losses in

¹⁹⁴ Ibid, 235.

¹⁹⁵ Patrick E. Tyler, As China Threatens Taiwan, It Makes Sure U.S. Listens,” New York Times, Jan 24. 1996, <https://www.nytimes.com/1996/01/24/world/as-china-threatens-taiwan-it-makes-sure-us-listens.html>

¹⁹⁶ Gerson, *Empire and the Bomb*, 234.

¹⁹⁷ DAnieri, Paul J. *International Politics: Power and Purpose in Global Affairs*. (Australia: Wadsworth, 2017), 157-179, 175-176.

each of the three key measurement of TSI: crisis severity, territorial authority, and threat perception. The model predicts that China should adopt a coercive strategy against Japan based upon the risk propensity table. Performing a congruence test with my five hypotheses will prove whether the prospect theory model accurately reflects the reality.

First, the TSI prospect theory model predicted that when China's TSI status is framed in a domain of losses, Beijing is more likely behave in a risk-acceptant way and adopt a coercive policy. The empirical record of the ECS crisis proves this hypothesis to be true. Based on the evidence reviewed, China engaged in a two-pronged diplomatic and military coercive strategy, coinciding with the model's predictions. However, this paper focuses on a specific type of coercion, nuclear coercion. The purpose of this research is to identify the conditions under which China chooses to engage in nuclear coercion. Second, the model predicted that the lower the TSI status in a domain of losses, the riskier the policy China will choose. The model proves this to be true. While located in a "low" TSI status, China engaged in increasingly risky foreign policy behavior, such as military coercion. Finally, I hypothesized that if located in the "lowest" TSI status possible, China would be more likely to engage in nuclear coercion. This hypothesis was also proven to be true: when Beijing perceives itself to be in a severely disadvantageous position in terms of its territorial sovereignty and integrity status, decision-makers are more

receptive to engaging in dangerous escalatory policies, such as implicit nuclear threats, to reverse their losses and force a return to the status quo.

Nuclear coercion offered Chinese leaders the greatest pay off if it succeeded, as the leaders faced the prospect of recoupling all losses and returning the islands dispute to the status quo ante. However, it also possessed the greatest risk of failure and could have escalated the crisis to an unmanageable state – but Beijing was willing to make that gamble. In the case of the 2012-2013 ECS crisis, the success of China’s nuclear deterrent threats is difficult to determine. By largely ignoring China’s threats, whether nuclear, conventional, or otherwise, and relying on the US military alliance, Japan’s resolve was strong and Tokyo was unlikely to be intimidated. If, on the other hand, Beijing meant to signal its seriousness and prevent Japan from, for example, shooting down a Chinese UAV over disputed waters and potentially sparking a war, China’s threats worked.

2. Senkaku/Diaoyu Islands Dispute 2014-2018

2.1 Crisis Background

China and Japan have claimed undisputed sovereignty over the Senkaku/Diaoyu islands for decades and tensions over them have oscillated over the last 50 years. However, because Japan has controlled three of the eight islands in dispute since 1972, China’s policy has been to shelve the sovereignty debate until future generations can solve it peacefully, that is, so

long as the status quo remained intact. The first major escalation in tensions over the island occurred in 2010 when a Chinese fishing vessel collided with a Japanese Coast Guard vessel. Japanese authorities arrested the boat captain and delayed his release, causing harsh backlash and protests in China. After the captain was released, tensions subsided but it left an impression on China who believed Tokyo was trying to change the status quo, stoking the fires of nationalism. The 2012-2013 crisis was ignited when the governor of Tokyo attempted to “buy” the islands from a private owner, sending the Chinese media into a frenzy and drawing the ire of Beijing. In an attempt to “preempt” the governor’s purchase, the Japanese government bought the islands in September 2012, thereby “nationalizing” them.¹⁹⁸ The purchase set off a spiral of actions that sent the countries careering toward conflict. Immediately after the Japanese government’s purchase of the islands, China began conducting combat drills in the Yellow Sea and dispatched regular maritime patrols into the contiguous waters around the islands¹⁹⁹ to challenge Japan’s control in what some experts called a “well-planned campaign with multi-agency coordination and high-level decision-making.”²⁰⁰

¹⁹⁸ International Crisis Group, “Dangerous Waters,” 6.

¹⁹⁹ Xinhua News Agency, “Zhongguo haijian chuanbo biandui dida diaoyudao haiyu kaizhan wiquan xunhang zhifa” (China’s Maritime Surveillance Ships Arriving in the Waters of Diaoyu Islands to Defend Rights), September 14, 2012, at http://news.xinhuanet.com/politics/2012-09/14/c_113073244.htm

²⁰⁰ International Crisis Group, *Dangerous Waters*, 23.

A period of relief surfaced, however, in early 2014, and the year would mark a monumental shift in terms of the potential for armed conflict. First, the 2014 Code of Unplanned Encounters at Sea (CUES), signed into effect on April 22nd, 2014 by the naval chiefs of over 20 states, including China, Japan, and the US. The CUES is a non-legally binding agreement that establishes protocols for how navies should communicate during unexpected or casual encounters.²⁰¹ The agreement was expected to reduce tensions by minimizing the risk of miscalculation, thus the likelihood of military conflict, and ultimately, to improve regional stability. Third, in a June 2014 press conference with Japan's Minister of Defense, Onodera, who announced that China and Japan had reached an agreement on the contents of the China-Japan maritime communication mechanism.²⁰² And in September 2014, the two countries agreed to restart the 2012 mechanism meetings suspended at the onset of the crisis, including meetings with representatives from all maritime agencies to establish crisis communication mechanisms like a crisis hotline.²⁰³ Finally, a summit between Xi Jinping and Shinzo Abe on the sidelines of the November 2014 Asia-Pacific Economic Cooperation (APEC) summit in Beijing provided a pivotal platform for Sino-Japanese relations to move in a

²⁰¹ Oliver Bräuner, Joanne Chan and Fleur Huijskens, "Confrontation and Cooperation in the East China Sea: Chinese Perspectives," SIPRI, February, 2015, 4-5.

<https://www.sipri.org/sites/default/files/files/misc/SIPRIPB1502a.pdf>

²⁰² Oliver Bräuner et al., "Confrontation and Cooperation in the East China Sea," 5-6.

²⁰³ Ibid, 6-7.

new direction. The resumption of top-level bilateral exchanges for the first time in years led to a four-point principled agreement that established mutual intentions to proceed with crisis communication mechanisms and other confidence building measures.²⁰⁴ Specifically, the two sides sought to create an emergency hotline, establish annual meetings, and determine a common radio frequency around the area.²⁰⁵ More recently, Xi and Abe took a pledge to move their country's relations in a "new historic direction" in 2018, while signing multibillion-dollar economic deals, marking the first official meeting between the two leaders in seven years.²⁰⁶

However, this period of *détente* did not put an end to the occurrence of near crisis events. For Japan's part, Tokyo sought to reduce tensions and avoid a conflict while simultaneously pushing forward with a multi-phase plan to militarize islands throughout the East China Sea. From 2013 to 2016, Japan installed a radar station on Yonaguni island—just south of the Senkakus—deployed troops to the Amami Islands near Okinawa, planned amphibious

²⁰⁴ Chinese Ministry of Foreign Affairs, 'Yang Jiechi meets national security advisor of Japan Shotaro Yachi: China and Japan reach four-point principled agreement on handling and improving bilateral relations', 7 Nov. 2014; Japanese Ministry of Foreign Affairs, 'Regarding discussions toward improving Japan–China 'relations'', 7 Nov. 2014.

²⁰⁵ South China Morning Post, "China and Japan eye early launch of East China Sea crisis management mechanism," 13 Jan. 2015.
<https://www.scmp.com/news/china/article/1679027/china-and-japan-eye-early-launch-east-china-sea-crisis-management>

²⁰⁶ Anna Fifield. "China and Japan pledge to take their relations in 'new historic direction'", Washington Post, October 26, 2018
https://www.washingtonpost.com/world/asia_pacific/china-and-japan-pledge-to-take-their-relationship-in-new-historic-direction/2018/10/26/0aeb5a32-d90f-11e8-83a2-d1c3da28d6b6_story.html?noredirect=on&utm_term=.30c1292a45f7

military responses via military drills, and improved its patrolling by launching ten new Japanese Coast Guard (JCG) 1,500-ton ships.²⁰⁷ In April 2014, Japan finally finished installing a military station on Yonaguni island, increasing the Japanese Self Defense Force's surveillance and military projection capabilities toward mainland China.²⁰⁸ Furthermore, from 2014 to 2015 Japan invested more than 12 billion USD in missile defense systems and their components, such as the Terminal High Altitude Area Defense (THAAD) ballistic missile defense system, X-band radar, anti-aircraft and anti-ship missile battery systems for installment in key waterways throughout the ECS.²⁰⁹ In 2015 Japan deployed thousands of JSDF troops throughout the ECS, who were tasked with building anti-ship and anti-aircraft missile batteries along nearly 200 islands spanning 1,400 km of the area to monitor and counter China's growing maritime influence.²¹⁰ To reach the Pacific Ocean, China will have to sail within the line of sight of Japan's missiles and surveillance equipment. Additionally, Japan announced plans to increase JSDF personnel in the ECS

²⁰⁷ CSIS Asia Maritime Transparency Initiative, "East Asia Sea Tensions: Approaching a Slow Boil," April 14, 2016

<https://amti.csis.org/east-china-sea-tensions/>

²⁰⁸ Tiezzi, Shannon. "Japan to Station Troops on Yonaguni, Near Disputed Islands." *The Diplomat*. April 19, 2014. <https://thediplomat.com/2014/04/japan-to-station-troops-on-yonaguni-near-disputed-islands/>.

²⁰⁹ Smith, Sheila A. "North Korea in Japan's Strategic Thinking." *The Japan-US-Russia Triangle in 2016* | *The Asan Forum*. <http://www.theasanforum.org/north-korea-in-japans-strategic-thinking/>

²¹⁰ McCurry, Justin. "Japan Steps up Military Presence in East China Sea." *The Guardian*. December 18, 2015. <http://www.theguardian.com/world/2015/dec/18/japan-steps-up-military-presence-east-china-sea>.

to nearly 10,000 between the years of 2014 to 2019.²¹¹ According to Satoshi Morimoto, a former Japanese defense minister, Japan considers the “first island chain”, which runs along the ECS, to be crucial toward maintaining the military balance.²¹² In sum, Japan’s increased defense spending, military installation construction projects, defense cooperation with states in territorial dispute with China, and the deployment of thousands of JSDF personnel within the ECS have in fact upped the military ante around the islands in dispute

Despite recent pledges for cooperation between the leaders as well as talk of promising confidence building measures from both camps, the dispute over the Senkaku/Diaoyu islands remains a key obstacle to better relations beyond surface level engagement. Misperception and miscalculation caused by inflammatory rhetoric or a minute of careless behavior still has the opportunity to send the countries careering towards an unintended conflict, a limited military engagement, or a regional war involving the United States. As a result, Sino-Japanese relations are believed to be vulnerable to destabilizing activity in the East China Sea and indeed, observers still consider the islands dispute a flashpoint for potential military conflict. While a period of détente replaced the status quo in 2014 and has remained intact since, both China and

²¹¹ McCurry, Japan Steps up Military Presence in East China Sea.”

²¹² Ibid.

Japan have continued to up the military ante around the disputed territory without sparking a more explosive crisis.

2.3 China's Domain of Actions: Threat Perception – High

Aggregate Power – Low

Conditions from the period of 2014 – 2018 are similar to those outlined in the first case study on the 2012-2013 ECS crisis, except that the disparity between the power of their economies grew even larger (see Figure 7). By 2015, China's GDP was twice that of Japan's and in 2018 was nearly three times the size of its neighbor's economy.²¹³ Over the last five years, Japan's population has also remained stagnant (see Figure 8) and the Japanese government continues to suffer from an aging society. Militarily, China is catching up to Japan in terms of technology and already possesses a defense budget four times larger.²¹⁴ Japan has also failed to match or check China's rapid military growth, and while the US military alliance ensures a level playing field for the time being, China is beginning to edge out its opponent by outspending and outproducing Japan across the military spectrum.²¹⁵ Thus, as a measurement of threat perception, China is likely not intimidated by Japan's aggregate

²¹³ World Bank Data, <https://data.worldbank.org/country/china?view=chart>.

²¹⁴ World Bank. China-Japan Military Expenditures, 2017.

<https://data.worldbank.org/indicator/MS.MIL.XPND.CD?locations=CN-JP>

²¹⁵ Patalano, Alessio. "Japan as a Seapower: Strategy, Doctrine, and Capabilities under Three Defence Reviews," 1995–2010, *Journal of Strategic Studies*, 37:3, 403-441, 2014, DOI: 10.1080/01402390.2014.904788, 436

power and consequently does not consider it a significant part of its threat perception calculus in terms of TSI status.

Geographic proximity – High

Just as in the 2012-2013 ECS crisis, proximity plays a large part in China's threat perception of Japan. As noted earlier, the Senkaku/Diaoyu islands are located only 410 km from Japan's nearest population center in Naha and 330 km from China's nearest population center in Wenzhou. For reference, the Japanese mainland, from Fukuoka to Shanghai, is barely 800 kilometers from China's claimed undisputed territory around the islands. As in the previous crisis, the dozens of competing territorial claims in the East and South China Seas and overlapping EEZs and ADIZs complicate competition. As a result, Japan's ability to project power and threaten China's core territorial interests is significant: threat perception is high.

Offensive Capabilities – High

As in the 2012-2013 ECS crisis, Japan's "quasi-military force"²¹⁶, while numerically inferior to China's naval and maritime forces, are quantitatively superior – but this trend has slowed and is now reversing. China's military expenditure exploded from 157 billion USD to 227 billion USD from 2012 to

²¹⁶ Richard Samuels, "New 'Fighting Power!' for Japan?" *Audit of Conventional Wisdom*, MIT Center for International Studies, vol. 7, no. 14 (September 2007).

2017²¹⁷ and Beijing has used those funds to conduct the largest military exercises in its history, proceed with a massive nuclear modernization program, and commission an aircraft carrier,²¹⁸ to name a few. While still a formidable force, the JSDF are not designed to project power and are primarily defensive in their military mission,²¹⁹ and therefore rely on US military alliance more than ever before for offensive capabilities. As a result, Japan's offensive capabilities alone pose less of a threat to China's military than in the past, and although it plays a role in China's threat perception, China's continued progress mitigates these concerns substantially. However, as noted earlier, China sees the territorial dispute as a fundamentally U.S.-related issue and the world's most powerful military continues to tip the scales in Japan's favor due to its unrivaled offensive firepower and conventional capabilities. In the event of a limited military conflict in the region, although China could pose serious challenges, the U.S. and Japan would likely defeat China decisively according to an extensive report by the California-based think tank RAND.²²⁰ Therefore, Japan's offensive capabilities play a large part in China's threat perception.

²¹⁷ World Bank. China-Japan Military Expenditures, 2017.

<https://data.worldbank.org/indicator/MS.MIL.XPND.CD?locations=CN-JP>

²¹⁸ US Department of Defense, "China Power Report 2019"

[https://media.defense.gov/2019/May/02/2002127082/-1/-1/1/2019%20CHINA%20MILITARY%20POWER%20REPORT%20\(1\).PDF](https://media.defense.gov/2019/May/02/2002127082/-1/-1/1/2019%20CHINA%20MILITARY%20POWER%20REPORT%20(1).PDF)

²¹⁹ Patalano, "Japan as a Seapower", 436

²²⁰ Eric Heginbotham, Michael Nixon, Forrest E. Morgan, Jacob L. Heim, Jeff Hagen, Sheng Tao Li, Jeffrey Engstrom, Martin C. Libicki, Paul DeLuca, David A. Shlapak, David R.

Aggressive Intentions – High

Since the 2012 ECS crisis, China continues to fear Japan's pursuit of greater global influence, its burgeoning nationalism, and its calls for a more expansive military doctrine. Indeed, in its 2015 defense White Paper, Beijing referred to Japan's military modernization a "grave concern."²²¹ For example, regarding Japan's stationing troops and a radar on Yonaguni Island in the ECS, Foreign Ministry spokesperson Hua Chunying remarked, "Due to historical reasons, any of Japan's military moves will raise concern among Asian countries" and "Japan should give a serious explanation for its real intention of building military muscle in [the] relevant region."²²² Japan's past behavior as well as the sensitive nature of their shared history remain salient obstacles that will be difficult to overcome and as such, China's perception regarding Japan's intentions remains concerned. Thus, China's belief about China's aggressive intentions remain a significant consideration in China's threat perception calculus.

Frelinger, Burgess Laird, Kyle Brady, Lyle J. Morris, "The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power 1996-2017," Report. RAND. 2015. https://www.rand.org/pubs/research_reports/RR392.html

²²¹ David Axe. "Japan's East China Sea Nightmare: Too Many Chinese Fighter Jets and Warships to Counter, January 4, 2019. National Interest. <https://nationalinterest.org/blog/buzz/japans-east-china-sea-nightmare-too-many-chinese-fighter-jets-and-warships-counter-40517>

²²² Tiezzi, Shannon. "Japan to Station Troops on Yonaguni, Near Disputed Islands." The Diplomat. April 19, 2014. <https://thediplomat.com/2014/04/japan-to-station-troops-on-yonaguni-near-disputed-islands/>.

In sum, analysis of the aggregate power, geographic proximity, offensive capabilities, and aggressive intentions measurements reveal that China perceives Japan's behavior and intentions as aggressive. Consequently, China's threat perception will be considered "high" in the 3-factor TSI prospect theory model and is denoted in figure 2 cells 1 or 3.

2.4 Territorial Authority – Strong

Maritime Military Power – Strong

China's maritime forces have undergone a massive reorganization since 2014, propelled by Xi Jinping's vision of making China a great maritime power. Consequently, maritime and naval issues have taken center stage. One general remarked that China's "main security threat comes from the sea," and warning others potential adversaries that "not the slightest harm can come to the core national interests,"²²³ and state media now refer to maritime rights, along with territorial sovereignty and integrity, as a "core interest (核心利益)," a phrase normally reserved for issues such as Taiwan or domestic stability.²²⁴ Indeed, The 2013 Science of Military Strategy, the PLA Military Academy's White Paper, has codified the military's new focus moving forward, stating the military's

²²³ International Crisis Group, *Dangerous Waters: China-Japan Relations on the Rocks*, Part of Asia Report N°280, April 8 2013, <https://d2071andvip0wj.cloudfront.net/dangerous-waters-china-japan-relations-on-the-rocks.pdf>, 16.

²²⁴ *Ibid.*

challenges are “mainly in the sea.”²²⁵ As a consequence, budgets for PLAN and maritime forces ballooned as their forces have combined. In fact, China’s defensive expenditure increased 12% in 2014 alone.²²⁶ As a result of these efforts, China has begun to not only catch up with Japan but is not “out-building Japan virtually across the board”, according to Toshi Yoshihara, a professor at the US Naval War College.²²⁷ China also began using old naval vessels in its Coast Guard, while increasing the tonnage and fire power of its ships around the disputed areas from an average of 2,200 tons in 2014 to 3,200 tons in 2015.²²⁸ In late 2015, for instance, China’s Coast Guard entered the territorial waters around the disputed islands for the first time with a vessel with gun turrets. This would become the norm, as both China and Japan now outfit their patrol vessels with increasingly higher caliber weaponry like 37 mm guns and 76 mm cannons.²²⁹ According to Yoshihara, “the maritime

²²⁵ People's Republic of China, *PLA Academy of Military Science's 2013 Science of Military Strategy* (Beijing: Military Science Press, 2013), 209

²²⁶ Michael Martina and Greg Torode, “China's Xi Ramps Up Military Spending in Face of Worried Region,” Reuters, March 5, 2014, <https://www.reuters.com/article/us-china-parliamentdefence/chinas-xi-ramps-up-military-spending-in-face-of-worried-regionidUSBREA2403L20140305>.

²²⁷ Chan, Minnie and Kwok, Kristine. “China’s Navy No Longer So Inferior to Japan’s, Experts Say.” July 27, 2014. South China Morning Post. <https://www.scmp.com/news/china/article/1560065/chinas-navy-no-longer-so-inferior-japans-experts-say>

²²⁸ De Luce, Dan and Johnson, Keith, “In the East China Sea, Beijing's Big Ships Push the Envelope”, Foreign Policy May 22, 2016, <https://foreignpolicy.com/2016/05/22/in-the-east-china-sea-beijings-big-ships-push-the-envelope/>

²²⁹ De Luce and Johnson, “In the East China Sea”.

balance of power, measured in terms of naval and civilian maritime law enforcement capabilities, is shifting in China's favor."²³⁰

China's maritime power relative to the Japan has increased and China's confidence in its ability to control the dispute and challenge Japan's claims have increased. Given these developments, China's territorial authority could be seen as "strong" in terms of maritime military power. However, the force multiplying power of the US-Japan military alliance during the period of 2014 to 2018 still leans in Japan's favor in terms of an extended military conflict or war. The naval power the U.S. can bring to bear gives the US navy, by some estimates, a 10:1 advantage as recently as 2018 because of its technological and qualitative superiority.²³¹ In the event that war broke out in the ECS, Japan would likely win a decisive naval engagement against the PLA Navy. However, in the event of a limited military conflict before the U.S. could intervene, Beijing increasingly possesses the advantage. I argue this is a more realistic scenario because the probability of a limited military conflict is reasonably higher than a regional theatre war involving the U.S. Therefore, China is now able to exert more authority over the disputed territory through intimidation or force when necessary, despite not administering the islands themselves. At the least, China can now control the dispute better than in the

²³⁰ Ibid.

²³¹ Livingston, Ian and O'Hanlon, Michael E., "Why China Isn't Ahead of the US Navy, Even With More Ships," September 10, 2018. <https://www.brookings.edu/blog/order-from-chaos/2018/09/10/why-china-isnt-ahead-of-the-us-navy-even-with-more-ships/>

past. I believe this point is critical toward understanding China's growing confidence in the status of its territorial sovereignty and territorial integrity – the dispute should reflect this evolving reality. China's confidence can be observed in its nearly decades-long harassment of Japanese maritime vessels, which it continues to do regularly and in increasing numbers (see Figure 10). Consequently, China's territorial authority with respect to maritime military power can be considered strong from China's perspective.

Administrative Control – Indeterminate

While Japan continues to exercise *de facto* control over the disputed Senkaku/Diaoyu islands (and has since 1972), the integrity of Japan's sovereignty claims is under threat. China's regular air and sea incursions into Japan's claimed waters and airspace may not alter the status quo set by the Japanese government's 'nationalization' of the islands, but it severely undermines the credibility of Japan's claim to territorial authority. As mentioned previously, one key component of sovereignty is the ability to exercise authority by repelling incursions, thus maintaining territorial integrity. So long as China continues to successfully prod Japan's porous defenses, territorial integrity cannot credibly be established and it speaks to Japan's ability to defend the islands over the long-run. China is, increasingly, able to exert greater authority over the territory (due to the size of its navy and the aggressivity of its tactics) through intimidation or force, while Japan is

relatively less capable than in the past. China's growing power and maritime tactics have also increased the probability that Japan may have to acknowledge the dispute as it continues repeatedly violating Japan's "undisputed" sovereignty over the islands. How often and for how much longer will Japan's sovereignty claims be violated before the debate on whether Tokyo exercises "effective" administrative control over the islands begins? In terms of the status of China's territorial sovereignty and integrity, Japan's administrative control over the islands can arguably be classified as "indeterminate." Just as China's confidence in its TSI status and the relative maritime and naval balance of power in the ECS evolves, so too should our understanding of the current status of the dispute and its trajectory.

In sum, combined with Japan's deteriorating ability to respond militarily to China in any decisive capacity, the scales are tipping in China's favor in terms of naval military power. I also argue that from 2014 to 2018, administrative control can reasonably be seen as *indeterminate*, as the facts are changing rapidly – and not in Japan's favor. Therefore, it can be argued that China possesses a strengthening territorial authority while Japan possesses weakening authority over the islands. This relative, not absolute, interpretation of territorial authority is valid because China's behavior is based on its own perception of its relative TSI status. Within the 3-factor TSI

prospect theory model, this places China in a domain of losses and is reflected in figure 2 as cells 3 or 4.

2.5 Severity of Crisis – Low

In terms of direct violence or threats of violence, the ECS dispute from 2014 to 2018 was not characterized by a high probability of military conflict. Although the two powers continue to trade barbs, neither has made threats of war, implicit or explicit, and certainly not the rate as was seen in 2012 and 2013. Despite the number of Chinese naval incursions into Japan's claimed waters around the disputed islands increasing and remaining consistent over the last five years, and incidents including allegations of dangerous radar lock-on incidents, the two powers have found a way to improve ties. From the Code of Unplanned Encounters at Sea to the maritime communication mechanism dialogue and recent summit between Xi Jinping and Shinzo Abe, the two countries have both worked toward de-escalating situations instead of escalating them. As a result, the period of 2014 to 2018 can be coded as "low" in crisis severity as the probability of military conflict was managed well. In the 3-factor TSI Prospect theory model, a low severity crisis is denoted with a (+) symbol at the bottom of figure 3.

2.6 Prospect Theory Predictions: A Risk-Averse Posture

Based on my analysis of the three territorial sovereignty and integrity measurements, I determined that China perceived a HIGH level of threat, possessed a STRONG territorial authority, and the crisis possessed a LOW level of severity. This outcome is represented in Figure 3, cell 5 below. According to the model, when China's threat perception of Japan is HIGH (-), its authority over the disputed territory STRONG (+), and the severity of the crisis LOW (+), China is in a domain of gains. When the values of each variable are combined (represented by either a - or a + sign), the aggregated effects of all three factors on TSI status is positive (two positive signs, one negative sign). This demonstrates that China's TSI status is "high", reflecting a relatively advantageous position in terms of China's territorial sovereignty and integrity in the ECS from 2014 to 2018.

Figure 3. 3-Factor TSI Prospect Theory Model – Low Severity Crisis

		Threat Perception	
		High (-)	Low (+)
		Strong (+)	5. <u>High</u> Territorial Sovereignty & Integrity (Domain of Gains)
Weak (-)	7. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)	8. <u>High</u> Territorial Sovereignty & Integrity (Domain of Gains)	

Low severity crisis (+)
Aggregate = (+)

*Each cell represents China’s domain of actions in relation to its TSI status level, measured from Lowest, Low, High, Highest. Cell 6 demonstrates that when TSI status is high, China finds itself in a domain of gains and according to PT is more likely to engage in risk-averse behavior

2.7 Beijing’s Decision: A Strategy of Conditional Accommodation to Protect Gains

Perceiving itself in an advantageous position, framed by a strong and growing confidence in its authority over the dispute, perceiving little potential for military conflict, but still concerned about Japan’s aggressive activities, China was more likely to behave in a risk-averse manner to deal with the several near crisis events in the ECS from 2014 to 2018. As a result, Beijing was most likely to employ conditional accommodation. This process is visualized in

Figure 4. Most importantly, why did China not choose to resolve the dispute through coercive intimidation, using tactics like nuclear coercion? Chinese leaders had three distinctive policy options available to them: 1.) allow Japan's militarization of the ECS to go unopposed, soften China's presence in the region (including decreasing the regular air and sea incursions into Japan's claimed territory), and pursue normalization of ties 2.) maintain China's activities in the region and voice protest against perceived transgressions by Japan while pursuing diplomatic normalization; or 3.) eschew normalization to maintain a tough approach to the dispute, escalating periodic crises to persuade Japan to cease and desist from activities in the ECS.

The first option is closest to full accommodation and is therefore the most risk-averse choice. This option, however, was very unlikely for a few reasons. First, China could not allow Japan to ride roughshod over its core national interests, namely, its sovereignty claims in other parts of the ECS. Neither could Beijing cease its naval and air-based incursions into Japan's EEZ and ADIZ around the Senkaku/Diaoyu islands – to do so would cause domestic backlash and allow Japan's attempt to change the status quo cement itself. The second option is the middle-of-the-road choice China would eventually take – this conditional accommodative approach is assertive and de-escalatory without spoiling the gains it worked so hard to acquire over the last few years. This option is particularly attractive because failing to

normalize relations after top-level diplomatic exchanges would harm relations significantly – after national leaders meet, there is nowhere left to go to negotiate. Normalizing ties in this way also allowed each party to continue their same behaviors in the ECS without losing face. Finally, the third option is the riskiest and involves a mix of diplomatic and military coercive policies to pressure and punish Japan during critical moments of the dispute between 2014-2018. Pursuing a coercive, and necessarily escalatory, policy would have been unlikely during this period for two reasons. First, both parties wanted to avoid war and escalating the crisis to pre-2014 levels would have brought them back to the brink. Second, coercion would likely not have worked – if the coercion employed in 2012 to 2013 did not work, Japan’s resolve was likely higher than China’s willingness to escalate.

China chose the middle-of-the-road path from 2014 to 2018 and adopted a policy of conditional accommodation. In order to avoid losing the gains it made by engaging in substantive and high-level diplomatic talks on issues from crisis management to trade agreements, thereby avoiding another high severity crisis, China maintained its assertive and often times aggressive behavior while simultaneously pursuing détente with Japan and neighbors. For example, China continued its maritime (and airspace) incursions into Japan’s claimed waters to challenge its sovereignty (see Figure 10) and in 2017, coordinated the dispatch of between 200 to 300 fishing vessels and 15 Chinese

Coast Guard ships to “overwhelm” Japan’s ability to react around the islands.²³² However, at the same time, China has not physically enforced its 2013 ADIZ,²³³ and continued dialogue at the working, ministerial, and presidential levels. Furthermore, although a news outlet run by the Chinese Communist Party insinuated that China could deploy warships to the area if necessary,²³⁴ instances of fiery rhetoric and threats from officials directed at Tokyo are scarce and pale in comparison to those of 2012 or 2013.

2.8 China’s Crisis Behavior: Results of Analysis

According to the 3-factor TSI prospect model, China perceived itself in a domain of gains in all of the three key measurements but threat perception. The model predicts that China should adopt an accommodative strategy to de-escalate and protect its gains. Performing a congruence test with my five hypotheses will demonstrate whether the prospect theory model accurately reflects reality.

First, the TSI prospect theory model predicted that when China’s TSI status is framed in a domain of gains, Beijing is more likely behave in a risk-averse way and adopt an accommodative policy. The empirical record of the

²³² Morris, Lyle J. “The New 'Normal' in the East China Sea”, RAND, February 27, 2017 <https://www.rand.org/blog/2017/02/the-new-normal-in-the-east-china-sea.html>

²³³ Ibid.

²³⁴ Ben Blanchard, “China Warns Japan against 'Provocation' around Disputed Islets,” Reuters, Jan 13, 2016, <http://www.reuters.com/article/us-china-japan-islands-idUSKCN0UR12G20160113>.

ECS dispute from 2014 to 2018 lends credence to this hypothesis. Based on the evidence reviewed, China engaged in policy of conditional accommodation, coinciding with the model's predictions. Second, the model predicted that the higher the TSI status in a domain of gains, the more cautious a policy China will choose. The model proves this to be true, too. While located in a "high" TSI status, China engaged in increasingly cautious and de-escalatory foreign policy behavior, like conditional accommodation.

The purpose of this research, however, is to identify the conditions under which China chooses to engage in nuclear coercion over other viable policy options. Why wasn't nuclear coercion employed to deal with Japan in the ECS from 2014 to 2018? As noted above, pursuing a coercive policy would have been unlikely during this period for two reasons. First, both parties wanted to avoid war and escalating the crisis to pre-2014 levels would have brought them back to the brink. Second, coercion of any type would not likely have worked – if 14 months of coercion, pressure, and implicit nuclear threats had not deterred Japan from its path, Chinese leaders surely understood that it was unlikely to work now. Alternatively, it can be argued that China's nuclear deterrent threats did work, and were no longer needed. If China's goal was simply to dissuade Japan from escalating crises into full blown military conflicts, Beijing succeeded. According to this interpretation, an extremely risky policy of nuclear coercion served its purpose and its use again would

have been redundant. Finally, according to the 3-factor TSI prospect theory model, China perceived itself to be in a relatively advantageous position beginning in 2014. As a result, risky policies were no longer necessary to improve the status of the country's territorial sovereignty and integrity, as the situation was improving without coercion.

CHAPTER IV: ANALYSIS & CONCLUSION

1. Summary of Research Objectives, Findings and Implications

1.1 Research Objectives

The focus of this thesis was to explore China's post-Cold War use of implicit nuclear deterrent threats in territorial disputes. Through the literature review, it was established that China's nuclear signaling was an understudied and often ignored subfield of the country's crisis behavior. Moreover, the review established that alternative explanations for China's crisis behavior, to include nuclear signaling, were critically needed and that answering the "when" and "why" Beijing chooses certain policies over others under conditions of risk and uncertainty was necessary, thus establishing a link between China's nuclear coercion and risky foreign policy crisis decision-making. Consequently, the research question endeavored to determine the conditions under which China chooses to engage in nuclear coercion. To this end, I identified prospect theory as the most appropriate tool for answering the research problem and filling this gap in the literature.

Through prospect theory, I identified China's reference point as China's territorial sovereignty and integrity, developed several variables to measure it, established China's perceived domain of actions (gains or losses) in relation to the country's TSI status, determined the risk propensity of various foreign policy behaviors, and identified two appropriate case studies

for analysis. Through a rigorous and novel research design that applied prospect theory systematically, I was able to connect TSI status and the risk propensity of China's behavior to demonstrate how important and consequential China's perception of its territorial sovereignty and integrity is on its behavior. In this way, I offered a new way to understand an old problem: how to predict state decision-making during crises, especially regarding whether to escalate or deescalate the crisis.

1.2 Summary of Findings

1. 3-factor TSI Prospect Theory model hypotheses found to be accurate.
2. Territorial Sovereignty & Integrity has an impact on China's behavior during crises.
3. TSI status is one set of variables that contribute to China's nuclear coercion.
4. Prospect Theory is useful for explaining and predicating China's crisis behavior.

First, the hypotheses derived from the 3-factor TSI prospect theory model appear to be accurate. Two case studies were analyzed, the 2012-2013 ECS crisis and the 2014-2018 Senkaku/Diaoyu islands dispute. I first hypothesized that when China's TSI status is framed in a domain of gains, Beijing is more likely to choose risk-averse policies. During the 2014-2018 ECS dispute, China perceived itself to be operating within a domain of gains and indeed adopted a risk-averse policy of accommodation in order to protect its gains and avoid further losses. Next, I hypothesized that when

China's TSI status is framed in a domain of losses, Beijing is more likely to choose a risk-acceptant policy. Consistent with the prediction, case study analysis of the 2012-2013 ECS crises demonstrated that Beijing perceived itself in a domain of losses and adopted a policy of diplomatic and military coercion to reverse its losses. The third hypothesis stated that the higher the TSI status in a domain of gains, China will behave more cautiously. Consistent with the evidence, China chose conditional accommodation when it was placed in a domain of gains (see Figure 3 Cell 5), but did not choose a full accommodation policy, which the model predicted would instead be taken if China perceived itself in Figure 3, Cell 6. Next, however, I hypothesized that the lower the TSI status in a domain of losses, the riskier the policy China would choose. Indeed, the empirical record proves this to be true. When located in a "low" or "lowest" TSI status (see Figure 2, Cell 3), China chose increasingly risky policies, moving from diplomatic to military coercion in the 2012-2013 ECS crisis. Finally, I hypothesized that when China is located in the "lowest" TSI status, Beijing will engage in the more extreme forms of risk-taking behavior, such as employing nuclear threats. This hypothesis appears to be accurate: when China's TSI status was the lowest possible, China perceived itself to be in a dire situation and chose to use implicit nuclear threats to either bring back the status quo or prevent a new one from solidifying.

Second, territorial sovereignty & integrity has an impact on China's behavior during crises. The original research question asked, "under what conditions does China engage in nuclear coercion?" To answer the question: China engages in nuclear coercion when it perceives itself to be in a severely disadvantageous position in relation to the status of its territorial sovereignty and integrity. In other words, when insecurity about or a perceived threat to China's TSI status exists, China is more likely to employ risky, dangerous escalatory policies, such as nuclear threats, to deter further loss, recoup its losses, or compel a return to the status quo. Therefore, TSI status appears to play a role in China's decision-making process during crises, specifically in territorial disputes. There are a few reasons for the prioritization and importance of territorial and sovereignty-related issues. First, China considers its sovereignty and territorial integrity to be core national interests. As a matter of national security, a state must be able to defend its sovereignty claims and maintain the integrity of its borders and as M. Taylor Fravel notes, there is a connection between regime insecurity and territorial disputes.²³⁵ Additionally, Beijing is particularly sensitive to issues of sovereignty involving Japan. Due to the complicated and deeply rooted historical animosities between the two countries, as well as China's

²³⁵ M. Taylor Fravel, "Regime Security and International Cooperation: Explaining China's Compromises in Territorial Disputes," *International Security* 30 (2005): 62.

historically better ties to Southeast Asian countries, China was far more aggressive with Japan in the ECS than with ASEAN states in the South China Sea. Therefore, it is possible that the TSI model is more effective at explaining risk-acceptant and risk-averse behavior with adversaries. Second, issues of territory are more salient than other issues because they are easy to recognize and possession of them provides the occupying state with land and sea it can use for military/surveillance, or economic purposes. As a result, territorial issues tend to be zero-sum in nature and prone to competition, disagreement, and conflict. Third, as a result of the second point and because of China's geographic location being surrounded by dozens of countries and being involved in dozens of territorial disputes, China has developed policies and strategies for dealing with crises in territorial disputes. When China was younger and more insecure, it tended to shelve disputes. Now that the country is more powerful, it may be able to resolve disputes through the use of force and therefore its behavior must take its new power into consideration.

Third, TSI status is one set of variables that contribute to China's nuclear coercion. First, China chose to employ nuclear coercion during the 2012-2013 period of the ECS crisis and not the 2014-2018 period. China chose nuclear coercion in the first case study because it found itself in a severely disadvantageous position in terms of the threat to its TSI status.

This was not the case from 2014 to 2018. There are a few reasons for this. In 2012, the status quo was turned on its head – when Japan nationalized the islands China claims a part of its indisputable sovereign territory, it directly threatened not only the physical space that China claimed, but its national sovereignty and its pride. Chinese leaders not only felt slighted, but also humiliated. If decision makers did not put their foot down during this dispute, other states, including Japan could begin ignoring Chinese claims or work to alter the status quo on the ground just as Japan did. Lack of resolve and assertiveness on this issue would be catastrophic for China's national security. In such position, China was willing to take more risks than a typical foreign policy crisis. Next, given Japan's willingness to trade provocations and escalate the situation, the probability of military conflict was considerably higher than Beijing likely wanted and the gravity of the situation for Chinese leaders led them to consider using nuclear deterrent threats for a number of purposes. Although the purpose of the threats are impossible to determine for sure, they could have been designed to 1.) compelling Japan to give up its claim to the islands, (very unlikely); 2.) compelling Japan to return the dispute to the status quo, retracting its nationalization of the islands (unlikely); or 3.) intimidate Japan to signal China's resolve or seriousness, deterring it from escalating situations and thereby decreasing the likelihood of unintended military conflict (likely).

Second, although any number of variables can and likely do contribute to a state's behavior, the model and case study analysis have proven that territorial sovereignty and integrity, as well as its measurements, crisis severity, threat perception, and territorial authority, play a considerable role in Chinese leader's decision-making calculus. I argue that this is because the concept of territorial sovereignty and integrity, as well as the factors I used to measure it, are rooted in the neorealist school of international affairs. The primacy of territory, of sovereignty, and of concepts like threat perception and authority (power) are cornerstones of realist thought and China is often believed to behave consistent with a realist worldview.²³⁶ Nuclear deterrence theory, founded upon game theory, is also deeply rooted in a realist outlook on logic and decision-making. Therefore, given the intertwined nature of these concepts with realism, the strong relationship between nuclear coercion and territorial sovereignty and integrity, or threat perception and power is not surprising.

Lastly, prospect theory is useful for explaining and predicating China's crisis behavior. Through the case study analyses in this paper, I was able to explain and predict China's coercive and accommodative

²³⁶ Behind the Official Narrative, China's Strategic Culture in Perspective, Interview with Christopher A. Ford, Nov 1 2016, <https://www.nbr.org/publication/behind-the-official-narrative-chinas-strategic-culture-in-perspective/>

policies in the ECS dispute, specifically, why China chose coercive policies in one part of the dispute but accommodative policies during another time by demonstrating how China interpreted its own situation, in either a domain of gains or losses, relative to a reference point: TSI status. Through a systematic process, I determined that when China perceives itself in a domain of losses, especially in extremely disadvantageous positions, Chinese leaders are more likely to adopt coercive policies on the extreme side of the spectrum. The high accuracy of the model implies that it has utility outside of the ECS and possibly outside of China's crisis behavior. As a result, I was able to document that the domain of actions and the framing effect have a significant impact on China's decision-making in crisis situations.

1.3 Discussion of Implications

If China's decision to employ implicit nuclear threats is based, in part, on the country's perception of the status of its sovereignty and territorial integrity, the implications are profound. First, if similar conditions are observed, such as a territorial dispute where the military conflict is probable, the 3-factor TSI prospect theory model can be applied once again to predict what type of policy China is likely to adopt. Armed with knowledge of China's behavioral patterns, neighboring states as well as the U.S. can learn to manage crises with China

more effectively, improving regional stability. Currently, there are few predictive models that can be used symmetrically for this purpose.

Next, if the only well-documented cases of China's nuclear threats are all confined to territorial disputes, there is likely a deeper connection between China's beliefs about territorial sovereignty and integrity and the internal workings of the CCP that previously understood. If China is willing to threaten nuclear attack—a state with a self-avowed “no-first-use” (NFU) nuclear weapons policy—genuinely or not because of fear or insecurity about challenges to its borders, its internal security, and challenges to its power in general, there is a deep connection between CCP regime security and the lengths China is willing to go to ensure the Communist Party's survival. This point raises further implications about China's no-first-use policy and its nuclear arsenal modernization programs. Will China always adhere to the NFU and never use nuclear weapons first? If China prioritizes the security of the regime as an extension of territorial sovereignty and integrity, would leaders be willing to use the weapons first if it meant survival?

Finally, China's growing power has led to notable territorial crises throughout the Asia-Pacific, but particularly in the East and South China Seas, bringing China into conflict with many rival claimants. Will a perceived vulnerability regarding China's TSI status lead to more coercive and riskier policies being adopted by Beijing to win disputes? Somewhat ironically, the

implications of the TSI model tell a different story. As China's power grows, in particular its military and economic power vis a vis other states, its threat perception of neighbors will decrease and its ability to control events (in the sense that it can prevent them from spiraling out of control) will increase. The result will be that China's TSI status will become increasingly resistant to insecurity and vulnerability, reducing the likelihood that China will be placed in a domain of losses. Consequently, the less often China is in a domain of losses, the less often Beijing will feel the need to force a favorable outcome and recoup losses using coercive policies. Instead, as China's power grows, its TSI status will be less threatened, placing it in a domain of gains in various territorial disputes, where China is more likely to adopt accommodative policies, the de-escalation of crises, and a more stable region. According to the TSI prospect theory model, therefore, China's growing power will enhance regional stability and lead to less conflict, challenging traditional realist interpretations of China's rise.

2. Limitations and Areas of Future Research

Compared to Kai He's political-survival prospect theory model, my 3-factor TSI model is more context-dependent, and most likely only effective for analyzing territorial disputes, whereas He's model can be applied to most any crisis due to its focus on Putnam's two-level game as well as individual

leadership. I argue, however, that because of the frequency, importance, and salience of territorial disputes, the model is highly applicable to other crises as well as other countries. More importantly, my paper focused on using the model to explain one specific type of crisis behavior, whereas He's model was designed to explore all types of behavior associated with foreign policy crises. While this limited the number of relevant case studies I could analyze, it increased the depth with which I was able to analyze and compare each, making the individual results of my cases more substantial. Finally, I argue that the implications of my model novel and profound. By using the model to specifically look at China's nuclear signaling behavior, I have deepened China's crisis behavior literature while filling a gap in the nuclear coercion literature. Future research programs should begin to apply new prospect theory models to the crisis behavior of China and other states. Considering the importance of nuclear weapons and the powerful incentives to prevent nuclear war, future research should also examine the conditions under which countries like the U.S., Russia, South Korea, Pakistan, India, or Israel engage in nuclear coercion.

Tables and Figures

Figure 1. Foreign policy crisis behavior typology
(Source: Kai He, 2016. “China’s Crisis Behavior.”)

1. Full Accommodation	2. Conditional Accommodation
3. Diplomatic Coercion	4. Military Coercion

*Each cell reflects the relative risk propensity of different foreign policy behaviors available to states during crises. Cell 1 represents the least risky behavior and Cell 4, the riskiest. Source: Kai He, “China’s Crisis Behavior.”

Figure 2. 3-Factor TSI Prospect Theory Model – High Severity Crisis
(Source: Kai He, 2016)

		Threat Perception	
		High (–)	Low (+)
Territorial Authority	Strong (+)	1. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)	2. <u>High</u> Territorial Sovereignty & Integrity (Domain of Gains)
	Weak (–)	3. <u>Lowest</u> Territorial Sovereignty & Integrity (Domain of Losses)	4. <u>Low</u> Territorial Sovereignty & Integrity (Domain of Losses)
		High severity crisis (–)	Aggregate = (–)

Figure 4. Territorial sovereignty & integrity model of crisis behavior.
(Source: Kai He, 2016)

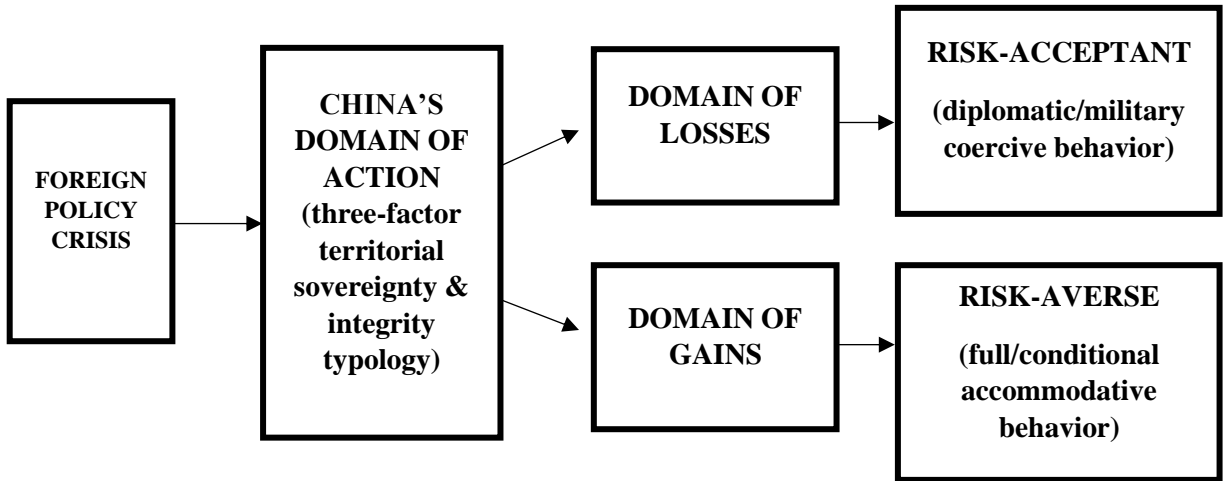


Figure 5.1 Prospect-Threat spectrum model. Visualization of policy options available to states during foreign policy crises (Source: Kai He, 2016).

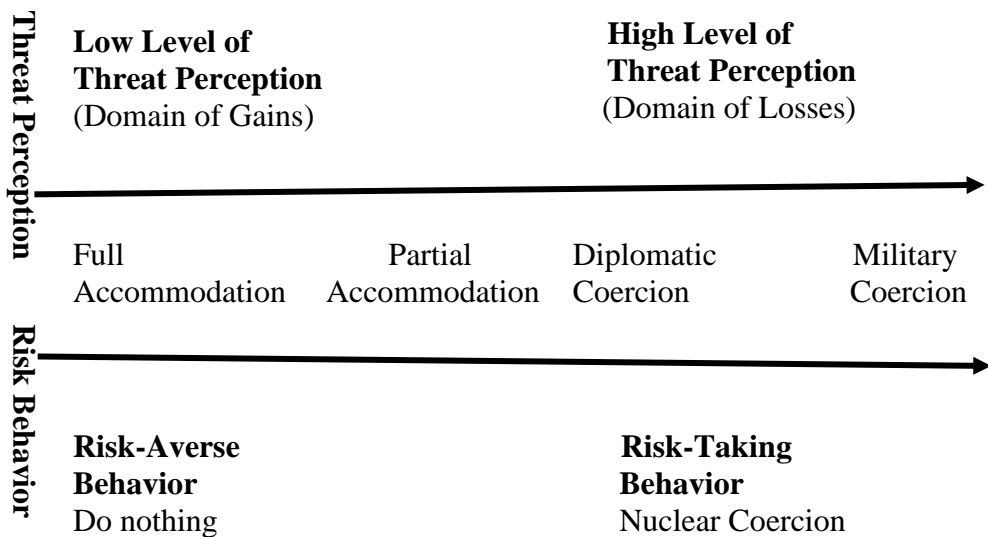


Figure 5.2 Prospect-Severity model with policy options during crisis.
 (Source: Kai He, 2016)

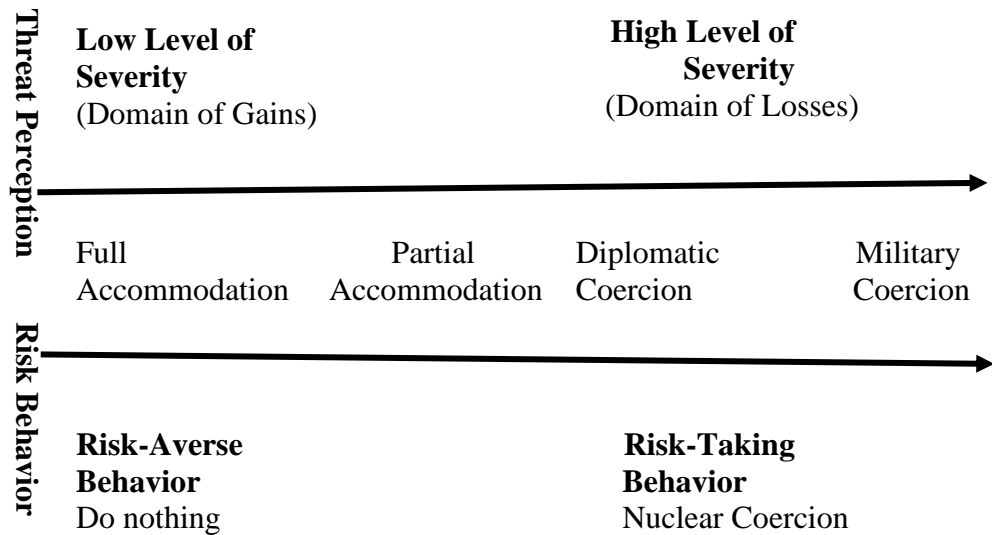


Figure 5.3 Prospect-Authority model with policy strategies for crises.
 (Source: Kai He, 2016)

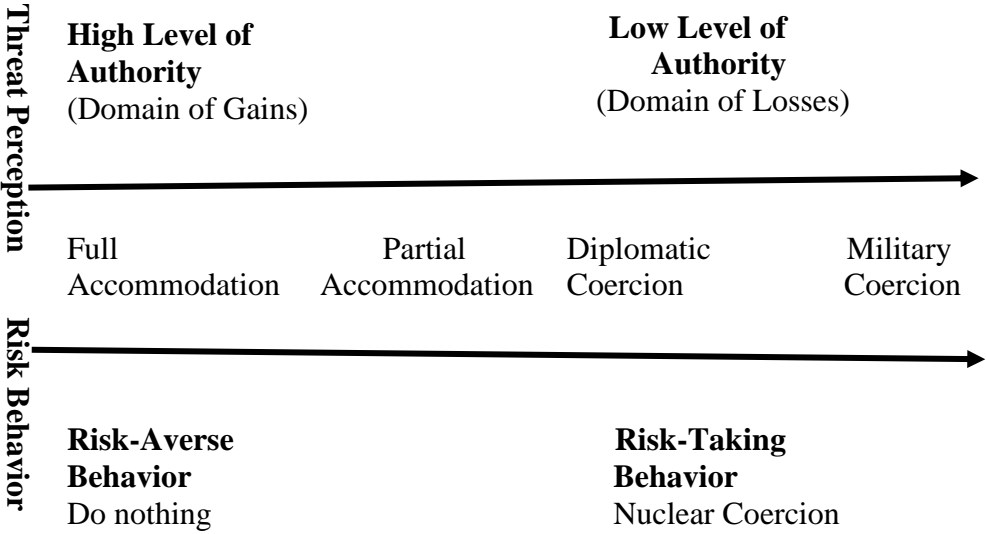


Figure 6. Map of the East China Sea and overlapping claims
(Source: Stratfor, 2012)



Figure 7: China vs. Japan GDP Comparison (Source: MGM Research, 2018).

CHINA VS JAPAN: GDP COMPARISON 1980-2023

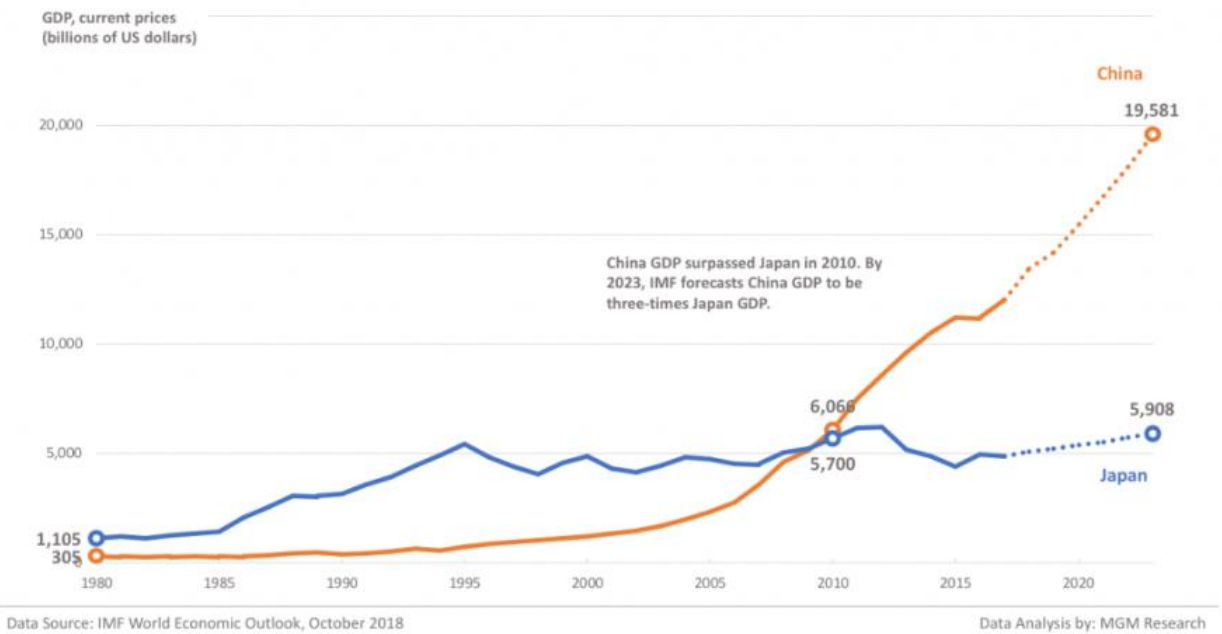


Figure 8. China vs. Japan: Population Comparison (Source: MGM Research, 2018).

CHINA VS JAPAN: POPULATION COMPARISON 1980-2023

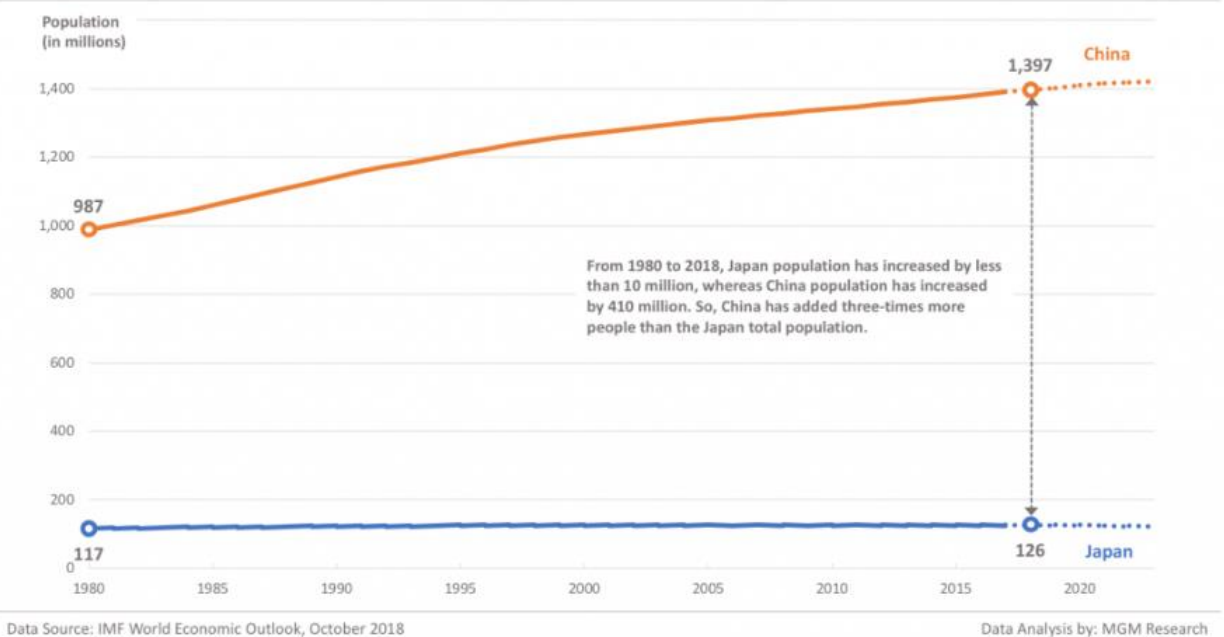


Figure 9. China-Japan Military Balance 2013 (Source: IISS, 2013.)

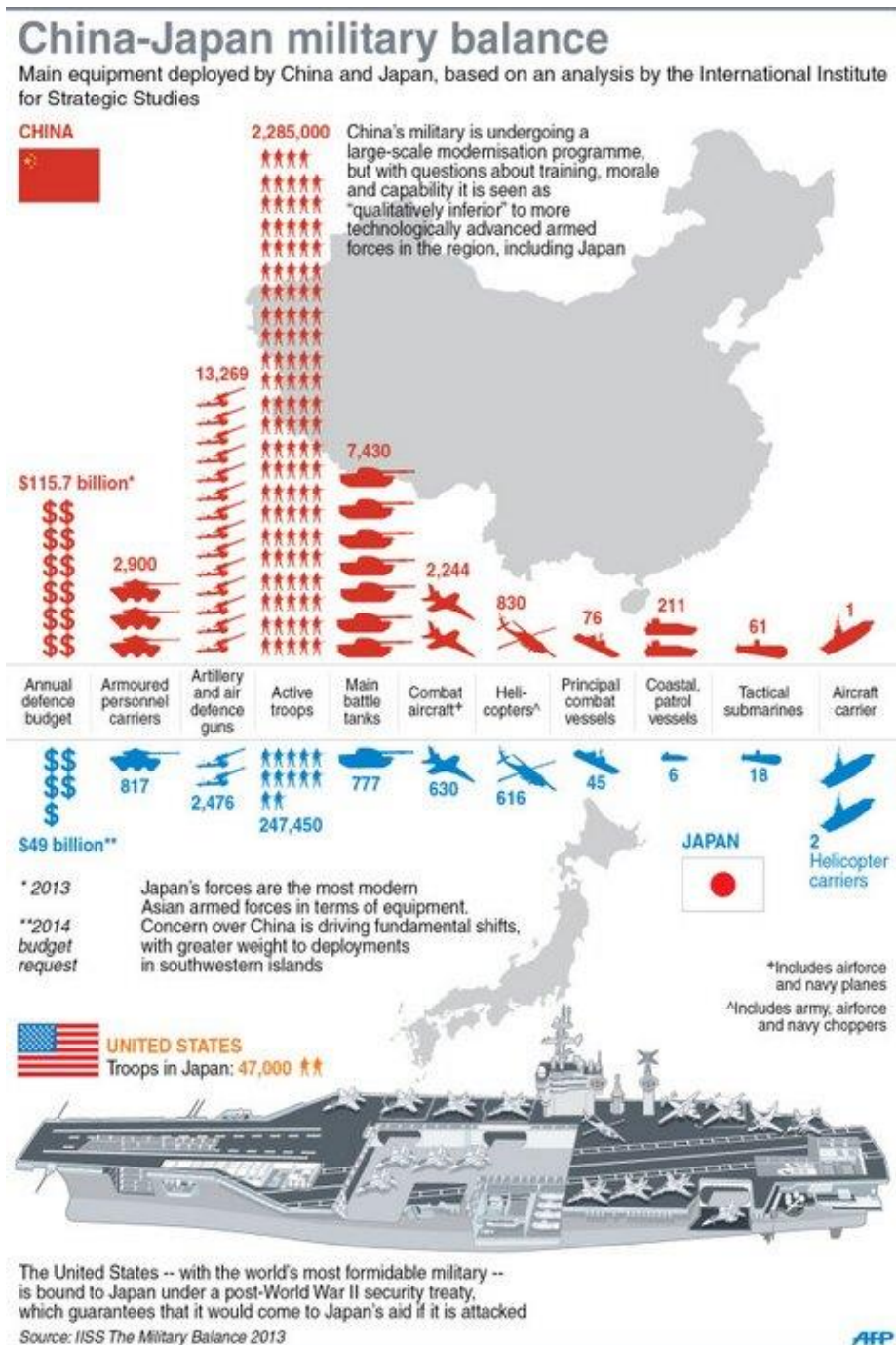
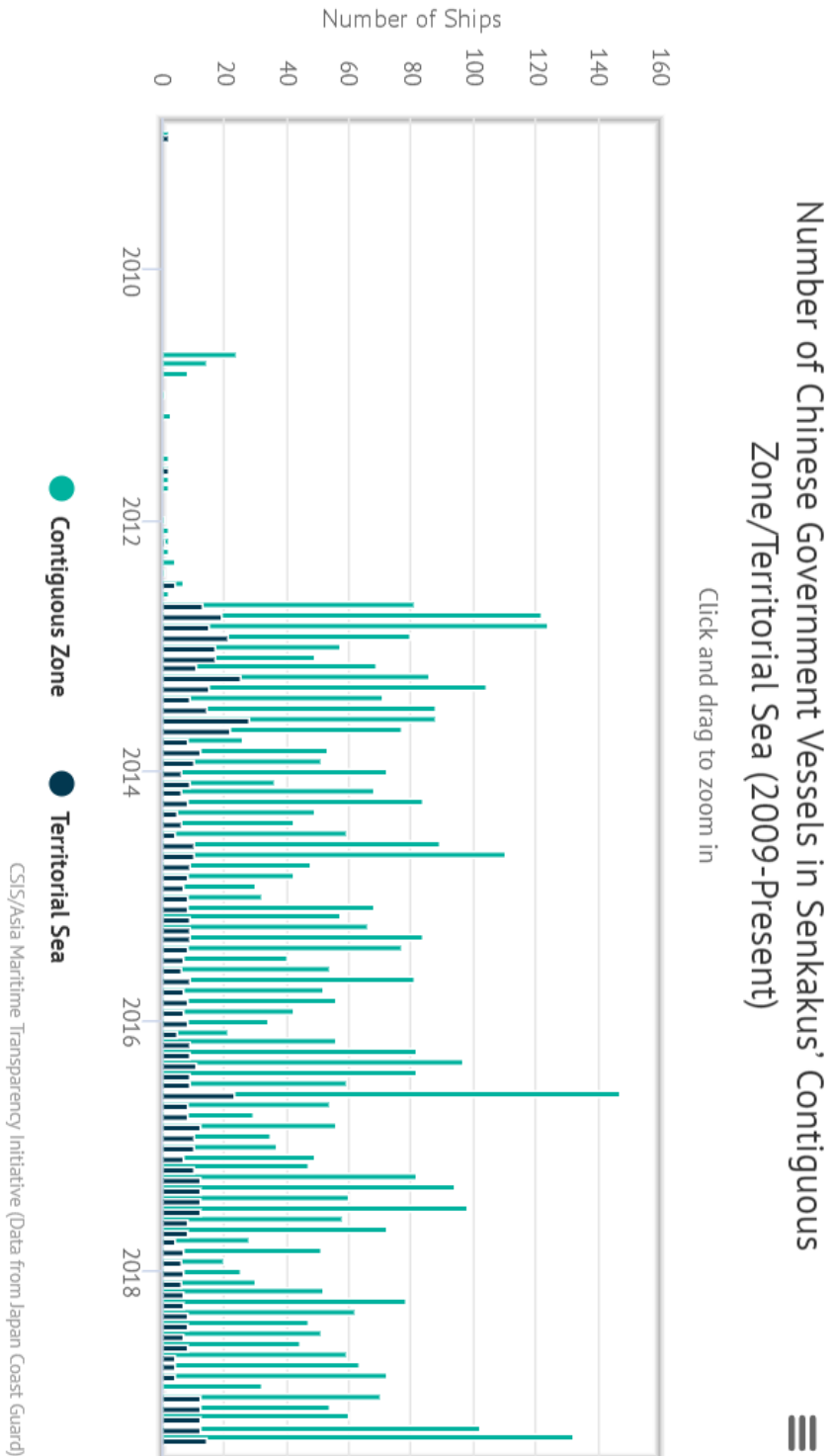


Figure 10. Chinese incursions into Japan's claimed territorial waters.
(Source: CSIS, Asia Maritime Transparency Initiative, 2019.)



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초록

중국의 확장하고 있는 힘과 강압적인 태도는 아시아 태평양 지역 안정에 중대한 영향을 미친다. 아시아 전역의 영토 분쟁에서 이러한 안정을 이루기 위한 중요한 요소 중 하나는 중국의 위기 행동이다. 이 논문은 중국 지도자들이 다른 실행 가능한 정책 대안이 아닌 핵 억지력을 선택하는 상황의 조건을 확인하여 냉전 후 중국의 핵 제지 위협의 성격을 이해하고자 한다. 둘째, 이 논문은 그 조건들을 확인하기 위해 중국의 위기 행동에 대한 새로운 전망 이론의 유용성을 탐구한다. 우선, 이 연구 결과는 영토의 주권과 보전이 핵 강제에 관여하기로 한 결정에 큰 영향을 미친다고 제안한다. 또한, 중국의 권력이 성장함에 따라 베이징이 불리한 위치에 놓이게 되어 핵 강제와 같은 강압적인 정책을 채택할 필요가 없다는 것을 제시함으로써 중국 군의 방향에 대한 현실주의 예측에 이의를 제기한다. 마지막으로, 이러한 결과는 전망 이론이 국제 관계와 중국의 위기 관리 행동에서 중요한 설명력과 예측력을 가지고 있음을 시사한다.

키워드: 중국, 일본, 핵 억지력, 핵 강제, 센카쿠/조어도 분쟁, 동중국해, 위기, 영토 주권

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