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UNDERSTANDING ALLIANCE FORMATION PATTERNS

by

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December 2015

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13. ABSTRACT (maximum 200 words)

In international relations literature, there seems to be some confusion caused by the many contradictory theories on alliance formation patterns. For this reason, this thesis surveys why there is not just one theory that explains most of the alliance formations throughout history. Using logistic regression models and statistical analysis for different historical periods from 1816 to 2012, the thesis explores the effects of four state-level variables—regime type, national material capabilities, geographical proximity, and trade exchange—on alliance formation behaviors.

The results show that the four state-level variables have different levels of significance in the different periods. The thesis concludes that alliance formation behaviors differ depending on the prevailing system-level conditions in the different historical periods, especially under conditions of war and peace and based on the polarity of the international system. The approach presented in the thesis provides a new perspective to analyze alliance formation patterns for a better understanding of future alliances.

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UNDERSTANDING ALLIANCE FORMATION PATTERNS

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In international relations literature, there seems to be some confusion caused by the many contradictory theories on alliance formation patterns. For this reason, this thesis surveys why there is not just one theory that explains most of the alliance formations throughout history. Using logistic regression models and statistical analysis for different historical periods from 1816 to 2012, the thesis explores the effects of four state-level variables—regime type, national material capabilities, geographical proximity, and trade exchange—on alliance formation behaviors.

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I.   INTRODUCTION

"If I must make war, I prefer it to be against a coalition."[1] By these words, Napoleon revealed his low opinion of the importance and strength of alliances; however, while Napoleon proved to be decisive in conquering other countries one at a time, an alliance of Austria, Great Britain, Prussia, and Russia defeated him in 1815.[2] Ultimately, history defied Napoleon and his underestimation of the power of alliances in times of war. In the words of international relations scholar Stephen Walt, an expert on alliances, "those who cause others to align against them are at a significant disadvantage."[3]

Although most political scientists and researchers agree on the importance of alliances in international relations and their effects on wars, they disagree on how to explain the reasons for and mechanisms of alliance formation. Most of the debates are based on which theory explains more historical cases as proof of its validity. For example, Walt presents case studies from the 20th century Middle East to prove his balance of threat theory,[4] whereas William Wohlforth et al. refute it based on case studies that start with Assyria in 900 BCE and cover 2000 years of international politics.[5] Additionally, Michael Atfeld uses case studies from the 19th century to show how alliances form according to rational-choice theory,[6] whereas Kevin Sweeney and Paul Fritz only examine great powers' alliances in the same period to show that an interest-based theory better explains the alliance behavior of states.[7]

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1. Ole R. Holsti et al., *Unity and Disintegration in International Alliances: Comparative Studies* (New York: Wiley, 1973), 22.

2. Holsti, *Unity and Disintegration in International Alliances,* 5.

3. Stephen M. Walt, *The Origins of Alliances* (Ithaca, NY: Cornell University Press, 1987), Preface.

4. Walt, *The Origins of Alliances*, 50.

5. William C. Wohlforth et al., "Testing the Balance-of-Power Theory in World History," *European Journal of International Relations* 13, no. 2 (June 2007): 155.

6. Michael F. Atfeld, "The Decision to Ally: A Theory and Test," *The Western Political Quarterly* 37, no. 4 (December 1984): 523–544.

7. Kevin Sweeney and Paul Fritz, "Jumping on the Bandwagon: An Interest-Based Explanation for Great Power Alliances," *The Journal of Politics* 66, no. 2 (2004): 428–449.

This thesis aims to achieve a better understanding of the patterns of alliance formation and the reasons behind the diversity of conclusions in alliance formation success. We argue that varying conditions in different historical periods lead to different alliance behaviors that cannot be captured by a single theory. By identifying the prevailing conditions in the international system during the different periods included in the analysis, we attempt to relate these conditions to the alliance behavior at the state level, which allows us to have a better understanding of future alliance behaviors under similar conditions.

This chapter begins with a discussion of the different theories of alliance formation to identify possible reasons for the disagreements on how to explain alliance patterns. We then provide a conceptual framework to bridge the gap between these theories by presenting our main hypothesis, which focuses on providing a systematic way to understand how and why different patterns in alliance behaviors emerge. We then present a detailed methodology for testing our main hypothesis.

A.   LITERATURE REVIEW

Several predominant theories exist to explain the conditions under which states form alliances. The classic "realist" theory of alliance formation among states is known as the "Balance of Power" theory. Among the most known advocates of this theory are Hans J. Morgenthau, Kenneth Waltz, and George Liska. Morgenthau in *Politics Among Nations* points out that the notion of the Balance of Power can be interpreted "(1) as a policy aimed at a certain state of affairs, (2) as an actual state of affairs, (3) as an approximately equal distribution of power, [and] (4) as any distribution of power."[8] He further argues that the concept is based on the widely used phenomenon of "equilibrium" in which "the balance of power and policies aiming at its preservation are not only inevitable but are an essential stabilizing factor in a society of sovereign nations."[9]

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8. Hans Joachim Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Knopf, 1972), 167.

9. Morgenthau, *Politics Among Nations*, 167.

For Waltz, "states behave in ways that result in balances forming."[10] Even when the balance is disrupted by one coalition's win over another, the winning coalition's unity will eventually weaken, and the balance will be restored again.[11] This occurs because security is the most essential end goal for states, and increased power, paradoxically, may not achieve that end. One of the reasons why a preponderance of power may lead to insecurity is that the division of gains in the winning coalition may favor some countries more and thus create security challenges to the others.[12] Liska builds on these observations and uses historical cases to prove the significance of the Balance of Power theory. For instance, Otto von Bismarck—as the first imperial chancellor of Germany— used his system of alliances in order to keep the equilibrium of forces and in the meantime maintain peace in Europe based on a mutual-assistance alliance of all great powers.[13]

On the other hand, many researchers challenge the validity of the Balance of Power theory. Paul W. Schroeder, for example, gives the same example of the Bismarckian system of alliances to argue that the balance of power was not the main purpose of all of Bismarck's alliances, but sometimes, he used alliances for the management and control of his enemies.[14] Additionally, Brian Healy and Arthur Stein conclude that the existing theories—among them the Balance of Power—have been overgeneralized through history. The authors argue that these theories might fit for a certain period (or periods) of time, but might not fit for other eras. Given the results Healy and Stein have reached, "a careful observer of contemporary international politics

10. Kenneth Neal Waltz, *Theory of International Politics* (New York: McGraw-Hill, 1979), 125.

11. Waltz, *Theory of International Politics*, 126.

12. Waltz, *Theory of International Politics*, 106.

13. George Liska, *Nations in Alliance: The Limits of Interdependence* (Baltimore: Johns Hopkins University Press, 1962), 32–33.

14. Paul W. Schroeder, "Alliances, 1815–1945: Weapons of Power and Tools of Management," in *Historical Dimensions of National Security Problems,* ed. Klaus Knorr (Lawrence, KS: University Press of Kansas, 1976), 242.

would be wise to reconsider the tried and apparently untrue generalizations that have long passed for balance of power theory."[15]

Other authors present "Bandwagoning" as an alternative to balance of power theory. Henry A. Kissinger argues,

> theorists of the balance of power often leave the impression that it is the natural form of international relations. In fact, balance-of-power systems have existed only rarely in human history. […] For the greatest part of humanity and the longest part of history empire has been the typical mode of government. […] Empires have no need for a balance of power.[16]

Walt also questions the Balance of Power theory by introducing some examples where weaker states bandwagoned with the stronger states rather than balancing against them. He contends that "states stand to ally with or against the foreign power that poses the greatest threat."[17]

Accordingly, Walt presents "Balance of Threat" theory as an alternative to Balance of Power theory. He maintains that it has a better explanatory power because it takes into account the effect of "geographic proximity, offensive capabilities, and perceived intentions" on alliance formation.[18] Whereas Waltz admits that the Balance of Power theory is not intended to explain the particular choices of states, Walt claims that the Balance of Threat theory can predict these choices because "a state [tends to] ally with the side it believes is least dangerous."[19] Focusing on historical cases of alliances in the Middle East from 1955 to 1979, Walt concludes that pragmatic interests and security considerations are more significant for alliance formation than ideological preferences.[20]

However, Randall Schweller contends that Walt's Balance of Threat theory only tests the alliance behaviors of threatened states and ignores the behavior of unthreatened

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15. Brian Healy and Arthur Stein, "The Balance of Power in International History: Theory and Reality," *Journal of Conflict Resolution* 17, no. 1 (March, 1973): 59.

16. Henry Kissinger, *Diplomacy* (New York: Touchstone, 1995), 21.

17. Walt, *The Origins of Alliances*, 21.

18. Walt, *The Origins of Alliances*, 5.

19. Walt, *The Origins of Alliances*, 121, 264.

20. Walt, *The Origins of Alliances*, 33.

states.[21] Schweller proposes the "Balance of Interests" theory to claim that states tend to bandwagon for profit contrary to the balancing behavior claimed by realist theorists.[22] Kevin Sweeny and Paul Fritz builds on Schweller's theory to argue that the

> balance of threat theory, as well as balance of power theory, explain alliance formation only in high-insecurity environments when survival is at stake and […] it seems that interest similarity—where both security and nonsecurity interests are considered—rather than threat alone provides a more complete explanation for alliance formation.[23]

More recently, in "Balancing, Stability, and War: The Mysterious Case of the Napoleonic International System," Richard Rosecrance and Chih-Cheng Lo apply game theory to test the Balance of Threat theory. They conclude that only when the threat caused by an aggressor declines to a certain level, the collective action problem is resolved and a balancing alliance is formed. Above a certain level of threat, states tend to bandwagon with the aggressor and below it, they tend to balance against the aggressor's threat.[24] For other authors, game theory by itself explains the mechanisms and reasons of alliance formation. William H. Riker uses John von Neumann and Oskar Morgenstern's "Minimax" theorem and the "*n*-Person Game" theory, previously used for economical behavior, to analyze political behavior in alliances. He then introduces the "Size Principle," which states that "only minimum winning coalitions occur."[25] Benjamin Fordham and Paul Poast point out that Riker's Size Principle has been long neglected and it is a powerful means in explaining both offensive and defensive alliances. In the case of offensive alliances, a certain minimum size can secure the alliance's goals, whereas a larger size can reduce the benefits to each of the other members.[26] In defensive alliances,

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21. Randall L. Schweller, "Bandwagoning for Profit: Bringing the Revisionist State Back In," *International Security* 19, no. 1 (1994): 83.

22. Schweller, "Bandwagoning for Profit," 99.

23. Sweeney and Fritz, "Jumping on the Bandwagon," 436.

24. Richard Rosecrance and Chih-Cheng Lo, "Balancing, Stability, and War: The Mysterious Case of the Napoleonic International System," *International Studies Quarterly* 42, no. 4 (December 1996): 497.

25. William H. Riker, *The Theory of Political Coalitions* (New Haven: Yale University Press, 1962), 32.

26. Benjamin Fordham and Paul Poast, "All Alliances are Multilateral: Rethinking Alliance Formation," *Journal of Conflict Resolution* 26, no. 1 (2014): 5–6.

they argue that the additional members' potential conflicts may establish a commitment problem for the alliance.[27]

The summary of the literature on alliance formation theories raises the following question: Why is there not just *one* theory that explains most of the alliance formations throughout history? We argue that the difficulty in agreeing on a common theory that explains most alliance formations lies in the different prevailing conditions during a certain historical period and consequently in the unique behavioral patterns of the states and their leaders.

B.   MAIN HYPOTHESIS

Although there is not one single theory that explains all alliance formation behaviors throughout history, we test whether certain prevailing conditions at the system level in different eras cause similar alliance formation patterns. Our main hypothesis is that we can determine the conditions that affect alliances by relating the alliance patterns to system-level conditions, which leads to a better understanding of alliance behaviors under similar conditions in future alliances.

C.   METHODOLOGY

To test the hypothesis, the analysis advances in the following order (refer to Figure 1). First, based on previous research and existing literature, the following conditions are examined to determine their relevance to alliance formation behaviors. These conditions include the following variables: regime type, national material capabilities, geographical proximity, and trade exchange. Second, we define the eras that potentially have common alliance formation patterns relying mainly on previously distinguished timeframes characterized by important events or conflicts that introduced a critical change in international relations. Specifically, these timeframes include the post-Napoleonic era (1816–1914), World War I (1914–1918), the interwar period (1918–1939), World War II (1939–1945), the Cold War (1945–1990), and the post–Cold War era (1990–2012). Third, we specify whether or not an alliance was formed between each

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27. Fordham and Poast, "All Alliances are Multilateral," 6.

of the dyads of states present in the international system in each of the previously defined periods.

Figure 1.   Flow Chart of the Methodology
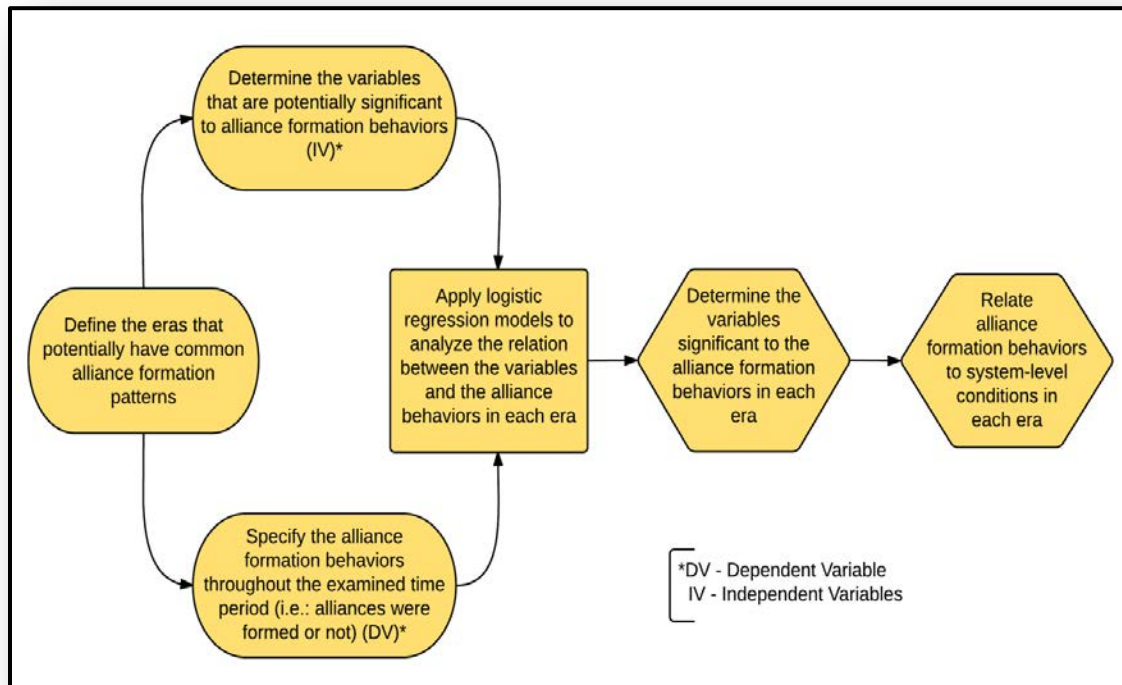
The next step is to use logistic regression models to analyze the relationship between each of the different conditions (as independent variables) and the alliance formation behavior (as a dependent variable) in each era. The results of this analysis determine the significance of each of the conditions in relation to the alliance behaviors in a specific era. In this way, we can distinguish the conditions that are significant to states' alliance behaviors in certain eras and whether or not the same conditions can cause different behaviors or are less significant in other eras. We then analyze whether the system-level conditions for each era (the polarity of the system and the state of war and peace) have an effect on the different alliance behavior patterns.

The thesis draws on the following data sets to test our hypothesis. We use the Correlates of War Project's list of alliances, the Formal Interstate Alliances data set

(v4.1), which identifies the alliance formations from 1816 to 2012.[28] Accordingly, the dataset provided by Douglas M. Gibler and Meredith Reid Sarkees differentiates between four types of alliances:

> The alliance type was coded as 'I' [for] defense pact, 'II' [for] neutrality or non-aggression pact, or 'III' [for] entente. Generally, Type I alliances imposed a higher level of obligation on the signatories than the Type II alliances, and both Types I and II imposed greater obligations than Type III alliances.[29]

For our analysis, we follow the same concept of defining a military alliance as Andrew G. Long did, and we therefore use defense pacts as the only type of military agreement that meets the requirements for a military alliance.[30] Several other researchers have also used defense pacts in their studies to present a similar argument.[31]

Therefore, our list of alliances starts with the military agreements between the European countries of the United Kingdom, Germany, Austria-Hungary, and Russia in 1816 and ends with the defense pact between Armenia and Russia, which was signed on August 20, 2010, extending Russia's permissible military presence in Armenia until 2044 in exchange for security guarantees.[32] To observe the alliance formation behavior, we test four independent variables that are likely to affect alliance formation. The trade data are derived from the Correlates of War Project Bilateral Trade data set (v3.0).[33] Our model also includes the states' capabilities that are measured using the Correlates of War Project

28. Douglas M. Gibler, *International Military Alliances: 1648-2008.*

29. Douglas M. Gibler and Meredith Reid Sarkees, "Measuring Alliances: The Correlates of War Formal Interstate Alliance Dataset, 1816-2000," *Journal of Peace Research* 41, no. 2 (2004): 212.

30. Andrew G. Long, "Defense Pacts and International Trade," *Journal of Peace Research* 40, no. 5 (September 2003): 542.

31. T. Camber Warren, "The Geometry of Security: Modeling Interstate Alliances as Evolving Networks," *Journal of Peace Research* 47, no. 6 (2010): 705; Kevin Sweeney and Paul Fritz, "Jumping on the Bandwagon: An Interest-Based Explanation for Great Power Alliances," *The Journal of Politics* 66, no. 2 (2004): 431.

32. Jaroslaw Wisniewski, "EU energy diversification policy and the case of South Caucasus," *Political Perspectives* 5, no. 2 (2011): 65.

33. Katherine Barbieri and Omar Keshk. *Correlates of War Project Trade Data Set Codebook,* Ver. 3.0 (2012), accessed May 2, 2015, http://correlatesofwar.org.

National Material Capabilities dataset (v4.0).[34] Additionally, the Direct Contiguity data set (v3.1) of the Correlates of War coding system allows us to create a dichotomous variable representing geographical proximity between states.[35] Finally, to capture the regime type of states, we use the 21-point scaled Polity scores from the Polity IV dataset.[36]

The thesis proceeds as follows. In Chapter II, we introduce the different hypotheses related to the aforementioned independent variables. Next, we apply different regression models to test these hypotheses, and we present the empirical results. In Chapter III, we introduce system-level analysis to understand how the significance of each of the variables at the state level changes from one period to another. In this respect, we analyze each of the four variables in a separate section. In the final chapter, we offer conclusions.

The thesis finds that the four state-level variables (regime type, national material capabilities, geographical proximity, and trade exchange) have varying levels of impact on alliance formation during different systemic conditions. By comparing the results across different international systems, clear differences in alliance behaviors emerge between times of peace and war. Moreover, alliance behaviors are more consistent in unipolar and bipolar international systems than in multipolar systems.

34. J. David Singer, "Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816-1985," *International Interactions* 14 (1987): 115–132.

35. Correlates of War Project, *Direct Contiguity Data, 1816-2006*, Ver. 3.1, accessed May 21, 2015, http://correlatesofwar.org.

36. Center for Systemic Peace, "Polity IV Annual Time-Series, 1800-2014," accessed May 21, 2015, http://www.systemicpeace.org/inscrdata.html.

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II.   STATISTICAL ANALYSIS

In this chapter, we apply several logistic regression models to test the effect of four state-level independent variables (regime type, national material capabilities, geographical proximity, and trade exchange) on the alliance behavior of states. To perform the analysis, we present four null hypotheses to test, each related to one variable, using logistic models. The results of the analysis reveal the significance of each of these variables on the likelihood of alliance formation in the different periods.

A.   LOGISTIC REGRESSION

The analysis is based on a logistic regression model, which is represented by Equation 1. The model analyzes whether or not an alliance is formed, **A** (as a dependent variable), in relation to the states' national capabilities, **C**, the trade exchange between them, **T**, the difference in regime types, **R**, and their geographical proximity to each other, **G**. The model is represented by

$$ A = \frac{e^{(\varepsilon + \alpha C + \beta T + \gamma R + \delta G)}}{1 + e^{(\varepsilon + \alpha C + \beta T + \gamma R + \delta G)}} \qquad (1) $$

A logistic regression model is applied because the dependent variable **A** is binary. In other words, two countries either ally with each other (given a value of 1), or they do not (given a value of 0). The parameters **α**, **β**, **γ**, and **δ** are the rates of change associated with each of the independent variables, and the parameter **ε** is an estimate of the error.

The regression model is applied separately to the following periods: post-Napoleonic era (1816–1914), World War I (1914–1918), the interwar period (1918–1939), World War II (1939–1945), the Cold War (1945–1990), and the post–Cold War era (1990–2012). The results of the analysis determine the significance of each of the variables on the alliance behaviors in a specific era. In this respect, conditions that are significant to the states' alliance behaviors in a certain era might cause different behaviors or have less significance in other eras.

The following hypotheses summarize the initial assumptions about the relationships between the dependent variable and each of the independent variables:

Hypothesis 1: The larger the difference in the capabilities of two states, the more likely they will ally.

Hypothesis 2: Stronger trade relations between two states lead to a higher likelihood for an alliance to form.

Hypothesis 3: A state is more likely to ally with another state of a similar regime type than with a state of a different regime type.

Hypothesis 4: It is more likely for states that are geographically closer to form an alliance than those that are geographically distant from each other.

B.   STATISTICAL ANALYSIS

Before applying the logistic regression analysis, the data is arranged in five steps. First, the *Alliance Formation* behavior, as a dependent variable, is included in the analysis as dyads of all the countries that existed in the international system in the different periods defined previously. The dependent variable takes a value of 0 (if no alliance is formed) or 1 (if an alliance is formed). Second, the economic relations are included in the data set as the value of the total size of the *Trade Exchange* between the two countries. Third, the countries' capabilities are measured according to the Composite Index of National Capability. Then, a *Ratio of the Capabilities* (the lower index divided by the higher index) is included in the analysis.

Fourth, the *Geographical Proximity* of two countries is measured according to the classification used in the Direct Contiguity dataset, in which

> the classification system for contiguous dyads is comprised of five categories, one for land contiguity and four for water contiguity. Land contiguity is defined as the intersection of the homeland territory of the two states in the dyad, either through a land boundary or a river. Water contiguity is divided into four categories, based on a separation by water of 12, 24, 150, and 400 miles.[37]

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37. Correlates of War Project, *Direct Contiguity Data, 1816-2006*, Ver. 3.1.

The *Geographical Proximity* is included in the analysis as a dummy variable. It is assigned a value of 1 in case the two countries in the alliance dyads fall within the first three groups in the Direct Contiguity classification system (land contiguity and the first two categories in the water contiguity), in which case they are considered geographically close. The *Geographical Proximity* variable is assigned a value of 0 for the other categories, in which case the countries are considered geographically distant from each other.

Fifth, the **Difference in Regime Types** is included as a measurement of the absolute difference in the democratic scores of two countries according to the "Polity IV Annual Time-Series, 1800–2014" which assigns values between -10 for the less democratic states and 10 for the most democratic states.

The variables are derived from different data sets. The alliance formation behavior (as a dependent variable) is taken from the Correlates of War Formal Interstate Alliances data set (v4.1).[38] The trade relations are taken from the Bilateral Trade data set (v3.0).[39] The states' capabilities are measured according to the National Material Capabilities dataset (v4.0).[40] The geographical distance is assigned according to the Direct Contiguity data set (v3.1).[41] The regime types are taken from the "Polity IV Annual Time-Series, 1800–2014."[42] The analysis is based on a 5% significance level.

It is important to note that the independent variables used in the regression analysis have different numbers of observations. For example, most of the records for the *Trade Exchange* variable are missing before and during the two World Wars, as can be seen from the comparison of the number of observations in Table 1 and Table 2.

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38. Gibler, *International Military Alliances: 1648-2008*."

39. Barbieri and Keshk, *Correlates of War Project Trade Data Set Codebook,* Ver. 3.0.

40. Singer, "Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816-1985."

41. Correlates of War Project, *Direct Contiguity Data, 1816-2006*, Ver 3.1.

42. Center for Systemic Peace, "Polity IV Annual Time-Series, 1800-2014."

Table 1.   Logit Regressions—Alliance Formation from 1816–2012 (All Independent Variables Included)

	Alliance Behavior (Formed or Not Formed)					
	Historical Periods					
	1816-1914	1914-1918	1918-1939	1939-1945	1945-1990	1991-2012
	(1)	(2)	(3)	(4)	(5)	(6)
Ratio of CINC	0.807***	-52.267	1.884***	0.294	0.607***	0.581***
	(0.259)	(72,121.240)	(0.186)	(7.391)	(0.027)	(0.033)
Trade Exchange	-0.00000	0.726	0.002***	-0.315	0.0003***	0.0001***
	(0.00001)	(288.435)	(0.0003)	(0.344)	(0.00001)	(0.00000)
Difference in Regime Types	-0.023	-6.821	0.028***	0.058	-0.075***	-0.163***
	(0.015)	(5,247.558)	(0.009)	(1.270)	(0.001)	(0.002)
Geographical Proximity	-0.243	300.904	1.710***	15.429	1.802***	2.061***
	(0.200)	(111,206.700)	(0.116)	(3,549.713)	(0.024)	(0.031)
Constant	-3.489***	-290.938	-4.743***	-15.220	-2.217***	-1.971***
	(0.152)	(115,054.100)	(0.137)	(3,549.738)	(0.014)	(0.017)
Observations	6,667	28	10,597	23	245,447	177,287
Log Likelihood	-871.351	-1.386	-1,377.985	-5.052	-64,465.750	-41,933.290
Akaike Inf. Crit.	1,752.703	12.773	2,765.970	20.105	128,941.500	83,876.590

Notes: Significance levels: *p<0.1; **p<0.05; ***p<0.01. The number in parentheses is the standard error.

This variation in observations affects the regression analysis when all the variables are introduced together in the analysis because the missing data for a certain variable causes the exclusion of the data for the other variables for a certain observation. Therefore, the logistic regression analysis is repeated several times to prevent any bias in the results caused by missing data. While Table 1 summarizes the results of the regression models for all the periods with all the independent variables included in the analysis, Table 2 presents the results for all the periods excluding the *Trade Exchange* variable.

Table 2.   Logit Regressions—Alliance Formation from 1816–2012
(Independent Variables Excluding the Trade Exchange)

	Alliance Behavior (Formed or Not Formed)					
	Historical Periods					
	1816-1914	1914-1918	1918-1939	1939-1945	1945-1990	1991-2012
	(1)	(2)	(3)	(4)	(5)	(6)
Ratio of CINC	0.761***	0.663**	1.497***	-0.359**	0.542***	0.478***
	(0.088)	(0.278)	(0.122)	(0.159)	(0.018)	(0.023)
Difference in Regime Types	-0.096***	0.032*	0.019***	-0.005	-0.070***	-0.172***
	(0.006)	(0.017)	(0.006)	(0.007)	(0.001)	(0.002)
Geographical Proximity	2.560***	1.678***	2.852***	1.708***	2.156***	2.327***
	(0.048)	(0.191)	(0.076)	(0.109)	(0.016)	(0.021)
Constant	-4.324***	-4.581***	-5.731***	-3.533***	-2.429***	-2.044***
	(0.052)	(0.180)	(0.087)	(0.085)	(0.009)	(0.011)
Observations	97,262	7,972	74,228	21,038	628,746	427,488
Log Likelihood	-7,882.180	-729.302	-3,772.084	-2,697.846	-147,608.300	-90,605.420
Akaike Inf. Crit.	15,772.360	1,466.605	7,552.169	5,403.692	295,224.500	181,218.800

Notes: Significance Levels: $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$. The number in parenthesis is the standard error.

This variation in observations affects the regression analysis when all the variables are introduced together in the analysis because the missing data for a certain variable causes the exclusion of the data for the other variables for a certain observation. Therefore, the logistic regression analysis is repeated several times to prevent any bias in the results caused by missing data. While Table 1 summarizes the results of the regression models for all the periods with all the independent variables included in the analysis, Table 2 presents the results for all the periods excluding the *Trade Exchange* variable.

Therefore, when introducing the *Trade Exchange* variable, the number of observations decreases from 97,262 to 6,667 (ratio of 1:14.6) in the period of 1816–1914, from 7,972 to 28 (ratio is 1:284.7) in World War I, and from 21,038 to 23 (ratio of

1:914.7) in World War II. The distortion caused by *Trade Exchange* has a lesser effect for the other periods. During the interwar period (1918–1939), the reduction in the number of observations has a ratio of 1:7, and after 1945, the ratio is about 1:3. For the other variables, few data are missing, which presumably has less effect on the analysis. In all cases, the regression models are repeated for each period by varying the variables introduced in the analysis in order to check the effect of the missing data on the authenticity of the results.

C.   RESULTS OF THE ANALYSIS

Tables 3, 4, 5, 6, 7, and 8 report the results of the logistic regression analysis models for each period separately. In each of these tables, the logistics regression analysis is repeated for all the possible combinations of independent variables for two reasons: first, to control for any correlation between the independent variables and, second, to check for the effect of any missing data.

1.   Post-Napoleonic Era (1816–1914)

As can be seen from Table 3, running the regression model for each of the independent variables separately reveals that all are significant except for *Trade Exchange*. Introducing the *Trade Exchange* variable affects the significance of two of the other variables (*Difference in Regime Types* and *Geographical Proximity*) as can be seen from the model in column 1 in Table 3. The model in column 7 shows that the *Trade Exchange* variable in itself is not significant for the formation of alliances in this period. Moreover, the results in the other models show that including or excluding any of the other variables does not influence the significance of the remaining variables.

Thus, after excluding the *Trade Exchange* variable from the model in column 2, the results reveal that the *Ratio of the Capabilities* and *Geographical Proximity* are positively related to the formation of alliances, and the *Difference in Regime Types* is negatively related. This implies that countries with similar national capabilities and that are geographically closer are more likely to ally with each other. The negative and

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statistically significant coefficient for the *Difference in Regime Types* indicates that states with similar regime types tend to ally with each other.

Table 3. Logit Regressions—Alliance Formation from 1816–1914

	Alliance Behavior (Formed or Not Formed)								
	Historical Periods								
	1816-1914	1816-1914	1816-1914	1816-1914	1816-1914	1816-1914	1816-1914	1816-1914	1816-1914
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ratio of CINC	0.807***	0.761***		0.759***	0.954***	0.936***			
	(0.259)	(0.088)		(0.080)	(0.052)	(0.047)			
Trade Exchange	-0.00000						-0.00000		
	(0.00001)						(0.00001)		
Difference in Regime Types	-0.023	-0.096***	-0.096***	-0.137***				-0.138***	
	(0.015)	(0.006)	(0.006)	(0.007)				(0.007)	
Geographical Proximity	-0.243	2.560***	2.581***		2.693***				2.706***
	(0.200)	(0.048)	(0.048)		(0.029)				(0.029)
Constant	-3.489***	-4.324***	-4.119***	-3.454***	-4.100***	-3.377***	-2.926***	-3.242***	-3.827***
	(0.152)	(0.052)	(0.044)	(0.043)	(0.027)	(0.021)	(0.052)	(0.034)	(0.020)
Observations	6,667	97,262	98,370	97,262	127,936	127,936	7,525	98,370	129,284
Log Likelihood	-71.351	-7,882.180	-7,929.590	-9,143.008	-18,726.090	-22,556.840	-1,513.629	-9,209.357	-18,932.750
Akaike Inf. Crit.	1,752.703	15,772.360	15,865.180	18,292.020	37,458.180	45,117.690	3,031.258	18,422.710	37,869.490

Notes: Significance levels: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$. The number in parentheses is the standard error.

2. World War I (1914–1918)

Table 4 shows that the *Trade Exchange* variable, which is statistically insignificant by itself, affects the significance of the other variables because it considerably affects the number of observations, as was mentioned earlier. On the other hand, the other variables do not affect each other's statistical significance.

Table 4.   Logit Regressions—Alliance Formation from 1914–1918

	Alliance Behavior (Formed or Not Formed)								
	Historical Periods								
	1914-1918	1914-1918	1914-1918	1914-1918	1914-1918	1914-1918	1914-1918	1914-1918	1914-1918
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ratio of CINC	-52.267	0.663**		0.814***	0.510**	0.815***			
	(72,121.240)	(0.278)		(0.270)	(0.233)	(0.218)			
Trade Exchange	0.726						-0.009		
	(288.435)						(0.011)		
Difference in Regime Types	-6.821	0.032*	0.033*	0.010				0.011	
	(5,247.558)	(0.017)	(0.017)	(0.017)				(0.017)	
Geographical Proximity	300.904	1.678***	1.781***		2.331***				2.420***
	(111,206.700)	(0.191)	(0.190)		(0.136)				(0.135)
Constant	-290.938	-4.581***	-4.472***	-4.214***	-4.321***	-3.905***	-1.733*	-4.050***	-4.241***
	(115,054.100)	(0.180)	(0.162)	(0.165)	(0.108)	(0.094)	(0.992)	(0.143)	(0.086)
Observations	28	7,972	8,414	7,972	9,870	9,870	28	8,414	10,356
Log Likelihood	-1.386	-729.302	-738.502	-759.762	-1,014.416	-1,133.503	-6.631	-772.466	-1,023.861
Akaike Inf. Crit.	12.773	1,466.605	1,483.005	1,525.525	2,034.832	2,271.006	17.263	1,548.932	2,051.721

Notes: Significance levels: *p<0.1; **p<0.05; ***p<0.01. The number in parentheses is the standard error.

As for the results, the *Ratio of the Capabilities* and *Geographical Proximity* are positively related to the formation of alliances. In other words, countries with similar national capabilities and that are geographically closer are more likely to ally with each other. As for the *Difference in Regime Types*, there is not enough evidence to infer that it is statistically significant on the 95% confidence level.

3.   Interwar Period (1918–1939)

As can be seen from Table 5, all the independent variables are positively related to the formation of alliances in the interwar period. Introducing the *Trade Exchange*

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variable affects the number of observations, but not to the extent that it changes the statistical significance of the other variables. Moreover, the variables remain significant whether introduced alone in the analysis or in combination with other variables.

Table 5.   Logit Regressions—Alliance Formation from 1918–1939

	Alliance Behavior (Formed or Not Formed)								
	Historical Periods								
	1918-1939	1918-1939	1918-1939	1918-1939	1918-1939	1918-1939	1918-1939	1918-1939	1918-1939
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ratio of CINC	1.884***	1.497***		1.698***	1.238***	1.430***			
	(0.186)	(0.122)		(0.114)	(0.115)	(0.109)			
Trade Exchange	0.002***						0.003***		
	(0.0003)						(0.0003)		
Difference in Regime Types	0.028***	0.019***	0.021***	-0.012**				-0.013**	
	(0.009)	(0.006)	(0.006)	(0.006)				(0.006)	
Geographical Proximity	1.710***	2.852***	2.944***		2.769***				2.832***
	(0.116)	(0.076)	(0.076)		(0.070)				(0.069)
Constant	-4.743***	-5.731***	-5.245***	-5.007***	-5.415***	-4.932***	-3.416***	-4.420***	-5.025***
	(0.137)	(0.087)	(0.073)	(0.076)	(0.062)	(0.054)	(0.055)	(0.058)	(0.046)
Observations	10,597	74,228	74,406	74,228	78,318	78,318	11,167	74,406	78,516
Log Likelihood	-1,377.985	-3,772.084	-3,845.131	-4,323.032	-4,191.981	-4,798.262	-1,687.522	-4,428.697	-4,248.294
Akaike Inf. Crit.	2,765.970	7,552.169	7,696.263	8,652.064	8,389.962	9,600.525	3,379.044	8,861.395	8,500.588

Notes: Significance levels: *p<0.1; **p<0.05; ***p<0.01. The number in parentheses is the standard error.

However, comparing the models in columns 1, 3, and 4 in Table 5 reveals a shift from positive to negative in the relationship between the regime types and the formation of alliances. While the model in column 1 includes all the independent variables, the model in column 3 introduces the *Geographical Proximity* and the *Difference in Regime Types* in the analysis without the other variables. Moreover, the model in column 4

excludes the *Geographical Proximity* from the analysis. Therefore, to test which model better explains the relationship between the dependent and independent variables, we use the methodology recommended by T. Camber Warren in his piece, "Not by the Sword Alone," which is based on generating receiver operating characteristics (ROC) curves for the different models. Then, the area under each curve (the AUC statistic), which "represents a measure of the overall predictive accuracy of the model,"[43] is measured. In our case, Figure 2 shows the receiver operating characteristic (ROC) curves for Models (1), (3) and (4) to compare their predictive accuracies.

Figure 2.   ROC Curves for Models 1 (Green), 3 (Black), and 4 (Red)

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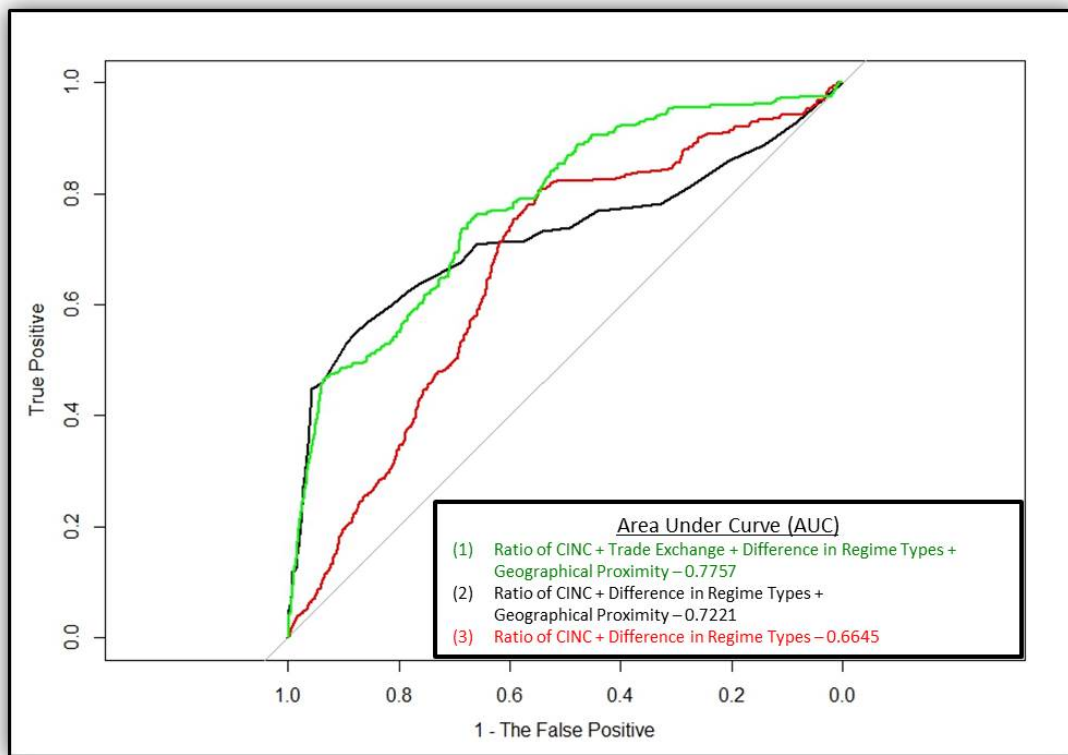
43. T. Camber Warren, "Not by the Sword Alone: Soft Power, Mass Media, and the Production of State Sovereignty," *International Organization* 68, no. 1 (January 2014): 129.

The AUC statistic for the three models reveals that the predictive accuracy of Model (1) with all the independent variables included is the highest (0.7757), while the predictive accuracy of Model (4) is the lowest. Consequently, the results of the analysis using Model (1) show that all the independent variables are positively related to the formation of alliances. In other words, states with higher trade exchange, similar national capabilities, different regime types, and that are geographically closer are more likely to ally with each other during this period.

4.   World War II (1939–1945)

Table 6 shows that the *Trade Exchange* variable, which is statistically insignificant by itself, affects the significance of the other variables because it considerably affects the number of observations, as previously mentioned (see the model in column 1).

Table 6.   Logit Regressions—Alliance Formation from 1939–1945

	Alliance Behavior (Formed or Not Formed)								
	Historical Periods								
	1939-1945	1939-1945	1939-1945	1939-1945	1939-1945	1939-1945	1939-1945	1939-1945	1939-1945
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ratio of CINC	0.294	-0.359**		-0.131	-0.165	0.036			
	(7.391)	(0.159)		(0.154)	(0.145)	(0.141)			
Trade Exchange	-0.315						-0.157		
	(0.344)						(0.181)		
Difference in Regime Types	0.058	-0.005	-0.004	-0.012*				-0.012*	
	(1.270)	(0.007)	(0.007)	(0.007)				(0.007)	
Geographical Proximity	15.429	1.708***	1.673***		1.858***				1.828***
	(3,549.713)	(0.109)	(0.107)		(0.095)				(0.094)
Constant	-15.220	-3.533***	-3.638***	-3.364***	-3.683***	-3.515***	-1.014	-3.404***	-3.709***
	(3,549.738)	(0.085)	(0.073)	(0.081)	(0.057)	(0.054)	(0.839)	(0.067)	(0.043)
Observations	23	21,038	21,056	21,038	24,244	24,244	36	21,056	24,284
Log Likelihood	-5.052	-2,697.846	-2,700.918	-2,790.565	-3,052.512	-3,195.726	-7.680	-2,791.467	-3,091.301
Akaike Inf. Crit.	20.105	5,403.692	5,407.835	5,587.130	6,111.024	6,395.453	19.360	5,586.934	6,186.602

Notes: Significance levels: *p<0.1; **p<0.05; ***p<0.01. The number in parentheses is the standard error.

The other models reveal that the other variables do not affect each other's statistical significance. As for the results, while the *Ratio of the Capabilities* is negatively related to the formation of alliances, the *Geographical Proximity* is positively related. In other words, states with weak national capabilities tend to ally with stronger states. On the other hand, states that are geographically closer are more likely to ally with each other. As for the *Difference in Regime Types*, there is not enough evidence to infer that it is statistically significant on the 95% confidence level.

5.   The Cold War (1945–1990)

As can be seen from Table 7, all of the regression models yield similar results, in which all the independent variables are statistically significant to the formation of alliances in the Cold War era.

While the *Ratio of the Capabilities, the Trade Exchange*, and *Geographical Proximity* are positively related to the formation of alliances, the *Difference in Regime Types* is negatively related. In other words, countries with higher trade exchange, similar national capabilities, and that are geographically closer are more likely to ally with each other. As for the *Difference in Regime Types*, it is negatively related to alliance formation, which means that similar regime types tend to ally together.

Table 7.   Logit Regressions—Alliance Formation from 1945–1990

	Alliance Behavior (Formed or Not Formed)								
	Historical Periods								
	1945-1990	1945-1990	1945-1990	1945-1990	1945-1990	1945-1990	1945-1990	1945-1990	1945-1990
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ratio of CINC	0.607***	0.542***		0.691***	0.453***	0.639***			
	(0.027)	(0.018)		(0.017)	(0.016)	(0.016)			
Trade Exchange	0.0003***						0.0003***		
	(0.00001)						(0.00001)		
Difference in Regime Types	-0.075***	-0.070***	-0.071***	-0.080***				-0.081***	
	(0.001)	(0.001)	(0.001)	(0.001)				(0.001)	
Geographical Proximity	1.802***	2.156***	2.197***		2.349***				2.382***
	(0.024)	(0.016)	(0.016)		(0.014)				(0.014)
Constant	-2.217***	-2.429***	-2.262***	-2.249***	-2.867***	-2.747***	-2.430***	-2.030***	-2.737***
	(0.014)	(0.009)	(0.007)	(0.009)	(0.007)	(0.006)	(0.007)	(0.007)	(0.005)
Observations	245,447	628,746	628,772	628,746	744,494	744,494	280,801	628,772	745,406
Log Likelihood	-64,465.7	-147,608.3	-148,126.0	-155,539.5	-179,205.6	-189,752.1	-80,341.2	-156,392.5	-180,996.0
Akaike Inf. Crit.	128,941.5	295,224.5	296,258.0	311,084.9	358,417.1	379,508.2	160,686.5	312,789.1	361,995.9

Notes: Significance levels: *p<0.1; **p<0.05; ***p<0.01. The number in parentheses is the standard error.

6. Post–Cold War Era (1990–2012)

The results in the post–Cold War era are similar to those during the Cold War, as shown in Table 8, in which all the independent variables are statistically significant.

Therefore, in the post–Cold War era, countries with higher trade exchange and similar national capabilities and that are geographically closer are more likely to ally with each other. As for the *Difference in Regime Types*, it is negatively related to alliance formation, which means that similar regime types tend to ally together.

Table 8.   Logit Regressions—Alliance Formation from 1991–2012

	Alliance Behavior (Formed or Not Formed)								
	Historical Periods								
	1991-2012	1991-2012	1991-2012	1991-2012	1991-2012	1991-2012	1991-2012	1991-2012	1991-2012
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ratio of CINC	0.581***	0.478***		0.571***	0.426***	0.583***			
	(0.033)	(0.023)		(0.022)	(0.019)	(0.018)			
Trade Exchange	0.0001***						0.0001***		
	(0.00000)						(0.00000)		
Diff. in Regime Types	-0.163***	-0.172***	-0.164***	-0.180***				-0.170***	
	(0.002)	(0.002)	(0.001)	(0.002)				(0.001)	
Geographical Proximity	2.061***	2.327***	2.249***		2.460***				2.404***
	(0.031)	(0.021)	(0.021)		(0.019)				(0.018)
Constant	-1.971***	-2.044***	-1.832***	-1.874***	-2.901***	-2.809***	-2.416***	-1.685***	-2.699***
	(0.017)	(0.011)	(0.008)	(0.011)	(0.007)	(0.007)	(0.007)	(0.007)	(0.005)
Observations	177,287	427,488	532,606	427,488	610,472	610,472	252,608	532,606	766,544
Log Likelihood	-41,933.2	-90,605.4	-121,260.6	-95,851.8	-139,798.6	-146,523.3	-72,795.0	-126,341.4	-185,995.7
Akaike Inf. Crit.	83,876.5	181,218.8	242,527.2	191,709.7	279,603.2	293,050.6	145,594.1	252,686.9	371,995.4

Notes: Significance Levels: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$. The number in parentheses is the standard error.

D.   ANALYSIS RESULTS

Based on our empirical analysis, the following can be inferred about the four hypotheses presented at the beginning of this chapter:

(1)   **Hypothesis 1**: The larger the difference in the capabilities of two states, the more likely they will ally.

The results of the statistical analysis refute Hypothesis 1 in all the periods except World War II, which means that alliances between states of similar capabilities are more common in history than alliances between states of different capabilities.

(2)   **Hypothesis 2**: Stronger trade relations between two states lead to a higher likelihood for an alliance to form.

The results of the statistical analysis support Hypothesis 2 in three historical periods (interwar period, Cold War, and post–Cold War era), while the relationship between trade exchange and alliance formation is insignificant in the other three periods (post-Napoleonic era, World War I, and World War II).

(3)   **Hypothesis 3**: A state is more likely to ally with another state of a similar regime type than with a state of a different regime type.

Similar to Hypothesis 1 and Hypothesis 2, the results of the analysis of the relationship between the regime type and alliance formation are not uniform throughout the historical periods. On the one hand, the results for the post-Napoleonic era, the Cold War, and the post–Cold War era support Hypothesis 3. On the other hand, the results for the interwar period refute H3, as states of different regime types were more likely to form alliance partners. Finally, regime type is insignificant to alliance formation in World War I and World War II.

(4)   **Hypothesis 4**: It is more likely for states that are geographically closer to form an alliance than those that are geographically distant from each other.

The results support Hypothesis 4 throughout the historical periods included in the analysis. In other words, geographical proximity is the only significant variable for

alliance formation under whatever prevailing system-level conditions exist in the different historical periods.

Therefore, the results show that the four hypotheses tested in our analysis (except for Hypothesis 4) are neither totally supported nor totally refuted in all the historical periods. This means that the independent variables included in the analysis are statistically significant for understanding alliance formation patterns in some eras but not in others except for the geographical proximity that is always significant in forming alliances. Moreover, even when a variable is statistically significant, the significance might take a different trend in different eras, in which it is either positive, leading to a bigger chance of alliance formation, or negative, leading states to ally against each other. These findings support the argument presented in the main hypothesis.

For example, in the case of the *Ratio of the Capabilities,* there is a positive relationship with *Alliance Formation* throughout the historical periods with the exception of World War II, in which a negative relationship can be observed. In the case of the *Difference in Regime Types,* there is not enough statistical evidence to prove or disprove differences in regime type and alliances during the two World Wars. As for the other periods, there is a shift from a negative relationship during the post-Napoleonic era to a positive relationship during the interwar period and them a return to a negative relationship during the Cold War and post–Cold War. Therefore, during the post-Napoleonic era and the Cold War, states with similar regime types were more prone to form an alliance, while during the interwar years, the opposite was true.

As assumed in the main hypothesis, the different prevailing conditions in different eras make it impossible for one single theory to explain alliance behavior patterns throughout history. The statistical analysis clearly supports this hypothesis. However, to understand why the different variables included in the analysis cause different behaviors in different eras, the following chapter presents a framework for assessing and comparing the different prevailing conditions by introducing system-level analysis. Systemic analysis is then be applied to each of the independent variables in separate sections to understand the effect of each of the state-level variables on alliance behaviors under different systemic conditions in the different periods.

III.   DISCUSSION

A.   INTRODUCTION

According to Kenneth Waltz, "theories of international politics that concentrate causes at the individual level are reductionist; theories that conceive of causes operating at the international level as well are systemic."[44] In this context, the systemic approach studies "the systems level, or structure, [as] distinct from the level of interacting units."[45] With respect to the states, their behaviors depend heavily on the international system's structure, and states in turn have an influence on the international outcomes.[46] Waltz points out that "each state arrives at policies and decides on actions according to its own internal processes, but its decisions are shaped by the very presence of other states as well as by interactions with them."[47] The analysis at the state level by itself is not enough to explain why similar patterns emerge even when the domestic situation of states and their interaction differs. In this respect, structural concepts help to explain important and enduring patterns in international politics.[48]

Non-realist theorists also consider analysis at both the unit level and the system level necessary to defend their theories. By advancing Balance of Interest theory, Randall Schweller claims that, at the unit level, the balance

> refers to the costs a state is willing to pay to defend its values relative to the costs it is willing to pay to extend its values. At the system level, it refers to the relative strengths of status quo and revisionist states.[49]

Additionally, Brian Lai and Dan Reiter empirically test the constructivist theory of cooperation, which assumes that actors can overcome the self-interest problem by a collectively-oriented conception of interest with the regime type as one of its possible

44. Waltz, *Theory of International Politics*, 18.

45. Waltz, *Theory of International Politics*, 40.

46. Waltz, *Theory of International Politics*, 40.

47. Waltz, *Theory of International Politics*, 65.

48. Waltz, *Theory of International Politics*, 70.

49. Schweller, "Bandwagoning for Profit," 99.

manifestations.[50] The theory of cooperation contrasts with the realist theory's assumption of the states' self-interest in an anarchic international system. Nevertheless, the authors argue that the different patterns of alliances related to similar regime types can be correlated to systemic changes.[51]

With respect to system-level analysis, Waltz argues that "the structure of [the international] system changes with changes in the distribution of capabilities across the system's units [i.e., the states]."[52] He contends that even if capabilities are unit attributes, "the distribution of capabilities is not a unit attribute, but rather a system-wide concept."[53] It is also not related to the interactions between states. In the case of alliances, for example, "an international-political system in which three or more great powers have split into two alliances remains a multipolar system."[54]

Many scholars have accepted the concept of system polarity and studied its effects on the behavior of the states. For example, William Wohlforth explains the effect of the distribution of capabilities on the status of states and therefore on their behavior. He contends that "if the status of states depends […] on their relative capabilities, and if states derive utility from status, then different distributions of capabilities may affect levels of satisfaction,"[55] and, consequently, the behavior of states. Wohlforth studies how status competition differs in unipolar, bipolar, and multipolar systems leading to different propensities for war.[56] Furthermore, Glenn Snyder uses the N-person prisoner's dilemma to analyze alliance formations in both bipolar and multipolar systems.[57] In his analysis, alliances in a multipolar system are not firm, and the possibility for defection or

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50. Brian Lai and Dan Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," *Journal of Conflict Resolution* 44, no. 2 (April 2000): 207.

51. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 224.

52. Waltz, *Theory of International Politics*, 97.

53. Waltz, *Theory of International Politics*, 98.

54. Waltz, *Theory of International Politics,* 98.

55. William C. Wohlforth, "Unipolarity, Status Competition, and Great Power War," *World Politics* 61, no. 1 (January 2009): 30.

56. Wohlforth, "Unipolarity, Status Competition, and Great Power War," 40.

57. Glenn H. Snyder, "The Security Dilemma in Alliance Politics," *World Politics* 36, no. 4 (July 1984): 462.

realignment is always present.[58] Moreover, alignment options in a multipolar system are open, and the states prefer to keep their commitments vague to preserve the opportunity for shifting partners or to bargain for more benefits from their current allies by showing that they have other alternatives.[59] In contrast, in a bipolar system, the alliances are firm. The only two superpowers in the system are more committed by their own interests to prevent the realignment of their allies either by giving more incentives or by coercion.[60]

Nevertheless, other researchers have also included the state of war and peace as another important factor in systemic analysis. Bruce Russett argues that it is important to differentiate between alliance behaviors in peace and war times.[61] During wartime, states are under "heavy pressures to be on the winning side [rather] than on the losing side."[62] In peacetime, alliances are formed for deterrence or for achieving the desired goals without engaging in war.[63] Stephen Walt also claims that there is a difference in alliance behaviors between peace and war times, which makes "victorious coalitions [more] likely to disintegrate with the conclusion of peace."[64] Similarly, Sweeny and Fritz contend that in periods of total war, like the two World Wars, the international system becomes so threatening that great powers tend to form more alliances than they usually do in other circumstances.[65]

As for the unit level analysis, Thomas Christensen and Jack Snyder claim that variables included in Robert Jervis's version of the security dilemma, such as technology, geography, and power variables, should be taken into consideration in Waltz's systemic theory, which is based on the number of great powers that are used to explain behaviors

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58. Snyder, "The Security Dilemma in Alliance Politics," 466.

59. Snyder, "The Security Dilemma in Alliance Politics," 468.

60. Snyder, "The Security Dilemma in Alliance Politics," 484.

61. Bruce M. Russett, "Components of an Operational Theory of International Alliance Formation," *Journal of Conflict Resolution* 12, no. 3 (1968): 297.

62. Russett, "Components of an Operational Theory of International Alliance Formation," 297.

63. Russett, "Components of an Operational Theory of International Alliance Formation," 298.

64. Walt, *The Origins of Alliances*, 31.

65. Sweeney and Fritz, "Jumping the Bandwagon," 438.

at the foreign policy level.[66] They give the example of the contradictory behaviors of states in the alliances leading to the two World Wars, although the international system was multipolar in both cases. Before World War I, the states committed themselves unconditionally to their allies, while in World War II they avoided unconditional commitments and instead counted on other states "to bear the costs of stopping a rising hegemon."[67]

Moreover, Lai and Reiter argue that alliances are an important manifestation of international cooperation, and they represent "the primary expression of a state's foreign policy preferences."[68] As a result, the study of the influence of domestic politics on the formation of alliances becomes essential. As for Brett Ashley Leeds, "without considering the impact of domestic institutions in the context of strategic behavior in the international system, the story remains incomplete."[69] Leeds concludes that scholars should consider jointly the domestic political constraints, the strategic behavior of leaders, and the international environment in their studies.[70] Peter Gourevitch presents a similar argument when he contends that although the international system affects domestic politics in many ways, the choice of response at the state level requires explanation based on domestic politics.[71] To reflect these arguments on alliance behavior, Robert Kaufman considers that "alliance behavior is not just a product of the international system: It also reflects the internal processes of states, ideology, and the perceptions of individual statesmen as well."[72]

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66. Thomas J. Christensen and Jack Snyder, "Chain Gangs and Passed Bucks: Predicting Alliance Patterns in Multipolarity," *International Organization* 44, no. 2 (Spring 1990): 138.

67. Christensen and Snyder, "Chain Gangs and Passed Bucks," 138.

68. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 203.

69. Brett Ashley Leeds, "Domestic Political Institutions, Credible Commitments, and International Cooperation," *American Journal of Political Science* 43, no. 4 (October 1999): 998.

70. Leeds, "Domestic Political Institutions, Credible Commitments, and International Cooperation," 999.

71. Peter Gourevitch, "The Second Image Reversed: The International Sources of Domestic Politics," *International Organization* 32, no. 4 (1978): 911.

72. Robert G. Kaufman, "To Balance or to Bandwagon? Alignment Decisions in 1930s Europe," *Security Studies* 1, no. 3 (1992): 419.

Therefore, to understand the similarities and differences in the patterns of alliances in the different periods, we apply an approach based on analysis at both the state level and the international system level. At the state level, the analysis includes the attributes of states (regime type, national capabilities) and their relations (geographical proximity and trade relations), which are included as independent variables in the logistic regression models in the previous chapter. Each of the following sections analyzes one of the independent variables included in the statistical analysis. Based on the results of regression models, when the state-level variables change in significance in relation to the dependent variable (alliance formation) from one period to another, a system-level analysis is applied to understand the reasons for this change; otherwise, when the results show that a certain variable is either significant or not throughout the periods, the analysis is limited to explaining the results on the state level and comparing the results with previous research by other scholars. On the international system level, the analysis includes, in addition to the polarity of the international system, the state of war and peace. As for the polarity of the system, we can differentiate between three systems in the periods included in this thesis. The nation-state system was multipolar until the end of World War II, after which it changed to bipolar with the rise of the United States and the Soviet Union as the two superpowers.[73] In the post–Cold War era, the system became unipolar even in the presence of second-tier powers such as Russia and China.[74]

B.   REGIME TYPE

Many scholars have explored the state's regime type as a possible predictor of alliance behavior. While some argue that states with similar regime types are more likely to ally with each other, others dismiss any relationship between regime type and the formation of alliances. For example, Leeds contends that democratic states are characterized by the high level of accountability of their chief executives toward their populations, whereas autocratic states provide their leaders with a greater flexibility to

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73. Waltz, *Theory of International Politics*, 163.

74. Wohlforth, "Unipolarity, Status Competition, and Great Power War," 52–54.

adjust policies.[75] This difference leads to higher levels of cooperation among states with similar regime types than among states with different regime types.[76] In Leeds's opinion, this argument holds true for military alliances, which represent a high level of international cooperation.[77] Similarly, Robert Kaufman argues that ideology and the internal processes of states are important in explaining alliance behavior although the constraints in the democratic process delay the process of alliance formation among democratic states.[78]

On the contrary, Michael Simon and Erik Gartzke argue that states prefer to have alliance partners of opposite regime types because they bring different qualities to alliances.[79] Walt claims that regime type has no clear effect on alliance formation according to his study of alliances in the Middle East, which reveals that alliances among states of similar domestic systems are as common as those among states of different domestic systems.[80] As for Fordham and Poast, the size principle based on power has a more important role in alliance formation than regime type.[81] In their opinion, Riker's 'size principle,' which assumes that states tend to form alliances with the minimum size to secure winning, is a powerful means to explain both offensive and defensive alliances.[82]

Furthermore, several analysts claim that the relationship between regime type and alliance behaviors only applies to democracies. For instance, Randolph Siverson and Julian Emmons argue that democracies form alliances at a higher rate than would be

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75. Leeds, "Domestic Political Institutions, Credible Commitments, and International Cooperation," 997.

76. Leeds, "Domestic Political Institutions, Credible Commitments, and International Cooperation," 998.

77. Leeds, "Domestic Political Institutions, Credible Commitments, and International Cooperation," 994.

78. Kaufman, "To Balance or to Bandwagon?," 437.

79. Michael W. Simon and Erik Gartzke, "Political System Similarity and the Choice of Allies: Do Democracies Flock Together, or Do Opposites Attract?" *Journal of Conflict Resolution* 40, no. 4 (1996): 622–623.

80. Walt, *The Origins of Alliances*, 214.

81. Fordham and Poast, "All Alliances are Multilateral," 20.

82. Fordham and Poast, "All Alliances are Multilateral," 5–6.

predicted.[83] On the contrary, Douglas Gibler and Scott Wolford claim that democratic states do not necessarily ally with each other; however, the presence of an alliance increases the likelihood of a democratic transition.[84] The difference in arguments about the effect of regime type on the process of alliance formation does not necessarily imply that some arguments are correct and others are not. In this section, we explain how all of these trends of alliance behaviors are possible under different systemic conditions, which supports our main hypothesis.

The results of the statistical analysis presented in Chapter II have shown that states with similar regime types were more likely to ally during the post-Napoleonic (1816–1914), Cold War, and post–Cold War eras. On the contrary, states with different regime types were more likely to ally during the interwar period. Moreover, the regime type is not significant during the two World Wars. These results show a clear distinction in alliance behaviors in times of war and peace. The regime type is not a significant factor in alliance formation during the two World Wars, whereas in periods of relative peace, the regime type becomes significant for alliance choices, although with some differences between unipolar, bipolar, and multipolar systems.

The results of our analysis for the two World Wars conform to the arguments advanced by several researchers that security takes precedence over ideology, especially in periods of total war. Therefore, under extremely threatening conditions, similar to the two World Wars, the regime type becomes less relevant to alliance choices, as states tend to choose the alliance partners that enhance their security. This argument is at the basis of Walt's 'balance of threat' theory, in which he argues that states usually ignore ideological considerations when they are faced with threat.[85] Moreover, Russet argues that there are many historical instances when states that have similar interests, including similar

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83. Randolph Siverson and Juliann Emmons, "Birds of a Feather: Democratic Political Systems and Alliance Choices in the Twentieth Century," *Journal of Conflict Resolution* 35, no. 2 (1991): 304.

84. Douglas M. Gibler and Scott Wolford, "Alliances, Then Democracy: An Examination of the Relationship between Regime Type and Alliance Formation," *Journal of Conflict Resolution* 50, no. 1 (February 2006): 129.

85. Walt, *The Origins of Alliances*, 214.

ideologies, economic institutions, or political systems, have formed alliances.[86] However, Russet admits that non-utilitarian preferences, including ideology, vary in influence in the different international systems.[87] Russet contends that

> in wartime the competitive (zero-sum) elements […] are predominant; [whereas] in peacetime the cooperative non-zero-sum elements play a greater role than in war, because of the common interest many or all states may have in avoiding the costs of conducting a war. Under these circumstances [of peace], the role of ideology, political system and other nonutilitarian preferences are likely to be more important.[88]

As for relative peace times, our results reveal that similar regime types were more likely to form alliances during the post-Napoleonic era, the Cold War and the post–Cold War era. On the contrary, different regime types were more likely to ally during the interwar period. To better understand the results, we use systemic level analysis based on polarity. These periods represent three different international systems (unipolar, bipolar, and multipolar). While similar regime types are more likely to ally in the bipolar system of the Cold War and the unipolar system of the post–Cold War era, the results for the multipolar systems of the post-Napoleonic era and the interwar period show contradictory results. This reflects the different characteristics of these systems.

Many studies have focused on the differences between bipolar and multipolar systems. Waltz argues that the military interdependence in a bipolar system is low because third parties do not affect the balance of power when they shift alliances.[89] Accordingly, the two superpowers make their strategies based on their interests and to cope with each other rather than to satisfy their alliance partners.[90] In contrast, in a multipolar system, with the great powers having roughly equal capabilities, military interdependence is high, as states need the help of others for their security, and they have to look for common interests among many competing ones, which leads to more

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86. Russet, "Components of an Operational Theory of International Alliance Formation," 286.

87. Russet, "Components of an Operational Theory of International Alliance Formation," 296.

88. Russet, "Components of an Operational Theory of International Alliance Formation," 298.

89. Waltz, *Theory of International Politics*, 169.

90. Waltz, *Theory of International Politics*, 170.

uncertainty and a less stable system. In other words, the uncertainties arising from the competition between the great powers in a multipolar system do not permit for a clear and fixed differentiation between allies and adversaries leading to higher rates of defection.[91] Waltz explains how the shift from a multipolar system to a bipolar system after World War II influenced the behaviors of the European states. In his opinion, because of the emergence of two superpowers from outside the region, the politics among European states shifted from a zero-sum game model to one of more cooperation.[92]

Lai Dan Reiter have tried to explain this difference by conducting a comprehensive empirical study on all the alliances from 1816 and 1992. They test three theories that predict the role of domestic politics on the likelihood of alliances, two of which are related to regime type. The first is the "Credible Commitments" theory, which predicts that democracies can be more credible to commit and consequently more likely to ally with each other.[93] They also test the constructivist theory, which "holds that states with similar regime type are likely to recognize collective interest and identity and therefore be more likely to ally with one another."[94] They examine each dyad of states from 1816 to 1992, and in one of their models, they split the dataset into two sets: alliances before 1945 and those after 1945. The results of their analysis reveal that after 1945, states of similar regime types have a higher propensity to form alliances than states of different regime types with no preference to democracies over authoritarian regimes.[95]

In Lai and Reiter's opinion, the results of their analysis reflect the politics of the Cold War, which was based on three main factors. First, the two superpowers tried to establish global spheres of influence with advances in military, transportation, and communications technologies, which caused every place in the world to be politically significant. Second, "divisions of power matched divisions of ideology. The United States and the [Soviet Union] were not just the two superpowers, but they also had

91. Waltz, *Theory of International Politics*, 168.

92. Waltz, *Theory of International Politics*, 70.

93. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 204.

94. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 204.

95. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 223.

completely different political systems."[96] Third, the Cold War witnessed the birth of new states, and this presented the two superpowers with the opportunity to intervene through economic or military means to pressure their allies to adopt political systems similar to their own. A similar conclusion is reached by Simon and Gartzke, who argue that the correlation between alliances and similar regime types are mainly influenced by the Cold War bipolarity and the formation of the Warsaw Pact and NATO.[97] Similarly, Walt contends that security considerations take precedence over ideological preferences; however, in a stable bipolar system, the impact of ideology has a greater influence.[98]

The results of the statistical analysis presented by Lai and Reiter are similar to the results revealed in this thesis for the Cold War period. As for the periods preceding the Cold War, the limitation of their analysis is that these periods cannot be analyzed as one period, especially for the two World Wars, although they all represent a multipolar system. Moreover, separating the post-Napoleonic era from the interwar period reveals completely opposite alliance behaviors. This clearly reflects the uncertainty in alliance behaviors in a multipolar system and supports the argument of Waltz, Christensen and Snyder, and Snyder that were presented earlier in this chapter. The structural instability of the multipolar system, the military interdependence of the alliance partners and the high degree of uncertainty regarding security calculations can cause states to have contradictory alliance behaviors. Therefore, predicting alliance behaviors in relation to regime type becomes extremely complicated.

From a historical context, in the post-Napoleonic era, similar regime types, whether liberal states or monarchies, collaborated to oppose any movements that threatened their legitimacy, as in the case when Russia, Prussia, and Austria-Hungary formed the Holy Alliance to counter the threat of liberal revolutions in the 1820s.[99] Further examples include "the Treaty of Munchengratz in 1833 and the Quadruple

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96. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 223.

97. Simon and Gartzke, "Political System Similarity and the Choice of Allies: Do Democracies Flock Together, or Do Opposites Attract?," 628.

98. Walt, *The Origins of Alliances*, 38.

99. Walt, *The Origins of Alliances*, 37.

Alliance of 1834, which divided Europe neatly along ideological lines."[100] The role of ideology was also clear in forming "the League of the Three Emperors in 1873 [that] united similar states in opposition to alternative political systems."[101] On the other hand, the interwar period had different dynamics that caused different regime types to ally together for several reasons. Siverson and Emmons explain that the democratic alliances started to dissolve after the First World War, and after 1932, "the number of democracies dropped and the alliances often stayed intact. [Moreover,] nations, particularly democracies, were so desperate for security that alliances were tried that previously would have been unthinkable."[102]

While most realist theorists focus on the differences between bipolar and multipolar systems, they ignore the possibility of a unipolar system and implicitly consider it as unstable. However, the unipolar system became a reality at the end of the Cold War. As William Thompson puts it, "unipolarity is a relatively alien concept in most international relations theory. It is not something that is supposed to happen, courtesy of balance-of-power reactions, according to most realists."[103] However, recent studies have shown that the unipolar system is more stable and enduring than previously assumed. For instance, William Wohlforth argues that the uncertainty is minimal in a unipolar system, and second-tier states will either bandwagon with the only superpower or avoid actions than enhance its enmity.[104] This leads to fewer "incentives for security or prestige competition among the great powers."[105] While many neorealists expected unipolarity to be quickly replaced by multipolarity as major powers try to balance against the United States, the United States instead has shaped the preferences of many ascending

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100. Walt, *The Origins of Alliances*, 35.

101. Walt, *The Origins of Alliances*, 35.

102. Siverson and Emmons, "Birds of a Feather," 303.

103. William R. Thompson, "Systemic Leadership, Evolutionary Processes, and International Relations Theory: The Unipolarity Question," *International Studies Review* 8, no. 1 (2006): 2.

104. William C. Wohlforth, "The Stability of a Unipolar World," *International Security* 24, no. 1 (1999): 25.

105. Wohlforth, "The Stability of a Unipolar World," 25.

powers, including Germany, Japan, and France.[106] In addition, other states in Eastern Europe have constrained their domestic and foreign policies substantially to join the U.S.-led NATO alliance.[107] However, Michael Mastanduno contends that

> balance-of-threat theory can explain the persistence of unipolarity, but to do it must focus on both on the distribution of capabilities and, at the unit level, on foreign policy intentions and behavior […] [This is based on the] American belief that U.S. power does not threaten anyone, and that the U.S.-led international order provides sufficient benefits so that it is unnecessary for other states to undermine it.[108]

Thompson similarly argues that "balancing against the system leader […] is a low probability occurrence because system leaders do not seek hegemony and territorial control."[109]

In the unipolar system of the post–Cold War era, as argued by Sweeny and Fritz, status quo states (mostly democratic) tend to join overlarge alliances to preserve the benefits of the status quo.[110] In other words, since the only superpower is a democratic state, we expect democracies will seek alliances with the United States to preserve the status quo, whereas non-democratic states will avoid allying against it. In this respect, after the collapse of the Soviet Union, many Eastern European states gradually turned into democracies and joined NATO. Accordingly, Kramer argues that Poland, Hungary and the Czech Republic bandwagoned with the stronger coalition.[111]

In summary, regime type is significant to alliance formation only in peacetime, as states will seek alliances based on security preferences in times of war. However, under

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106. Michael Mastanduno and Ethan Kapstein, *Unipolar Politics: Realism and State Strategies after the Cold War* (New York: Columbia University Press, 1999), 15.

107. Mark Kramer, "Neorealism, Nuclear Proliferation, and East-Central European Strategies," in *Unipolar Politics: Realism and State Strategies after the Cold War,* ed. Michael Mastanduno and Ethan Kapstein (New York: Columbia University Press, 1999), 429.

108. Michael Mastanduno, "Preserving the Unipolar Moment," in *Unipolar Politics: Realism and State Strategies after the Cold War,* ed. Michael Mastanduno and Ethan Kapstein (New York: Columbia University Press, 1999), 168.

109. Thompson, "Systemic Leadership, Evolutionary Processes, and International Relations Theory: The Unipolarity Question," 17.

110. Sweeney and Fritz, "Jumping on the Bandwagon," 446.

111. Kramer, "Neorealism, Nuclear Proliferation, and East-Central European Strategies," 428.

conditions of relative peace, our results show alternations between the different periods. We argue that this is a consequence of the international system's polarity. Therefore, unipolar and bipolar systems provide sufficient conditions of stability for states to follow their ideological preferences. On the other hand, under a multipolar system, the conditions of uncertainty regarding states' security and status competition make their alliance behavior according to regime type not authoritatively decisive.

C.   CAPABILITIES

There is an important theoretical framework in international relations providing arguments that states' relative capabilities substantially determine their interests for alliance formation. Certainly, the capability of a state is a critical factor in power and influence. For instance, when member states of an alliance have unbalanced power, there is a greater probability that the greater ally may force the weaker one into its preferred foreign policy. Our findings suggest that, during the examined historical periods, countries with similar capabilities are more likely to form an alliance with each other than with countries that have different capabilities; the only exception of this pattern was during World War II. We argue that in the absence of unique circumstances, such as the conditions that World War II created, states might search for allies with equal capabilities to have an opportunity for a balanced relationship. Within this section, we intend to provide evidence that supports this argument by examining related literature and historical background.

One of the most dominating theories within the literature on alliances is the capability aggregation model, which maintains that when a state's power is measured, it has to be augmented with the power capability of its allies. In other words, the followers of this theory emphasize the role of increasing national power through external means, namely, alliance formation. Liska argues that "states enter into alliances with one another in order to supplement each other's capability."[112] James D. Morrow categorizes this model as *symmetric alliance* and defines it as follows: "nations form alliances to increase

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112. Liska, *Nations in Alliance: The Limits of Interdependence*, 26.

their security by massing their capabilities against a common enemy. The need for the alliance ends when the threat passes."[113]

Morrow then finds that alliances are not always formed to receive security benefits, but he provides an alternative explanation for alliance formation. He contends that in many cases the weaker partner in the alliance provides autonomy benefits for the stronger partner in exchange for security, leading to what he calls an *asymmetric alliance*.[114] Moreover, Morrow concludes that asymmetric alliances both occur more frequently and last for a longer period than symmetric alliances. He explains this behavior by the virtue of major powers that positively influence the durability and stability of the alliance.[115] Our results differ from Morrow's finding in that states with similar capabilities are more likely to form an alliance in every period but one. The contrast might originate from different applied methods of examination.

D. Scott Bennett is one of the scholars who challenges Morrow's methodology. Bennett contends that

> Morrow found evidence supporting the model when it was applied to alliance termination (which he argues is a critical test). However, Morrow's empirical analysis was specifically an examination of the limited variables emerging from the security-autonomy model rather than a general analysis of alliance duration, and so his study did not include variables from other perspectives. As a result, Morrow's models are misspecified if in fact variables from the other perspectives presented here have important effects on alliance duration.[116]

Furthermore, although Warren does not try to challenge either Morrow's methodology or his findings, he also presents results that are different from those of Morrow. Warren uses stochastic actor-oriented models to show the patterns of interstate alliance decisions, and he finds that in his models "the significant negative coefficient for *Capability Ratio*

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113. James D. Morrow, "Alliances and Asymmetry: An Alternative to the Capability Aggregation Model of Alliances," *American Journal of Political Science* 35, no. 4 (November 1991): 904.

114. Morrow, "Alliances and Asymmetry: An Alternative to the Capability Aggregation Model of Alliances," 914.

115. Morrow, "Alliances and Asymmetry: An Alternative to the Capability Aggregation Model of Alliances," 930.

116. D. Scott Bennett, "Testing Alternative Models of Alliance Duration, 1816–1984," *American Journal of Political Science* 41, no. 3 (July 1997): 849.

indicates that states prefer to form alliance ties with partners who possess similar levels of military capabilities, in contrast to the expectations of Morrow (1991)."[117]

Morrow's analysis, that states with different capabilities are more prone to ally with each other, involves the alliances formed between 1815 and 1965 and supports only the period of World War II from our findings. Although his approach and methodology are challenged by other authors, as presented previously in this paper, Morrow's autonomy-security trade-off model of alliances is strongly applicable for an international order when there is a great need for alliances with disproportionate strengths of states. This need might be the strongest during times of war when the very existence of states is at stake.

As we pointed out in the introduction section of this chapter, it is important to differentiate between the states of war and peace with regard to systemic analysis. Therefore, it is reasonable that there is a deviation in the trends of alliance formation during periods of war and peace. In wartime, weaker states are not necessarily aspiring to form alliances with coequal partners (considering the national material capabilities) in the first place, but are rather bandwagoning with a stronger (and often adversarial) ally to avoid the greater threat to their existence. John Mearsheimer states that "good examples of bandwagoning are the decisions by Bulgaria and Romania to ally with Nazi Germany in the early stages of World War II and then shift their allegiance to the Soviet Union near the end of the war."[118]

Thus, during wartime, states with different national material capabilities might be more likely to form an alliance than during peacetime. Accepting this argument raises an important question: Why did states with similar capabilities more frequently ally with each other in World War I? In other words, how can we explain the difference in alliance behaviors between World War I and World War II? A similar question is considered by Thomas J. Christensen and Jack Snyder, who explore the reason for differences between the alliance behavior of European states before the First World War and their behavior

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117. Warren, "The Geometry of Security: Modeling Interstate Alliances as Evolving Networks," 705.

118. John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001), 163.

approaching World War II, "despite the fact that the system was multipolar in both cases."[119] Christensen and Snyder find that

> in the earlier period, states allowed themselves to be dragged into war by their allies, as if they were in a 'chain gang,' but in the later period they 'passed the buck' to allies in an attempt to avoid the cost of war. Some important variable other than system structure must have been at play. That variable, the authors suggest, was the prevailing belief as to whether offensive or defensive capabilities were superior.[120]

Mearsheimer has used the same argument as a possible explanation for different behaviors of states against hegemons throughout the previous centuries. Mearsheimer finds that

> we see the least amount of buck-passing against Wilhelmine Germany [comprises the period between 1890 and 1918]. The Triple Entente, which included the United Kingdom, France, and Russia and which was designed to contain Germany, was largely in place by 1907, some seven years before World War I broke out. [...] Much more buck-passing arose against Nazi Germany than there had been against Wilhelmine Germany. Hitler came to power in January 1933 and almost immediately began building a powerful military. The Third Reich's main rivals—the United Kingdom, France, and the Soviet Union—never formed a balancing coalition against Nazi Germany. In fact, all three pursued buck-passing strategies during the 1930s.[121]

Therefore, a very different alliance behavior can be observed leading to World War II than before World War I, which might appear to account (at least partially) for the different patterns of states' alliance behavior during the two wars.

Another potential reason for the difference in alliance behaviors between World War I and World War II is that the capabilities of the states involved in the Second World War were much more diverse than those of the states that participated in the First World War. As David E. Kaiser points out:

> The Second World War confirmed the lesson of the First: that no European power had the economic resources to compete with the

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119. Glenn H. Snyder, *Alliance Politics* (Ithaca, NY: Cornell University Press, 1997), 29.

120. Snyder, *Alliance Politics*, 29.

121. Mearsheimer, *The Tragedy of Great Power Politics*, 330–331.

economic might of the United States, which furnished most of the supplies for the Allied war effort against Germany and simultaneously defeated Japan as well. While the Germans, British, and Soviets each produced between 112,000 and 137,000 aircraft during the war, the United States built 300,000; while the Germans produced 45,000 tanks, the United States built 87,000 and the Soviets 103,000. Although both the Soviet Union and the western Allies eventually learned to use the techniques of blitzkrieg to defeat the German armies and reconquer Europe, they consistently relied upon material superiority to win their victories.[122]

The greater diversity during World War II might obviously lead to an opportunity, especially for weaker states, to bandwagon with greater powers in order to ensure advantages during different stages of the war.

In summary, our findings suggest that during peacetime, states seek equal partners to avoid pressures from stronger partners in unbalanced relationships, which is reflected in the three periods of relative peace included in our analysis. On the other hand, states may worry less about these pressures during periods of greater threat, especially existential threats. Therefore, in times of global war, such as World War II, weaker states seek stronger allies in order to enjoy security. However, this is not always the case, as demonstrated by Morrow's autonomy-security trade-off model of alliances. This explains the different alliance behaviors of states during World War I and World War II; states' perceptions of each other's offensive and defensive capabilities in the period leading to war directly affected their alliance behaviors.

D.   GEOGRAPHICAL PROXIMITY

The conventional wisdom is that geographical proximity is the source of territorial disputes and conflicts of interests between states. For instance, Walt argues that neighboring states are more threatening for each other than those who are distant as "the ability to project power declines with distance."[123] However, many recent empirical studies have shown that "states prefer to form alliance ties with partners who are

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122. David E. Kaiser, *Politics and War: European Conflict from Philip II to Hitler* (Cambridge, MA: Harvard University Press, 1990), 389–390.

123. Walt, *The Origins of Alliances*, 23.

geographically close."[124] As mentioned earlier, we assumed that states are geographically close in our statistical analysis models if they fall within the first three groups in the Direct Contiguity classification system, which includes states that share a common border, are separated by a river, or are separated up to 24 miles by a body of water. Lai and Reiter use two models to test a similar claim about the association between distance and dyadic alliance formation. In their first model, in which they use the complete data set for alliances from 1816 to 1992, they find that states prefer to have geographically closer allies.[125] As for their second model, the result of their analysis also shows a similar outcome even when considering only the alliances between 1946 and 1992.[126]

Our results for the relationship between geographical distance and alliance formation conform with the empirical studies mentioned above: States that are geographically closer are more likely to ally with each other than are those that are more distant from one to another. It is important to note that in our analysis, this relationship does not change under different international systems and between times of peace or war. It might be obvious in a dataset that includes dyads for all the possible alliances in the world that states will choose alliance partners from their region or continent rather than allying with a distant state. For this reason, we introduce a new model to check for a possible bias in the analysis. In our new model (see Table 9), we only include European countries to check if the relationship still applies in the same continent as well. The reason for choosing Europe is that this was the theater for the most important events and conflicts during the periods included in our analysis, especially from the post-Napoleonic War until the end of World War II.

The results in Table 9 reveal that European states prefer to have alliances with closer states in all the periods of the analysis, which supports the original finding. In other words, even though most of the conflicts and wars in Europe were about territorial expansion and competition among neighboring states, those states still preferred to have alliances with other proximate states.

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124. Warren, "The Geometry of Security: Modeling Interstate Alliances as Evolving Networks," 705.

125. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 217.

126. Lai and Reiter, "Democracy, Political Similarity, and International Alliances, 1816-1992," 220.

Table 9.   Logit Regressions—Alliance Formation from 1816–2012 in Europe (Independent Variables Excluding the Trade Exchange)

	Alliance Behavior (Formed or Not Formed)					
	Historical Periods					
	1816-1914	1914-1918	1918-1939	1939-1945	1945-1990	1991-2012
	(1)	(2)	(3)	(4)	(5)	(6)
Ratio of CINC	0.436***	0.625**	1.233***	-0.849**	0.401***	0.291***
	(0.100)	(0.307)	(0.140)	(0.376)	(0.052)	(0.058)
Difference in Regime Types	-0.094***	0.026	0.029***	0.007	-0.149***	-0.182***
	(0.007)	(0.018)	(0.006)	(0.015)	(0.002)	(0.006)
Geographical Proximity	1.800***	0.481**	1.966***	1.819***	0.713***	1.267***
	(0.053)	(0.221)	(0.083)	(0.196)	(0.036)	(0.044)
Constant	-2.891***	-2.814***	-4.217***	-3.144***	-0.366***	-1.229***
	(0.056)	(0.191)	(0.098)	(0.215)	(0.026)	(0.028)
Observations	25,274	1,492	14,008	2,126	29,686	25,310
Log Likelihood	-5,466.768	-433.876	-2,422.152	-425.809	-14,321.030	-11,684.540
Akaike Inf. Crit.	10,941.530	875.751	4,852.303	859.619	28,650.060	23,377.070

Notes: Significance levels: *$p<0.1$; **$p<0.05$; ***$p<0.01$. The number in parentheses is the standard error.

Fordham and Poast claim that the absence of overwhelming coalitions in world politics can be explained by geographical distance. In their words, "geography is [a] source of heterogeneous interests because states in different locations will have different preferences about the placement of the alliance's military resources."[127] Therefore, Fordham and Poast present two reasons why alliances are less likely with distance: the difference in interests between distant states and the ability to project military capabilities across distant states. Even in cases when distant states might share common interests, defending these interests depends on the availability of military resources. The cost of pooling military resources across long distances becomes problematic, and many states

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127. Fordham and Poast, "All Alliances are Multilateral: Rethinking Alliance Formation," 10.

can only project their power capabilities to support closer allies.[128] In this respect, with the exception of a few major states in each period, most states cannot pursue interests in far regions or in other continents. Some of these major states include Great Britain, France, Italy, and Russia during the colonial era and most likely only the United States and the Soviet Union during the Cold War.

Furthermore, alliance formation might be the consequence of conflict settlement among neighboring states. Gibler emphasizes the importance of using power politics when states intend to resolve their territorial conflicts. Gibler contends that a solution for such a situation might be a well-proven technique, the use of alliances.[129] He provides a list of suitable cases from the 19th and 20th centuries when "states have either exchanged territory or agreed to the status quo settlement of territory and have then cemented their new relationship with the signing of an alliance."[130] Therefore, geographical proximity can be considered an effective indicator of alliance formation even if the would-be partners are in conflict or at least have issues to solve prior to signing a defense pact.

In summary, although neighboring states are usually perceived as the source of threat and conflict, the results of our analysis have shown that geographically closer states are more likely to form alliances in all periods and under all systemic conditions. This holds true even when we limit our analysis to alliances among European states. We argued that this is mainly because of the different interests between distant states, the incapability of most states to project military capabilities to far regions, and the use of alliances to resolve territorial disputes among neighboring countries.

E.   TRADE EXCHANGE

Our results suggest that economic relations—the total size of the *Trade Exchange*—are related to alliance formation between states. However, a more thorough examination of the results might reveal that *Trade Exchange* is not necessarily the cause

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128. Fordham and Poast, "All Alliances are Multilateral: Rethinking Alliance Formation," 10–11.

129. Douglas M. Gibler, "Alliances That Never Balance: The Territorial-Settlement Treaty," in *A Road Map to War: Territorial Dimensions of International Conflict,* ed. Paul F. Diehl (Nashville: Vanderbilt University Press, 1999), 182.

130. Gibler, "Alliances That Never Balance: The Territorial-Settlement Treaty," 182.

of alliance formation, but rather the consequence of it. Therefore, a further comparison of the results with the existing theories may be indispensable.

Since the beginning of the 1990s, a number of scholars have sought empirical evidence to evaluate the important elements of recent literature on alliances and international trade. There are theorists who argue the importance of alliances and maintain the importance of alliances on the world stage in increasing free trade between allies. On the other hand, other approaches have questioned that trade flows are greater within alliances. Further disagreements in findings are related, for instance, to the role of the established international order or to the potential gravity of a major power included in the alliance. A review of well-known arguments gives us a better insight into the trade and alliance relationship.

Joanne Gowa and Edward D. Mansfield apply analytical tools to corroborate their initial argument that free trade is much more likely to advance within an alliance than among potential or actual adversaries. They "argue that the play of power politics is an inexorable element of any agreement to open international markets because trade produces security externalities."[131] Gowa explains the necessity to maintain trade among allies by claiming that gains accrued from trade between allies bolster the mutual security goals and strengthen the alliance. On the other hand, she argues, trade exchange with potential adversaries might generate unfavorable security externalities.[132] An illustrative example is the economies of the Communist states beginning from 1948:

> In a short time […] their trade relations with non-Communist states became negligible. Direct trade with the USSR amounted in 1951 to 29 per cent in the case of Hungary (which had practically no trade with the USSR before the war); 58 per cent in the case of Bulgaria; 25 per cent in the case of Poland; 51 per cent in the case of Rumania; and 28 per cent in the case of Czechoslovakia. In turn, about 80 per cent of all Soviet trade in 1951 was with the People's Democracies [that include Bulgaria, Czechoslovakia, the German Democratic Republic (GDR – more

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131. Joanne S. Gowa and Edward D. Mansfield, "Power Politics and International Trade," *American Political Science Review* 87, no. 2 (June 1993): 408.

132. Joanne S. Gowa, *Allies, Adversaries, and International Trade* (Princeton, NJ: Princeton University Press, 1994), 120.

commonly known as East Germany), Hungary, Poland, Rumania, and Yugoslavia].[133]

More innovative views on the relationship between alliances and trade have been developed by Mansfield and Richard Bronson, who also maintain that "international trade is likely to be greater when trading partners are allies [with the extension that it is also more likely if the participants are] members of a preferential trading arrangement."[134] They argue that the combination of these two conditions yields to "a greater impetus to trade than does either of these institutions alone."[135] They present empirical evidence to "indicate that allies conduct more trade than do non-allies and that the formation of alliances tends to generate increases in trade. […] [After further analyses they] found no evidence that trade flows or changes in them influence the formation of alliances."[136] This is in accordance with our conclusion that trade exchange between states might not be the causation of alliance formation, but the consequence of it.

In contrast with the concept that alliances give rise to trade, Morrow et al. do not find enough statistical evidence to infer that there is either a positive or a negative relationship between the two variables. They argue that "the effect of alliances on trade flows is uncertain; they may increase or decrease trade."[137] Furthermore, they point out that their results disprove the former arguments that "security concerns lead states to control their trade flows."[138] Morrow et al. indicate that "joint democracy and the

133. Zbigniew Brzezinski, *The Soviet Bloc, Unity, and Conflict* (Cambridge, MA: Harvard University Press, 1967), 127–128.

134. Edward D. Mansfield and Rachel Bronson, "Alliances, Preferential Trading Arrangements, and International Trade," *American Political Science Review* 91, no. 1 (March 1997): 96.

135. Mansfield and Bronson, "Alliances, Preferential Trading Arrangements, and International Trade," 101.

136. Mansfield and Bronson, "Alliances, Preferential Trading Arrangements, and International Trade," 103.

137. James D. Morrow, Randolph M. Siverson, and Theresa E. Tabares, "The Political Determinants of International Trade: The Major Powers, 1907-90," *American Political Science Review* 92, no. 3 (September 1998): 658.

138. Morrow, Siverson, and Tabares, "The Political Determinants of International Trade: The Major Powers, 1907-90," 659.

similarity of policy interests between the states"[139] are more decisive aspects than alliances. According to their theory, similar political systems—democracies above all—pose less political risk toward each other. Thus, they provide greater protection for trade with potential trading partners, which has a positive effect on trade flows between these states. For instance, former analyses proved that "U.S. exports were greater to democratic trading partners [than to nondemocratic states]."[140]

Andrew G. Long provides an alternative explanation for the previously mentioned inconsistent findings. He argues that "when designing empirical analyses, researchers include a much broader range of security agreements in the category of military alliance than necessary to capture the concept in their argument."[141] Long arrives at the same conclusion as we did in our hypothesis; among the different types of alliances—defense pact, neutrality and non-aggression pact, and entente—only the defense pacts meet the required indicators for a military alliance. "Namely those classified as defense pacts, obligate the members to provide military assistance to a partner in the event of an attack upon the partner's sovereignty and/or territorial integrity."[142] Thus, after narrowing down the model, Long finds statistical evidence that "defense pacts [between major powers from 1885 to 1990] are positively related to dyadic trade levels, and that their non-defense-pact counterparts are not significantly related to trade in a dyad."[143]

Another possible explanation for the varying results of the alliance and trade relationship is dedicated to Long and Leeds, who argue that another factor is also complementary to the relationship between alliance formation and increased trade. They find empirical evidence that additional promises of economic cooperation prompt allies

139. Morrow, Siverson, and Tabares, "The Political Determinants of International Trade: The Major Powers, 1907-90," 659.

140. Morrow, Siverson, and Tabares, "The Political Determinants of International Trade: The Major Powers, 1907-90," 651.

141. Long, "Defense Pacts and International Trade," 538.

142. Long, "Defense Pacts and International Trade," 542.

143. Long, "Defense Pacts and International Trade," 550.

to trade more with each other than with states that have no economic ties to the allies.[144] Long and Leeds attribute the following example from 1936 to this theory:

> While there were a number of sources of Belgian dissatisfaction with the military relationship with France, one source was what Belgium viewed as France's failure to continue to provide adequate access to the French market for Belgian exporters. As a result of the Depression, France had imposed import quotas and high tariffs, as well as quota on Belgians permitted to work in France. […] Repeatedly unsuccessful attempts to negotiate a new commercial agreement created increasing Belgian dissatisfaction with the Belgian–French relationship and was one cause of the Belgian decision to terminate the alliance. Belgian defection on the military alliance was linked to French defection on commercial agreements.[145]

In summary, every state may be concerned with whether its trading partner uses the gains from that trade for hostile intentions, which creates the negative security externalities described previously. Allies may worry less because there is a greater chance that the partner state uses its gains in accordance with the alliance's policy. Therefore, the security externalities are either positive or remain at least neutral in most cases. In general, this suggests that more trust usually leads to greater trade exchange. Our findings coincide with these arguments. The previously mentioned studies also found it difficult to explain the alliance and trade relationship before World War I and during the World Wars due to the absence of reliable data. In the meantime, however, we find statistical evidence that alliances are positively related to trade during the interwar period, the Cold War, and the post–Cold War eras, which is consistent with former studies.

F. CONCLUDING THOUGHTS

In this chapter, we used system-level analysis based on the polarity of the international system and the state of war or peace to analyze the alliance behavior of states with regard to the four state-level variables included in the statistical analysis (i.e., regime type, national capabilities, geographical proximity, and trade relations). We first argued that states with similar regime types are likely to ally with each other in times of

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144. Andrew G. Long and Brett Ashley Leeds, "Trading for Security: Military Alliances and Economic Agreements," *Journal of Peace Research* 43, no. 4 (July 2006): 445.

145. Long and Leeds, "Trading for Security: Military Alliances and Economic Agreements," 439.

relative peace under unipolar or bipolar international systems. However, in times of total war, security considerations take precedence, and regime type becomes insignificant for alliance formation. Second, geographical proximity is significant for alliance formation under all system conditions because of the inability of most states to project their military capabilities into distant places to defend faraway allies. Third, states with similar national capabilities are more likely to ally with each other in times of peace under all types of international systems because they prefer a balanced relationship. In contrast, state alliance decisions are not consistent in times of war, as the preferences for security or autonomy differ according to their perception of the level of threat from other states. Finally, we argued that the formation of alliances in times of peace plays a significant role in enhancing, rather than worsening, the trade exchange between countries.

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IV. CONCLUSIONS

In this thesis, we argued that the reason why there is not a single theory that explains all alliance formation patterns is because of the different prevailing conditions at the system level in different periods. Instead, we offered an alternative based on analyzing each period separately. Next, we tested the effect of four state-level variables (regime type, trade exchange, states' national capabilities, and geographical proximity) on the alliance behavior of states in each period using logistic regression analysis. Then, we presented an approach for understanding the different alliance behaviors based on linking the alliance behaviors to the prevailing system-level conditions in each period. The systemic analysis we used focused on differentiating between times of peace and war in addition to distinguishing between unipolar, bipolar, and multipolar international systems. Based on the results of the statistical analysis of the state-level variables and on the system-level analysis, we can deduce the following.

First, states of similar regime types are likely to ally with each other in times of relative peace under a unipolar or bipolar international system. The arguments about the stability of the unipolar and bipolar systems allow us to expect that regime type will have a significant influence on alliance choices under these systems in peacetime only. Under a multipolar system, alliances based on similar regime types are not certain due to the uncertainties faced by states with respect to alliance partners under the conditions of multipolarity. On the other hand, regime type becomes insignificant in the alliance decisions of states in times of total war, and security considerations prevail over ideological preferences.

Second, geographical proximity is a major factor in alliance choices whether in peace or war times and under all system-level conditions. States tend to have geographically proximate alliance partners although border disputes and threats are expected to be higher from neighboring states. The preference toward close alliance partners is mainly due to the fact that most states cannot project their military capabilities into distant places and consequently cannot commit to defend faraway allies.

Third, states with similar national capabilities are more likely to ally with each other in times of peace under all types of international systems. In other words, most alliances in peacetime seek a balanced relationship. On the contrary, in times of war, the states' alliance decisions are weighted based on a trade-off between security and autonomy. Accordingly, alliance decisions are not consistent among all states, as some of them prefer security over autonomy, whereas others prefer the opposite. Moreover, the level of diversity in national capabilities between states may also affect alliance choices, as in the cases of World Wars I and II.

Fourth, the relationship between trade exchange and alliance formation is significant in peacetime under all system-level conditions. However, in this thesis, we argued that the reverse relationship is the most probable, meaning that the formation of alliances is a significant factor for enhancing the trade exchange between countries and not the opposite. In times of war, the relationship is not clear mainly because of a lack of data. However, one would expect that security prevails over other preferences in wartime as previously argued for other variables.

For future exploration of this topic, we recommend the following research ideas. First, further refinement and testing of the findings might provide additional unrevealed explanations about alliance formation. For example, supplementary analysis of multipolar systems can offer clearer distinctions about alliance behaviors under multipolarity. This can be done by further dividing the multipolar systems to capture more crucial and influential events and by dividing the post-Napoleonic era into two periods, before the Crimean War and after it. Additionally, in the analysis of the bipolar system, it would be interesting to consider a case when the two superpowers do not have different ideologies. Similarly, in a unipolar system, it is probably worth examining another historical period with the superpower having a different regime type and/or foreign policy than that of the United States. Second, we suggest examining additional independent variables to test state-level alliance behavior, which might capture more relevant behaviors to alliance formation patterns. This can include variables that measure interstate relations prior to forming alliances, states' alliance reputation and commitments in previous alliances, and

states' degree of satisfaction of their status. This is also dependent on the presence of data that covers different historical periods.

Alliance formation is one of the most explored topics in international relations and it will probably remain so for many years to come. The methodology used in this thesis makes it easier to understand alliance patterns by dividing history into distinct periods and then analyzing alliance behaviors based on the prevailing system-level conditions in these periods. This thesis by no means presents a theory in alliance formation, and this is exactly what is argued in our main hypothesis. It is not possible to find one single theory that explains all alliance formation behaviors throughout history because of the different prevailing system-level conditions in different eras. However, under similar system-level conditions, we expect to have similar alliance formation patterns. The approach presented in this thesis and the findings may provide a new perspective in understanding alliance formation patterns. By relating the alliance patterns to system-level conditions, we might better understand alliance behaviors under similar conditions in future alliances.

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