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EXPLORING THE US-MIDDLE EAST-CHINA RELATIONSHIP

by
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AN ABSTRACT OF THE THESIS OF

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China and the United States both maintain crucial interests in the Middle East, and Middle Eastern regimes actively court both powers to improve their own respective international positions. Does the US, China and the Middle East form a cohesive triangular relationship in which each side responds to the actions of one another, like previously developed models of the US, China and the Soviet Union? Through the use of automated event data, it is possible to judge whether bilateral relationships are reciprocal and triangular reactions are evident. This thesis is an pilot vector autoregression (VAR) model of dyadic events collected by ICEWS which incorporates all bilateral actions taken by a collection of dyads over the course of two decades. The sample leads to the conclusion that Sino-Middle East relations are distinctly influenced by American activities in the Middle East, while the opposite is present though less prevalent. Furthermore, Chinese-Middle East relationships are becoming embedded in regional political dynamics, with triangular responses visible between regional adversaries (such as the GCC and Iran) impacting their respective China policies.

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CHAPTER I
INTRODUCTION

In an era of military dominance by the United States, how do great powers interact in competition for influence around the world? As China emerges as a peer competitor to the United States around the globe, the potential for competition between the two exists. In the Middle East, US primacy has remained the dominant paradigm since the end of the Cold War. Will it be necessary to include China in future understandings of the Middle East?

The United States is currently, and will likely remain for the foreseeable future, the most potent military force in the Middle East. Whether China seeking to supplant the American role in the Middle East is unlikely; any desire for military power projection into the region remains muted at best. So what is China's impact on the American role in the Middle East? Have Middle Eastern countries improved relations with China to the detriment of their relations with the US, or can the interests of all parties be satisfied in a positive-sum relationship?

Through a triangular relationship analysis using coded event data, it is possible to determine quantitatively the nature of interactions between the parties on a cooperation-conflict scale, as well as the impact one party has on the other two. Previously, this model has been employed to model Sino-Soviet-American relations as well as American-Israeli-Palestinian relations. This thesis seeks to apply a similar model to determine whether or not a similar triangular relationship actually exists between the US, China and Middle Eastern countries. Furthermore, the nature of the quantitative interactions could provide evidence of competition between the United States and China

in the Middle East, and whether zero-sum logic is applicable to this triangular relationship. To that end, three main questions are posed:

- Question 1: Can statistically significant triangular responses be found in the US-China-Middle East relationship?
- Question 2: Do significant responses indicate that the US and China are competing with each other in the Middle East?
- Question 3: How do regional states position themselves between the two major external powers?

CHAPTER II
THE MIDDLE EAST IN THE INTERNATIONAL SYSTEM

In the modern international system, the Middle East, like the world, exists in an environment of unipolarity, and outside powers play a crucial role in the Middle Eastern regional system. More generally, external penetration the region dates back much further with foreign powers exerting influence for centuries, a trend only monopolized by the United States in the last century.[1] Since the end of the Cold War, United States has been characterized as hegemonic.[2] Does China have a sufficiently influential position in the Middle East to be compared alongside the United States?

Furthermore, on the ideational level, only China represents a genuine political alternative to the US-dominated system, a potentially exportable model that eschews the democratic values promoted by the US.[3] This alternative does not threaten the existing liberal order, in fact, the China actively seeks to bolster its mechanisms, increasing its own influence within them.[4] The perpetuation and growth of soft power is considered a zero-sum competition between the United States and China,[5] and has been explicitly

1 Benjamin Miller, "The International System and Regional Balance in the Middle East," in *Balance of Power: Theory and Practice in the 21st Century*, by T. V Paul, James J Wirtz, and Michel Fortmann (Stanford, California: Stanford University Press, 2004), 244.

2 Raymond Hinnebusch, "The Middle East in the World Hierarchy: Imperialism and Resistance," *Journal of International Relations and Development* 14, no. 2 (April 2011): 236; Miller, "The International System and Regional Balance in the Middle East," 243.

3 Aaron L. Friedberg, "Hegemony with Chinese Characteristics," *The National Interest*, no. 114 (2011): 23.

4 Yoram Evron, "China's Diplomatic Initiatives in the Middle East: The Quest for a Great-Power Role in the Region," *International Relations*, December 21, 2015, 4.

5 Randall L. Schweller and Xiaoyu Pu, "After Unipolarity: China's Visions of International Order in an Era of U.S. Decline," *International Security* 36, no. 1 (2011): 56.

identified as the a potent point of competition between the two in the Middle East.[6] With China representing the only significant potential competitor with the United States in the Middle East, their activities are theoretically comparable with each other.

Maintaining hegemony over an international system becomes increasingly costly over time, considering that internal and external developments lessen the net benefits for the dominant state, making the cost of hegemony prohibitive. Aware of the potential costs to be incurred in relieving the United States of its dominant position in the Middle East, however, Chinese policymakers consciously avoid infringing on areas of American preponderance, especially regarding military affairs.[7] In practice, Chinese and US interests are intimately intertwined; for example, China's vital access to Middle Eastern energy would be curtailed if the US security umbrella was removed.[8] Ultimately, the US and China have overlapping interests in the Middle East that need not be in conflict with each other, including stability and counterterrorism, so the potential for mutual cooperation between the two powers exists. By "marching westwards", or increasing Chinese involvement in the Greater Middle East, as Wang Jisi describes, China can improve its position in the international system: compared to Sino-US competition in East Asia, which is distinctly zero-sum, the Middle East offers China the opportunity to engage in cooperative efforts with the United States for the benefit of both parties.[9]

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6 Wang Jisi, "'Marching Westwards': The Rebalancing of China's Geostrategy," ed. Shao Binhong, *The World in 2020 According to China*, May 28, 2014, 131.

7 Jon B. Alterman, "China's Soft Power in the Middle East," in *Chinese Soft Power and Its Implications for the United States: Competition and Cooperation in the Developing World*, ed. Carola McGiffert (Washington, DC: Center for Strategic and International Studies, 2009), 63.

8 Wang Jisi, "China's Search for Stability with America," *Foreign Affairs* 84, no. 5 (2005): 48.

9 Wang Jisi, "Marching Westwards."

While Chinese penetration of the Middle East remains low in absolute terms, there is a great deal of growth potential. In January 2016, the Chinese government released their Arab policy white paper indicating their explicit interest in increasing involvement in Middle East regional affairs.[10] The desire to increase involvement in regional diplomatic initiatives is an important element of their larger soft power campaign.

Solely considering the role of great power competition risks discounting the agency of regional states. For example, the neoclassical realist perception of hegemonic struggle between the US and China[11] does not extensively account for the preferences of regional states themselves; rather, states are considered passive recipients of each major party's respective foreign policy. Uneven economic growth between rising and declining states leads to a redistribution of power on a global scale,[12] which directly affects the policy choices available to peripheral "small" states. In an environment of uncertainty, where power is changing without a clear timeline, small states must choose how to position themselves between major powers with substantial control over their external environment. While the Middle East, given well-established American primacy, is less vulnerable to realignment than other regions in the world, examples from elsewhere offer a framework in which it is possible to understand the methods by which Chinese influence grows.

10 "China's Arab Policy Paper," Xinhua, January 13, 2016, http://news.xinhuanet.com/english/china/2016-01/13/c_135006619.htm.

11 Schweller and Pu, "After Unipolarity"; Aaron L. Friedberg, "The Future of U.S.-China Relations: Is Conflict Inevitable?," *International Security* 30, no. 2 (October 1, 2005): 7–45.

12 Robert Gilpin, *War and Change in World Politics* (Cambridge University Press, 1981), 156.

The case of Chinese expansion in Southeast Asia parallels the phenomenon this thesis seeks to understand in the Middle East. As Peou and Kuik both describe, most ASEAN states did not balance against increasing Chinese power in the 1990s, but rather bandwagoned with Chinese economic power through engagement in multilateral institutions.[13] Along the lines of Singapore's "realist pragmatism", such bandwagoning typically excludes security cooperation, which remains an American monopoly. The trend for ASEAN states to appreciate American military engagement as a counterweight to China is rooted in a perceived threat to their liberal democratic nature.[14] Thus, liberal preferences appear to be dominant among ASEAN countries, given the interest in economic openness, but the environment in which bargaining takes place appears to be based on absolute power calculations rather than shared values. Given the fact that Middle Eastern states are almost uniformly authoritarian,[15] alleviating concerns of encroachment of authoritarian influences, a modified version of this trend (on a smaller scale) is potentially applicable to the Middle East regional system.

Similarly, African engagement with China holds relevance to Sino-Middle East relations. African leaders have found the "China model" of authoritarian developmentalism more attractive than standard Anglo-American neoliberalism.[16] Additionally, the common experience of historical colonial domination shared by China

13 Cheng-Chwee Kuik, "Smaller States' Alignment Choices: A Comparative Study of Malaysia and Singapore's Hedging Behavior in the Face of a Rising China" (The Johns Hopkins University, 2010), 60; Sorpong Peou, "Why China's Rise May Not Cause Major Power-Transition War: A Review Essay," *Asian Politics & Policy* 6, no. 1 (January 1, 2014): 125.

14 Peou, "Why China's Rise May Not Cause Major Power-Transition War," 125.

15 "Democracy Index 2016: Revenge of the 'Deplorables'" (The Economist Intelligence Unit, 2016).

16 Marcus Power and Giles Mohan, "Towards a Critical Geopolitics of China's Engagement with African Development," *Geopolitics* 15, no. 3 (July 2010): 464.

and African nations has reinforced a mutual interest in strict non-interventionist principles,[17] a sentiment echoed in the Middle East which too was immensely affected by Western colonial policies.[18] Thus, even beyond economic interests, there is a degree of ideological identification that binds the two sides together and makes China a more attractive partner than the US. Like many African nations, Middle Eastern regimes perceive improved relations with China as a preferable alternative to excessive dependence on the United States.[19] Therefore, within this context of a changing international environment that provides opportunities for small states to recalibrate their foreign policies, the United States, China and the Middle East may form a crucial triangular relationship for analysis.

Since China transformed itself into a manufacturing powerhouse, energy represents the unifying interest that cements this triangular relationship: American interests lie in protecting the free flow of energy from the region, Chinese interests lie in importing energy from the region, and Middle Eastern countries with substantial oil deposits have an interest in continuing to export energy.[20] The stumbling block in this realm is the willingness of the Chinese to engage with regimes that Washington seeks to

17 Lin Anshan, "China and Africa: Policy and Challenges," *China Security* 3, no. 3 (2007): 75.
18 Degang Sun and Shaoxiong He, "From A By-Stander to A Constructor: China and the Middle East Security Governance," *Journal of Middle Eastern and Islamic Studies (in Asia)* 9, no. 3 (2015): 79.
19 Alterman, "Chinese Soft Power and Its Implications for the United States," 63; James M. Dorsey, "China and the Middle East: Venturing into the Maelstrom," RSIS Working Paper (Singapore: S. Rajaratnam School of International Studies, 2016).
20 Jon B. Alterman and John W. Garver, *The Vital Triangle: China, the United States, and the Middle East*, vol. 30, Significant Issues 2 (Washington, DC: Center for Strategic and International Studies, 2008), 8.

sanction, such as Iran or Sudan.[21] The ability to capitalize on energy markets that are shunned by Western countries, however, serves as an advantage for China.[22]

The intention here is to focus specifically on the nature of *asymmetrical* power relations, as United States and China both represent large countries that significantly overshadow the capabilities of any individual Middle East state or bloc of states. Previous research utilizing coded event data indicates that between each other, the United States and China clearly reciprocate the other's actions within a very short time frame.[23] For smaller states, there is an advantage in avoiding an overly dependent relationship with a single great power; the theoretical ideal is at an equidistant point between two or more, which maximizes the bargaining power of small states to manipulate larger rivalries.[24] With the inclusion of this third party seeking to benefit from the competition between large rival states, a triangular relationship is born.

Triangular relationships go one dimension beyond dyadic relationships, and are often measured through the relationship between two dyads sharing one partner (e.g. country A with country B, and country B with country C). Triangular responses in relationships including the US and China have been previously analyzed (and replicated multiple times) in the context of the Cold War, comparing the two vis-a-vis the Soviet Union. Using aggregated event data, growing Sino-American relations were found have

21 Flynt Leverett and Jeffrey Bader, "Managing China-U.S. Energy Competition in the Middle East," *The Washington Quarterly* 29, no. 1 (December 1, 2005): 196.

22 Sara Bazoobandi, "Sanctions and Isolation, the Driving Force of Sino-Iranian Relations," *East Asia* 32, no. 3 (August 16, 2015): 257.

23 Shahryar Minhas, Peter D Hoff, and Michael D Ward, "A New Approach to Analyzing Coevolving Longitudinal Networks in International Relations," *Journal of Peace Research* 53, no. 3 (May 1, 2016): 498.

24 Kuik, "Smaller States' Alignment Choices," 87.

a significant effect on Sino-Soviet relations, forming the modern canonical example of a triangular relationship.[25] This basic VAR model for triangular relationships can be, and has been, extrapolated into different contexts.

Expanding the triangular relationships concept into the context of the Middle East, American relations with Middle Eastern countries have a significant effect on regional dyads, in particular Palestinian-Israeli relations, indicating the pivotal role the United States plays in regional conflicts and fostering cooperation among regional states.[26] Triangular responses were not limited to dyads sharing an immediate partner, such as how the Israel-Palestine dyad was positively correlated with the US-Israeli dyad, but unrelated dyads also produced significant correlations, such as how the Iraq-Iran dyad was negatively correlated with the US-GCC dyad.[27]

Can similar significant triangular responses be found in the US-China-Middle East relationship? Can this relationship be quantitatively measured in the same manner? Employing this model in a new context, especially considering the inclusion of smaller states, the mechanisms that affect foreign policy behavior of small states in the context of two large partners becomes visible. Furthermore, cross-correlation between triangular dyads illuminates the behavior of two great powers toward a third region vis-a-vis each other.

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25 Joshua S. Goldstein and John R. Freeman, *Three-Way Street: Strategic Reciprocity in World Politics* (Chicago: University of Chicago Press, 1990); Joshua S. Goldstein and John R. Freeman, "U.S.-Soviet-Chinese Relations: Routine, Reciprocity, or Rational Expectations?," *The American Political Science Review* 85, no. 1 (1991): 17–35; Joshua S. Goldstein, "A Conflict-Cooperation Scale for WEIS Events Data," *Journal of Conflict Resolution* 36, no. 2 (June 1, 1992): 369–85.

26 Joshua S. Goldstein et al., "Reciprocity, Triangularity, and Cooperation in the Middle East, 1979-97," *Journal of Conflict Resolution* 45, no. 5 (October 1, 2001): 594–620.

27 Goldstein et al., 613.

CHAPTER III
THE INTERNATIONAL SYSTEM

Liberal theory in international relations is based on the concept that political relations are, in effect, subject to a specific understanding of processes of economic development.[28] The interdependence of nations raises the cost of direct conflict, dissuading countries from pursuing war as a means to achieve their ends. Compared to realism, liberalism accounts for domestic and systemic factors in a one parsimonious framework. Chinese rhetoric regarding its "peaceful rise" and win-win diplomacy is clearly intended to invoke liberal internationalist concept.[29] While liberalism is useful in understanding economic preferences and tendencies toward cooperation in a single, unified capitalist system,[30] it lacks the same balance-of-power and alignment dynamics that the research question seeks to address, and so both theoretical approaches offer elements that need to be explored.

Neorealism presents a state-centric framework in which alliance dynamics can be understood. Kuik defines one pertinent reason why pure neorealism is deficient in terms of accounting for the unique relations between large and small states: the inapplicability of "relative gains".[31] In asymmetric power relations, the existing power gap is typically considered as a structural element that is simply too vast to be

28 Andrew Moravcsik, *Liberalism and International Relations Theory*, 92 (Center for International Affairs, Harvard University Cambridge, MA, 1992), 25.

29 Power and Mohan, "Towards a Critical Geopolitics of China's Engagement with African Development," 480.

30 Christopher A. McNally, "Sino-Capitalism: China's Reemergence and the International Political Economy," *World Politics* 64, no. 4 (October 2012): 742.

31 Kuik, "Smaller States' Alignment Choices," 70–72.

eliminated. Thus, the concerns of both parties regarding the difference in relative gains from the relationship, a key element of realism,[32] are not relevant.

Expanding on the classic neorealist ontology, instead of pure bandwagoning or balancing, more nuanced actions are available to smaller states which do not demand pure alignment with one side or another. Hedging is the most prominent example of such a policy choice available to states.[33] For small states, uncertain environments of fluctuating power are most conductive to hedging behavior, as it retains alternative avenues of alignment in the event that a significant upset in the status quo occurs. Similarly, given the remaining power disparity between the United States and China, the latter has advantages in adopting hedging behavior. The infeasibility of displacing the United States as the preeminent global power in the short term incentives hedging behavior in regions of strategic importance that remain dominated by the United States.[34]

A. Classifying States Into "Large" And "Small" Categories

Robert Keohane posits a separation of states into "system-determining", "system-influencing", "system-affecting", and "system-ineffectual" states, or great, secondary, middle and small powers respectively.[35] Determining the proper

32 Kenneth Neal Waltz, *Theory of International Politics*, Addison-Wesley Series in Political Science (Reading, MA: Addison-Wesley, 1979), 105.

33 Yoel Guzansky, "The Foreign-Policy Tools of Small Powers: Strategic Hedging in the Persian Gulf," *Middle East Policy* 22, no. 1 (March 1, 2015): 112–22.

34 Mohammad Salman and Gustaaf Geeraerts, "Strategic Hedging and China's Economic Policy in the Middle East," *China Report* 51, no. 2 (2015): 102–120.

35 Robert O. Keohane, "Lilliputians' Dilemmas: Small States in International Politics," *International Organization* 23, no. 2 (ed 1969): 295.

categorization of a state is either conducted quantitatively or qualitatively. Qualitatively, Keohane defines each as follows:

> A Great Power is a state whose leaders consider that it can, alone, exercise a large, perhaps decisive, impact on the international system; a secondary power is a state whose leaders consider that alone it can exercise some impact, although never in itself decisive, on that system; a middle power is a state whose leaders consider that it cannot act alone effectively but may be able to have a systemic impact in a small group or through an international institution; a small power is a state whose leaders consider that it can never, acting alone or in a small group, make a significant impact on the system.[36]

Under unipolarity, the United States represents the sole great power. Accepting that its influence cannot be unilaterally decisive,[37] China can be categorized as a secondary power. The position of both the United States and China in the international hierarchy can be corroborated quantitatively, considering their large territories, large populations, and large economies by any global standard.

Middle Eastern countries are more ambiguous, and highlight the weaknesses of quantitative methods of determining relative power relationships. Utilizing the same quantitative indicators mentioned above, Morocco and China have been deemed comparable as "large" states in a cluster analysis,[38] though in practice, of course, they do not exert similar influence on the international system. Therefore, defining "small" and "large" states qualitatively is more useful in practice to map…

The relationship between the Middle East and external powers is lopsided, and external powers play a decisive role in regional politics.[39] Regional powers and ever

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36 Keohane, 296.

37 Rosemary Foot, "Chinese Strategies in a US-Hegemonic Global Order: Accommodating and Hedging," *International Affairs* 82, no. 1 (January 1, 2006): 83.

38 Tom Crowards, "Defining the Category of 'Small' States," *Journal of International Development* 14, no. 2 (March 1, 2002): 164–66.

39 Raymond A. Hinnebusch, *The International Politics of the Middle East*, Regional International Politics (New York, NY: Palgrave, 2003), 4.

hegemonic contenders in the Middle East seek little in the way of extra-regional power projection, being preoccupied with regional (even intranational) conflicts. Therefore, following Keohane's definition, Middle Eastern states are mostly small powers, with a few arguable cases of middle powers.

B. Three-Player Game Model

Interaction between the parties can be modeled as the Prisoner's Dilemma extended to three parties, which accounts for the presence of a significant third party in a relationship. The Middle East is not a unitary actor both literally and in practice, compared to other regional agglomerations like Europe, and so each individual state represents one element of a larger overlapping triangle that represents more general dynamics in the international system. As we have determined that the US-Middle East-China triangle represents an important three-actor network, the extended Prisoner's Dilemma model is directly applicable. Including three players typically results in similar outcomes to the two-player model: defection, though iteration and a history of cooperation are capable of overcoming this tendency.

One main difference in the practice of international relations from the theoretical model is that states more frequently act in a bilateral fashion rather than addressing all parties simultaneously. With this in mind, the interactions between three parties should be perceived as a series of two-player games occurring within each bilateral relationship.[40] Within the US-Middle East-China triangle, for example, a downward turn in one Middle Eastern country's relationship with the United States could directly influence the payoff structure of that country's bilateral game with China.

40 Goldstein and Freeman, *Three-Way Street*, 33.

In the same manner, however, the payoff structure could change for China as well if the United States chooses to introduce sanctions on a country, as the opportunity for Chinese investment is directly affected by American incentive structures that discourage cooperation with sanctioned entities.

Although full regional autonomy is stifled due to dependence on the US security umbrella, Middle Eastern states retain autonomy over their respective external relationships,[41] and thus are themselves potent players in the game. In the Prisoner's Dilemma model, the "defection" of a Middle Eastern state (and resultant shunning by the international community in an iterated game) has repercussions that impact both other players. Axelrod's description of cooperation theory in the context of the Prisoner's Dilemma cites the tit for tat strategy (reciprocation for previous actions) as the most robust technique for gaining the optimal payoff in an iterated game.[42] Because of its cogency, communicability and efficacy, tit for tat behavior outperforms all other strategies.[43] The simplicity of tit for tat means its presence is easy to measure. The other potential triangular response that can be tested is triangular inertia, where the behavior of state X toward state Y is directly influenced by its previous interactions with country Z. Goldstein and Freeman define this phenomenon as "spillover", where the policy adopted toward one country is extended toward another country.[44]

41 Gerd Nonneman, "Analyzing the Foreign Policies of the Middle East and North Africa: A Conceptual Framework," *Review of International Affairs* 3, no. 2 (December 1, 2003): 125.

42 Robert Axelrod, *The Evolution of Cooperation* (New York, NY: Basic Books, 1985), 53.

43 Pao-wen Li, "The Determinants of the Level of Cooperation and Conflict in Cross-Strait Relations after 1990" (Georgia State University, 2014), 38.

44 Goldstein and Freeman, *Three-Way Street*, 35.

Triangular interactions between dyadic relationships provides an empirical mechanism with which it is possible to determine the moves within our three-player game model.[45] The results will answer the question as to whether zero-sum logic (i.e. defection) is applicable, or if mutual cooperation does emerge from the triangular relationship. Triangular responses can be either reciprocal or inverse; for example, a reciprocal triangular response would indicate that greater cooperation with one great power increases cooperation with another, providing evidence for mutual cooperation overcoming the risk of defection. Conversely, an inverse triangular response would confirm zero-sum assumptions, indicating defection.

First and foremost, we must determine whether or not these triangular interactions are actually measurable, and only then can a three-player game theory model be applied to US-Middle East-China relations. If significant results are found, the size, direction and sign of the relationship will illustrate how each party actually behaves in a real-world context.

45 Goldstein and Freeman, 34.

CHAPTER IV
METHODOLOGY

Statistical analysis of event data provides an empirical method to determine the significance of triangular interactions between the United States, China, and the Middle East. Using dyadic event data, specifically summed Goldstein scores which will be explained further below, our main measurement is a numeric proxy for the net level of cooperation between two countries at a given point in time.

A stimulus-response model developed through sequencing offers the ability to determine causality, for example, if state X acts and state Y responds at a statistically significant level after a certain delay (typically a few days in this sample), then it is possible to conclude that the state Y's actions were directly caused by the actions of state X.[46] On the triangular level, coefficients on third party interactions are regressed against the bilateral interactions of another, such as state Z and state Y's interactions are compared to the interactions between state X and state Y.[47] So if the relations between state Z and state Y are correlated at a statistically significant level with relations between state X and state Y after a similar delay, we can make a similar causal claim that the change in the second bilateral relationship was due to an earlier change in the first bilateral relationship. If US-Iran relations degrade after a notable increase in China-Iran relations, for example, there may be a causal link to be found. Due to limitations on data availability (the ICEWS project only provides event data beginning in 1995), the temporal scope of the analysis is confined to the period from 1995 to the present.

46 G. Dale Thomas, "Minimizing the Effects of Temporal Aggregation on Event Data Analysis," *International Interactions* 40, no. 5 (October 20, 2014): 842.

47 Goldstein and Freeman, *Three-Way Street*, 34.

A. Data Collection And Aggregation

Mapping the dynamics within and between bilateral relationships is possible by the use of dyadic event data; the phenomenon of interest is the presence of relationship reciprocity and triangular interactions that are quantitatively measurable. Relationship development or deterioration is usually conceptualized as a continuous process, but the observable manifestations emerge as individual events.[48] Using these as a proxy, the process itself is indirectly measurable through aggregated series of events.

Automated event data collects textual information from a variety of authoritative sources (typically news reports), and filters this information through natural language processing to produce coded events. To date, GDELT[49] and ICEWS[50] represent the largest collections of automated event data publicly available, and both utilize the CAMEO taxonomy for dyadic political event data.[51] Between these two major sets of event data, the ontological basis of ICEWS is better suited to the analysis here given its emphasis on providing an accurate reflection of activities in reality. ICEWS, for example, discards news stories about historical events regardless of their publication date;[52] for example, an article discussing the Iranian hostage crisis would be omitted from the final data even if it was published within the 1995 to present period in

48 Gary King, "Event Count Models for International Relations: Generalizations and Applications," *International Studies Quarterly* 33, no. 2 (June 1, 1989): 124.

49 Kalev Leetaru and Philip Schrodt, "GDELT: Global Data on Events Language and Tone," 2011, https://www.gdeltproject.org/.

50 Sean P. O'Brien, "Crisis Early Warning and Decision Support: Contemporary Approaches and Thoughts on Future Research," *International Studies Review* 12, no. 1 (March 1, 2010): 87–104.

51 Patrick T. Brandt, John R. Freeman, and Philip A. Schrodt, "Real Time, Time Series Forecasting of Inter- and Intra-State Political Conflict," *Conflict Management and Peace Science* 28, no. 1 (February 1, 2011): 41–64.

52 Michael D. Ward et al., "Comparing GDELT and ICEWS Event Data," *Analysis* 21 (2013): 3.

which ICEWS has collected information. The ontology of GDELT, in comparison, is to accurately reflect the nature of the discourse it ingests rather than utilizing such discourse as a proxy for real-world events, and thus does not offer the same fundamental basis on which to make comparisons between state-to-state relationships despite its special benefits from an extended taxonomy.

As individual observations of single events, raw streams of event data are unsuitable for developing empirical models directly and must be aggregated. Aggregation is a flexible process that consists of three[53] parts: actor aggregation, event aggregation, and temporal aggregation. Each step has the potential to introduce bias into the sample. In this sample, actor aggregation is conducted on the state level, including all events attributed to any actor belonging to a specific state, whether initiated by the government, private sector businesses, civil society organizations, or any other actor. Disaggregation of domestic actors is conceptually complex for bilateral relationships and especially complex for triangular relationships. Furthermore, disaggregation is technically difficult considering a plurality of events the sample are either attributed to the government or a catch-all “other” coding, and most actors lack sufficient numbers of coded events to make empirical conclusions about their relevance. While including the United States and China is clearly necessary, determining the proper Middle Eastern countries to include is more nuanced. Given China’s preference for economic engagement and to avoid excessive cross-correlation in the model, only the largest Middle East economies were included.

53 ICEWS lacks geolocation in its version of the CAMEO taxonomy, so a potential fourth option of geospatial aggregation is unavailable.

Event aggregation weighs the type of event on the adapted Goldstein scale,[54] which ranks events from -10 (e.g. use conventional military force) to +10 (e.g. militarily surrender) on a single-axis conflict-cooperation spectrum. These values are summed within a specified time window to provide a net cooperation score for a single directed dyad. Summing, while not ideal, offers a preferable alternative that overcomes the problems involved in deriving the mean of the scores, which both distorts score intensity and does not provide insight into the overall level of interaction in a dyad.[55]

Temporal aggregation was conducted on a daily basis to provide as much granularity as possible in order to distinguish one-way causal relationships from reciprocal relationships.[56] Further aggregation on the temporal level limits the potential to judge sequential events (reactions may appear contemporaneous) and increases standard errors.[57] All individual events within one directed dyad over the course of a single day are aggregated into one directed dyad-day, measured as the sum of all weighted events that occurred on that day initiated by one country targeting another.

From the full ICEWS database available between January 1995 and December 2016, 56 total directed dyads were aggregated over the course of 8036 days to ultimately produce 450,016 directed dyad-days. As a dyad-day with no events recorded can be represented by a true zero, there is no missing data, though slightly over 75

54 Philip A. Schrodt, "Automated Production of High-Volume, Real-Time Political Event Data," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, 2010), 8, https://papers.ssrn.com/abstract=1643761.

55 James E. Yonamine, "Working with Event Data: A Guide to Aggregation Choices" (State College, PA, 2011), 7, https://web.archive.org/web/20140106215606/http://www.jayyonamine.com/wp-content/uploads/2013/04/Working-with-Event-Data-A-Guide-to-Aggregation-Choices.pdf.

56 Yonamine, 9.

57 Thomas, "Minimizing the Effects of Temporal Aggregation on Event Data Analysis," 848.

percent of the observations are zero. Each dyad name follows a ISO-3166-alpha3 standard source-to-target taxonomy with one nonstandard additional aggregation (GCC).[58] To demonstrate, “IRNUSA” represents the “Iran toward United States” directed dyad, or events initiated by Iran targeting the United States. In full, the following units were included in the model:

- EGY = Egypt
- GCC = Gulf Cooperation Council
- IRN = Iran
- IRQ = Iraq
- ISR = Israel
- SYR = Syria
- TUR = Turkey
- USA = United States
- CHN = China

Finally, in regards to time series data, causal inferences can only be made from stationary series lacking unit roots. To ensure that each dyad time series was indeed stationary, the augmented Dickey-Fuller test rejected the null hypothesis of a unit root at less than the 1 percent significance level, making the need to further transform the data by difference was unnecessary.[59]

58 As the sample ends in 2017, the GCC states retained diplomatic cohesiveness throughout the vast majority of the timeframe, and the GCC is frequently referred to as a single unit in the context of Chinese relations. Furthermore, a Sino-GCC free trade agreement is actively under negotiation, making this aggregation logical. See: Neil Quilliam, “China and the Gulf Co-Operation Council: The Rebound Relationship,” in *Toward Well-Oiled Relations?*, ed. Niv Horesh, The Nottingham China Policy Institute Series (Palgrave Macmillan UK, 2016), 148–61; Abdulaziz Sager, “GCC-China Relations: Looking Beyond Oil-Risks and Rewards,” *China’s Growing Role In the Middle East: Implications for the Region and Beyond. The Gulf Research Center, Dubai, United Arab Emirates and the Nixon Center, Washington DC*, 2010, 1–22.

59 This was buttressed with an additional Phillips-Perron Unit Root Test, which returned similar results rejecting the null hypothesis of unit roots.

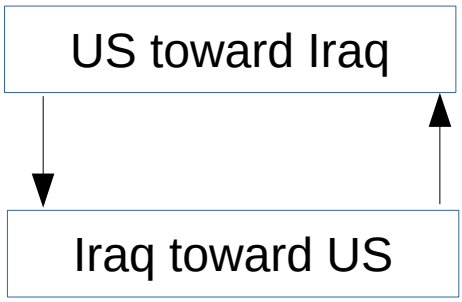

Figure 1: Dyadic interaction

Figure 1 represents a single dyad, or two directed dyads, each measured by a daily Goldstein score sum. A positive correlation between the two would indicate bilateral reciprocity (tit for tat behavior) whether qualitatively positive or negative in nature, while an inverse relationship would represent evidence of either one party exploiting cooperation or not resisting hostility from their counterpart.[60]

Moving from dyadic to triangular relationships, figure 2 offers an example of the eight potential interactions between individual directed dyads representing a triangular relationship. Including bilateral interactions increases this to twelve. Egypt serves only as one example – each of these twelve avenues of interaction is repeated for each Middle East unit represented in the sample. Furthermore, each arrow is bidirectional; interactions can flow both ways between the six dyads. Significant correlations between these dyads indicates that the external relationships affect one another, and the nature of the effect is dependent both on the coefficient sign and the dyad direction.

60 Goldstein and Freeman, *Three-Way Street*, 78.

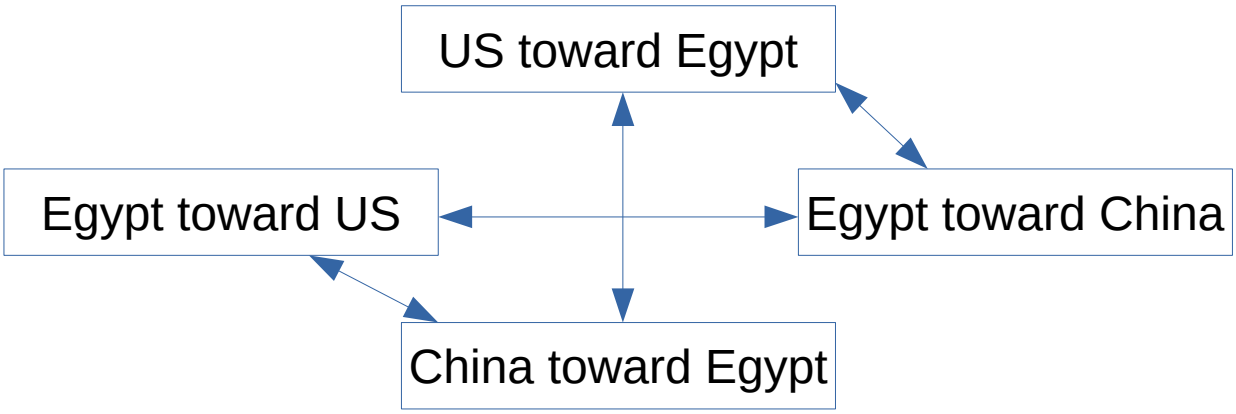

Figure 2: Direct triangular interactions

B. Model

To determine the significance of dyadic and triangular interactions, a vector autoregression (VAR) model forms a series of equations with the weighted net cooperation of a directed dyad as the left-hand side variable. In each equation, the dependent variable is a function of the lags of both its own previous values as well as the lagged values of all other dyads, along with a constant and the error term. As all lagged values are included in each equation, all equations share the same right-hand side terms. A summarized version of the model is as follows:

$$X1_t = C_1 + \beta_{111} X1_{t-1} + \ldots + \beta_{11k} X1_{t-k} + \beta_{121} X2_{t-1} + \ldots + \beta_{1N1} XN_{t-1} + \ldots + \beta_{1Nk} XN_{t-k} + e_1$$

…

$$XN_t = C_N + \beta_{n11} X1_{t-1} + \ldots + \beta_{N1k} X1_{t-k} + \beta_{N21} X2_{t-1} + \ldots + \beta_{NN1} XN_{t-1} + \ldots + \beta_{NNk} XN_{t-k} + e_N$$

Where X is a directed dyad measured at time t, N is the total number of dyads in the model, k is the determined number of lags to include, and C and e are the constant and error term, respectively. Through this model, bilateral reciprocity and triangular responses can both be analyzed without unnecessary assumptions in the model itself regarding the nature of each relationship.[61]

61 Goldstein and Freeman, 70.

Reaction or inertia is never immediately visible, so after what delay is the effect of one dyad on another apparent on a daily time scale? As the VAR model incorporates lagged values, this delay is relevant, and insufficient use of lagged terms can bias results.[62] Calculated lag periods ranged between 3 to 14 dependent on the time frame analyzed (1995-2000, 2004-2010, 2012-2017). Notably, as lag test results consistently were below one year, annual (or weekly) aggregation would not have offered the necessary granularity for empirical conclusions.

Initially, the aggregated data for different dyads were visually inspected as time series plots to ascertain validity as coded. As one example, figures 3 and 4 chart the dyadic activity between Iran and both the United States and China, with weighted events smoothed by a 30-day lag so the general trend and extended changes are distinguishable. The vertical axis measures net cooperation at a given point in time, with points above the zero line indicating net cooperation, and points below the zero line indicating net conflict. Given the differences in total activity between dyads, the scale for net cooperation is different between figures.

62 John R. Freeman, “Systematic Sampling, Temporal Aggregation, and the Study of Political Relationships,” *Political Analysis* 1 (1989): 89.

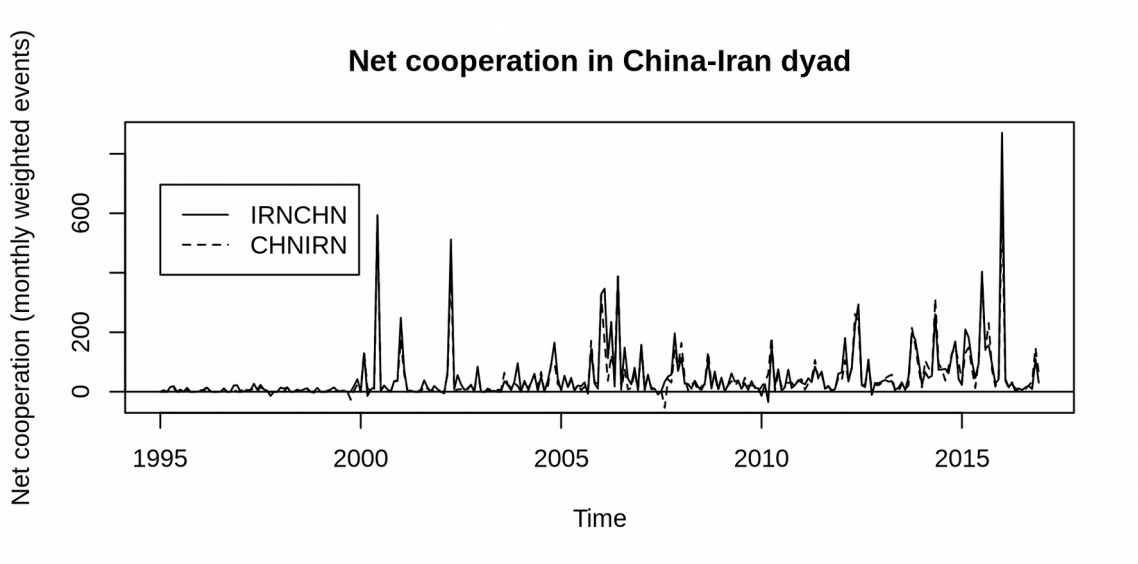

Figure 3

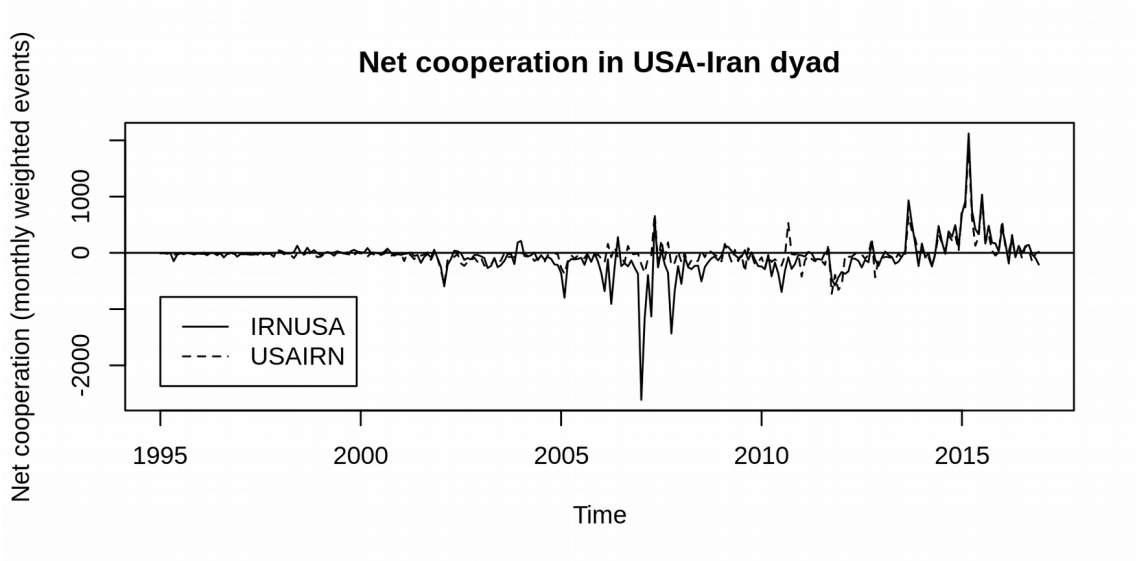

Figure 4

How closely do these Goldstein scores align with qualitative assessments of US-Iran and China-Iran relations? American and Iranian mutual antipathy has been a constant since 1979, with brief interludes of diplomatic engagement, such as Khatami's call for dialogue between civilizations, which ultimately collapsed into recrimination.[63]

63 Nikki R. Keddie, *Modern Iran: Roots and Results of Revolution*, 2006, 232.

The Iraq War further heightened tensions, as both countries found themselves on opposite sides of an emerging civil war on Iraqi territory alongside their preexisting disputes over nuclear development and terrorism sponsorship. Comparatively, China has only increased cooperation with Iran over time, as Iran became a bastion of China's regional energy security strategy since the 1990s and remains one of China's most important oil sources in the world.[64]

Both dyads experienced a spike around 2014, likely produced from the effects of the Iranian nuclear deal and related diplomatic cooperation. Prior to that point, the USA-Iran dyad frequently averaged below the zero line, and rapidly returned to those levels by 2016. The major dips between 2006 and 2008 are linked to tensions between the two countries as a result of the Iraq War, as well as sanctions implemented under the Bush administration. Conversely, China has consistently remained on the positive side of net cooperation with Iran, with the frequency of large cooperation spikes increasing over time. Therefore, examination of the time series plots appears to coincide with what should be expected fluctuations in the relationship. Indeed, the US-Iran plot itself offers a new angle on understanding the dramatic shift from high levels of conflict to cooperation.

As both figures above show, there is a drought of coded events between the beginning of data availability in 1995 through to 2000, though critical dyads, such as Iraq-USA, still emit a relatively strong signal seen in table 1.

64 Wen-Sheng Chen, "China's Oil Strategy: 'Going Out' to Iran," *Asian Politics & Policy* 2, no. 1 (January 1, 2010): 46.

Table 1: Monthly average net cooperation levels (USA-MENA dyads)

Dyad	1995-2000	2001-2008	2009-2010	2011-2017	Dyad	1995-2000	2001-2008	2009-2010	2011-2017
AREUSA	3.72	14.19	20.63	14.83	USAARE	3.19	12.54	16.09	6.54
BHRUSA	5.12	11.65	2.92	9.41	USABHR	4.97	9.43	1.86	0.66
DZAUSA	6.12	13.51	6.03	16.89	USADZA	5.98	6.28	9.83	12.58
EGYUSA	54.67	136.29	124.80	127.74	USAEGY	44.24	111.65	98.46	68.47
IRNUSA	-3.42	-216.07	-147.64	92.01	USAIRN	-20.47	-80.63	-64.54	64.20
IRQUSA	-378.61	-1,927.03	294.25	-179.03	USAIRQ	-39.24	-276.50	131.82	-1.66
ISRUSA	248.59	444.55	520.95	237.08	USAISR	206.15	311.39	411.28	173.57
JORUSA	30.22	68.52	38.48	48.48	USAJOR	18.89	52.83	23.58	10.99
KWTUSA	11.06	16.18	2.58	1.62	USAKWT	12.92	13.02	3.69	1.31
LBNUSA	16.22	57.93	79.08	25.89	USALBN	10.86	23.20	44.23	12.01
LBYUSA	-7.77	30.39	5.89	-64.74	USALBY	-3.41	23.52	10.85	-12.16
MARUSA	10.15	22.12	7.26	13.07	USAMAR	7.60	13.07	5.20	8.63
OMNUSA	2.63	6.17	2.21	6.06	USAOMN	1.04	5.02	1.38	3.69
QATUSA	2.82	3.36	8.12	15.68	USAQAT	3.61	6.72	5.39	11.46
SAUUSA	24.44	82.54	82.75	78.64	USASAU	18.84	49.86	64.49	51.25
SDNUSA	-78.37	33.68	61.21	12.41	USASDN	1.08	34.06	33.52	6.98
SYRUSA	69.68	-76.77	75.89	-354.93	USASYR	55.34	15.11	76.90	-10.29
TUNUSA	3.52	7.67	3.42	27.35	USATUN	3.50	3.78	1.75	11.83
TURUSA	57.50	194.65	207.53	142.28	USATUR	47.46	163.88	138.71	73.07
YEMUSA	6.16	25.57	46.64	-50.83	USAYEM	2.26	13.44	12.88	2.04

As table 1 shows, the balance in net cooperation appears to remain consistent within most dyads. Some, however, such as the Iraq toward United States (IRQUSA) dyad, do change from negative to positive (and back again), but in a manner consistent with Iraq's international isolation under the Ba'athist regime, subsequent invasion, reconstruction, and final descent into civil war, all of which the United States was intimately involved with. Iran averages positive in the final section, though as noted in figure 4, this spike was not a lasting period of cooperation Thus, there are two dyads in

which sustained conflict is present, the Iran-United States (IRNUSA) and Iraq-United States (IRQUSA) dyads, as well as the reverse directed dyads of each.

Comparatively, as table 2 indicates, China has maintained positive relationships with all the Middle East states, albeit with smaller total cooperation figures than the United States. This is unsurprising given less total levels of interaction, as the United States is more actively involved in regional affairs than any other external country. Of note, Iran is well ahead of all other bilateral ties as the most cooperative relationship for China in the Middle East, though in the earlier years Israel and Turkey maintained higher levels of net cooperation.

Table 2: Monthly average net cooperation levels (China-MENA dyads)

Dyad	1995-2000	2001-2008	2009-2010	2011-2017	Dyad	1995-2000	2001-2008	2009-2010	2011-2017
ARECHN	1.25	5.13	5.05	3.75	CHNARE	1.23	4.98	6.04	2.74
BHRCHN	0.72	1.91	0.62	1.42	CHNBHR	0.79	1.22	0.35	1.54
DZACHN	6.57	13.12	2.67	8.88	CHNDZA	6.93	10.36	1.65	7.23
EGYCHN	16.84	39.09	22.33	41.41	CHNEGY	14.51	36.10	18.15	36.50
IRNCHN	16.93	53.65	29.40	83.30	CHNIRN	14.36	43.84	33.60	79.47
IRQCHN	11.79	21.89	3.47	8.97	CHNIRQ	9.95	8.68	2.28	1.15
ISRCHN	21.11	15.80	16.03	17.53	CHNISR	16.91	14.28	13.18	15.43
JORCHN	5.78	12.22	6.55	6.28	CHNJOR	6.18	11.27	6.06	5.40
KWTCHN	3.05	4.67	8.53	1.14	CHNKWT	1.78	3.83	10.07	1.08
LBNCHN	1.49	11.76	2.62	3.57	CHNLBN	1.43	8.06	1.77	2.21
LBYCHN	3.60	4.34	0.39	6.18	CHNLBY	2.53	4.00	1.00	4.11
MARCHN	8.24	11.25	2.14	2.63	CHNMAR	7.58	10.38	2.41	3.63
OMNCHN	1.75	3.48	1.33	0.51	CHNOMN	1.60	2.27	1.96	0.41
QATCHN	2.34	5.00	2.35	2.34	CHNQAT	1.66	3.00	0.98	1.551
SAUCHN	6.86	17.90	17.32	14.49	CHNSAU	7.17	14.93	13.12	12.76
SDNCHN	5.42	36.76	23.38	24.09	CHNSDN	3.82	18.86	17.88	14.34
SYRCHN	8.42	14.15	15.71	23.34	CHNSYR	7.75	12.03	13.91	11.71
TUNCHN	4.12	6.05	2.65	3.61	CHNTUN	3.28	5.03	2.36	1.70
TURCHN	17.86	21.10	52.99	14.76	CHNTUR	15.85	22.12	49.48	11.42
YEMCHN	2.91	9.36	9.32	7.12	CHNYEM	1.99	7.54	4.64	5.93

CHAPTER V
RESULTS

This dyadic event data sample indicates first and foremost that there is no doubt that Chinese activity is increasing in the Middle East. China's activity in the Middle East is both quantitatively and qualitatively different than that of the United States, significantly smaller in scope, and almost universally positive in the aggregate. Comparatively, the United States has high levels of activity, though not all of it reaching net cooperation. Delving further beyond the simple aggregate Goldstein sums, regression results indicate that each individual Middle East country varies widely in regards to its respective bilateral and triangular correlations. The external relations of the Middle East are complex and varying; in fact, these results show that it is misleading to consider the Middle East as a cohesive entity of its own.

A. Dyadic Reciprocity

The first part in determining the results of our series of two-player games is to identify instances of tit for tat behavior, or reciprocity, on the dyadic level. As an iterated game theory model would predict, mutual reciprocity is a key element in maintaining extended periods of cooperation, as the likelihood of future cooperation is predicated on a history of previous cooperation. Maintaining a positive coefficient over time would represent evidence of tit for tat behavior, whether in responding to cooperation or conflict.

Table 3: USA-MENA bilateral Goldstein correlations

Variables		1995 to 2000	2004 to 2010	2012 to 2017
Dependent	Independent (lagged)	F-Statistic	F-Statistic	F-Statistic
EGYUSA	USAEGY	0.130**	0.03	-0.077*
GCCUSA	USAGCC	0.123***	0.002	0.084***
IRNUSA	USAIRN	0.039	0.006	0.084**
IRQUSA	USAIRQ	0.005*	0.016**	0.016
ISRUSA	USAISR	0.202***	-0.001	0.053†
SYRUSA	USASYR	0.732***	0.026	-0.0001
USAEGY	EGYUSA	-0.107*	0.080**	-0.027
USAGCC	GCCUSA	0.065†	-0.0004	-0.007
USAIRN	IRNUSA	0.026	-0.022	0.080*
USAIRQ	IRQUSA	-0.088	0.139	-0.013
USAISR	ISRUSA	-0.055	0.009	-0.048
USASYR	SYRUSA	-0.522***	-0.045	0.256

†p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001.

US responses to Middle East events appear to be less reciprocal than the other way around, implying that the bilateral relationships are driven primarily by the actions United States, with Middle Eastern countries responding to American actitivies. The only significant negative coefficients are with Egypt (EGY) and Syria (SYR), and even then inverse responses were only prominent in the first period measured. Here it is important to note that positive statistical reciprocation does not provide an insight into the overall level of net cooperation, but merely whether actions themselves are reciprocated. For example, the US-Iran and US-Iraq dyads are reciprocal in certain time frames, but regularly engage in net conflict rather than cooperation as seen in table 1. This discrepancy is most prominent in the GCCUSA-USAGCC and IRNUSA-USAIRN dyads, which share the same level of reciprocity in the final period, yet are qualitatively very different in nature. From the opposite perspective, however, the United States

appears to actively reciprocate Iranian actions at a significant level compared to GCC actions.

Table 4: China-MENA bilateral Goldstein correlations

Variables		1995 to 2000	2004 to 2010	2012 to 2017
Dependent	Independent (lagged)	F-Statistic	F-Statistic	F-Statistic
CHNEGY	EGYCHN	0.959***	0.111*	-0.062
CHNGCC	GCCCHN	0.169***	0.030	-0.203***
CHNIRN	IRNCHN	0.015	-0.135***	-0.164***
CHNIRQ	IRQCHN	0.111*	-0.055***	0.073**
CHNISR	ISRCHN	0.226***	0.066*	0.145***
CHNSYR	SYRCHN	-0.197**	0.060†	-0.008
EGYCHN	CHNEGY	-0.547***	-0.017	-0.005
GCCCHN	CHNGCC	0.269***	-0.028	0.252***
IRNCHN	CHNIRN	0.018	0.120***	0.125**
IRQCHN	CHNIRQ	-0.032†	-0.066†	-0.053
ISRCHN	CHNISR	0.300***	-0.017	-0.056†
SYRCHN	CHNSYR	0.144**	-0.014	-0.054*

†p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001.

Comparing tables three and four conclude that inverse relationships appear to be more common in the Chinese context, though they are only inverse from one side, most commonly the Chinese side. This would lend credence to the claim that the Chinese drive the relationship, and regional parties like the GCC respond to Chinese behavior. Given the unusual frequency, what policy implications can we deduce from these negative coefficients? One potential explanation is that the Chinese put forward cooperative initiatives that Middle Eastern countries either do not or cannot reciprocate at similar levels, a possibility buttressed by the fact that the mirror directed dyads *are* reciprocal.

Finally, as all dyadic relationships within the Middle East are included to provide a more cohesive VAR model, comparing the level of regional reciprocity to great power reciprocity offers evidence of the quantitative difference between balanced power dyads and unbalanced power dyads.

Table 5: Intra-MENA bilateral Goldstein correlations

Variables		1995 to 2000	2004 to 2010	2012 to 2017
Dependent	Independent (lagged)	F-Statistic	F-Statistic	F-Statistic
EGYGCC	GCCEGY	0.074†	0.007	-0.003
EGYIRN	IRNEGY	0.048*	0.109***	0.098*
EGYIRQ	IRQEGY	0.135***	-0.043*	0.146***
EGYISR	ISREGY	0.136***	-0.007	-0.050
EGYSYR	SYREGY	0.106	-0.065	-0.116*
GCCEGY	EGYGCC	0.134***	-0.019	0.024
GCCIRN	IRNGCC	0.070*	0.028	-0.193***
GCCIRQ	IRQGCC	0.014	0.007	0.008
GCCISR	ISRGCC	0.071†	0.011	-0.013
GCCSYR	SYRGCC	0.052	0.102*	-0.003
IRNEGY	EGYIRN	0.108**	-0.133***	-0.233***
IRNGCC	GCCIRN	0.129***	-0.059	0.083***
IRNIRQ	IRQIRN	-0.050	0.005	-0.027
IRNISR	ISRIRN	-0.019	0.032	-0.037*
IRNSYR	SYRIRN	-0.042	-0.085*	-0.110***
IRQEGY	EGYIRQ	-0.043	-0.068*	-0.084**
IRQGCC	GCCIRQ	-0.022	-0.050	0.004
IRQIRN	IRNIRQ	0.076***	-0.080***	-0.044*
IRQISR	ISRIRQ	0.050	0.036	-0.023
IRQSYR	SYRIRQ	0.057†	-0.089**	0.035
ISREGY	EGYISR	-0.024	-0.014	-0.054**
ISRGCC	GCCISR	-0.095***	0.039	0.006
ISRIRN	IRNISR	-0.066*	0.040†	0.177***
ISRIRQ	IRQISR	-0.010	-0.003	-0.023
ISRSYR	SYRISR	-0.045	-0.115	-0.157
SYREGY	EGYSYR	0.032	0.092	0.020
SYRGCC	GCCSYR	0.141***	0.0004	0.013
SYRIRN	IRNSYR	0.133**	0.121**	-0.058*
SYRIRQ	IRQSYR	0.141***	-0.018	0.010
SYRISR	ISRSYR	0.079*	-0.007†	0.003

†p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001.

Are regional dyads more prone to reciprocity than great power dyads? It does not appear that there is any basis on which to make that assumption, as the exact dyad in

question appears to make a difference. Reciprocity is present in a little under half of the regional dyads, notably those that are either in open conflict (e.g. GCC-Iran, GCCIRN). Cooperating countries like Iraq and Iran, in fact, appear to demonstrate a pattern that can be associated with coercion with their significant inverse relationships. No extrapolated theoretical claim can be made based on this data regarding the typical behavior of regional dyads vs great power dyads.

Concluding from these three tables and the data they represent, reciprocity is not discernible as a norm; inverse responses and insignificant results are more common than unambiguous reciprocation. This result is contrasts starkly with previous VAR models of great power dyadic relationships, which commonly find in-kind reciprocity at a statistically significant level. Other dyadic relationships, outside the MENA context, may very likely produce different results more in line with the great power norm of reciprocity. This dataset, however, shows that in almost all cases, the most significant predictor of a dyad's current value is the lagged value of the same dyad. This would indicate that policy inertia is more influential than the behavior of the other party regarding 1the current level of net cooperation, a result that has been commonly found and is usually attributed to a bureaucratic model of foreign policy development which presents obstacles to major changes in policy.

At best, these results lead to the tentative conclusion that reciprocity is a marginal aspect in the development of foreign policy, and cannot overcome sustained inertia in a short period of time. The USAIRN-IRNUSA dyad illustrates this concept: reciprocity is virtually absent until the final time period (2011-2017), and even then, despite the massive shift from net conflict to net cooperation, the coefficients remains

small. This means that both states act independently, and even in the context of bilateral cooperation initiative is undertaken (such as the negotiation of the Iran nuclear deal), the actions of one party are often unrelated to any immediately discernible cause. To better illustrate a potential conclusion based on table 3, American behavior toward Iran between 1995 and 2010 was not reactive to Iranian behavior toward the United States. Instead, American foreign policy toward Iran has been driven by other exogenous factors, most likely of which is American domestic political considerations.

Comparatively, the most striking result found here is that inverse bilateral responses are surprisingly common, another departure from previously developed models based on dyadic event data which typically provide support for a tit-for-tat theory of bilateral relationships. An inverse response would represent either coerced submission or aggressive manipulation of a cooperative country, both of which are precisely the opposite of tit-for-tat.

What does that mean in the context of an iterated game theory model? Both a lack of common reciprocity and the presence of inverse responses would lead to the conclusion that tit for tat is not prominent on the bilateral level, either for regional or great power dyads in our sample. Instead of responding to the immediate actions of their counterparts, historical memory of previous actions over a long period of time may take precedence in contemporary decision-making processes.

B. Moving From Dyads To Triads

Adding the third dimension offers a detailed map regarding the functionality of the Middle East regional system: significant triadic relationships provide information on

the structure of conflicts and alliances. For example, the GCC and Iran (IRN), or Israel (ISR) and Iran are clearly connected and directly affect one another's external relationships. Interestingly, these effects are incurred by both external powers, the United States and China, despite China's stated aim to remain detached from regional conflicts. This leads to the conclusion that even Chinese ties are not isolated from regional dynamics, but are in fact integrated into the Middle East regional system, even if that integration remains shallow compared to the United States.

Triads determine the reactions of the third parties to (lagged) external events. The direction of the correlated dyads explains both the nature of the reaction and what actions it is responding to. In tables 6 and 7, the dependent variable includes the name of the directed dyad, the coefficient, and the significance level. Only significant regressors where one of the partners was either the United States or China were included in the table, though all regional dyads were part of the underlying model. Triangular responses initiated by Middle Eastern states that directly pertain to great power competition are relatively rare, even rarer than cases of clear bilateral reciprocity, and are indicated in tables 6 and 7 in boldface.

Table 6		Independent (lagged)	
Dependent	1995-2000	2004-2010	2012-2017
EGYUSA	USASYR-0.073† **CHNEGY0.266†**	GCCUSA0.04* USAGCC0.11*** ISRUSA0.032† USAISR-0.031*	**EGYCHN-0.17*** **CHNEGY0.22**** IRQUSA0.078***
GCCUSA	IRNUSA-0.08*	ISRUSA0.04* EGYUSA-0.19***	USAIRQ-0.018* ISRUSA0.52* EGYUSA-0.071†
IRNUSA	IRQUSA-0.017† USAIRQ0.004***	USAEGY-0.06† EGYUSA0.083*	ISRUSA0.11*
IRQUSA	None	**IRQCHN0.197***	SYRUSA-0.11†
ISRUSA	**ISRCHN0.27***** **CHNISR0.298*****	IRNUSA-0.85** GCCUSA0.063†	**CHNISR-0.279†**
SYRUSA	EGYUSA0.105* USAEGY0.142** USAISR0.044*	**CHNSYR0.317*** **SYRCHN-0.285***	IRQUSA0.023†
EGYCHN	CHNGCC0.137* IRNCHN0.198* CHNIRN0.167*	CHNIRN0.066**	GCCCHN-0.237***
GCCCHN	IRNCHN-0.257*** CHNIRN0.157** CHNISR-0.08*	**USAGCC0.036****	CHNIRN-0.054*
IRNCHN	ISRCHN0.05** CHNISR-0.037*	ISRCHN0.1* CHNISR-0.088†	IRQCHN0.1† CHNIRQ-0.16* GCCCHN0.32*** EGYCHN-0.36*** CHNEGY0.136*
IRQCHN	CHNISR0.03**	**IRQUSA0.011†**	SYRCHN0.099* CHNGCC0.096†
ISRCHN	CHNGCC0.11*	None	None
SYRCHN	CHNEGY0.231***	CHNIRN-0.022*	**SYRUSA0.033*** GCCCHN-0.14*** CHNGCC0.143***

†p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001.

Table 7	Independent (lagged)		
Dependent	1995-2000	2004-2010	2012-2017
USAEGY	**CHNEGY0.03*** **EGYCHN-0.34*** IRNUSA-0.12** USAISR0.033†	USAGCC0.159*** SYRUSA0.036†	**EGYCHN-0.2†** **CHNEGY0.21†**
USAGCC	IRQUSA-0.13*** USAEGY0.159***	USAIRN-0.22* USAEGY0.239*** EGYUSA-0.268***	USAIRN-0.044*
USAIRN	USAIRQ0.002† **IRNCHN0.14†**	USAIRQ0.0314* USAISR-0.09642** ISRUSA8.567† CHNISR-0.978*** ISRCHN-0.736***	GCCUSA-0.14* USAISR-0.96*
USAIRQ	USAGCC1.10* GCCUSA-1.44**	USAIRN0.063† **CHNIRQ-0.616***	IRNUSA0.15**
USAISR	None	GCCUSA0.15* IRNUSA-0.073†	**CHNISR-0.41***
USASYR	USAEGY0.15** EGYUSA0.167**	None	IRNUSA0.31*** USAIRN-0.16*
CHNEGY	GCCCHN-0.138* CHNGCC0.215*** CHNIRN0.162* IRNCHN0.232**	CHNIRN0.081**	GCCCHN-0.41***
CHNGCC	IRNCHN-0.23*** EGYCHN0.56*** CHNEGY-0.44*** CHNSYR0.18*	None	USAIRN0.034*** CHNIRN-0.056* EGYCHN-0.68†
CHNIRN	ISRCHN0.0627*** EGYCHN1.31*** CHNEGY-1.182	CHNISR-0.14* ISRCHN0.11*	**IRNUSA0.057***** **USAIRN-0.03***
CHNIRQ	**USAIRQ-0.004***** **IRQUSA-0.01***	**USAIRQ-0.0052***	**IRQUSA-0.0095*** **USAIRQ-0.004*****
CHNISR	None	USAIRN0.0007*	None
CHNSYR	CHNEGY0.32***	**SYRUSA-0.039***** **USASYR0.011*****	CHNIRQ-1.327** CHNGCC0.088†

†p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001.

As one could expect, the United States is more intricately linked to regional dyads than China, a natural function of its historically prominent role in Middle East regional politics. This dynamic is evident from the higher coefficients from US-related dyads. The most important conclusion from the great power-driven dyads is that in more cases, China is responding to American activity in the Middle East rather than vice versa. In some cases this is positive, others are inverse, depending on the political context underlying the relationship. Iraq and Iran, for example, represent the clearest cases of direct great power competition in the Middle East. While this dynamic has been evident in Iraq throughout the entirety of the sample, Iran has only recently fallen into this pattern. Thus, it is impossible to make any conclusive claim regarding the nature of cooperation or competition between the United States and China in the Middle East; too many exogenous factors are likely important that make such a conclusion difficult.

From the perspective of Middle Eastern countries, neither great power appears to have an overwhelming influence on the country's alignment pattern; in fact, in this regard, the results are remarkably inconclusive. Based on the significant results, certain cases, particularly Iraq (IRQ) and Israel (ISR), inverse triangular responses indicate that growing relations with China come at the expense of good relations with the United States. Zero-sum logic may be applicable to individual Middle Eastern countries: better relations with China are a response to worsened relations with the United States.

CHAPTER VI
CONCLUSION

Is it possible to discuss a cohesive US-Middle East-China strategic triangle in the same manner as a US-Sino-Soviet strategic triangle during the Cold War? The data analyzed here ultimately points to no, considering the varying presence of statistical significance in individual triangular relationships, although it does illuminate a number of interesting dynamics worthy of attention. China drives the agenda in its bilateral relationships with Middle East states, China more often responds to American actions in the Middle East than vice versa, and, in a few cases such as Iraq and Iran, there is evidence of zero-sum competition between the United States and China. As a collection of small states, the Middle East is not a player in the international system on the same level as great powers, but is strategically important enough that it warrants substantial attention from both the United States and China. With these ideas in mind, we can return to our original questions.

- Question 1: Can statistically significant triangular responses be found in the US-China-Middle East relationship?

In most cases, the effects have been insignificant, though a few countries like Iraq and Syria have a clear causal relationship that binds their respective foreign policies. For example, in the first two time periods analyzed, the foreign policies adopted by Middle East states toward both the United States and China appear to be complimentary, with the sole exception of Iraq. Only in the final section of the sample (2012-2017) does inverse triangular responses, implying opposite forms of activity, become commonplace.

- Question 2: Do significant responses indicate that the US and China are competing with each other in the Middle East?

The sheer diversity in results makes such a conclusion impossible. There are some cases where this is evident, like Iran, but other cases, like Egypt, would refute such a sweeping claim. In Egypt, cordial political relations with the United States makes competition unnecessary, whereas the opposite is true in the case of Iran, where a hostile American foreign policy effectively makes competition inevitable. The Middle East is fundamentally different from other regional entities previously analyzed in the context of US-China competition, like ASEAN, in that there is no unifying element within the region that binds it together like a shared security threat. The interests of China and the US in the Middle East can vary wildly from country to country, and so the inability to draw a full conclusion in this regard should not be surprising.

- Question 3: How do MENA states position themselves between the two major external powers?

Similarly to question 1, once again, the (unsatisfying) answer is that it is dependent on the country itself, and potentially other exogenous factors that lie outside the VAR model used here.

Quantitative methods, and especially automated event data collection methods, present shortcomings that may hinder the external validity of the conclusions postulated. Even considering the resources devoted to ensuring false positives are rare, since ICEWS event data is utilized in critical military predictive heuristics, the data is still a noisy and imperfect proxy for interpreting the status of bilateral relationships. Utilizing

alternative event data sets, especially hand-coded sets, would partially alleviate this shortcoming, and doing so has bolstered conclusions of zero-sum triangular logic in regard to US-Sino-Soviet relations.

Secondly, basing a VAR model on event data excludes exogenous variables, which may be the most influential factors in determining the behavior of one country toward another. The previously developed event data models for triangular relationships replicated here also do not include exogenous variables, however, so this is not a limitation of this thesis alone but in the field as a whole.

Finally, triangular relationships are complicated by definition, even when they solely consist of large, unitary actors. The Middle East, as an internally divided region with competing centers of influence, only further complicates any attempts to draw firm theoretical conclusions about the relationship between the MENA region and external great powers. Quantitative methods with event data can offer support to claims of causal relationships of conflict or cooperation, but the level of ambiguity that remains means that such methods should not be considered in isolation to uncover crucial dynamics in international relations.

APPENDIX

A. Data Overview

Statistic	N	Mean	St. Dev.	Min	Max
goldstein.CHNEGY	8,036	1.056	6.193	-10.000	195.000
goldstein.CHNGCC	8,036	0.915	5.681	-11.000	166.500
goldstein.CHNIRN	8,036	1.627	7.879	-24.000	263.400
goldstein.CHNIRQ	8,036	0.458	3.727	-34.200	116.900
goldstein.CHNISR	8,036	0.583	3.997	-25.600	93.900
goldstein.CHNSYR	8,036	0.500	3.312	-20.000	92.200
goldstein.CHNUSA	8,036	13.442	31.992	-112.400	510.800
goldstein.EGYCHN	8,036	0.942	5.989	-55.200	202.900
goldstein.EGYGCC	8,036	1.544	6.896	-186.900	111.200
goldstein.EGYIRN	8,036	0.793	5.040	-25.000	184.100
goldstein.EGYIRQ	8,036	0.713	4.199	-50.000	99.100
goldstein.EGYISR	8,036	1.790	11.214	-244.000	240.200
goldstein.EGYSYR	8,036	0.999	5.707	-119.900	138.500
goldstein.EGYUSA	8,036	2.638	11.035	-79.500	185.900
goldstein.GCCCHN	8,036	0.765	5.073	-10.000	153.500
goldstein.GCCEGY	8,036	1.742	6.207	-91.300	97.800
goldstein.GCCIRN	8,036	1.489	17.784	-959.900	194.900
goldstein.GCCIRQ	8,036	0.801	5.471	-80.200	101.100
goldstein.GCCISR	8,036	0.036	2.586	-60.000	53.800
goldstein.GCCSYR	8,036	0.945	5.675	-134.000	107.600
goldstein.GCCUSA	8,036	2.502	11.556	-295.700	190.400
goldstein.IRNCHN	8,036	1.465	7.278	-35.000	270.300
goldstein.IRNEGY	8,036	0.964	5.480	-30.000	172.400
goldstein.IRNGCC	8,036	1.369	13.613	-472.000	177.600
goldstein.IRNIRQ	8,036	2.528	13.715	-377.000	313.400
goldstein.IRNISR	8,036	-1.583	5.509	-109.000	18.000
goldstein.IRNSYR	8,036	2.858	8.716	-42.300	127.200
goldstein.IRNUSA	8,036	-0.764	15.049	-206.200	227.000
goldstein.IRQCHN	8,036	0.210	5.316	-241.200	91.400
goldstein.IRQEGY	8,036	0.460	4.802	-144.500	103.600
goldstein.IRQGCC	8,036	-0.048	9.904	-605.500	81.600
goldstein.IRQIRN	8,036	1.644	10.801	-151.400	246.600
goldstein.IRQISR	8,036	-0.260	2.352	-60.000	19.600
goldstein.IRQSYR	8,036	-1.118	11.170	-202.000	149.300
goldstein.IRQUSA	8,036	-3.276	27.062	-391.800	275.700
goldstein.ISRCHN	8,036	0.500	3.895	-57.200	93.600
goldstein.ISREGY	8,036	2.092	9.686	-133.000	156.900

goldstein.ISRGCC	8,036	0.155	3.222	-30.000	180.600
goldstein.ISRIRN	8,036	-2.304	7.847	-135.400	18.700
goldstein.ISRIRQ	8,036	-0.064	1.590	-33.100	32.900
goldstein.ISRSYR	8,036	-2.840	38.327	-1,544.500	252.600
goldstein.ISRUSA	8,036	8.350	20.003	-88.500	348.100
goldstein.SYRCHN	8,036	0.360	2.750	-20.000	77.900
goldstein.SYREGY	8,036	0.910	5.000	-28.000	132.000
goldstein.SYRGCC	8,036	0.748	4.916	-55.000	99.400
goldstein.SYRIRN	8,036	1.755	8.119	-93.400	133.700
goldstein.SYRIRQ	8,036	-0.280	8.512	-151.500	119.900
goldstein.SYRISR	8,036	0.329	7.305	-150.000	244.500
goldstein.SYRUSA	8,036	0.814	10.298	-367.000	254.600
goldstein.USACHN	8,036	15.724	34.607	-517.000	510.800
goldstein.USAEGY	8,036	3.635	12.928	-54.300	227.500
goldstein.USAGCC	8,036	3.535	12.396	-188.000	210.100
goldstein.USAIRN	8,036	-2.229	20.382	-528.400	257.000
goldstein.USAIRQ	8,036	-27.138	150.795	-7,701.500	309.900
goldstein.USAISR	8,036	11.218	24.396	-57.100	368.900
goldstein.USASYR	8,036	-3.246	35.197	-1,331.700	212.000

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