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Measuring Rising Power Satisfaction: The Power Transition Theory and Prospects for Cooperation in the Sino-American Dyad

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Introduction

During the Cold War, a number of realist theories were developed by scholars of international relations that attempted to estimate which type of international system would be most stable. In the context of the Cold War bipolar system, the Power Transition Theory was developed by A.F.K. Organski and Jacek Kugler (1980) to explain the causes of war and stability in international relations, confronting the balance of power and collective security theses.

The basic notion of the theory is as follows: When a secondary power on the world stage is not satisfied with the world order created by the current hegemon, and that country's elites are willing to go to war, conflict will occur as the aggrieved power catches up in capabilities with the hegemon.

Organski and Kugler (1980) postulated various empirical measures of the PTT. Relying upon a series of measurements, such as their *Power Measurement Formula* and measures of alliance behavior, the authors empirically test the proposition, in a dyad between a contending power on the world stage (defined as one with at least 80 percent of the hegemon's GNP) and the hegemon, that war will ensue when that contender is *dissatisfied and catching up in power with the hegemon* (Organski and Kugler, 1980, pp. 55).

This theory, however, has a problem regarding the indirect measurement and correlation between the variables of "satisfaction" and "war". The authors do not offer a clear operational definition of the concept of "satisfaction", rather only for the variables of "power" and "war". They assume *a priori* that all rising contenders in an international system are "not satisfied" and provide no justification for the assumption. They also extrapolate data mostly from European case studies, as well as assume that the weaker power will start the conflict *during* the power transition, and not *after*.

In this paper, I endeavored to answer the following question: Firstly, is there better way to observe and measure the concept of *satisfaction* in the context of PTT? Secondly, can such an operationalization be better suited to analyze the Sino-American dyad? The objectives of the paper will be to formulate a viable alternative measure for the variable of *satisfaction in the context of* PTT as a general testing of the theory.

This research is necessary because of the prevalence of realist international relations theory in recent times for the interpretation of the strategic interaction between rising and established powers, conceived as hegemon-challenger relations. Thus, a viable theory that explains how power fluctuations between contender-hegemon dyads will occur and affect the whole international system would be beneficial to policy making.

In addition, the critique on Organski and Kugler's (1980) original empirical measurement, as well as later author's measurement of the variable of satisfaction, will enhance variable measurement in international relations theory, with a particular focus on realist theory. This work critiqued what has already been worked on in operationalizing satisfaction in Power Transition Theory, proposed the most logical operationalizations of satisfaction, and presented the results of binary logistic regression analyses to ascertain the effect of the independent variables suggested by the literature on the occurrence of conflict initiation in hegemon-contender dyadic relations. The paper then focuses on qualitatively analyzing the most relevant operationalizations of satisfaction coming from the regressions.

Literature Review:

As was previously mentioned, PTT in its original iteration makes a series of flawed assumptions regarding the interaction between the variables "satisfaction" and "power" that have been critiqued by later authors. De Soysa, Oneal, and Park's (1997) analysis posits that PPT is

applicable beyond contender-hegemon relations, and that alternative measurements of power (like the Correlates of War Project) are better predictors of inter-state war within peripheral dyads (de Soysa, Oneal and Park, 1997, pp. 525). De Soysa et al (1997) also raise concerns that there may be a possible contradiction in PPT when it comes to the variable of *satisfaction*, specifically arguing that, if Organski's (1981) theory is to be taken at face value, the theoretical attribution of the dissatisfaction of the contender is problematic T, as Organski (1981) suggests that the hegemon shapes the international system so it disproportionately benefits from its position, thus making the variable of "satisfaction" a mere function of power (cited in Lemke and Reed, 1998, pp. 511).

Lemke and Reed (1998) argue that there is no such contradiction, positing that the theoretical position that all rising states will be either dissatisfied or satisfied makes the assumption that states are only concerned with relative gains, a position that misunderstands PPT's original position on "conditional anarchy", in which satisfied states may pursue absolute gains and dissatisfied states pursue relative gains (Lemke and Reed, 1998, pp. 511). Citing Organski (1981), Lemke and Reed (1998) make the distinction between powerful and satisfied states and powerful and dissatisfied states, also making the point that, if indeed there is a positive correlation between being powerful and satisfaction, "then PTT would lead us to anticipate that no wars among great powers would ever occur" (Lemke and Reed, 1998, 511-13). Concluding in their analysis that that national power is not related statistically to status quo evaluation, their work further makes the case for a viable measurement of the variable of satisfaction (Lemke and Reed, 1998, 514).

Chan (2004) tries to standardize once again the empirical measurement of *satisfaction/dissatisfaction* within the international system by quantifying principles such as the observance of sovereignty and the laws of war (Chan, 2004, pp. 216). Keeping this indicator

separate from measurements of power to establish causality, Chan (2004) uses International Governmental Organization membership to quantify whether non-status quo powers are satisfied with the international system, finding a positive correlation between increasing IGO membership and increased satisfaction. However, the main problem that arises out of depending on the observation of IGO membership as a measure of satisfaction/dissatisfaction is temporal: the only credible period of measurement by this variable of satisfaction occurs only after 1945, thus depriving the theory of temporal validity before this time period. Pevehouse, Nordstrom and Warnke find, in their study on IGO creation (*The New Correlates of War IGO Data)*, that the average rate of formation of IGO creation in five-year increments from the year 1815-1874 was 0.58 (Pevehouse, Nordstrom, and Warnke, 2004 pp. 107).

A proposed measurement involves the issue of relative gains in international cooperation. According to realist theory, the seeking of relative gains by actors would inhibit international cooperation. According to Snidal's (1991) two-actor and large N model, he finds that realist assumptions about relative gains have more validity in the former model rather than in the latter (Grieco, Powell, and Snidal, 1993, pp. 730). Basing his idea on the notion of "constant returns" in the large N model, Snidal (1991) argues that the gains from cooperation would be proportional to the size of the involved states, these gains being shared equally among them (Grieco, Powell, and Snidal, 1993, pp. 730). Such a model is problematic because it: 1) relies on a major assumption, echoes already existing realist theory regarding third parties in dyadic situations, and relies on realist arguments regarding the size of states (Grieco, Powell, and Snidal, 1993, pp. 730-732).

Powell (1991) finds in his formal model that gaps in mutually positive gains from joint action between states will lower a state's utility and impede cooperation if the state in question fears that the increased capabilities of the other state due to the gap in gains will make the other

state a military threat to the latter (Grieco, Powell, and Snidal, 1993, pp. 733). We are thus left with the methodological issue of attempting find a viable measurement of this tendency in international cooperation.

Indeed, Organski and Kugler (1989) in their later evaluation of the PTT's precepts make the point that "the power transition conceived international competition as driven by the potential net gains that could be accrued from conflict or cooperation" (Organski and Kugler, 1989, cited in Midlarsky, 1989, pp. 173). This idea of *net gains* describes the aforementioned model proposed by Powell (1991) and suggests that nations will conduct a cost-benefit analysis to determine whether the relative gains accrued by participation in the international system overcome the *costs* of participating in the international system.

A proposed measurement of the variable of *net gains* involves the level of measurable trade between states in a dyad. There are two methods available. The first one, Katherine Barbieri's (1995) *trade share* concept, is essentially the proportion of bilateral trade to each state's total trade in a dyadic relationship (Gartzke and Li, 2003, pp. 555). Generally speaking, "the concentration of *trade share* in a single partner is argued to represent vulnerability and might be indicative of political manipulation (Gartzke and Li, 2003, pp. 555). Oneal and Russet (1997), on the other hand, "base their measure on the ratio of bilateral trade to a state's gross domestic product (GDP)…" (Gartzke and Li, 2003, pp. 555). This measurement suggests a state's dependence upon a particular dyadic trade relationship (Gartzke and Li, 2003, pp. 555).

Applicable Theory

The theory that was used was be concept of *net gains* applied to the measurement of the variable of satisfaction with the *trade share concept*. We can assume Organski's (1980) concept of *net gains* can be operationalized by Barbieri's (1995) measure of trade share due to the

increasingly common perception that trade tensions will precede militarized conflict. In other words, "satisfaction" was quantitatively measured as a function of the perceived net gains a contending nation may derive from a hegemon in the dyadic relationship, measured by trade share as an independent variable.

The quantitative measure of trade share in a dyadic relationship was measured in such a way to ascertain whether a country's relative gains are greater than the costs of participating in the international system. Additionally, considering the subjective nature of a country's satisfaction with the international system, there was a need for the quantitative analysis to be combined with a qualitative overview of that country's perceived level of satisfaction.

One could also assume that whether alliances tighten or loosen before a militarized dispute will affect the probability of war in a dyad, per Organski's (1980) findings in this regard. This was another independent variable alongside trade share. The measures used were the Tau B measure and Signorino and Ritter's (1999) S Score (both its weighted and unweighted variants). Additionally, Chan's (2004) findings also point to a positive relationship between IGO membership and satisfaction, thus IGO membership was the third independent variable. In addition, several independent variables available from EuGene, such as whether the hegemon or the contender starts the conflict or not, or its capabilities vis-à-vis the contender, were independent variables as well. After these measurements, the Sino-American dyad was analyzed in depth to determine if China is not satisfied with the international system.

Hypotheses

1. The more satisfied a contender in a dyadic relationship is with the international order, the probability of conflict between it and the hegemon will be lower.

a. H0: There is no statistically significant relationship between levels of satisfaction and the probability of conflict initiation in contender-hegemon dyads.

Methodology

The methodology used for the preliminary testing of the PTT depended upon the improved measure of satisfaction measured by three of the proposed measurements: *trade share*, alliance formation and IGO membership, as independent variables and *war* as a dependent variable. The unit of analysis for this portion was all major power dyads. The first measurement was a quantitative appraisal of the perceived net gains a country receives by participating in the international system, measured by *trade share*, IGO membership, and alliance formation. Statistically, this was conducted by a *logit* regression to ascertain the three independent variable's effects (trade share, alliance formation, and IGO membership) upon the occurrence of the binary value of war as a dependent variable (occurrence or no occurrence). Trade share is defined by the following equation:

$$\frac{(imports\ ij + exports\ ij)}{(imports\ i + exports\ i)} = \frac{trade\ ij}{trade\ i}$$

In this equation, *ij* denotes a dyadic variable, while subscripts *i* and *j* denote the states *i* and *j* in the dyad, such that *i* does not equal *j* (Barbieri, 1995, cited in Gartzke and Li, 2003, pp. 555). Similarly, *trade salience* ij, *trade symmetry ij* and *trade interdependence ij* are given by the following equations:

$$trade\ salience\ ij = \sqrt{trade\ share\ i * trade\ share\ j}$$
$$trade\ symmetry\ ij = 1 - |trade\ share\ i - trade\ share\ j|$$
$$trade\ interdependence\ ij = trade\ salience\ ij * trade\ symmetry\ ij$$

They are thus all derived from the original trade share equation (Barbieri, 1995, cited in Gartzke and Li, 2003, pp. 555). The second measurement, proposed by Chan (2004), was that of measuring Inter-Governmental Organization membership in dyadic relationships. This measurement was provided as a variable measured in the Expected Utility Generation and Management Program developed by D. Scott Bennett and Allan C. Stam, III. EUGene is a program designed for the quantitative analysis of international relations, with such variables as the country-year, directed dyad year, non-directed dyad year and directed dispute-dyad year as the units of analysis.

The measure of alliance formation was quantitatively determined by the alliance portfolio available in EuGene. The similarity of the country's alliance portfolio was measured by the tau b score in the alliance portfolio available in the software. The software was used to identify alliance "clusters" and will measure whether these clusters are discrete or overlapping (Signorino and Ritter, 1999, pp. 116). Bueno de Mesquita and Atfeld argue that "alliance portfolios could be interpreted as revealed preferences over security issues" (Signorino and Ritter, 1999, pp. 116). The resulting datasets were exported as text files to a statistical program like R that displayed and analyzed the results.

The data set used to measure dyadic trade is version 4 of the Correlates of War Trade Data organized by Katherine Barbieri. The data set used to measure IGO membership is version 2.3 of the Correlates of War IGO data set compiled by Peevehouse, Jon CW, McManus and Jamison. The original power transition dataset will be produced from the EuGene program.

Design and Reach

This project was correlational in nature, as its hypotheses seeked to establish a correlation between the occurrence and non-occurrence of war in major power dyads according to the effects of several independent variables The unit of analysis is the major power dyad in the modern states system (1816-Present). The sample of cases was selected according to the following criteria: whether it was a major power, whether it was in a dyadic relationship with another major power, and whether during that dyadic relationship conflict initiated (coded as 1) or did not initiate (coded as 0). This resulted in a number of cases:

Additionally, the sample of cases was augmented with information concerning dyadic trade and common IGO memberships. The research techniques used for this paper are binary logistic regression analyses that seek to establish the effects the operationalizations of satisfaction in PTT have on the occurrence of war (whether 1 or 0). This design, while ideal to analyze much information, is limited in that a researcher has to limit the number of independent variables to those that would logically have bearing on the occurrence or non-occurrence of war. The total number of cases for the general testing of the PTT will be all major power dyads from 1816-2000.

Results

The first logistic regression that was run sought to be a control regression: a measure of a wide variety of accepted operationalizations of satisfaction: Tau B, S scores (both weighted and unweighted) capabilities of the hegemon (cap 1) and of the contender (cap 2) and their effects on conflict initiation (*cwinit*). The results are, in odds ratios:

Table 1.

Logit regression with Tau B, S score (weighted and unweighted) and capabilities as independent variables

VARIABLES	(1) cwinit
Weighted global S score	-1.847***
	(0.308)
Unweighted global S score	0.698**
	(0.279)
Global tau score	0.559*
	(0.338)
Capabilities of country 1	0.545
	(0.631)
Capabilities of country 2	-1.105*
	(0.633)
Constant	-3.377***
	(0.163)
Observations	5,930

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
R2 0.5365
Note. Data taken from EUGene software ver. 3.212 by Bennet, D. Scott and Stam III, Alan C

Of note are the results indicating that both the global Tau B score and the weighted S score influenced the non-initiation of interstate war between the dyads in question, though only the weighted and unweighted S scores of the alliance portfolios had any statistical significance, with the weighted global S score being the most statistically significant predictor of the non-occurrence of conflict initiation, applicable in 99.9 percent of cases, having a p-value of 0.00 (unweighted S scores having a p-value of 0.012). Thus, the null hypothesis can be discarded, as there is a statistically significant relationship between satisfaction (operationalized as alliance formation measured by S scores) and conflict initiation. This model had a fit of R^2=0.5365.

Next, I sought to ascertain the effect of including whether the hegemon or the contender in the dyadic relationship started the conflict on its outbreak. The results of the same *logit* including whether the hegemon (cworig1) or the contender (cworig2) started the conflict as independent variables is shown below:

Table 2.

Control logit with conflict originator as independent variables

VARIABLES	(1) cwinit
Conflict originator country 1	0.790***
	(0.298)
Conflict originator country 2'	-1.072***
	(0.299)
Global weighted s score	-1.880***
	(0.310)
Global unweighted s score	0.884***
	(0.279)
Global Tau score	0.596*
	(0.337)
Capabilities of country 1	0.701
	(0.641)
Capabilities of country 2	-1.177*
	(0.643)
Constant	-3.501***
	(0.163)
Observations	5,930

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
R2 0.5496

Note. Data taken from EUGene software ver. 3.212 by Bennet, D. Scott and Stam III, Alan C

As can be determined, whether the hegemon in a given dyad starts the conflict has a high probability, statistically significant in 99.9 percent of cases, of affecting the outbreak of conflict, a p-value of 0.008. In contrast, the conflict being started by the contender actually affects the probability of conflict initiation negatively, this variable exhibiting a p-value of 0.000. The weighted global S score has negative probability of affecting conflict initiation, being statistically significant with a P value of $p<0.01$. In contrast, the unweighted S scores had a higher probability of influencing the outbreak of conflict with a statistical significance of 99.9 percent, or $p=0.002$. Capabilities of the hegemon likewise, influence the probability of conflict positively, but this probability is not statistically significant in this model ($p=0.274$). Capabilities of the contender, interestingly, do negatively affect the probability of conflict initiation with a statistical significance of 93 percent of cases, or $p=0.067$. The fit for this model was $R^2=0.5496$.

In order to test the effects of Barbieri's trade measure formulas, the Correlates of War data concerning dyadic trade were merged into the original EuGene dataset. Conducting the same logit with total trade dyadic trade as an independent variable yielded the following results:

Table 3.
Control logit with smooth total trade as independent variable

VARIABLES	(1) cwinit
s_wt_glo	-1.778***
	(0.546)
Conflict originator country 1	1.192***
	(0.438)
Conflict originator country 2	-1.515***
	(0.440)
Capabilities of country 1	0.880
	(1.101)
Capabilities of country 2	-1.271
	(1.117)
Global tau score	0.388
	(0.529)
Global unweighted s score	1.019**
	(0.446)

smoothtotrade	0.000
	(0.000)
Constant	-3.547***
	(0.267)
Observations	2,375

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
R2 0.5733

Note. Data taken from EUGene software ver. 3.212 by Bennet, D. Scott and Stam III, Alan C and by Barbieri, Katherine and Omar M. G. Omar Keshk. 2016. Correlates of War Project Trade Data Set Codebook, Version 4.0. Online: http:/correlatesofwar.org

Here, the operationalization of satisfaction via total dyadic trade seems to be the factor that most lowers the probability of war, but it is not statistically significant at any level, with p>0.05. However, the weighted S Score does lower the probability of conflict initiation significantly, and this result is statistically significant in 99.9 percent of the 2,375 cases (p=0.01). Capabilities of the hegemon tend to increase conflict initiation, but this result is not statistically significant at any level in this model, with p>0.05. Interestingly, the unweighted global S score increases the probability of conflict initiation, and this result is significant in more than 95 percent of the 2,375 cases in the merged dataset, or p=0.022. Finally, whether the hegemon in the dyad initiates the conflict increases conflict initiation positively, and this result is statistically significant in 99.9 percent of cases in this model, or p=0.006. The overall fit for this model was R^2=0.5733.

Seeing as total trade was not a statistically significant variable that influenced conflict initiation, I sought to ascertain which trade variables were statistically significant. I tried to see whether trade flows between the pairs in a dyad (flow1 and flow 2) or trade dip (a binary value that indicates whether trade between a dyad pair had dipped below 50 percent) had any bearing on the outcome of conflict initiation. For this analysis, the data concerning “ccode” and “year” were sorted into a single variable called “group 1” that sought to pair a dyad for all years. I then

conducted a binary logistic regression analysis using trade dip and an independent variables. The results follow:

Table 4.

Control logit with trade dip as independent variables

VARIABLES	(1) odds ratio
group1	.
	(.)
Conflict initiation	.
	(.)
Weighted global S scores	0.845**
	(0.061)
Capabilities of country 1	32,151.423***
	(41,721.638)
Capabilities of country 2	16,300.884***
	(38,807.831)
Trade dip with country 1	0.738
	(0.746)
Trade dip with country 2	2.529*
	(1.310)
Constant	0.000***
	(0.000)
Observations	34,108

seEform in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Note. Data taken from EUGene software ver. 3.212 by Bennet, D. Scott and Stam III, Alan C and by Barbieri, Katherine and Omar M. G. Omar Keshk. 2016. Correlates of War Project Trade Data Set Codebook, Version 4.0. Online: http:/correlatesofwar.org

Table 5.

Control logit with dyadic trade flow as independent variables

VARIABLES	(1) odds ratio

group1	.
	(.)
Cwinit	.
	(.)
Global weighted S score	0.845**
	(0.066)
Trade flow 2	1.000**
	(0.000)
Capabilities of country 2	18,402.327***
	(45,174.688)
Trade flow 1	1.000**
	(0.000)
Capabilities of country 1	34,520.294***
	(45,128.203)
Constant	0.000***
	(0.000)
Observations	34,108

seEform in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Note. Data taken from EUGene software ver. 3.212 by Bennet, D. Scott and Stam III, Alan C and by Barbieri, Katherine and Omar M. G. Omar Keshk. 2016. Correlates of War Project Trade Data Set Codebook, Version 4.0. Online: http:/correlatesofwar.org

Table 6.
Logit with group variable modifications and S score (weighted and unweighted) as independent variables

VARIABLES	(1) odds ratio
group1	.
	(.)
Conflict initiation	.
	(.)
Weighted S score	0.056***
	(0.056)
Capabilities of country1	2,078.881***
	(2,839.852)
Capabilities of country 2	42.939
	(115.575)
	-
Weighted regional S score	2.424

	(1.969)
Constant	0.001***
	(0.001)
Observations	33,770

seEform in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Note. Data taken from EUGene software ver. 3.212 by Bennet, D. Scott and Stam III, Alan C

The result of these three logits with the modified variables shows that capabilities of the hegemon (followed by those of the contender) most influence the outbreak of conflict, being statistically significant with p values below p=0.01. Whether trade flow with the hegemon had dipped below 50 percent influenced the probability of conflict initiation, but this result was not statistically significant at any level. Interestingly, trade dip *with the contender* had a positive outcome of conflict initiation, statistically significant at p=0.10, or 90 percent of cases. Trade flow to the contender or hegemon had a positive (yet not nearly as strong as their capabilities) impact on conflict initiation, this being statistically significant in 95 percent of cases or p=0.05. Interestingly, the regional weighted s score did positively influence conflict initiation, but this result was not statistically significant at any level, unlike the global weighted S score, which in the last model with the group modifications lowered the probability of conflict initiation with p=0.04. The R^2 of the trade dip model was 0.0643, 0.0675 for the trade flow model, and 0.0818 for the S score and capabilities model

The next step was to ascertain the effects of shared IGO membership between the dyads. For that analysis, the original EuGene data set was merged with version 2.3 of the dyad unit COW IGO data set. The resulting merge limited the cases to 1,032, which were the matching data points between the original EuGene data set and the COW IGO data set. This is due to the aforementioned

fact that Inter Governmental Organization membership is a relatively new phenomenon in international relations. As such, the mean of the "year" variable in this data set is around 1947. Accordingly, the same *logit* was run, this time with shared United Nations membership as an independent variable. This is because this particular IGO is logically the most common membership among all the great power dyads after on or after 1947. The results follow:

Table 7.

Control logit with shared UN membership as independent variable

VARIABLES	(1) cwinit
Weighted global S score	-2.356***
	(0.814)
Conflict originator 1	1.377**
	(0.572)
Conflict originator 2	-1.807***
	(0.574)
Capabilities 1	4.087**
	(1.818)
Capabilities 2	1.295
	(3.249)
Global Tau Score	0.219
	(0.847)
Unweighted Global S score	1.838***
	(0.693)
UN membership	0.352*
	(0.184)
Constant	-4.335***
	(0.536)
Observations	1,032

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Note. Data taken from EUGene software ver. 3.212 by Bennet, D. Scott and Stam III, Alan C and by Pevehouse, Jon C.W., Timothy Nordstron, Roseanne W McManus, Anne Spencer Jamison, "Tracking Organizations in the World: The Correlates of War IGO Version 2.3 datasets", Journal of Peace Research.

Again, the weighted global S score was the factor that affected non-initiation of conflict the most, being statistically significant in 99.6 percent of cases, or p=0.004. Whether the hegemon initiated the conflict affected the likelihood of conflict initiation positively, and was statistically significant in more than 95 percent of cases, with p<0.05. Whether the contender initiated the conflict had the opposite effect, a lower probability of hegemonic conflict, significant in more than 95 percent of cases with p<0.05. In this model, capabilities of the hegemon significantly affected the likelihood of conflict initiation, with this probability being significant in more than 95 percent of cases, or p<0.05. Capabilities of the contender had a lower probability of affecting conflict initiation, but this result was not statistically significant at any level, with p>0.05. The global Tau score also influenced the non-initiation of conflict, but this result was not statistically significant at any level with p>0.05. Interestingly, the unweighted S score, unlike its weighted variant, was associated with an *increased* likelihood of conflict initiation, statistically significant in 99.9 percent of cases, or p=0.008. Finally, this model showed that shared UN membership influenced the likelihood of conflict initiation negatively, but was not statistically significant at both the 0.05 or 0.01, only at the 0.10 level, with p>0.05. This model had a fit of R^2=0.4942.

The Sino-American Dyad

We would first need to determine whether China is indeed dissatisfied with the international system created and maintained by the United States. Many authors, such as Lim(2015) suggest that China is a dissatisfied power due to its impatience with the current East Asian security structure (Lim 2015 pp. 12). Other authors, such as Graham Allison, have argued

that the US-China relationship is fraught with current misunderstanding that could potentially lead to war, if adjustments to attitudes are not forthcoming from both sides (Allison, 2017, pp. 2).

Further evidence of Chinese dissatisfaction may be done by textual analysis of Chinese statements regarding the status of the Sino-American dyad. If one were to take a recent pew poll as an example, 75 percent of Chinese think their country plays a more important role in the world than it did 10 years ago vs only 21 percent of Americans thinking the same of their country (Pew). In that same poll, over half believe the US is actively trying to weaken China (Pew Research center). Bresin (2013) similarly signals that "although there is clear dissatisfaction in China with the global world order" finding a "coherent vision" of global order shared by China is a much more difficult task to accomplish (Bresin 2013). There is evidence, according to Bresin (2013) of conflicting understandings of the benefits and costs of a more proactive approach to international affairs such that it is very much possible that some elites in china are satisfied with the current order and others not, a necessary condition for Organski and Kugler's Power Transition Theory to hold (Bresin 2013 pp. 5, Organski and Kugler 1989, pp. 20).

Taking a constructivist approach, Bresin (2013) finds that the resulting confusion about a coherent Chinese vision of the world is partly the result of how Chinese elites frame their postures towards different audiences (Bresin 2013). According to Bresin (2013):

> It seems fairly clear that China wants to change its role in global politics, and that the emphasis on keeping a low international profile that informed Chinese policy from the 1980s onwards is giving way to a more activist inclination. What is less clear is how this should be expressed and to what ends and outcomes. Those skeptical of China's motivations and long-term objectives point to the failure of the Copenhagen climate

conference in 2009 as an example of Chinese distributive strategies preventing the emergence of an effective new governance regime. The development of a 'pattern of aggressively asserting its sovereignty claims South China Sea has also been seen as a signal that the Chinese are not prepared to make any concessions to others when it comes to the defense of what they consider to be their 'core interests'.The idea that China will inevitably rise to 'rule the world' and shape it to reflect Chinese ideas and interests has gathered a number of followers. (Bresin 2013 pp. 1-2).

In order to apply our quantitative analysis to the case of the Sino-American dyad it is necessary to qualitatively assess the variables. Through the qualitative analysis of our variables, trade share, alliances, and conflict initiation, we could perhaps gleam a better understanding of China's purported dissatisfaction with the world order.

Alliance Formation

Power Transition Theory holds that whether alliances loosen or tighten determines the onset of conflict. Thus, an analysis of China's alliance formation behavior is merited in order to see whether alliances with the PRC are tightening. Historically speaking China has had a conflicted relationship with its near abroad.

According to Baig(2020):

Almost two decades after independence, China seized the Paracel (Xisha) Islands from South Vietnamese Forces in 1974 (Chang and Halliday, 2005: 597–598). In the 1980s, Admiral Liu Huaqing of the People's Liberation Army Navy (PLA Navy) argued that "whoever controls the Spratlys will reap huge economic and military benefits" (Fravel, 2008: 267; Huaqing, 2004: 538).During the War in Vietnam, the Tet Offensive of January 1968 significantly weakened the South Vietnamese Forces, and China seized the opportunity by capturing the archipelago of almost 100 islets known as the Spratly Islands. The Paracel archipelago is strategically important,

as the group of 30 islands is located almost 315 kilometres from Hainan Island (Tucker, 2011: 875–876). The show of military power in conducting rapid amphibious operations led the potential competitors in contemplating a strong PLA. The carnage received condemnation from the West and Beijing was almost isolated over the butchery (Shambaugh, 2013: 41).

Baig (2020) essentially argues that China would need to buffer up its alliance system if it ever desired to compete with the United States on even footing, arguing that the country's near abroad would be prime ground to expand alliances (Baig 2020 pp. 1). Baig (2020) also argues that the Belt and Road Initiative is one instance of "soft alliance formation" (Baig 2020 pp. 2). For example, given that China is still in a preliminary stage of alliance formation, we can surmise that it is dissatisfied with the world order by wanting to engage countries in such a matter contrary to its former policy of neutrality, but these alliances have not matured to the extent that hegemonic war would be likely between its preliminary system of alliances and NATO.

It would be beneficial to conduct an analysis of who China is allying with in the international system. According to Han and Papa (2020), after conducting content analysis of 1,403 articles in the top Chinese political science journals that alliance behavior has not receded from the Chinese thinking on international relations, rather it is making a distinct comeback (Han and Papa 2020, pp. 4). China has traditionally had a wary view of alliances (Han and Papa, 2020, pp. 2). However, in recent years it remains unclear whether China views a rising power alliance as advantageous.

Trade

The Belt and Road Initiative provides another case in which satisfaction according to one of the other metrics measured can be ascertained: trade data and its correlation with conflict. Increased levels of trade share did lower, though not to a statistically significant degree, the

probability of conflict initiation in the previous Power Transition Model. Examining the status of the trade relationship between the United States and China, one finds a myriad of potential conflict areas if the past Trump administration's stance on this issue is taken into account. According to Steinbock: "The evolving global scenarios of U.S.-China trade and technology conflicts are the outcome of an ever more anxious America forsaking its multilateral cooperative stances for primacy doctrines"(Steinbock 2018). Speaking of the divide between China-led development vs US-led development, Steinbock (2018) argues that the goal of the US resisting such efforts at geo-economic competition such as the Belt and Road Initiative seems to be to "to contain China's economic rise or divide Asia, or both, as evidenced by hardened sentiments3 and efforts to pressure China on its trade, investment and technological policies, while taking many "divide and rule" measures in the Asia-Pacific" (Steinbock, 2018, pp 516). Current US attempts to compete with the Belt and Road Initiative pale in comparison, with America's Indo-Pacific Economic Vision only offering around 113 million US in comparison to the BRI's 4 trillion to 8 trillion dollars of investment in the region (Steinbock, 2018, pp. 517). Considering the past combative language the Trump administration referenced China with on trade, and the current Biden administration's strategy on competitive cooperation, the US seems to be not as interested in geo-economically engaging China as it did during the end of the Clinton administration. Thus, trade share between these two dyads, while constituting the most important trade relationship in the world today and probably exerting a retarding effect on any effort to engage in conventional war, seems to have become more and more of a potential flashpoint for a potential US-China conflict.

Military Capabilities

We have seen China conduct a buildup of military capabilities in recent years, according toa Congressional Research Services Report, China's navy, for example, has begun a concerted

modernization effort begun in the 1990s, and this has resulted in China having the largest navy in East Asia with increased capabilities as well as increased activities in far away waters. (Congressional Research Service pp. 2). Analyzing such trends, one finds that China is whoheartedly increasing its military capabilities in order to project force abroad in any future conflict with the US.

Conclusion

Taking these qualitative analyses into account, as well as the current context in which China tries to exert military pressure upon its geopolitical neighborhood, and American responses to balance them, would suggest the United States at some level fears potential Chinese hegemony. Based on the above empirical findings, that war occurs more often when the leading power in a contending dyad perceives itself to be overtaken by the contender, it is more likely that any war between China and the United States would be initiated by the latter country.

Unresolved Issues

There were many limitations to this research in terms of the qualitative and quantitative assessments used to test these operationalizations of Power Transition Theory. It would have been beneficial to conduct a textual analysis of Chinese statements on their relationship with the United States in order to ascertain qualitatively the current level of dissatisfaction with the current dyad. However, due to the pandemic, I had to cancel this portion of the research project. In addition, there were many measures of satisfaction, particularly the trade variables, that were problematic

in the initial portions of the logit regressions, particularly Barbieri's trade share measurement. In a subsequent research project, I would strive to better this operationalization of satisfaction.

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