

THE GREAT CHASM: CHINA'S DEFENSE STRATEGY AND UNITED STATES
PUBLIC OPINION

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1 Abstract

China represents one of the most pressing modern threats to the United States' national security. This threat is best characterized by the opacity of China's defense strategy, increasing uncertainty surrounding its intentions. While existing literature expounds global perceptions of China and determinants of public opinion, there is a gap when it comes to the nature of the relationship between China's defense strategy and United States public opinion – one that has significant implications for United States policymaking and national security. Using sentiment analysis and topic modeling of China's national defense white papers, this research examines (1) the tone and (2) the contents of China's defense strategy as each relates to United States public opinion of China. The findings show no statistically significant relationship between either facet of China's strategy and American public opinion, mitigating the risk posed by China's influence campaign to the United States' national interests.

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2 Introduction

China represents one of the most pressing modern threats to the United States' national security. Between the United States-China trade war that started in 2018, China-attributed cyber-attacks on United States research institutions in early 2020, and the closing of United States and Chinese consulates later in the year, American headlines have been dominated by China and its security impact. In recent years, tension between China and the United States has increased, demonstrated by each country's defense posture. The United States has explicitly identified China in almost every National Security Strategy since 1987,¹ as well as the past three National Defense and National Intelligence Strategies, respectively.² Similarly, since 1995, each of China's defense strategies has mentioned the United States.³ Over time, the tone and contents of each country's strategies have varied depending on the political and economic context. Recently, both China and the United States have included increasingly frequent references to the other as a key strategic competitor and security threat.

Interpreting these strategies and their implications presents a key challenge, especially pertaining to those of China. China is well known for its use of "strategic ambiguity" and opacity in its national defense white papers (NDWPs), wherein it obscures its expansionary intentions with pacifying and vague language.⁴ It is unclear how

¹ "National Security Strategy Archive," National Security Strategy Archive (The Taylor Group, 2019), <https://nssarchive.us/>.

² "National Defense Strategy," National Security Strategy Archive (The Taylor Group, 2018), <https://nssarchive.us/national-defense-strategy/>; "Reports & Publications," Office of the Director of National Intelligence (Office of the Director of National Intelligence, 2020), <https://www.dni.gov/index.php/newsroom/reports-publications/>.

³ Andrew Erikson, "China Defense White Papers—1995-2019," Andrew S. Erickson: China Analysis from Original Sources, July 23, 2019, <https://www.andrewerickson.com/2019/07/china-defense-white-papers-1995-2019-download-complete-set-read-highlights-here/> (accessed July 15, 2020).

⁴ Miles Maochun Yu, "China's Strategic Ambiguity," Hoover Institution (Stanford University, June 25, 2018), <https://www.hoover.org/research/chinas-strategic-ambiguity> (accessed June 23, 2020).

successful this strategy has been, however. The contradiction and lack of transparency found in China's NDWPs has fostered uncertainty among global actors, particularly in the United States. As part of its strategy to expand its influence and alter the global power distribution, China seeks to improve international perceptions, operationalized in this research as United States public opinion. This is particularly salient due to the potential implications for the United States' policymaking and national security. As a democracy, the United States government is responsive to public opinion in its policymaking. Should there be a connection between United States public opinion and China's defense strategy, China could have a direct path to influence United States policy. Further, as a key strategic competitor, China seeks to expand its global power at the expense of the incumbent United States, negatively impacting American national interests.

While there exists extensive literature on global opinion of China, China's public diplomacy, and the causal mechanisms of public opinion, there is a dearth of material on the intersection of these subjects. China's defense strategy lies at this nexus, serving as China's primary means of communication and as a key tool for influencing international perceptions. This research seeks to close the gap in existing scholarship through determining the nature of the relationship between China's defense strategy, as operationalized by its NDWPs, and United States public opinion of China. Using sentiment analysis and topic modeling, it examines two components of China's NDWPs – tone and contents – as they relate to Americans' views on China. For both elements, the analysis shows no statistically significant relationship, indicating that there is not a meaningful association between China's defense strategy and United States public opinion.

The implications of these results are significant for the United States' national

interests. First, the lack of relationship between China's defense strategy and United States public opinion lowers the risk of China's direct access to the United States policymaking apparatus through influencing public opinion. Second, these findings indicate that China's attempts to expand influence through its defense strategy have yet to be successful; there remains a gap between global perceptions of China and the image that it seeks to portray. China continues to challenge the global balance of power, but its inefficacy thus far lowers the risk it poses to the United States' national security.

The remaining sections of this paper explore these topics in greater detail. The following section examines existing literature, lays out the theoretical framework, and defines the research hypotheses. The subsequent section outlines the data and methodology used to test the hypotheses, followed by a section presenting and discussing the results, which show no statistically significant relationship between China's defense strategy and United States public opinion. The final section explores the implications of these findings and considers areas for future research.

3 Literature Review and Theoretical Framework

3.1 China's Defense Strategy

Every few years, China publishes a national defense white paper outlining its defense strategy and defining its intentions for its global audience. These documents serve as "authoritative statements on national security",⁵ providing insight for international observers seeking to learn about China's defense and strategic priorities. To date, eleven

⁵ Caitlin Campbell, "Highlights from China's New Defense White Paper, 'China's Military Strategy'" (U.S.-China Economic and Security Review Commission, July 1, 2015), https://www.uscc.gov/sites/default/files/Research/Issue%20Brief_Highlights%20from%20Chinas%20New%20Defense%20White%20Paper_Campbell_6.1.15.pdf.

papers have been published detailing select information regarding China's interests, aspirations, and intentions.⁶ These documents serve as a means for China to promote its purported peaceful image, counter the "China threat", and respond to international calls for transparency, while also providing a reference point regarding China's intentions and their security implications for the international community.⁷

Readers such as the United States Department of Defense, London's International Institution for Strategic Studies, and the *Economist* have criticized China's NDWPs for their "lack of transparency and substance" and the limited insight they provide into China's objectives.⁸ Officials in the United States and Asia-Pacific countries have highlighted the need for increased openness regarding China's "military capabilities, activities, and intentions" to better gauge the threat posed to their national security.⁹ China has historically engaged in "strategic ambiguity", obfuscating its intentions by reassuring the public of its "peaceful development" and citing its military inferiority. Through employing ambiguous language and reciting its desires for peace and cooperation, China seeks to pacify its peers and deter potential adversaries.¹⁰ These tactics underpin China's "two-handed strategy": at the surface, it is cooperative and agreeable, lowering its perceived threat, while quietly expanding and asserting itself in the global arena.¹¹ This contradiction

⁶ Elsa Kania and Peter Wood, "Major Themes in China's 2019 National Defense White Paper," China Brief 19, no. 14 (July 31, 2019), https://jamestown.org/program/major-themes-in-chinas-2019-national-defense-white-paper/?mc_cid=cabc0abe69&mc_eid=d8c8ced7d5.

⁷ Jian Zhang, "China's Defense White Papers: a Critical Appraisal," Journal of Contemporary China 21, no. 77 (2012): 881-898, <https://doi.org/10.1080/10670564.2012.684969>.

⁸ Zhang, "China's Defense White Papers," 881-898.

⁹ Michael Kiselycznyk and Phillip C Saunders, "Assessing Chinese Military Transparency," China Perspectives (National Defense University Press, June 1, 2010), <https://ndupress.ndu.edu/Publications/Article/717807/assessing-chinese-military-transparency/>.

¹⁰ Yu, "China's Strategic Ambiguity."

¹¹ Franklin J. Woo, "A Contest for Supremacy: China, America, and the Struggle for Mastery in Asia by Aaron L. Friedberg," China Review International 18, no. 3 (2011): 320-326, <https://doi.org/10.1353/cri.2011.0075>.

paired with China's disjointed message result in "confused, contested, uncertain, passive, and risk-averse" diplomacy, creating a chasm between China's intentions and public perceptions.¹²

Although China has become gradually more transparent, this chasm persists. While maintaining its strategic ambiguity, China has also become increasingly assertive.¹³ Its 2015 NDWP elaborates on its military strategy and the increasingly complex security environment. Though the paper's language is placatory, its contents show an increased focus on the centralization of power and the delicate balance between maintaining sovereignty and promoting peace.¹⁴ The 2019 NDWP does the same, renewing focus on strategic competition and the global balance of power and emphasizing military modernization and global engagement. However, as in 2015, the 2019 NDWP frames China's military development and global expansion defensively and highlights the need for global peace. Between increasingly assertive military rhetoric and reassurances of a peaceful rise, it is unclear what China's intended message is, causing uncertainty.

3.2 Public Opinion and Global Influence

It is clear that a gap exists between the image that China seeks to portray – a peaceful country on the rise – and how it is actually perceived: as a threat.¹⁵ Using the United States as a case study, this disconnect is illustrated by public opinion, which, over the past few decades, has deemed China's rise to be an increasing threat. During the same

¹² Angela Poh and Mingjiang Li, "A China in Transition: The Rhetoric and Substance of Chinese Foreign Policy under Xi Jinping," *Asian Security* 13, no. 2 (2017): 84-97, <https://doi.org/10.1080/14799855.2017.1286163>.

¹³ Poh and Li, "A China in Transition," 84-97.

¹⁴ Campbell, "Highlights."

¹⁵ Tao Xie and Benjamin I. Page, "What Affects China's National Image? A Cross-National Study of Public Opinion," *Journal of Contemporary China* 22, no. 83 (May 15, 2013): 850-867, <https://doi.org/10.1080/10670564.2013.782130>.

period, public opinion of China has fallen. From 2005 until the most recent NDWP, the proportion of the United States public that has a “favorable” opinion of China has ranged from 35% to 52%, until 2019 when public opinion clocked in at only 26% favorable.¹⁶ A similar survey shows United States public opinion hovering between 39% and 45% favorable from the inception of China’s NDWPs until the year of the most recent publication, when it fell to 33% favorable. The same study shows that China has been considered one of the top five enemies of the United States over the past nine years, and that its economic power, military power, and conflict with Taiwan are seen as critical or important threats by the majority of respondents.¹⁷ These statistics mirror the recent increase in China’s assertiveness and military rhetoric, suggesting that public opinion generally changes as expected relative to the sentiment and contents of China’s NDWPs.

As indicated in China’s latest NDWP, strategic competition is a core tenet of its defense strategy, particularly as it pertains to the global balance of power. China seeks to increase its share of that power and influence how its distribution, favoring multipolarity in place of the current unipolarity. To accomplish this, China strives to expand its global influence through improving international perceptions.¹⁸ This research seeks to gauge the effectiveness of this strategy by using public opinion as a measure of China’s influence, exerted through its national defense white papers.

This issue is particularly salient in the case of the United States, which has

¹⁶ “Global Indicators Database,” Pew Research Center's Global Attitudes Project (Pew Research Center, March 2020), <https://www.pewresearch.org/global/database/indicator/24/country/us/> (accessed June 23, 2020).

¹⁷ Gallup, “China,” Gallup.com (Gallup, March 31, 2020), <https://news.gallup.com/poll/1627/china.aspx> (accessed July 15, 2020).

¹⁸ Xie and Page, “What Affects China’s National Image?”, 850-867.

identified China as a key strategic competitor.¹⁹ As an upcoming “superpower” challenging the incumbent, China’s strategy to increase its share of power directly challenges the United States as the primary provider of global security. China’s increasing influence threatens the United States’ current military freedom, regional access, and existing relationships on which it relies to protect its national interests.²⁰ Because China presents such a threat to the United States’ national security, it is important to measure China’s global influence through identifying the drivers of public opinion. Understanding the underlying factors contributing to China’s expanding influence is critical to countering the security risk posed to the United States.

Due to the lack of direct interaction between the United States public and China, opinion is largely formed through media and government filters.²¹ Due to its reliance on readily available information, the public is likely to mirror the sentiment of government and media viewpoints, which could be formed from potentially biased secondary sources. Filtering notwithstanding, public opinion of China is driven by perceptions of both hard and soft power. Soft power is “the ability to get what you want through attraction rather than coercion or payments”; hard power is a coercive approach determined by matters such as the military and economy.²² The “hard” drivers of China’s global influence include economic and military power, foreign trade, foreign investment, and market openness.²³

¹⁹ Jim Mattis, “Summary of the 2018 National Defense Strategy of the United States of America” (Washington, DC: Department of Defense, 2018), <https://apps.dtic.mil/sti/pdfs/AD1045785.pdf>.

²⁰ Michael D Swaine and Ashley J Tellis, “Interpreting China’s Grand Strategy: Past, Present, and Future” (RAND Corporation, 2000), www.jstor.org/stable/10.7249/mr1121af.

²¹ Xie and Page, “What Affects China’s National Image?”, 850-867.

²² Young Nam Cho and Jong Ho Jeong, “China’s Soft Power: Discussions, Resources, and Prospects,” *Asian Survey* 48, no. 3 (2008): 453-472, <https://doi.org/10.1525/as.2008.48.3.453>.

²³ Gallup, “China”; “How Are Global Views on China Trending?” ChinaPower Project. Center for Strategic and International Studies, March 20, 2020. <https://chinapower.csis.org/global-views/> (accessed June 23, 2020).

The “soft” drivers include culture, political values, and foreign policy,²⁴ as well as socioeconomic conditions and education,²⁵ human rights and governance,²⁶ and environmental impact and government corruption.²⁷ The expected relationship between China’s national defense white papers and American opinion relies on their shared linkage with the causal mechanisms of public opinion; to the extent that the NDWPs embody these intermediary variables, they are associated with United States public opinion, and by extension, public policy.

A core tenant of democracy is that a legitimate government is responsive to the public. Accordingly, significant linkages exist between public opinion and policy.²⁸ While early theories posited that public opinion was relatively impotent in the formulation of policy, recent studies have shown the opposite. This is driven by the fact that policymakers’ reelection is conditional on public support. One study found significant “correspondence between public preferences and United States policy” relating to China due to the possibility of electoral retribution by voters. A similar trend was found between public opinion and policy relating to arms control.²⁹ These case studies suggest that public opinion is especially highly correlated with policy decisions relating to foreign policy and

²⁴ Joseph S. Nye, "Public Diplomacy and Soft Power," *The Annals of the American Academy of Political and Social Science* 616 (2008): 94-109, www.jstor.org/stable/25097996.

²⁵ Shin-wha Lee, (2011), *The Theory and Reality of Soft Power: Practical Approaches in East Asia*, 10.1057/9780230118447_2.

²⁶ Joseph S. Nye, "Soft Power", *Foreign Policy*, no. 80 (1990): 153-71, <https://doi.org/10.2307/1148580>.

²⁷ Xie and Page, "What Affects China’s National Image?", 850-867.

²⁸ Paul Burstein, "The Impact of Public Opinion on Public Policy: A Review and an Agenda," *Political Research Quarterly* 56, no. 1 (2003): 29, <https://doi.org/10.2307/3219881>.

²⁹ Ole R. Holsti, "Public Opinion and Foreign Policy: Challenges to the Almond-Lippmann Consensus Mershon Series: Research Programs and Debates," *International Studies Quarterly* 36, no. 4 (1992): 439-66, <https://doi.org/10.2307/2600734>.

defense spending, particularly when it comes to salient and enduring issues like China.³⁰

It follows, then, that public opinion of China impacts public policy. This suggests that to the extent that it relates to United States public opinion, China's defense strategy impacts United States policy. The potential risk of this connection is obvious: China could deliver its strategy to influence public opinion and policy to its advantage, such as with favorable trade, military, or foreign policies. Because of these policymaking and national security implications, it is critical to understand the effectiveness of China's strategy to expand its global influence, particularly as it pertains to the United States.

3.3 Hypotheses

As China looks to bridge the gap between the image it seeks to portray and American perceptions, it is imperative to measure its success. While there is considerable scholarship on China's public diplomacy, global opinions of China, and determinants of public opinion, there is less on the combination of the three. Existing literature on the determinants of United States public opinion of China is limited, especially as they relate to China's defense strategy. This research seeks to determine the nature of the relationship between China's defense strategy, as operationalized by its national defense white papers, and United States public opinion to measure China's expanding influence.

China's defense strategy has two components: tone and content. Whether either has a meaningful relationship with United States public opinion remains largely unanswered by existing literature. As a public diplomacy tool, the NDWPs are a logical means by which China seeks to achieve its strategic objectives, expanding power through driving the

³⁰ Benjamin I. Page and Robert Y. Shapiro, "Effects of Public Opinion on Policy," *The American Political Science Review* 77, no. 1 (1983): 175-90, <https://doi.org/10.2307/1956018>.

determinants of public opinion. Public opinion is generally responsive to the sentiment of the information from which it is formed.³¹ From this, the following is derived:

H₁: There is a statistically significant relationship between the sentiment of China's defense white papers and United States public opinion of China, where a change in sentiment is associated with a change in United States public opinion.

Regarding the contents of China's defense strategy, existing literature concludes the following to be significant drivers of public opinion: military development, economic and fiscal policy, foreign policy, political ideals, social development, and culture. Assuming China's NDWPs represent these determinants, a second hypothesis is derived:

H₂: The contents of China's national defense white papers are representative of the determinants of public opinion of China. The extent to which the topics of the white papers include military development, economic and fiscal policy, foreign policy, political ideals, social development, and culture has a statistically significant relationship with United States public opinion.

4 Data and Methods

To test these hypotheses, data are leveraged from "China Defense White Papers: 1995 – 2019" and Roper iPoll. The site, "China Defense White Papers: 1995 – 2019," is a repository of China's NDWPs compiled from various internet sources by Dr. Andrew Erikson, professor and founder of the Naval War College's China Maritime Studies Institute.³² There are eleven total documents, published in 1995, 1998, 2000, 2002, 2004,

³¹ Xiuli Wang and Pamela J. Shoemaker, "What Shapes Americans' Opinion of China? Country Characteristics, Public Relations and Mass Media," *Chinese Journal of Communication* 4, no. 1 (2011):1-20, <https://doi.org/10.1080/17544750.2011.544079>.

³² Andrew Erikson, "About Andrew Erikson," Andrew S. Erickson, 2019, <https://www.andrewerickson.com/about/> (accessed July 15, 2020).

2006, 2008, 2010, 2013, 2015, and 2019, respectively.³³ For this study, each document is scraped and featurized to represent China's defense strategy for that year.

Roper iPoll is an archive of survey and public opinion data sponsored by Cornell University's Roper Center for Public Opinion Research, containing thousands of survey questions and datasets from cross-industry polling organizations.³⁴ This study uses Gallup's News Service and Organization polls, which survey a national sample of United States adults via telephone, with sample sizes ranging from 979 and 1054 respondents. Data are gathered from the most proximate survey after each NDWP's publication. In most cases, the survey occurs within one year; the exception is the 2015 NDWP, for which public opinion data were not collected until 21 months after publication. Each year, public opinion is measured by a survey asking: "Is your overall opinion of...China...very favorable, mostly favorable, mostly unfavorable, or very unfavorable?". Responses are reported as a percentage across four categories: "favorable", "mostly favorable", "mostly unfavorable", and "very unfavorable", and then are condensed to "percentage of favorable responses" ("favorable" and "mostly favorable") and "percentage of unfavorable responses" ("mostly unfavorable" and "very unfavorable"). "Percentage of favorable responses" (*Favorability*) is the dependent variable for H_1 and H_2 . As shown in Figure 1 and Table 1, *Favorability* fluctuates significantly between 33% and 50%, and falls drastically in 2019.

³³ Erikson, "China Defense White Papers," (accessed July 15, 2020).

³⁴ "What We Do," What we do | Roper Center for Public Opinion Research (Cornell University, 2020), <https://ropercenter.cornell.edu/about-center/what-we-do> (accessed July 15, 2020).

Figure 1. United States Public Opinion of China

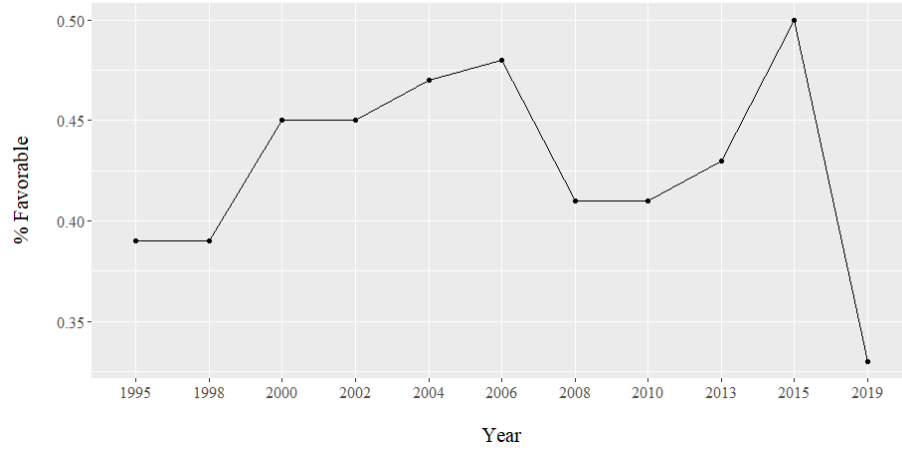


Table 1. Descriptive Statistics

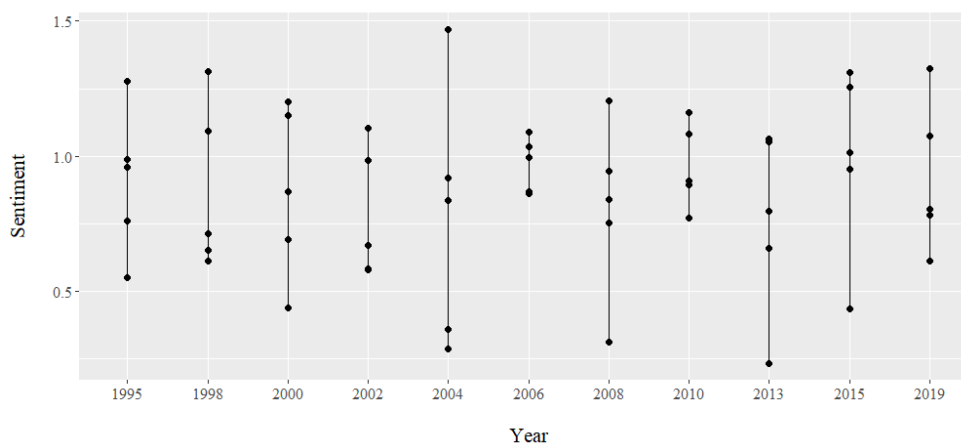
Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Favorability	55	0.428	0.047	0.330	0.390	0.470	0.500
Sentiment	55	0.875	0.286	0.230	0.680	1.075	1.470
Economy	55	0.026	0.007	0.010	0.020	0.030	0.040
Military	55	0.051	0.010	0.030	0.040	0.060	0.070
Foreign	55	0.014	0.007	0.000	0.010	0.020	0.030
Political	55	0.043	0.009	0.030	0.040	0.050	0.060
Social	55	0.017	0.006	0.010	0.010	0.020	0.030
Cultural	55	0.0004	0.002	0.000	0.000	0.000	0.000

For H_1 , the sentiment of the NDWPs serves as the independent variable. To engineer this variable from the web-scraped documents, sentiment analysis is conducted using the `SentimentR` package in R, employed previously by similar analyses.³⁵ To reduce noise, the texts are stemmed and cleaned to remove URLs, numbers, punctuation, capitalization, non-ASCII characters, and stopwords, resulting in a range of 7,463 to 22,927 features per document. Because only eleven NDWPs have been published, the population size is rather small. To reduce standard error, five random samples of 1,000 features are

³⁵ James E Sanders, "Similarities and Differences in the Argumentative Characteristics of the Official Brexit Campaigns," LSE Undergraduate Political Review 1 (February 1, 2018): 1-21, <https://doi.org/10.21953/lse.naec6c7u8de9>.

drawn from each document, increasing the sample to 55 texts. Sentiment analysis is run to calculate the average sentiment (*Sentiment*) of each text, shown in Figure 2. *SentimentR* uses dictionary-lookup methods with a lexicon of 11,709 words to assess the sentiment of each feature, rated on a scale of 19 values from -2.0 to 1.0: less than -1 signals valence shifters, -1.0 to 0.0 is negative, 0.0 is neutral, and 0.0 to 1.0 is positive.³⁶ As illustrated in Table 1, *Sentiment* is positive for all texts, ranging from 0.23 to 1.47 with a mean of 0.88.

Figure 2. Sentiment of National Defense White Papers

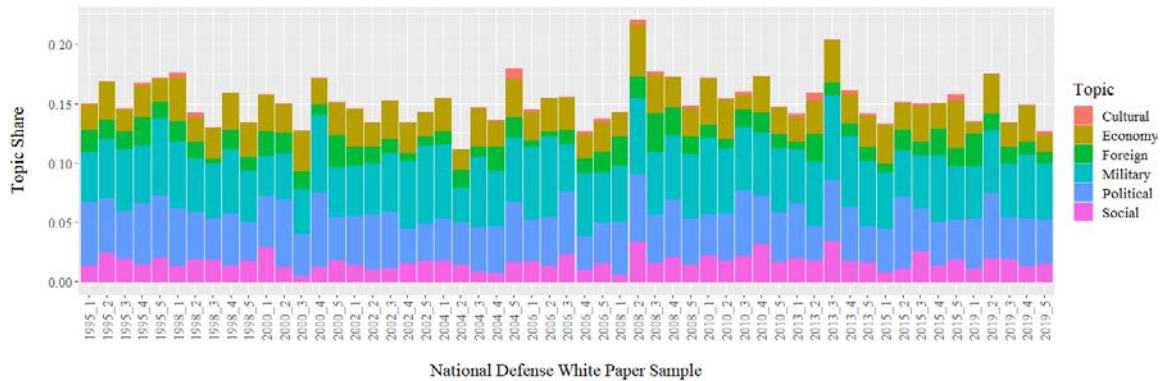


For H_2 , the topics of the NDWPs serve as the independent variables. As with sentiment, the topic variables need to be engineered, this time through topic modeling. Using the *tm* package, the NDWP texts are converted to a document term matrix and are stemmed and cleaned to remove non-English characters, stopwords, numbers, capitalization, symbols, URLs, and punctuation. Again, because of the limitations presented by a population size of 11 documents, five random samples of 1,000 features are drawn from each, increasing the sample to 55 texts. Supervised dictionary methods are

³⁶ Maurizio Naldi, “A Review of Sentiment Computation Methods with R Packages” ArXiv abs/1901.08319 (2019): 1-11, <https://arxiv.org/pdf/1901.08319.pdf> (accessed July 18, 2020); Tyler Rinker, “SentimentR v2.7.1,” R Documentation, 2019, <https://www.rdocumentation.org/packages/sentimentr/versions/2.7.1> (accessed July 18, 2020).

applied through the `quanteda` package to classify the cleaned text into topics, using the LexiCoder Policy Agenda (LPA) dictionary. The LPA dictionary, compiled by the Comparative Agendas Project, contains 28 topics relating to media, legislature, and policy and has been used previously to classify political texts.³⁷ To better align with H_2 , the 28 topics are consolidated to six: *Economy*, *Military*, *Foreign*, *Political*, *Social*, and *Cultural*. Each topic is supplemented with context-specific terms to increase relevance to the NDWPs. The final dictionary, found in the Appendix, is applied to the NDWP samples to calculate the proportion of topics in each text, illustrated in Figure 3. Topic shares range from 0.0% to 7.0%, with means ranging from 0.04% to 5.1%, as detailed in Table 1.

Figure 3. Distribution of Topics Among National Defense White Papers



Note: Topic shares do not add to 1.0 due to the features in each text that do not fall into any of the six topics. These are considered neutral and are excluded from analysis.

Both H_1 and H_2 are tested using an Ordinary Least Squares (OLS) regression; analysis of residuals suggests that each variable is drawn from a normal distribution, indicating that linear regression is suitable. *Favorability* is regressed on *Sentiment*, *Economy*, *Military*, *Foreign*, *Political*, *Social*, and *Cultural*, and the results are evaluated

³⁷ Julie Sevenans et al., “The Automated Coding of Policy Agendas: A Dictionary Based Approach” (The 7th Annual Conference of the Comparative Agendas Project (CAP), June 2014), https://www.researchgate.net/publication/263732999_The_Automated_Coding_of_Policy_Agendas_A_Dictionary_Based_Approach.

at the 1%, 5%, and 10% significance levels.³⁸

5 Results

5.1 Key Findings

This research begins with two hypotheses theorizing that (1) the tone and (2) the contents of China's defense strategy are significantly related to United States public opinion of China. It is expected that differences in sentiment among China's national defense white papers are associated with the variance in the proportion of the American public that views China favorably. It is also expected that the respective proportions of the topics in each NDWP – economy, military, foreign affairs, political ideals, social issues, and culture – are associated with the proportion of Americans with favorable views. In exploring each of these relationships, this research finds that there is not, in fact, any meaningful association between either the tone or the contents of China's defense strategy and United States public opinion of China.

5.1.1 Sentiment

After conducting regression analysis to test H_1 , this study fails to reject the null hypothesis that there is no statistically significant relationship between the sentiment of China's national defense white papers and United States public opinion of China. In short, the changes in United States public opinion over time are not associated with changes in the sentiment of China's defense strategy. For *Sentiment*, the OLS regression results in a

³⁸ To avoid post-treatment bias, control variables were not included, as most determinants of public opinion follow from the strategy stated in China's NDWPs. Additionally, the inclusion of interaction terms introduces significant multicollinearity and has no impact on the statistical significance of the correlation coefficients; accordingly, they are not included in the regression model.

correlation coefficient of -0.011 and a p-value of 0.676, as illustrated in Table 2. This indicates that on average, a one-point increase in the sentiment of China's white papers is associated with a 1.0 percentage-point decrease in the proportion of the United States public that views China favorably, an extremely weak negative relationship. However, because the p-value for *Sentiment* far exceeds any standard level of significance, this relationship is not statistically significant. This suggests that United States public opinion is not associated with the sentiment of the NDWPs, despite the logic that public opinion would tend to worsen where there is more negative rhetoric. Ultimately, contrary to the theory posited in H₁, there is no meaningful relationship between the tone of China's defense strategy and the United States' views on China, leaving the variance in United States public opinion yet unexplained.

Table 2. OLS Regression for NDWP Sentiment and Topics

	<i>Dependent variable:</i>
	Favorability
Economy	1.434 (1.037) p = 0.174
Military	-0.304 (0.712) p = 0.672
Foreign	-0.745 (1.102) p = 0.503
Political	-0.494 (0.783) p = 0.531
Social	-0.698 (1.135) p = 0.542
Cultural	2.538

	(3.641)
	p = 0.490
Sentiment	-0.011
	(0.025)
	p = 0.676
Constant	0.457***
	(0.057)
	p = 0.000
Observations	55
R ²	0.068
Adjusted R ²	-0.071
Residual Std. Error	0.049 (df = 47)
F Statistic	0.488 (df = 7; 47)
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01	

5.1.2 Content

Using the same OLS regression to test H_2 , this study again fails to reject the null hypothesis, finding that there is no statistically significant relationship between the contents of China's national defense white papers and United States public opinion of China. As shown in Table 2, the correlation coefficients for the NDWP topic shares have a broad range, spanning from -0.745 to 2.538. *Military*, *Foreign*, *Political*, and *Social* all have negative, statistically insignificant values. *Military* has a correlation coefficient of -0.304 and a p-value of 0.672, suggesting that a one-percentage-point increase in the proportion of a NDWP text classified as *Military* is associated with a 0.3 percentage-point decrease in the proportion of Americans that view China favorably. *Foreign* has a correlation coefficient of -0.745 and a p-value of 0.503, suggesting that a one-percentage-point increase in the *Foreign* proportion of an NDWP is associated on average with a 0.7 percentage-point decrease in *Favorability*. *Political* has a correlation coefficient of -0.494 and a p-value of 0.531, suggesting that a one-percentage-point increase in the *Political*

proportion is associated on average with a 0.5 percentage-point decrease in *Favorability*. Finally, *Social* has a correlation coefficient of -0.698 and a p-value of 0.542, which suggests that a one-percentage-point decrease in the share of the NDWP classified as *Social* is associated on average with a 0.7 percentage-point decrease in *Favorability*. Although the magnitude of these coefficients is relatively low, their negativity suggests that more frequent inclusion of military, foreign, political, or social matters in China's defense strategy is associated with a decline in United States opinion of China. However, because the p-value of each of these topic variables is considerably greater than any standard level of significance, none has a statistically significant relationship with the proportion of the American public that views China favorably

Economy and *Cultural* have positive coefficients, suggesting that an increase in their respective proportions of China's national defense white papers is associated with an improvement in United States public opinion of China, though the association is statistically insignificant. These topics have the largest magnitude of all topic variable coefficients, suggesting a comparatively greater impact on *Favorability*. *Economy* has a correlation coefficient of 1.434 and a p-value of 0.174, indicating that on average, a one-percentage-point increase in the proportion of the NDWP text classified as *Economy* is associated with a 1.4 percentage-point increase in the proportion of the American public that views China favorably. *Cultural* has a correlation coefficient of 2.538 and a p-value of 0.490, suggesting that a one-percentage-point increase in the *Cultural* proportion is associated on average with a 2.5 percentage-point increase in the proportion of favorable views of China. These positive relationships suggest that United States public opinion is generally more positive when China's defense strategy mentions cultural and economic

matters more frequently. However, as with *Military*, *Foreign*, *Political*, and *Social*, the p-values for *Economy* and *Cultural* exceed standard levels of significance, and thus are not statistically significant. It is worth noting that *Economy* has the lowest p-value of the topic variables, nearing significant levels; additional national defense white papers would improve the standard error and clarify both the magnitude and significance of relationship between the white paper topics and United States public opinion of China.

The null findings for both H_1 and H_2 are supported by the regression's adjusted R-squared value of -0.071, which indicates that a negligible amount of the variance in United States public opinion can be attributed to the topics and sentiment of China's defense strategy. The OLS regression model thus has low explanatory power when confined to the six topic variables and the sentiment variable, once again leaving the public opinion variance in Figure 1 unexplained. In general, this research fails to establish a relationship between China's defense strategy and United States public opinion of China. Although the magnitude and direction of the coefficient on each variable are potentially meaningful, the low explanatory power of the model and the lack of statistical significance indicates that neither the tone nor the topics of China's defense strategy is meaningfully related to United States public opinion of China.

5.2 Strategic Inefficacy

That neither aspect of China's defense strategy is meaningfully related to American public opinion has significant implications for the United States' national security and is a critical topic for further study. The null findings for both hypotheses suggest that the change in United States public opinion of China from 1995 to 2019 does not directly correspond to changes in either the tone or contents of China's defense strategy. Specific

to tone, the lack of relationship with American public opinion implies that China's two-handed strategy has not been as effective in swaying global perceptions as intended. China's use of vague and placatory language to disguise its expansionary objectives does result in positive sentiment; however, that positive sentiment does not have any meaningful association with change in perceptions of China. Regarding content, to the extent that the NDWP topics are representative of the elements of China's defense strategy, there is not a clear association between the strategy's contents and the proportion of Americans that view China favorability. This is likely a result of the contradictions typical of China's strategic communications, such as calls for peace followed by thinly veiled military threats. These inconsistencies have resulted in an unclear message and leave the global audience uncertain; this explains the disconnect between what China's defense strategy says and how the United States public feels. The incongruous positive sentiment of the defense strategies further obfuscates their contents, causing even greater confusion and failing to effectively convey China's true strategic objectives.

The enduring uncertainty surrounding China's intentions suggests that the chasm persists between global perceptions of China and the image that China seeks to portray. Based on this case study of the United States, China has yet to successfully increase transparency, improve its international image, or expand influence through its defense strategy. China's intentions remain as opaque as ever due to the persistent ambiguity and characteristic contradictions of its strategy. China's image, as measured by United States public opinion, is shown to be unchanged vis-à-vis its defense strategy. The proportion of Americans that view China favorably averages below 50%, shown in Table 1, suggesting that China's attempts to pacify the United States as a strategic competitor have been largely

ineffective. China depends on public diplomacy and positive global perceptions to achieve its goals; its inefficacy thus far demonstrates that its defense strategy has not been an effective means by which to expand influence. These findings do not bode well for China's pursuit of power. The lack of meaningful relationship between China's defense strategy and Americans' views of China indicates that it has a way to go in shifting the global balance of power in its favor. As it stands today, United States public opinion remains largely untouched by China's national defense strategy, and the strategic competition between the two countries endures.

5.3 National Security Implications

The implications of these findings are encouraging for the United States' national security. First, because public opinion is a key driver of policy formulation in the United States, especially for foreign and defense issues, the possibility that China could impose direct influence on the American public poses a threat to the United States' policymaking apparatus. Were China to deliver its strategy in a way that influences the public to promote policies that would benefit China, there would be an increased risk to the United States' national security. Such policy decisions might be counter to the United States' national interests, whether regarding the economy, foreign policy, or the military, undermining the integrity of American democratic process and potentially damaging the United States' standing in the global arena. The lack of association between China's defense strategy and United States public opinion diminishes the risk of such subversive policymaking and protects the United States' integrity and national security interests.

Second, as the incumbent power in a unipolar world, and one of China's primary strategic competitors, the United States stands to lose significantly from China influencing

the global balance of power. The United States' national security is contingent on its present military superiority, global access, economic prosperity, and network of alliances, all of which serve to protect American national interests. These conditions are directly challenged by China's expanding influence, which comes at the United States' expense. However, as illustrated by the findings of this research, China has yet to be entirely effective at extending its influence. This implies that the balance of power remains unaffected by China's use of its defense strategy as a public diplomacy tool, and that the United States' national interests and current standing among global actors endure. However, a new threat to the United States' national security is introduced by China's inability to reduce the uncertainty surrounding its intentions. As a barometer for China's strategic objectives and the security implications thereof, China's defense strategy has done little to address calls for better transparency, increasing the risk of a global security dilemma.³⁹ How this will impact China's strategy-making and the United States' national security interests is sure to play a role in the ongoing strategic competition.

The findings of this research suggest that China's defense strategy has done little to achieve its expansionary goals or address global uncertainty, perpetuating the chasm between the image China seeks to project and global perceptions. Both access to the United States' policymaking apparatus and infringement on the United States' present status as a global power represent critical national security threats. However, this study's finding that there is no meaningful relationship between China's defense strategy and United States public opinion of China indicates that, despite the additional risks to global security,

³⁹ Adam P. Liff and G. John Ikenberry, "Racing toward Tragedy?: China's Rise, Military Competition in the Asia Pacific, and the Security Dilemma," *International Security* 39, no. 2 (2014): pp. 52-91, https://doi.org/10.1162/isec_a_00176.

American national interests remain unharmed, diminishing the overall threat posed to the United States' national security.

6 Conclusion

This research finds that neither the tone nor the contents of China's defense strategy has a meaningful association with United States public opinion of China. Using OLS regression to test both H_1 and H_2 , it fails to reject the null hypotheses, showing no statistically significant relationship between either component of China's national defense white papers and American views on China. These findings have significant implications for the United States' national security. They indicate that China's effort to shift global perceptions and expand influence using its national defense strategy have not been as productive as intended, likely due to its strategic ambiguity and characteristic contradictions. As a result, China has not been successful in shaping United States public opinion, and by extension, public policy. This finding reduces the risk of a direct line of influence between China and the United States policymaking apparatus, which could otherwise damage the United States' national interests. Additionally, China's strategic inefficacy does little to sway the global balance of power, which currently leans in the United States' favor. This is advantageous for American national interests, which may be undermined by China's encroachment on the United States' position as the primary provider of global security.

These results bode well for the United States, whose resources are spread thin across a multitude of defense initiatives. Because China's expansionary strategy has shown no association with United States public opinion to date, policymakers may consider shifting their efforts towards other more immediate national security threats, making more

efficient use of limited time, funding, and political capital. This should be done, however, with careful consideration; China's defense strategy is likely to evolve over time, as are its tactics to expand influence at the expense of the United States.

This research seeks to address the gap in existing literature relating to China's public diplomacy, global perceptions of China, and causal mechanisms of public opinion through determining the nature of the relationship between China's defense strategy and United States public opinion. In general, the null findings contradict prior theories, which would portend an association between China's defense strategy and American views based on the strategy's linkage with the determinants of public opinion. Of course, in exploring this relationship, this research does have limitations. The most significant of these is the assumption that China's NDWPs are representative of the causal mechanisms of United States public opinion. The null findings and low explanatory power of the regression model suggest that alone, China's white papers may not effectively characterize the intermediary variables that drive United States public opinion; if they did, there would likely be a statistically significant relationship. This could be a result of the feature engineering performed to operationalize the tone and contents of China's defense strategy, or an indication that other causal mechanisms were not included in the regression. As with any research, the potential for omitted variable bias exists due to the possibility of overlooked variables, contributing to the low explanatory power of the model.

There is also the question of generalizability – this research is a case study on the relationship between China's defense strategy and public opinion in the United States. Because the NDWP topics in this analysis were constructed to be representative of the determinants of American views of China, they may not be easily extended to those of

other countries. For instance, economic matters such as China's trade practices may be less salient in a country that does not interact with China in the global marketplace. Further research into the causal mechanisms of public opinion of China would help determine external validity of the findings. Additional constraints of this research include its small sample size, variance in the lag between white paper publication and public opinion surveys, the applicability of the selected sentiment and topic dictionaries, and overfitting of the topic model due to dictionary customization.

A natural continuation of this research might explore the "why" behind the null findings. Paired with the low explanatory power of the regression model, the statistically insignificant results indicate that there may be other variables that should be considered. The national defense white papers are representative of the common drivers of public opinion, China's hard and soft power. One path for future research is to examine alternative explanations of American views on China that are not driven by the white papers. These might include information about the individual survey respondents, or variables representing government and media information filters. It would also be interesting to test the same hypotheses for other global actors. Modifying the model to measure other countries' views on China would shed light on whether the lack of relationship between China's defense strategy and public opinion is specific to the United States, or if it is more broadly applicable. This would help determine external validity and contribute to a wider understanding of China's defense strategy and its impact to global security.

Ultimately, the null findings of this research are a valuable addition to the existing body of literature on global opinion of China, China's public diplomacy, and the causal mechanisms of public opinion. The lack of meaningful relationship between China's

defense strategy and American views on China has significant national security implications and has the potential to inform policymakers' decisions in the United States' ongoing strategic competition with China.

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8 Appendix

The LexiCoder Policy Agenda dictionary, compiled by the Comparative Agendas Project and last updated in 2013, can be found at the following web address: <http://www.lexicoder.com/ltdjun2013/>. Of the dictionary's 28 topics, 24 applied to the NDWP texts. These 24 topics were condensed into six according to the below coding rules:

- **Economy:** finance, energy, foreign_trade, macroeconomics, agriculture, transportation, forestry, housing;
- **Military:** defence, sstc;
- **Foreign:** intl_affairs, intergovernmental;
- **Political:** government_ops, crime, immigration;
- **Social:** civil_rights, education, environment, fisheries, healthcare, land-water-management, social_welfare; and
- **Cultural:** culture.

The terms in each of the condensed LPA dictionary topics were supplemented by the following lists of stemmed China- and United States-specific terms to improve contextual relevance to the NDWP text:

- **Economy:** "trade", "invest", "growth", "tech", "exchange", "sanction", "develop", "employ", "income", "pric", "supply", "demand", "private", "public", "interest", "workforce", "credit", "business", "capital", "rate", "fair", "resourc";
- **Military:** "arm", "maritime", "pla", "conflict", "train", "securi", "counter", "force", "threat", "nuclear", "cyber", "incident", "air", "terror", "warn", "space", "aero";;

- **Foreign:** "actor", "region", "regional", "russia", "asia", "hong kong", "taiwan", "agree", "alli", "trust", "mutual", "cooperat", "peace", "north korea", "member", "internat", "institut", "commun", "brunei"
- **Political:** "sovereign", "respect", "strateg", "open", "nation", "right", "control", "peopl", "chin", "govern", "part", "peace", "citizen", "freedom", "civil", "public", "protest", "law", "service", "corrupt", "ccp", "cpc", "republic";
- **Social:** "human", "social", "develop", "right", "people", "carbon emission", "agricultur", "sustain", "social"; and
- **Cultural:** "confuci", "histor", "cultur".

9 Curriculum Vita Summary

Rachel Sullivan is a candidate for a Master of Science in Government Analytics with a concentration in statistical analysis from the Johns Hopkins University. She has bachelor's degrees in Economics and Government & Politics from the University of Maryland, College Park, where she focused her studies on international relations and Chines area studies. Rachel's professional experience has been in the United States defense industry, using data-driven methodologies to support program finances. Currently, Rachel works for the Johns Hopkins University Applied Physics Lab as a financial manager in the Research and Exploratory Development Department (REDD). She supports REDD's Human & Machine Intelligence and Advanced Science & Technological Development programs, which conduct basic and applied research on cutting edge technologies for Department of Defense and Intelligence Community sponsors.