

Autocratic Soft Power: Evidence from China and India

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Abstract

Foreign public opinion is crucial for a rising power like China. Yet existing theory suggests autocracies will struggle to build soft power. We hypothesize that public diplomacy is effective at building an autocratic regime's soft power when it focuses on material considerations, especially foreign aid, not political values. We conduct an experiment, to our knowledge the first of its kind, that randomly exposes Indian citizens to real messages from Chinese diplomats, before and after deadly border clashes between Indian and Chinese troops. We find evidence that public diplomacy focusing on promoting Chinese aid works to strengthen Chinese soft power in times of peace and, strikingly, that it was just as effective in times of violent escalation. On the other hand, so-called "Wolf Warrior" diplomats who criticize American foreign policy were ineffective. Despite considerable skepticism, we show China's public diplomacy and aid pays dividends, even with a regional rival.

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1 Introduction

Foreign public opinion is crucial for a rising power like China. Popular support can pressure democratic governments — and even some autocrats (Weeks, 2012) — to agree to join military alliances (Goldsmith and Horiuchi, 2012), to open their markets (Milner and Tingley, 2011), to host military bases (Cooley, 2012), and to deescalate conflict (Kertzer, Brutger and Quek, 2019). On the other hand, hostile foreign opinion can lead to balancing, trade friction, and conflict spirals.

Given the importance of foreign public opinion, China has invested heavily in public diplomacy efforts aimed at improving the country’s “soft power” among foreign audiences (Nye, 2008). Since Xi Jinping became the leader of the Chinese Communist Party (CCP), he has discussed the importance of strengthening the nation’s soft power in some 40 speeches. As a part of this effort, Chinese diplomats and politicians have attempted to directly court foreign audiences through social media, advertising, Confucius Institutes, news programs, and leader visits.

Yet there is considerable skepticism among some policymakers, journalists, and scholars that these efforts in fact work — especially when undertaken by an autocracy like China. Nye (2008) argues that effective public diplomacy requires credible self-criticism and a robust civil society that most autocracies lack. Shambaugh (2015, p. 107) argues that China’s soft power efforts have had “meager results” because the country’s autocratic “political system denies, rather than enables, free human development.” Prominent journalists also dismiss Chinese soft power efforts, claiming that “Chinese power in domestic and international realms has become synonymous with brute strength, bribery and browbeat-

ing.”¹ Moreover, realists and others working in a rational choice paradigm long wrote off public diplomacy altogether as “cheap talk” that did not matter for geopolitical outcomes.

In this paper we ask whether and how aggressive public diplomacy efforts can improve autocratic soft power — especially in a context where traditional security concerns loom large. Does public diplomacy alter how foreign audiences perceive the Chinese government and the foreign policies they prefer? Can Chinese public diplomacy persuade audiences even in the context of an escalating hard power conflict?

We hypothesize that public diplomacy is effective at building autocratic soft power when it focuses on promoting the regime’s benevolence and avoids discussion of political values. One way that autocracies can achieve this is by highlighting foreign aid. In addition to signaling peaceful intentions, aid frames the donor in material terms, eliding political differences.

We examine Chinese soft power with an experiment that randomly exposes Indian citizens to actual messages from Chinese diplomats. This experiment was embedded in a survey that was fielded in two waves, one shortly before and one immediately after the deadly Galwan Valley clashes between the Indian and Chinese armies in June 2020. Manipulating exposure to real public diplomacy messages allows us untangle the effects, if any, of Chinese public diplomacy. The unexpected outbreak of military conflict further allows us to examine how a territorial conflict and a worsening security dilemma impacts China’s soft power strategy.

India is in many respects a hard case for studying the effectiveness of China’s soft

¹Edward Wong, “A Chinese Empire Reborn,” *The New York Times*, January 5, 2018. Available at: <https://www.nytimes.com/2018/01/05/sunday-review/china-military-economic-power.html>.

power push. Even before the June 2020 incident, the two countries had a decades-long history of armed conflict and border tensions. Mistrust has been exacerbated by China's longstanding support for India's key adversary, Pakistan. In a recent Pew study, Indians had the most pessimistic view of China's economic rise out of 34 surveyed countries.² If Chinese public diplomacy works among an Indian public, there is reason to expect it may well be broadly effective.

We show that public diplomacy works to build Chinese soft power in times of peace and, strikingly, that it was just as effective in times of military escalation. In particular, we show that diplomats who focus on promoting Chinese foreign aid succeed in building positive attitudes toward China among a broad audience. Our evidence suggests that these changes in attitudes are largely a consequence of respondents' updating their beliefs about the generosity of Chinese foreign aid, consistent with prior research on how foreign aid can build popular support (Goldsmith, Horiuchi and Wood, 2014). Importantly, we find evidence that this type of velvet glove diplomacy changed minds in the immediate aftermath of the emotionally charged Galwan Valley conflict, an event which received blanket coverage in the Indian media. These findings contrast with the oft-repeated view, especially common in the Western press, that China's "aggressive diplomacy" is "threatening China's international standing,"³ and is more consistent with other scholarship showing

²Laura Silver, Kat Devlin, and Christine Huang. "China's Economic Growth Mostly Welcomed in Emerging Markets, but Neighbors Wary of Its Influence." Pew Research Center report. Available at <https://www.pewresearch.org/global/2019/12/05/attitudes-toward-china-2019/>.

³Steven Lee Myers, "China's Aggressive Diplomacy Weakens Xi Jinping's Global Standing," *The New York Times*, April 17, 2020. Available at: <https://www.nytimes.com/2020/04/17/world/asia/coronavirus-china-xi-jinping.html>.

that China's soft power efforts pay dividends.

However, China's public diplomacy approach to building soft power has noteworthy limits. The effect of public diplomacy was small relative to the very large, negative shock that the border skirmish had on public opinion towards China. In addition, we find that "Wolf Warrior" diplomats who stridently criticize the United States and other Western countries, setting up a clash of values between China and an interventionist United States, are on balance unpersuasive.

Taken together the findings suggest modifications to our understanding of important theories about soft and hard power. In the face of considerable debate over whether an autocratic rising power like China can effectively shape its public image, we provide strong evidence in the affirmative. Even in a hard case — the Sino-Indian relationship in the immediate aftermath of a lethal border clash — real communications from Chinese diplomats improve public perceptions of China. This diplomacy is effective when it focuses on direct aid rather than a clash of political values. These findings build on other empirical studies that reveal that public diplomacy efforts may be more important than once thought (Goldsmith, Horiuchi and Matush, 2020).

2 Can an Autocracy on the Rise Build Its Soft Power?

Government leaders expend considerable time and effort in public diplomacy, including direct outreach by local embassies and consulates to local populations. A new body of research has begun to uncover the reasons behind governments' enthusiasm for these practices. Even such grand-scale and seemingly materially-driven processes as the rise of great powers are now recognized as being influenced by public perceptions (Tingley,

2017; Allan, Vucetic and Hopf, 2018). Survey experiments have probed the effectiveness of different messaging strategies in framing a crisis, and evidence shows that foreign aid and news media can each influence foreign audiences (Goldsmith, Horiuchi and Wood, 2014; Kohama, Inamasu and Tago, 2017; Chapman and Gerber, 2019).

Yet there is considerable debate over whether autocracies in general and China in particular can effectively build their soft power. Some scholars express strong skepticism that soft power efforts by autocracies like China can work (e.g. Nye, 2008; Shambaugh, 2015). Others have argued that China's soft power push has been effective, if within certain limits (e.g. Gill and Huang, 2006).

One possibility, building on work by Goldsmith, Horiuchi and Wood (2014), is that distributing foreign aid can generate international goodwill. Autocracies like China are just as able to provide foreign aid as democracies, and may even face weaker domestic political constraints in the amount of aid they distribute. China's aid is known to be guided by foreign policy considerations, and winning favorable impressions would be a natural extension of this strategy (Dreher et al., 2018). Furthermore, as Nathan (2015, p. 160) notes, "[t]he primary theme of Chinese international propaganda is not regime type but China's benevolence." Yet there is considerable skepticism that China's foreign aid buys it good will: as Shambaugh (2015) claims, "[s]oft power cannot be bought" through public diplomacy, the media, or foreign aid. Building on this debate, we hypothesized that public diplomacy that focuses on China's benevolence, and especially its foreign aid, will strengthen its soft power among a foreign audience.

Another possibility is that, if China cannot promote its own political values, it can at least attack the reputation of its main rival, the United States. This hypothesis was moti-

vated not by theory, but by real-world events: beginning in 2019, the Chinese Ministry of Foreign Affairs adopted a confrontational tone on social media. It promoted the controversial diplomat and active Twitter user Zhao Lijian and created an official @MFA_China account, which has been sharply critical of the United States. As many public figures have discovered, Twitter is an ideal platform for circumventing traditional media and reaching audiences directly. This shift in strategy played a key role in motivating our study and decision to focus on Twitter.

These online, official denouncements of the United States have garnered the name “Wolf Warrior” diplomacy, in reference to a series of nationalistic Chinese action movies. We hypothesized that, by framing the United States as a bullying foreign power, such messaging would weaken approval of the United States and, by comparison, improve perceptions of China. Although a strictly rational individual might not change their opinion on China in response to information about the United States, human decisions are frequently context-dependent (Tversky and Simonson, 1993).⁴ Our study joins a growing literature that examines key dimensions of China’s economic statecraft and diplomacy (e.g. Wong, 2019; Brazys and Dukalskis, 2019).

3 Research Design

We conducted an experiment in India to examine the effect of different types of public diplomacy on popular attitudes. Our experiment exposed respondents to two types of diplomatic messaging from Chinese diplomats. The first emphasized expressions of goodwill towards Indians, including the provision of foreign aid. The second consisted of brash

⁴We preregistered these hypotheses with EGAP pre-analysis plan # [Redacted].

denunciations of the United States, or “Wolf Warrior” diplomacy. The full treatments and placebo control are available in the online appendix.

We collected a number of outcomes, which we aggregated into four groups. The first two comprised a series of statements about China’s government and the Chinese people, which respondents agreed or disagreed with on a seven-point scale. The third category asked about India’s policies toward China, and the fourth measured perceptions of China’s response to the COVID-19 epidemic, which was the subject of a messaging battle between China and the United States. For each group, we created a composite outcome by extracting the first principal component. We pre-registered this analysis plan with EGAP. We also collected an identical set of outcomes for Indian perceptions of the United States.

Our first wave of data collection consisted of 2319 residents of India. Our survey was distributed by Lucid, a market research firm. We used quota sampling to ensure gender balance and a variety of ages, but did not otherwise seek to make our sample representative. We consider our sample of relatively youthful internet users to be a politically important subset of India’s population. Furthermore, studies show that convenience samples often return estimates of causal effects similar to representative samples, at least in the United States (Coppock and McClellan, 2019). Because the Chinese diplomats we study typically tweet in English, we conducted the survey in English.

Thirty-seven days after the first wave of data collection ended, on the night of June 15-16, Chinese and Indian soldiers fought their largest engagement since the 1962 border war. The battle, which saw the first deaths in the conflict since 1974, took place in the Galwan River Valley, near the triple point of territory controlled by India, China, and Pakistan. At least twenty Indian soldiers were killed, many of them falling from great

heights in the rugged terrain. (The Chinese military has not released details about its own casualties.) The incident precipitated a furious nationalistic response in India, with angry citizens smashing Chinese-made televisions.⁵

After the crisis, we collected a second wave of responses, exploiting the as-if-random nature of the timing of the event to compare effect sizes in normal and crisis circumstances. We collected 2358 responses, beginning roughly 48-60 hours after news of the clash broke, and ending 22 hours later.

4 Public Diplomacy Builds Chinese Soft Power, Even In Times of Conflict

We find that aid-related messaging was effective in both normal times and during the crisis (Figure 1). Estimated treatment effects were very close in both waves, and the pooled estimates attain statistical significance for all four outcomes.⁶ Reminders of China's foreign aid improved opinions of the Chinese government ('Government') and the Chinese people ('People') using an index that combines multiple outcomes. In addition, foreign aid messaging increased support for Indian cooperation with China ('Policy') and also improved citizens' evaluation of China's response to the coronavirus pandemic, which was the subject of much public messaging during the period the survey was fielded ('Covid-19').

The wide range of outcomes that improved after reminders of China's generosity is striking. Question-level results are available in the appendix, but a sampling includes: respondents became more willing to support cooperation with China on trade, more likely to perceive its activities in the South China Sea as defensive in nature, and less willing

⁵Bismee Taskin, "Breaking TV sets to boycotting Chinese goods," *The Print*, June 18, 2020.

⁶The effect on perceptions of the Chinese people is not significant when adjusting for multiple comparisons. See appendix for full details.

to support sanctions on China for its repression of the Uyghur minority. We infer that aid-focused public diplomacy lifts perceptions of “China” as an entity, causing it and its activities to be evaluated more positively. In other words, autocracies can do well by doing good, no differently from democracies.

At face value, these effects are not large; most range between 0.1 and 0.2 units on the seven-point scale. However, when considering that the deadly Galwan Valley incident moved many outcomes by only 0.4 units or even less, these effects seem meaningful. Furthermore, our treatment consisted of nothing more than five tweets. Such results from a single impression support the idea that public diplomacy is an efficient use of resources. A comparison with campaign advertising may be apt: effects may be small when a candidate is already well-known, but it is still one of the most important tools available to politicians.

Aid-focused public diplomacy also continued to work under the demanding circumstances of a crisis. These tweets included messages of friendship, which may have mollified the outraged Indian audience. It is questionable if China would choose to send such messages during a confrontation, for fear of appearing unresolved to both its adversary and domestic audience, but our results indicate that should the government wish to de-escalate, it has the rhetorical tools to do so.

By contrast, Wolf Warrior tweets did not shift perceptions of either China or the United States (Figure 2). Estimated effects were close to zero for all outcomes in both waves, and may even have backfired during the crisis, with respondents reporting slightly worse perceptions of China than the control group. Perceptions of the United States were also stable, despite these efforts to deface it. We conclude that positive messaging outperforms efforts to smear a rival, and that public diplomacy can work even during a crisis, given the

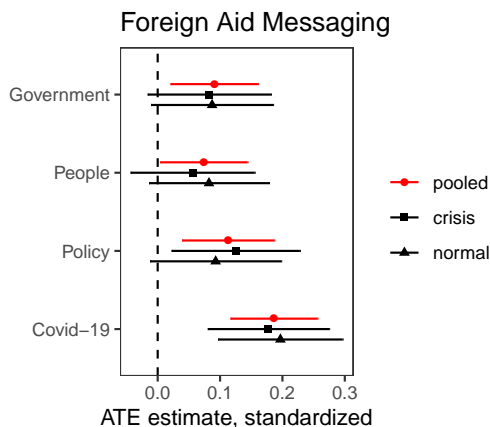


Figure 1: Effect of aid messaging on outcome indices.

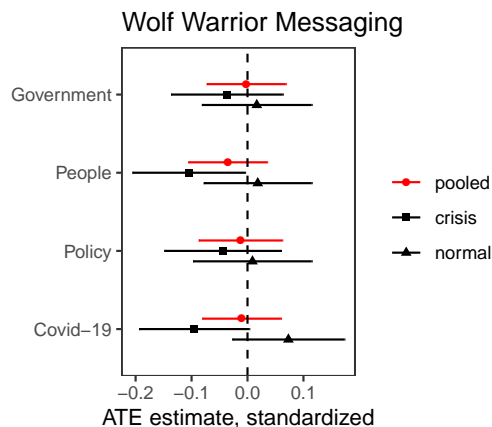


Figure 2: Effect of Wolf Warrior messaging on outcome indices.

right message.

We admit to being surprised that foreign-aid messaging outperformed Wolf Warrior messages. A large body of research has found that humans tend to give greater weight to negative information (e.g. Baumeister et al. (2001)), and one previous experimental study found that condemnation was an effective strategy during an imagined crisis (Kohama, Inamasu and Tago, 2017). We do not expect all positive messaging to outperform all negative messaging, but our large sample size ($n = 4677$ in the pooled sample) makes us reasonably confident that, in India and other countries with a pronounced lean towards the United States, public diplomacy that focuses on China's benevolence is more effective than attempts to embarrass the US. We suggest that this may be because values are tricky rhetorical territory for China. Democratic publics are unlikely to view China as a credible messenger on moral issues, and might even be reminded of Chinese policies they disapprove of.

The limited effectiveness of Wolf Warrior diplomacy might lead observers to won-

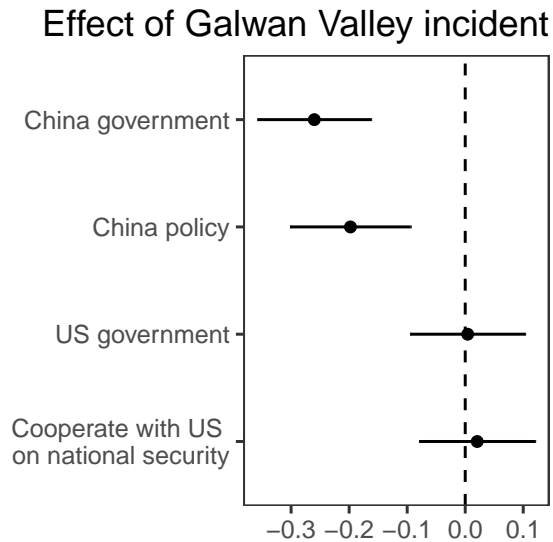


Figure 3: Effects of Galwan Valley incident

der why Chinese diplomats chose to adopt this unusual strategy. One possibility is that these ostensibly public messages are in fact aimed at rivals or superiors within the Chinese government, in order to burnish the sender's reputation as a hawk on the Sino-US relationship. If true, further research should investigate this unusual application of public diplomacy. Candidates for national office in democracies frequently bash foreign rivals for electoral gain, but this behavior is more unusual among diplomats.

4.1 The Border Crisis Pushed Indians Away From China, But Not Towards the U.S.

Assuming that our sample from May provides a reasonable counterfactual for Indian attitudes in June, absent the border clash, we are able to estimate the effect of the incident on perceptions of China and the United States. Unsurprisingly, the event severely damaged Indian perceptions of China. Perceptions of the Chinese government fell by a quarter of

a standard deviation, which translates to approximately half a point in the original seven-point scales. Respondents also became less willing to support policies that cooperated with China.

Western media promptly speculated that the event would encourage India to more fully align with the United States in an anti-China coalition.⁷ Much academic research into alliance formation, from Waltz (1979)'s balance-of-power theory, to Walt (1990)'s balance-of-threat theory, makes similar predictions.

Yet at as far as public opinion is concerned, our results cast doubt on this hypothesis (Figure 3). Perceptions of the US did not rise, and agreement with the specific statement "India should cooperate more with the United States on national defense" also stayed flat. To be clear, respondents had a higher overall opinion of the United States than China, but while the border incident harmed perceptions of China, it did not lead to an increase in popular support for more military cooperation with the United States. These results are robust even to a modified procedure designed to deal with "ceiling effects" imposed by the seven-point Likert scale.

This finding challenges popular and scholarly expectations that great-power politics are zero-sum, instead suggesting that countries like India evaluate China and the United States independently of one another. Other research into security cooperation between states, such as Adler, Barnett and Smith (1998) and Lake (2011), emphasizes the role of shared trust in binding allies together. Although our data do not offer an opportunity to test these theories, they are more consistent with the high-but-stable level of support for security cooperation with the US that we observe across normal and crisis periods.

⁷Gideon Rachman, "India picks a side in the new cold war," *Financial Times* June 22, 2020.

5 Conclusion

We provide experimental evidence of the effectiveness of Chinese public diplomacy in India, and leverage a natural experiment to learn how international crises affect these efforts. We conclude that aid-focused public diplomacy is effective both in normal times and during a crisis. Brash attacks on the United States, however, do not appear to be persuasive. We also find that, while the first deadly conflict in nearly half a century over a disputed border harmed Indian perceptions of China, it did not increase support for closer military cooperation with the US.

We conclude that public diplomacy can be effective, even in the hardest of hard cases: citizens of a rival nation during a security crisis. For this reason, China will likely continue to invest in efforts to improve its image abroad and reduce concerns about the threat it poses. Meanwhile, its rivals may find themselves compelled to compete in like fashion, offering warm words and tangible goodies, given the ineffectiveness of smear tactics and the fact that tensions with China do not necessarily push countries towards the United States.

More broadly, this evidence sheds light on the interaction of hard and soft power. In its relations with India and other countries, China employs both sets of tools. We empirically confirm that this mixed strategy makes sense because the exercise of hard power carries a steep reputational cost, while public diplomacy offers small gains for a low cost. Additionally, we show that foreign audiences respond to diplomatic messaging, even during a crisis. Most of the crisis bargaining literature focuses on costly signals, but cheap talk almost certainly plays a role as well.

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A Online Appendix

A.1 Ethical Responsibilities to Human Subjects

We took our ethical responsibilities as researchers seriously. Specifically, we took steps to ensure the well-being of survey participants and their society. We informed potential participants of our own identity, provided them with means to contact us, and offered them the opportunity to decline to participate. All data collection occurred online, which afforded participants maximum autonomy. Participants stayed anonymous during the entire research process. We remunerated participants \$1.00 USD, or about 75 INR. The median respondent took approximately nine minutes to complete our survey. According to a 2018 International Labour Organization report on wages in India, the median daily wage in India in 2011-2012 was 150 INR. We believe that our compensation was fair, but resist framing participation as purely a matter of employment. Many participants took the time to write in comments about China, despite the absence of a monetary incentive, suggesting genuine eagerness to voice their opinion, which is a common human desire. Furthermore, by soliciting Indian public opinion, we diversify a debate over China's rise that has been dominated by elite, American voices.

In designing the questionnaire, we included only truthful information that did not place anyone at risk or compromise the integrity of political processes. Because we shared information that reflected positively on China and negatively on the United States, it is conceivable that we could be criticized for abetting an authoritarian regime. We believe that such a critique is too simplistic. First, honest criticism of the United States' ethically unsavory foreign policy should help enforce more-moral behavior by the world's most powerful

government. Second, messages encouraging friendship between China and India, if they did alter some individuals' opinion, did so in the direction of peace.

In sum, we believe that our research had no discernible negative impact, a modest positive material impact for participants, and made a modest contribution to the study of politics.

A.2 Composite Outcomes

As declared in our pre-analysis plan, we combined answers to multiple questions into composite outcomes by extracting the first principal component. The factor loadings for each question are given below. Many questions are statements, which respondents expressed agreement or disagreement to on a seven-point scale.

Table A1: Chinese Government PCA weights

Question	PC loading
1. The Chinese government is trustworthy.	0.53
2. The Chinese government is dangerous.	-0.02
3. If China were to increase its military activities in the South China Sea, do you think it would be for offensive or defensive reasons?	0.36
4. China's rise is good for India's economy	0.53
5. China's rise is good for India's national security	0.55

Table A2: Chinese People PCA weights

Question	PC loading
1. It's good that Chinese ideas and customs are spreading here.	0.57
2. Chinese culture has positive aspects.	0.58
3. People from China are trustworthy.	0.58

Table A3: India's policies toward China PCA weights

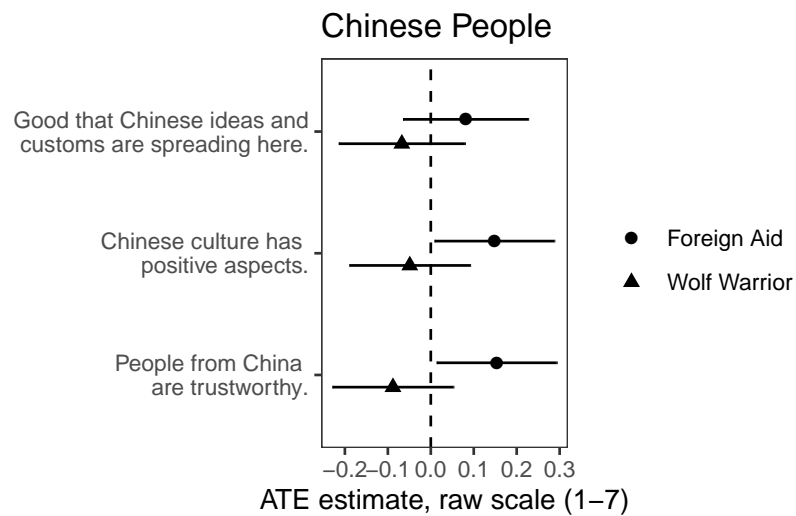
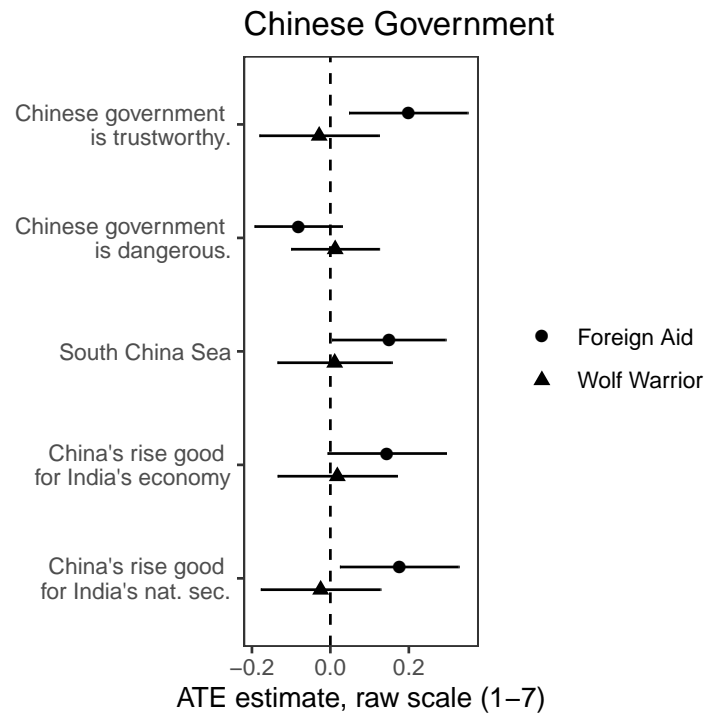
Question	PC loading
1. India should cooperate more with China on trade.	0.56
2. India should cooperate more with China on national defense.	0.56
3. The Indian government should publicly condemn the Chinese government for its actions in Xinjiang.	0.00
4. The Indian government should impose economic sanctions on the Chinese government for its actions in Xinjiang.	0.06
5. The Indian government should offer asylum to Uyghurs	0.26
6. If India must chose between being allies with China or allies with the United States, it should pick China.	0.55

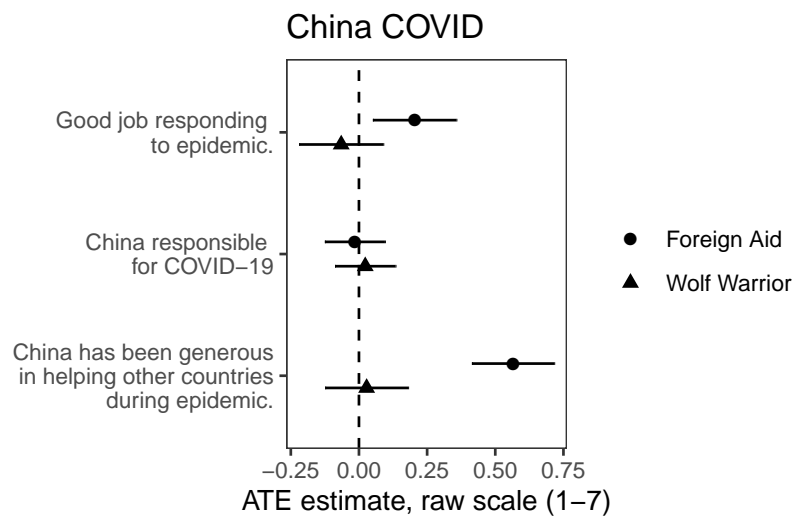
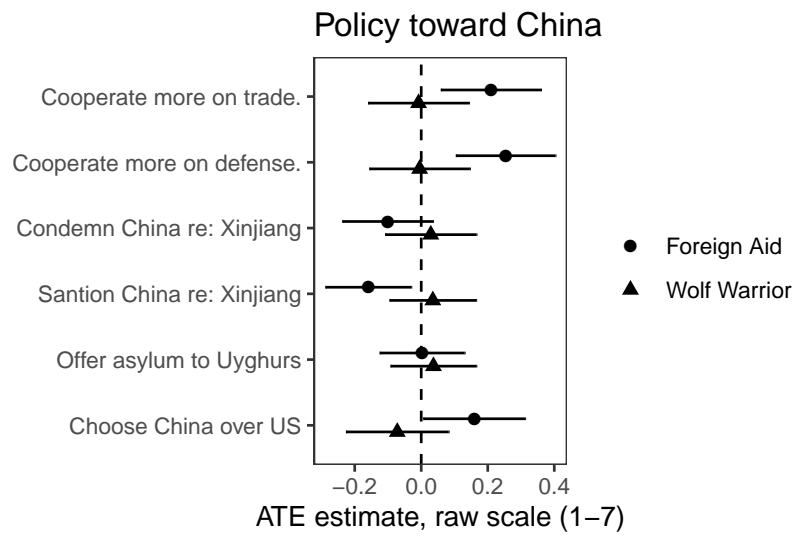
Table A4: China's handling of COVID-19 PCA weights

Question	PC loading
1. The Chinese government has done a good job of responding to the COVID-19 epidemic.	0.7
2. The Chinese government is responsible for the COVID-19 epidemic.	0.13
3. China has been generous in helping other countries during the COVID-19 epidemic.	0.7

A.3 Results for Individual Questions

Pooled across waves.





A.4 US Outcomes

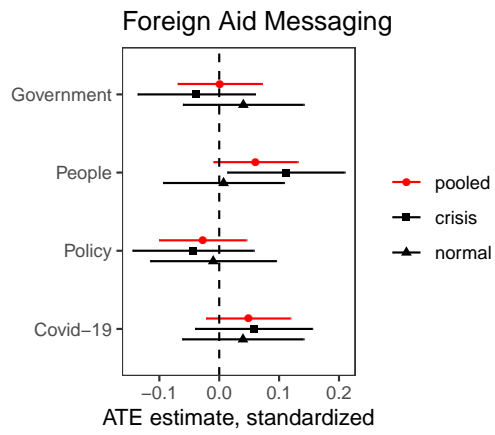


Figure A1: Effect of aid messaging on US outcome indices.

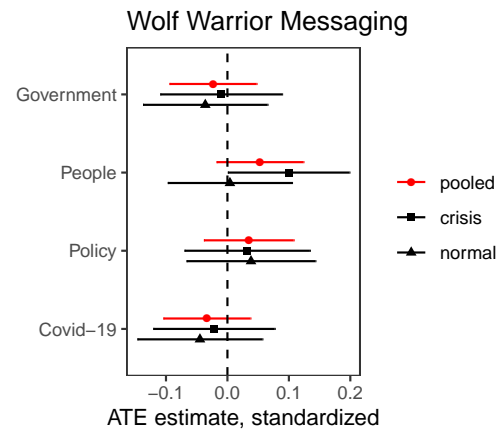


Figure A2: Effect of Wolf Warrior messaging on US outcome indices.

A.5 Pre-Analysis Plan and Multiple Comparisons

We submitted two pre-analysis plans and collected four rounds of data. Our first P-AP was submitted to EGAP on March 4, 2020, and envisioned a small-n, two-arm pilot, where the only treatment consisted of “Wolf Warrior” tweets criticizing the US. We collected approximately 200 responses each from India and the United States, using Amazon’s Mechanical Turk platform.

Following these pilots, we decided to focus on the Indian audience, primarily because we thought that the theoretical questions were sharper in the Indian context. On May 5, 2020, we submitted an addendum to our first P-AP, which outlined a larger, four-arm experiment: control, foreign-aid messaging, Chinese criticism of the US, and US criticism of China. We then collected about 4000 responses, using Lucid’s platform.

Approximately, one month later, Chinese and Indian soldiers became involved in a deadly clash. Once again, we collected responses using Lucid’s platform, but this time, we excluded the fourth arm of the experiment (US criticism of China). This was because, in beginning to write up our results, we found it easier to frame our research in terms of “What China is doing.” This second large-n wave was governed by the same May 5 pre-analysis plan.

Our manuscript diverges from the pre-analysis plan on three points: first, we omit discussion of Indian perceptions of the United States. Instead, we present those results in appendix A.4. Second, we ignore the experimental arm in which participants were exposed to official US criticism of China. As mentioned above, we decided to stop collecting observations for this arm because we had narrowed our research question from Twitter diplomacy to China’s autocratic public diplomacy.

Finally, we decided to present our findings graphically, rather than in a table with p-values. Overall, we believe that this is a superior means of communicating our results, but we want to honor our commitment to adjusting for multiple comparisons. Whereas our pre-analysis plan anticipated four arms, with six potential cross-arm comparisons, we ultimately only made two comparisons per outcome: control versus Foreign Aid, and control versus Wolf Warrior. Below, we present our main results and ITT results in tabular format, with both raw and adjusted p-values.

Using conventional $\alpha = 0.05$ levels of statistical significance, the only significant result that does not hold up to the Bonferonni-Hochberg procedure is the effect of the Foreign Aid messaging treatment on perceptions of the Chinese people. Our ITT estimates, which re-fit and re-tested the composite outcomes using all responses (including those suspected of repeat submission) are very similar to the main results.

Table A5: Adjusting p-values for multiple comparisons with Benjamini-Hochberg procedure

	Outcome	Treatment	p-value	B-H correction	ITT p-value	ITT B-H correction
1	Government	Foreign Aid	0.011	0.022	0.013	0.027
2	Government	Wolf Warrior	0.952	0.952	0.988	0.988
3	People	Foreign Aid	0.038	0.075	0.036	0.071
4	People	Wolf Warrior	0.326	0.326	0.409	0.409
5	Policy	Foreign Aid	0.003	0.005	0.021	0.042
6	Policy	Wolf Warrior	0.743	0.743	0.93	0.93
7	COVID	Foreign Aid	< .001	< .001	< .001	< .001
8	COVID	Wolf Warrior	0.769	0.769	0.962	0.962

A.6 Descriptive statistics

Table A6: Descriptive statistics.

Statistic	N	Mean	St. Dev.	Min	Max
Under 40 years old	4,670	0.817	0.387	0	1
Female	4,658	0.443	0.497	0	1
College educated	4,652	0.763	0.425	0	1
China Dove	3,563	0.253	0.435	0	1
China Hawk	3,563	0.585	0.493	0	1
Can name prior Chinese leader	4,677	0.257	0.437	0	1
Ideology: “Extreme right”	4,649	0.271	0.444	0	1
Ideology: “Extreme left”	4,649	0.062	0.241	0	1

A.7 Covariate Balance

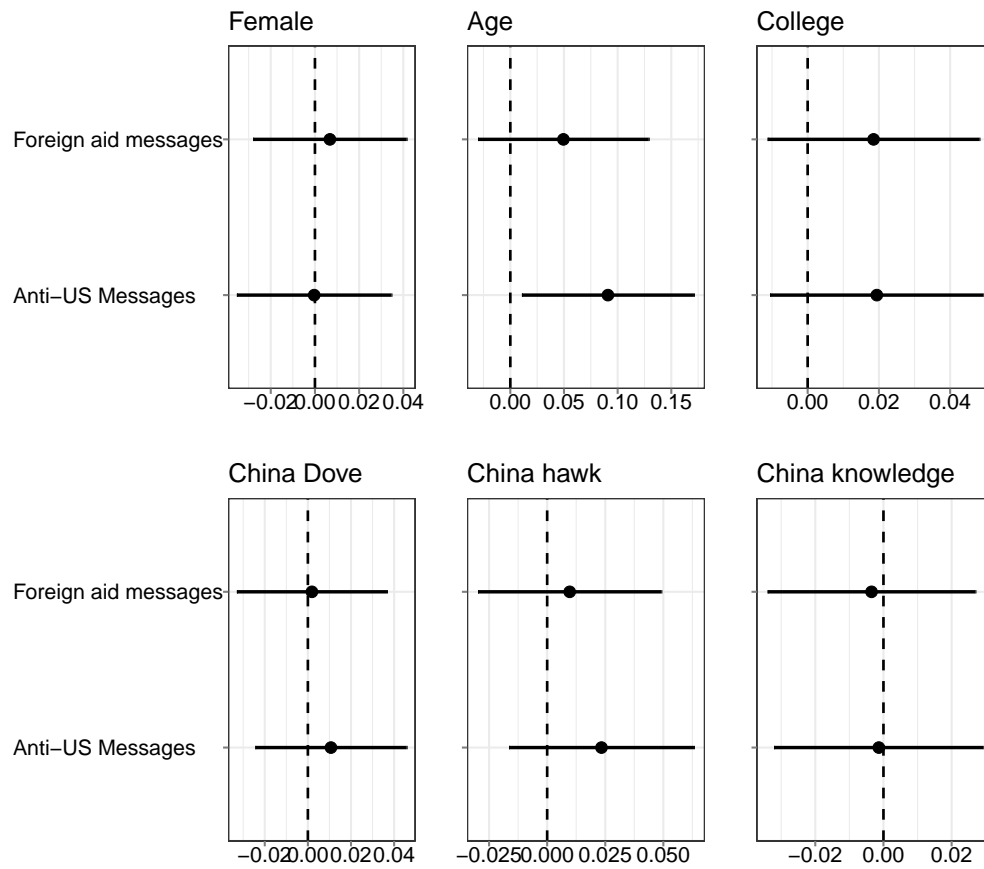


Figure A3: **Pre-Treatment Covariate Balance:** Most covariates are very well balanced, although age is not balanced for the Wolf Warrior treatment. The results remain robust when controlling for pre-treatment covariates.

A.8 Ceiling effects do not account for the null effect in Section 4.1

The most surprising fact emerging from the Galwan Valley incident was that support for closer military cooperation with the United States remained flat. Upon closer inspection of the data, we were initially concerned that this was an artifact of “ceiling effects,” because fully one-third of our May (control) sample expressed maximum support for this outcome. Thus, a null treatment effect might have been driven by respondents’ inability to express higher levels of support.

To address this concern, we estimated the conditional average treatment effect for those individuals who, in the control condition, would have expressed less-than-full support for this statement. Since this type of respondent had room to change their response, ceiling effects are less of a problem. These individuals can be denoted as $s = 1$, in contrast to those individuals $s = 0$ who would express full support even in the control condition.

Assuming that individuals who would be at the ceiling in the control condition stay at the ceiling in the treatment condition (that is, $E[Y(0)|s = 0] = E[Y(1)|s = 0]$, in bold below), this CATE can be calculated by scaling the ATE by the proportion p of the control group that was below the ceiling. (\hat{p} is easily calculated from the control group, and is

equal in control and treatment groups by assumption.)

$$\begin{aligned}
E[Y(1)] &= E[Y(1)|s = 1](p) + E[Y(1)|s = 0](1 - p) \\
E[Y(1)] - E[Y(0)] &= E[Y(1)|s = 1](p) + E[Y(1)|s = 0](1 - p) \\
&\quad - E[Y(0)|s = 1](p) - E[Y(0)|s = 0](1 - p) \\
E[Y(1)] - E[Y(0)] &= E[Y(1)|s = 1](p) + E[Y(1)|s = 0](1 - p) \\
&\quad - E[Y(0)|s = 1](p) - \mathbf{E}[\mathbf{Y}(\mathbf{1})|\mathbf{s} = \mathbf{0}](\mathbf{1} - \mathbf{p}) \\
E[Y(1)] - E[Y(0)] &= E[Y(1)|s = 1](p) - E[Y(0)|s = 1](p) \\
\frac{E[Y(1)] - E[Y(0)]}{p} &= E[Y(1) - Y(0)|s = 1]
\end{aligned}$$

Alternatively, one can first stratify by removing all of the control units with $Y = \max$, and an equivalent proportion of observations at the ceiling from the control group, and calculate the difference-in-means directly. This has the advantage of making the calculation of standard errors straightforward.

In our sample, we actually found fewer observations of maximum support for closer military cooperation with the US in the June wave than would have been expected even for a sharp null effect, based on the level of support in the May wave. This was a reassuring sign that ceiling effects were unlikely to be a problem. The $CATE_{s=1}$ was .07 standard deviations, $t = 0.81$, further confirming that the null result was not driven by ceiling effects.