

# **How News Media Framing Affects Americans' Perceptions of Chinese Americans: A Survey Experiment**

*Abstract:* Recent spikes in hate crimes against Chinese Americans along with increased news coverage of China due to the coronavirus pandemic suggests a significant relationship between media portrayals of China and Americans' opinions of Chinese Americans. This thesis explores this relationship to provide information on the impact of media portrayals of China on Americans' opinions of Chinese Americans. Can different visual stimuli and rhetorical framings of news articles about China prime Americans to see Chinese Americans as a “yellow peril” or “model minority”? This research answers the preceding question empirically through an original online survey experiment in Qualtrics that recruited about 500 respondents from Amazon Mechanical Turk. The statistically significant results of the survey experiment suggest that exposure to the news articles that frame China in a positive light can potentially increase Trump supporters' comfort and enthusiasm toward Chinese Americans. However, comparisons of the reported attitudes toward Chinese Americans across the experimental conditions between Trump supporters and non-Trump supporters suggest that associating COVID with news about China in general could lead to poor opinion of Chinese Americans by non-Trump supporters.

Reneé Nikolov

Research Advisor: Prof. John Chin

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# I. Introduction

Over the last two years, China and Chinese people have been a reoccurring media topic due to the COVID-19 pandemic. As American news pundits discuss the implications of China's involvement in the spread of coronavirus, Chinese Americans suffer the adverse effects of racism and hate crimes. According to the Center for the Study of Hate and Extremism, anti-Asian hate crimes surged by 145% while overall hate crime dropped 6% in 2020.<sup>1</sup> Trends in rising hate crimes against Asian Americans seem to coincide with political rhetoric and pandemic media coverage that has associated Chinese people with the spread of coronavirus. Retweets of racist dog whistles such as “China virus” and “Chinese coronavirus” peaked around March 2020, when the worst highs of anti-Asian hate crime were reported by the news.<sup>2</sup> Thus, the majority of think pieces that comment on the rising hate crimes against Asian Americans claim that there is a significant relationship between media framing of coronavirus coverage and the American public's perception of Chinese Americans. These think pieces theorize — but do not empirically test — that there is a re-emergence of a “yellow peril” perception of Chinese Americans caused by media coverage of the pandemic that associates the threat of the virus with Chinese people.

Previous literature regarding the effect of media portrayals of Chinese Americans on Americans' perceptions of Chinese Americans demonstrates two predominant views of Chinese Americans: the “yellow peril” perception and “model minority” perception. The “yellow peril” perception paints Chinese Americans in a negative light while the “model minority” perception portrays Chinese Americans in a positive light. The literature has theorized the connection between media framing and Americans' views of Chinese Americans through historical case studies and correlational studies. However, few studies have empirically tested whether the media can prime “yellow peril” or “model minority” views of Chinese Americans. This study fills this gap in the literature of empirical research on the relationship between U.S. media framing effects and Americans' perceptions of Chinese Americans by conducting a survey experiment to investigate whether negative or positive media framing of news about China's COVID safety policies can affect Americans' opinions of Chinese Americans. The study tries to answer the question: Can different visual stimuli and rhetorical framings of news articles about China prime Americans to see Chinese Americans as a “yellow peril” or “model minority”?

The structure of this paper is as follows. First, I review prior literature on portrayals of Chinese Americans as well as prior research that examines the relationship between media portrayals of minorities and Americans' opinion of those minorities. Second, I describe the design of the survey experiment and the participant pool of the survey. Third, I present the main results. Fourth, I discuss implications of the results and possible improvements to the survey experiment design. I conclude by discussing the study's limitations and implications.

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<sup>1</sup> Center for the Study of Hate & Extremism, “FACT SHEET: Anti-Asian Prejudice March 2021” (CSUSB, 2021), <https://www.csusb.edu/sites/default/files/FACT%20SHEET-%20Anti-Asian%20Hate%202020%20rev%203.21.21.pdf>.

<sup>2</sup> DFR Lab, “U.S. Politicians Exploit Coronavirus Fears with Anti-Chinese Dog Whistles,” Medium, March 17, 2020, <https://medium.com/dfrlab/u-s-politicians-exploit-coronavirus-fears-with-anti-chinese-dog-whistles-ff61c9d7e458>.

## II. Literature Review

Much of the literature concerning public perceptions of Chinese Americans analyzes these perceptions in terms of historical patterns of “Yellow Peril” and “Model Minority” archetypes and groups Chinese Americans as a part of a larger minority population in the United States: Asian Americans. Scholars generally discuss the origin of these two main perceptions of Chinese Americans and whether one view is more dominant in American society than the other. This dissertation engages with five distinct literatures: (A) minority stereotypes, (B) perceptions of Chinese Americans, (C) media portrayals of Asian Americans, (D) experimental approaches to perceptions of Asian Americans, and (E) experimental approaches to testing media bias/priming effects on perceptions of minorities.

### A. Minority Stereotypes

The “yellow peril” stereotype for Asian Americans first appeared during the late 19th century and early 20th century to characterize the growing population of Chinese immigrants settling on the West Coast.<sup>3</sup> As white Americans felt threatened by the socioeconomic success of Chinese immigrants and feared a “Chinese invasion” from a mass population boom of Chinese immigrants in the United States, white writers propagated this fear of a Chinese takeover of western civilization through science fiction works imbedded with menacing portrayals of Chinese people and fantasies of war between the West and China. This fictitious literature provided the source material for defining Chinese Americans as “yellow peril.” As the “yellow peril,” Chinese Americans were perceived as a threat to western civilization and values. The “yellow peril” stereotype developed negative imagery of Chinese Americans as “exotic, heathen, filthy, crime-ridden, and violent.”<sup>4</sup> This negative representation of Chinese Americans would be used to justify and garner support for anti-Chinese immigrant legislation and public policy, such as the Chinese Exclusion Act of 1882.

The “yellow peril” rhetoric against Chinese immigrants would later be recycled and weaponized against other Asian Americans who had ties to Asian foreign powers that challenged western and U.S. hegemony in the international community. During the rise of the Japanese Empire leading to World War II, the United States used “yellow peril” characterizations of Japanese people to propagate U.S. public sentiment against Japan as a challenger to the United States’ global power.<sup>5</sup> The United States also used “yellow peril” rhetoric against Asian Americans affected by U.S. imperialism in Asia to vilify any Asian social movement or pan-Asian solidarity against U.S. colonization efforts in Asia.<sup>6</sup> The “yellow peril” portrayal of Asian Americans served to legitimize U.S. exploitation of Asian Americans while encouraging Americans to prevent Asian American success from exceeding white American success. Thus, in the United States, “yellow

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<sup>3</sup> Stanford M. Lyman, “The ‘Yellow Peril’ Mystique: Origins and Vicissitudes of a Racist Discourse,” *International Journal of Politics, Culture, and Society* 13, no. 4 (2000): 683–747.

<sup>4</sup> Neil Nakadate, ed. William F. Wu, *MELUS* 10, no. 3 (1983): 92–95, <https://doi.org/10.2307/467445>.

<sup>5</sup> Lyman, “The ‘Yellow Peril’ Mystique: Origins and Vicissitudes of a Racist Discourse.”

<sup>6</sup> Moon-Ho Jung, *Menace to Empire: Anticolonial Solidarities and the Transpacific Origins of the US Security State* (University of California Press, n.d.).

peril” came to describe Asians who threatened the success or power of other Americans, especially white Americans.

On the other hand, the “model minority” stereotype first developed in the 1960s to late 20th century as a description of the well-off and educated Asian population immigrating to the United States during this time period. The narrative of Asian Americans being the “model minority” of the United States emerged as a political tool for disparaging the Civil Rights movement and dismantling solidarity between Asian Americans and other U.S. racial minorities in advancing the social and economic mobility of racial minorities in the United States.<sup>7</sup> The racist power elites propped up the immigrant success story of Asian Americans to discredit African American claims that racism and systemic barriers relating to white supremacy prevented U.S. minorities, especially African Americans, from thriving in American society. U.S. media in the 1980s praised “the nation’s 300,000 Chinese-Americans” for “moving ahead on their own with no help from anyone else” to criticize African Americans for blaming their lack of socioeconomic success on racial discrimination.<sup>8</sup> The “model minority” portrayal of Asian immigrants characterized Asian Americans as hardworking, passive, and non-threatening individuals who serve as an example of “how other minority groups could ‘make it’ in society.”<sup>9</sup>

## **B. Perceptions of Chinese Americans**

“Yellow peril” literature on Chinese Americans, especially during the late 19th century and early 20th century, is extensive since Chinese immigrants inspired the creation of the “yellow peril” stereotype in the first place. However, as the United States used the “yellow peril” stereotype to represent other Asian groups during conflict with other Asian powers, the discussion of “yellow peril” imagery broadened to include the impact of the stereotype on Asian Americans as a whole group.<sup>10</sup> Most literature on “model minority” perceptions of Asian Americans also seems to discuss the “model minority” perception of Chinese Americans as generalizable to the experience of other Asian Americans. There is an underlying assumption that perceptions of Chinese Americans project onto how non-Asians view Asian Americans as a group. In a case study of racism against Asian Americans during the COVID-19 pandemic, the authors note that pandemic scapegoating and racism does not just target Chinese immigrants but also victimizes “any Asian American perceived as having connections to China” due to a generalization that Asian Americans are indistinguishable from one another.<sup>11</sup> Since Chinese Americans share the experience of being perceived in the contrasting images of “yellow peril” and “model minority”

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<sup>7</sup> Tianlong Yu, “Challenging the Politics of the ‘Model Minority’ Stereotype: A Case for Educational Equality,” *Equity & Excellence in Education* 39, no. 4 (December 1, 2006): 325–33, <https://doi.org/10.1080/10665680600932333>.

<sup>8</sup> “Success Story of One Minority Group in U.S.,” *U.S. News and World Report*, December 26, 1966, <https://www.dartmouth.edu/~hist32/Hist33/US%20News%20&%20World%20Report.pdf>.

<sup>9</sup> Keith Osajima, “Asian Americans as the Model Minority: An Analysis of the Popular Press Image in the 1960s and 1980s,” *A Companion to Asian American Studies* 1, no. 1 (2005): 215–25.

<sup>10</sup> Lyman, “The ‘Yellow Peril’ Mystique: Origins and Vicissitudes of a Racist Discourse.”

<sup>11</sup> Yao Li and Harvey L. Nicholson Jr, “When ‘Model Minorities’ Become ‘Yellow Peril’—Othering and the Racialization of Asian Americans in the COVID-19 Pandemic,” *Sociology Compass* 15, no. 2 (2021): 1–13.

with other Asian Americans, U.S. perceptions of Chinese Americans tend to relate to a larger conversation of how American society recognizes Asian Americans.<sup>12</sup>

### **C. Media Portrayals of Asian Americans**

One author, Doobo Shim, addresses the connection between media portrayal of China and views of Chinese Americans through his historical analysis of mainstream media representation of Chinese and Japanese people and its impact on the perception of Asian Americans.<sup>13</sup> He argues that perceptions of Chinese Americans alternate between “yellow peril” and “model minority” based on historical events and societal norms reflected in mainstream media Asian representation of the time. However, his analysis focuses mainly on deriving the origins of these perceptions as they appear in American media over time. His discussion of the effects of media portrayals of China and Chinese people are limited to providing justification of the persistence of “yellow peril” or “model minority” stereotypes in mainstream media about Asian Americans. Nancy Chung Allred discusses the theory of a modern resurgence of the “yellow peril” view of Asian Americans by framing it as “yellow peril” rebranded from the “model minority” perception.<sup>14</sup> She uses a case study of affirmative action discourse to explain how conservatives inspire “yellow peril” fears in non-white audiences by making Asian Americans the face of anti-affirmative action propaganda.

Other scholars use qualitative historical analysis of the new wave of intellectual Asian American immigrants during the Cold War Era to state that “model minority” perceptions completely replace “yellow peril.”<sup>15</sup> These qualitative case studies only discuss historical events and American political attitudes informed by those events in shaping propaganda that pushes for the “model minority” perception of Asian Americans.

### **D. Experimental Approaches to Perceptions of Asian Americans**

There have been experimental studies that tested Americans’ perceptions of Asian Americans in terms of “yellow peril” or “model minority.” One survey experiment found that Americans only significantly view Asian Americans as a “yellow peril” in the context of competing for jobs.<sup>16</sup> An experiment on “model minority” depictions of Asian Americans in magazine advertising does

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<sup>12</sup> Albert H. Yee, “Myopic Perceptions and Textbooks: Chinese Americans’ Search for Identity 1,” *Journal of Social Issues* 29, no. 2 (1973): 99–113.

<sup>13</sup> Doobo Shim, “From Yellow Peril through Model Minority to Renewed Yellow Peril,” *Journal of Communication Inquiry* 22, no. 4 (October 1, 1998): 385–409, <https://doi.org/10.1177/0196859998022004004>.

<sup>14</sup> Nancy Chung Allred, “Asian Americans and Affirmative Action: From Yellow Peril to Model Minority and Back Again,” *Asian American Law Journal* 14, no. 1 (2007): 57–84, <https://doi.org/10.15779/Z38JS23>.

<sup>15</sup> Srilata Bhattacharyya, “From ‘Yellow Peril’ to ‘Model Minority’: The Transition of Asian Americans,” *ERIC*, November 14, 2001, 1–12.

<sup>16</sup> Jenny Nguyen, “From the Yellow Peril to the Model Minority: An Experimental Survey Examining Racial Attitudes towards Asian Americans” (Sociology, University of Central Florida, 2016): 1–146, <http://purl.fcla.edu/fcla/etd/CFE0006154>.

provide some discussion of media priming “model minority” perceptions of Asian Americans.<sup>17</sup> The study claims that its findings of the overrepresentation of “model minority” portrayals of Asian Americans in advertising implicate that the media primes its audience to view Asian Americans as the “model minority” through this consistent “model minority” representation. However, the experiment in the study only measured the quality and type of Asian representation in mainstream media, specifically magazine advertising. It did not empirically measure any association between the media representation of Asian Americans and Americans’ opinions of Asian Americans. An experiment conducted by José Abreu, Estrella Ramirez, Bryan Kim, and Chris Haddy tested whether individuals could be primed with “yellow peril” stereotypes in order to view Asian Americans as “yellow peril.”<sup>18</sup> The researchers yielded results that suggest “yellow peril” views coexist with “model minority” perceptions – with “model minority” perceptions being more blatant than “yellow peril.” They do not comment on the influence of mainstream media in priming perceptions of Asian Americans, as they use the “yellow peril” stereotypes rather than media story treatments to prime the participants of the study.

The recent rise in hate crime against Asian Americans during the COVID-19 pandemic has sparked interest in exploring the causes of anti-Asian prejudice and the influence of the “yellow peril” stereotype in recent pandemic perceptions of Asian Americans by other Americans. Jiun-Yi Tsai, Joe Phua, Shuya Pan, and Chia-chen Yang investigated the relationship between COVID-19 news consumption, intergroup contact, media trust, and prejudice against Asians through statistical analysis.<sup>19</sup> They found that traditional news exposure and trust in social media are positive predictors of prejudice against Asian Americans, indicating that COVID news consumption has a positive correlation with prejudice against Asian Americans. These findings support the inference of anti-Asian media bias being a significant influence on Americans’ perceptions of Asian Americans. Other articles have written about the hypothesis of anti-Asian rhetoric or bias in the media being a significant cause of public hate and prejudice against Asian Americans. Hannah Tessler, Meera Choi, and Grace Kao claim that the media has reinforced Americans’ belief of Asian Americans as foreign vessels of disease.<sup>20</sup> In their paper, they discuss historical examples of U.S. portrayal of Asian Americans as foreign disease carriers to sustain their hypothesis of a continual trend of Americans perceiving Asian Americans as perpetual foreigners, which makes scapegoating Asian Americans for diseases (such as the coronavirus) more accessible for the media and other Americans. Although there are recent papers that discuss the relationship between anti-Asian media bias and Americans’ prejudicial attitudes toward

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<sup>17</sup> Charles R. Taylor, Stacy Landreth, and Hae-Kyong Bang, “Asian Americans in Magazine Advertising: Portrayals of the ‘Model Minority,’” *Journal of Macromarketing* 25, no. 2 (December 1, 2005): 163–74, <https://doi.org/10.1177/0276146705280634>.

<sup>18</sup> José M. Abreu et al., “Automatic Activation of Yellow Peril Asian American Stereotypes: Effects on Social Impression Formation,” *The Journal of Social Psychology* 143, no. 6 (December 1, 2003): 691–706, <https://doi.org/10.1080/00224540309600425>.

<sup>19</sup> Jiun-Yi Tsai et al., “Intergroup Contact, COVID-19 News Consumption, and the Moderating Role of Digital Media Trust on Prejudice Toward Asians in the United States: Cross-Sectional Study,” *J Med Internet Res* 22, no. 9 (September 25, 2020): 1–15, <https://doi.org/10.2196/22767>.

<sup>20</sup> Hannah Tessler, Meera Choi, and Grace Kao, “The Anxiety of Being Asian American: Hate Crimes and Negative Biases During the COVID-19 Pandemic,” *American Journal of Criminal Justice* 45, no. 4 (August 1, 2020): 636–46, <https://doi.org/10.1007/s12103-020-09541-5>.

Asian Americans, not many studies explore this relationship in an empirical manner. In fact, the study of racial discrimination against Asian Americans is still a burgeoning field of research.<sup>21</sup>

### **E. Experimental Approaches to Testing Media Bias/Priming Effects on Perceptions of Minorities**

Regarding studies of the effect of media bias on people's perception of minorities, there have been experiments testing the influence of stereotypical media representation of minorities on white people's perception of minorities. Srividya Ramasubramanian conducted a 2x2 factorial experiment that explores the impact of stereotypical or counter-stereotypical representation of African Americans on white people's perceptions of African Americans and on support for affirmative action policies.<sup>22</sup> He found that exposure to media stereotypes of African Americans caused white participants of the experiment to indicate greater belief in these stereotypes, more prejudice towards African Americans, and more personal attributions for perceived failures of African Americans. The white participants exposed to African American media stereotypes also expressed a lack of support for affirmative action policies benefiting racial minorities. While the experiment by Ramasubramanian provides some compelling support to the hypothesis that media can prime Americans to strengthen prejudicial attitudes toward minorities, Meredith Morris's paper reports mixed results in the presence of "the priming effects of media frames" in affecting white Americans' perceptions of African Americans and Hispanics.<sup>23</sup> The experiment in Morris's paper tested the effect of visual priming on people's perceptions of the racial identities of people getting emergency hunger services. The results of the experiment revealed that white people were responsive to the Hispanic primes, such that white people who saw photos of Hispanics attached to the article on emergency hunger services overestimated the percentage of Hispanic people served by the hunger services. However, white and Hispanic people consistently overestimated the percentage of African Americans in the hunger program, regardless of whether they were exposed to the African American visual prime or only text from the article. These results suggest that, depending on the racial identity group, visual primes in news media strengthened stereotypical views of the racial group depicted or did not have a significant effect on the preconceived prejudicial view of that racial group.

### **The Current Study**

Through this study, I attempt to answer the research question:

Can different visual stimuli and rhetorical framings of news articles about China prime Americans to see Chinese Americans as a "yellow peril" or "model minority"?

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<sup>21</sup> Angus Chen, "Amid Growing Anti-Asian Racism, A Call For More Research Into Its Health Effects," *NPR*, May 29, 2021, <https://www.npr.org/sections/health-shots/2021/05/29/1001373994/amid-growing-anti-asian-racism-a-call-for-more-research-into-its-health-effects>.

<sup>22</sup> Srividya Ramasubramanian, "The Impact of Stereotypical versus Counterstereotypical Media Exemplars on Racial Attitudes, Causal Attributions, and Support for Affirmative Action," *Communication Research* 38, no. 4 (2011): 497–516.

<sup>23</sup> Meredith Morris, "The Priming Effects of Media Frames in Regard to News Images and Stereotypes Held by Hispanic Audiences," 2013.

Whereas prior research in racial prejudice against Chinese Americans has primarily been qualitative cultural histories, I will be the first to use a survey experiment to test the causal influence of media framing on Americans' perceptions of Chinese Americans. The survey experiment will evaluate whether the use of anti-China rhetoric and negative imagery of China in a news story will inspire readers to harbor increased feelings of prejudice against Chinese Americans and if a news story about China framed in a positive light accompanied with a friendly photo of a Chinese citizen will influence readers to report positive attitudes toward Chinese Americans. While other pandemic racism studies report associations between media trust, fake news, and prejudice against Asian Americans,<sup>24</sup> I aim to test anti-China rhetoric and visual priming as potential causal mechanisms for the relationship between news media and anti-Chinese attitudes.

Based the results of previous studies investigating media priming effects on attitudes toward racial minorities, for this study, I hypothesize:

Participants who read a news article that frames China in a negative light will report lower levels of positive feelings towards Chinese Americans than participants who read a neutral news article about COVID safety policies and participants who read a news article that frames China in a positive light.

Since Tsai et al. confirmed a correlation between holding conservative values and increased prejudice against Asian Americans,<sup>25</sup> an interaction between party affiliation and exposure to anti-China news such that conservative participants reading a negative news article about China will report higher anti-Chinese prejudice than liberal participants reading the same news article.

### III. Methods

#### Participant Recruitment

The participants were recruited from Amazon's Mechanical Turk (MTurk). I used MTurk to derive a sample of participants representative of the U.S. population because the platform offers access to a massive on-demand workforce for a price within the budget of this experiment. By comparing the demographics and political preferences of MTurk survey respondents to the demographics and political preferences of Cooperative Congressional Election Survey (CCES) respondents, Amazon's Mechanical Turk was found to match the CCES's recruitment of respondents from diverse geographic regions in the U.S. as well as provide similar representative

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<sup>24</sup> Chrysalis L Wright and Hang Duong, "COVID-19 Fake News and Attitudes toward Asian Americans," *Journal of Media Research* 14, no. 1 (March 2021): 5–29, <https://doi.org/10.24193/jmr.39.1>.

<sup>25</sup> Tsai et al., "Intergroup Contact, COVID-19 News Consumption, and the Moderating Role of Digital Media Trust on Prejudice Toward Asians in the United States: Cross-Sectional Study."



samples of education in young Americans to the data in the CCES survey.<sup>26</sup> This comparison between MTurk and CCES by Conner Huff and Dustin Tingley also revealed that MTurk is better than the CCES in attracting young Asians and young Hispanic women. However, MTurk lacks in its ability to collect samples from most older populations of racial minorities. MTurk also has significant difficulty in attracting African American participants. Thus, MTurk can be a suitable platform for collecting a representative sample of the U.S. population for the purpose of this study — being mindful that MTurk may not recruit enough African Americans for the study. Levay et al. confirms findings that respondents from Amazon’s Mechanical Turk do not seem to be critically different “from population-based respondents in unmeasurable ways” when evaluating the demographics and the partisanship of MTurk samples.<sup>27</sup>

## Participants

Participation in the survey was limited to MTurk workers who are 18 years or older and located in the United States. A total of 514 people responded to the survey, but only 505 of those 514 survey respondents were approved.<sup>28</sup> After reviewing the quality of the responses given by the 505 approved participants, 30 responses were dropped from the dataset such that there were 475 total observations in the final dataset.<sup>29</sup> Sixteen participants who completed the survey in one minute or less represented a fraction of the 30 responses that were dropped from the dataset. The survey experiment required reading through a 350-400 word mock news article in addition to answering 23 questions, such that completion of the survey in a minute or less indicated that the participant did not read the article or answer the survey questions in a thoughtful manner. Thus, the responses from those 16 participants were dropped from the dataset.

Table 1 shows the summary statistics of the demographics of the entire participant sample pool. When comparing the demographics data presented in the table to the U.S. Census data on demographics, the percentage of Black Americans represented in the MTurk sample (4%) is significantly lower than the national percentage of Black Americans in the U.S. population as reported in the U.S. Census data (12.4%).<sup>30</sup> The table also reveals that there’s a higher percentage of white people in the experiment sample (84%) than the percentage of white Americans in the United States (61.6%). The proportion of multiracial individuals in the MTurk sample (0.05) is

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<sup>26</sup> Connor Huff and Dustin Tingley, “‘Who Are These People?’ Evaluating the Demographic Characteristics and Political Preferences of MTurk Survey Respondents,” *Research & Politics* 2, no. 3 (July 1, 2015): 1–12, <https://doi.org/10.1177/2053168015604648>.

<sup>27</sup> Kevin E. Levay, Jeremy Freese, and James N. Druckman, “The Demographic and Political Composition of Mechanical Turk Samples,” *SAGE Open* 6, no. 1 (January 1, 2016): 1–17, <https://doi.org/10.1177/2158244016636433>.

<sup>28</sup> Nine of the survey respondents were prematurely kicked out of the survey, as they failed the attention check question: “Which animal of the following do you like the most? If you are paying attention, please choose ‘Otter.’”

<sup>29</sup> Six participant responses were dropped because they did not answer either the question confirming their understanding of the information in the consent form or the question confirming their voluntary participation in the study. Eight incomplete survey responses were also dropped.

<sup>30</sup> “Race and Ethnicity in the United States: 2010 Census and 2020 Census,” United States Census Bureau, February 5, 2022, <https://www.census.gov/library/visualizations/interactive/race-and-ethnicity-in-the-united-state-2010-and-2020-census.html>.

**Table 1: Summary Statistics of the Demographics of All Participants<sup>31</sup>**

Total Participants*									
	white	black	multiracial	other	citizenship	gender	age	education	party affiliation
count	466	466	466	466	466	466	466	466	466
mean	0.84	0.04	0.05	0.13	1.00	0.37	36.37	2.76	1.51
standard deviation	0.364	0.193	0.226	0.533	0.000	0.484	9.954	0.747	0.663
min	0	0	0	0	1	0	21	0	0
max	1	1	1	3	1	1	69	4	3
*9 observations total were dropped from the table due to missing values.									

lower than the proportion of multiracial Americans represented in the 2020 U.S. Census (0.10) by a factor of two. The representation of other races<sup>32</sup> is also lower in the MTurk sample than in the 2020 U.S. Census. Based on these comparisons, the MTurk sample in this study is not very representative of the U.S. population at large in terms of race and ethnicity. White people are overrepresented in the MTurk sample while racial minority groups are underrepresented in the sample. Thus, observations based on the racial minorities sampled in this study cannot really be generalized to represent the behavior or views of racial minorities in the entire U.S. population.

On the other hand, the mean age of the participant pool appears to be close to the average age of the U.S. population (about 38 years old).<sup>33</sup> Just like in the U.S. Census Bureau Educational Attainment data,<sup>34</sup> a majority of participants report completing an undergraduate degree as the highest level of education attained. Almost all the participants in the study report that they are U.S. citizens.<sup>35</sup> The study's participant pool represents the U.S. citizen population, the average age of Americans, and the average education level of the U.S. population relatively well.

Lastly, Table 1 shows that females are underrepresented in the MTurk sample, as females make up roughly 50% of the U.S. population.<sup>36</sup> Democrats are a little overrepresented in the participant pool while Independents are severely underrepresented, according to a Gallup poll on party

<sup>31</sup> The first four columns of the table are dummy race variables. Detailed information about how these variables coded race can be found in Appendix D, as well as information on how the other variables in the table were coded.

<sup>32</sup> The variable "other" consisted of the Latino, Asian, and Native American/Indigenous races.

<sup>33</sup> "Age and Sex Composition in the United States: 2019," United States Census Bureau, October 8, 2021, <https://www.census.gov/data/tables/2019/demo/age-and-sex/2019-age-sex-composition.html>.

<sup>34</sup> Frances Alonzo, "Census Bureau Releases New Educational Attainment Data," United States Census Bureau, February 24, 2022, <https://www.census.gov/newsroom/press-releases/2022/educational-attainment.html>.

<sup>35</sup> Five participants chose "Prefer not to say" when asked about being a U.S. citizen.

<sup>36</sup> "Age and Sex Composition in the United States: 2019."

affiliation in the United States.<sup>37</sup> While Independents make up the majority of voters in the United States, only 9.47% of participants identify themselves as Independent in this study.

Table 2 shows the summary statistics of the demographics of the control group and each treatment group of this study.<sup>38</sup>

**Table 2: Summary Statistics of the Demographics of Participants by Experimental Condition**

	Control Group	Positive Treatment Group	Negative Treatment Group
count	155	158	153
<b>white</b>			
mean	0.87 (0.336)	0.86 (0.347)	0.8 (0.403)
min - max	0 - 1	0 - 1	0 - 1
<b>black</b>			
mean	0.01 (0.08)	0.06 (0.233)	0.05 (0.223)
min - max	0 - 1	0 - 1	0 - 1
<b>multiracial</b>			
mean	0.06 (0.246)	0.04 (0.192)	0.06 (0.236)
min - max	0 - 1	0 - 1	0 - 1
<b>other</b>			
mean	0.13 (0.543)	0.11 (0.524)	0.15 (0.535)
min - max	0 - 3	0 - 3	0 - 3
<b>citizenship</b>			
mean	1 (0)	1 (0)	1 (0)
min - max	1	1	1
<b>gender</b>			
mean	0.4 (0.491)	0.35 (0.478)	0.37 (0.485)
min - max	0 - 1	0 - 1	0 - 1
<b>age</b>			
mean	36.92 (10.665)	35.76 (9.369)	36.43 (9.824)
min - max	23 - 67	24 - 68	21 - 69
<b>education</b>			
mean	2.7 (0.784)	2.91 (0.626)	2.67 (0.803)
min - max	1 - 4	1 - 4	0 - 4
<b>party affiliation</b>			
mean	1.47 (0.687)	1.61 (0.594)	1.44 (0.697)
min - max	0 - 2	0 - 3	0 - 2
<b>Note:</b> Standard deviation is in parentheses next to the mean.			

<sup>37</sup> Gallup Inc, "Party Affiliation," Gallup.com, February 2022, <https://news.gallup.com/poll/15370/Party-Affiliation.aspx>.

<sup>38</sup> Three observations were dropped from each group in the table due to missing values.

Although there seems to be noticeably more Black participants and more highly educated participants in the positive treatment group than in the control treatment and the negative treatment group, Table 2 overall demonstrates a fairly even distribution of participants across the control, positive treatment, and negative treatment groups — regardless of citizenship status, gender, and age. By performing an equality of means test on the variables associated with race, gender, age, education, and party affiliation across the experimental conditions, I found that the null hypothesis that the data is normally distributed across the experimental conditions could not be rejected at 95% confidence for the variables of gender, age, and party affiliation.<sup>39</sup> The equality of means test revealed no statistically significant difference in means across experimental conditions for the race dummy variables measuring whiteness, multiracial individuals, and Latino, Asian, and Indigenous individuals within the participant pool.<sup>40</sup>

However, the equality of means test results for the dummy variable measuring the presence of Black participants in the experiment show that the null hypothesis that data on Black participants is normally distributed across the experimental conditions could be rejected at 95% confidence.<sup>41</sup> I also found that the data for education was not normally distributed, at a statistically significant level.<sup>42</sup> Therefore, the equality of means tests support Table 2's demonstration that the participants were normally distributed across the control, positive treatment, and negative treatment groups by gender, age, and party affiliation. All racial groups except for Black people were distributed evenly across the experimental conditions, as the positive and negative treatment groups seem to have significantly more Black participants than the control group. The positive treatment group has more highly educated people than the negative treatment group and the control group, at a statistically significant level.

## Survey Experiment Design

The survey was created in Qualtrics and contains 23 questions. The survey started with a consent form<sup>43</sup> that participants had to read and agree to follow before starting the actual experiment. If participants answer “No” to any of the questions following the consent form, then the survey ends and they do not receive compensation. To prevent bots from infiltrating the participant pool, a Recaptcha test was added to the survey as well as an attention check question<sup>44</sup> after the consent form page. If participants passed the attention check question, then they would proceed to answer a series of demographic questions<sup>45</sup> about their race, gender, age, education level, U.S. citizenship status, and party affiliation. If participants identified as Independents, then they

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<sup>39</sup> Test for equality across experimental conditions results for variables: gender ( $F(2, 470) = [0.65]$ ,  $p = 0.5203$ ), age ( $F(2, 472) = [0.57]$ ,  $p = 0.5667$ ), and party affiliation ( $F(2, 472) = [2.61]$ ,  $p = 0.0749$ )

<sup>40</sup> Test for equality across experimental conditions results for variables: white ( $F(2, 472) = [1.61]$ ,  $p = 0.2014$ ), multiracial ( $F(2, 472) = [0.32]$ ,  $p = 0.7259$ ), and other ( $F(2, 472) = [0.25]$ ,  $p = 0.7808$ )

<sup>41</sup>  $F(2, 472) = [3.65]$ ,  $p = 0.0268$

<sup>42</sup>  $F(2, 470) = [4.77]$ ,  $p = 0.0089$

<sup>43</sup> See Appendix A.

<sup>44</sup> Attention check question: “Which animal of the following do you like the most? If you are paying attention, please choose ‘Otter.’” Participants were kicked out of the survey with no compensation if they chose any option besides “Otter.”

<sup>45</sup> See Appendix B for the specific questions asked.

would be prompted to identify their political leaning on a scale from “center or adjacent” to “pretty much leftist/conservative.”<sup>46</sup> Since previous studies found correlations between “right-wing authoritarianism” and anti-Asian prejudice,<sup>47</sup> participants also answered a question about whether they supported Trump in the 2020 election and about whether they were satisfied with the 2020 election results so that the study data could catch any confounding effects from this variable. Participants who responded “Yes” to supporting Trump in the 2020 election or “No” to being satisfied with the 2020 election results would be portrayed as having an inclination toward “right-wing authoritarianism.”

After answering these demographic questions and questions about the 2020 elections, participants were given instructions to prepare for the next task: reading one of three mock news articles. The instruction page told participants to read the article on the next page carefully and respond to the questions that followed the article. The mock news articles served as the manipulated independent variable of interest. Participants were evenly randomly assigned one of three articles: the control article, the positive treatment article, and the negative treatment article.<sup>48</sup> Participants were only shown the article that was randomly assigned to them.

### Control and Treatment Designs

As the manipulated independent variable of interest, the random assignment of the control and treatment articles had the purpose of testing whether receiving negatively or positively framed news about China would influence participants’ reported attitudes toward Chinese Americans. The control article would act as a placebo, while the negative treatment article exposed participants to a negative framing of China’s COVID safety policy and the positive treatment article exposed participants to a positive framing of China’s COVID safety policy. The articles were written to imitate articles read on online news websites. Each article was about 350-400 words long and included a picture with a caption. As well as serving the purpose of making the articles look more realistic as news articles, the captioned picture with each article also was manipulated according to the experimental condition such that I can investigate if the visuals had any priming effects on the participants’ impression of Chinese Americans. Some individuals on social media have claimed that using photos of Asians in COVID news stories primes readers to associate Asians with the virus such that scapegoating Asians for the pandemic increases.<sup>49</sup>

As the placebo, the control article reported on a similar but different topic than the treatment articles. While the treatment articles reported on China’s COVID safety policies, the control article reported on the World Health Organization’s recommendations for general public COVID

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<sup>46</sup> See Appendix B to view the exact question and possible responses.

<sup>47</sup> Wright and Duong, “COVID-19 Fake News and Attitudes toward Asian Americans,” 19.

<sup>48</sup> See Appendix C.

<sup>49</sup> Jennifer Koh, “Hi @nytimes -Please Stop Using Pictures of Asian Americans as Your Default Image for Covid. It’s Racially Biased and Propagates Violence against Us <https://t.co/JYmsLTeeQb>,” Tweet, @jenniferkoh1 (blog), March 26, 2022, <https://twitter.com/jenniferkoh1/status/1507585207045607428>.

safety and for international travel during the pandemic.<sup>50</sup> If all articles were to discuss the exact same topic, then there would be no noticeable difference between the control and positive treatment of this study. I tried to give a “neutral” tone to the control article by attempting to write the article as an organized statement of facts. The World Health Organization (WHO), as a non-partisan source of information about COVID, gave inspiration for the content and organization of this article.<sup>51</sup> The article was accompanied by a photo of the WHO Headquarters building.

The positive treatment article attempted to relay information about China’s COVID policy that portrayed China in a positive light. To give the article a “positive” tone when describing China’s COVID policy, the article contained a picture with a Chinese man giving a thumbs up while getting vaccinated. The article was worded in a manner that framed China as protective and caring toward its citizens through the enactment of its COVID policy. Quotations from fake Chinese citizens praised the Chinese government’s COVID safety efforts in the article. Throughout the article, the scientific name used by the WHO (i.e., COVID or COVID-19) to refer to the coronavirus was used to label the virus. The content of the positive treatment article was based on a New York Times article that praised China’s recovery from the COVID-19 pandemic.<sup>52</sup>

In contrast, the negative treatment article tried to portray China negatively by framing China’s COVID policy as an oppressive and cruel burden on Chinese citizens. The wording of the article served to portray some of the same regulations stated in the positive treatment article as excessive and unsympathetic to its citizens. A Quotation from a fake Chinese citizen emphasized the cruelty of China’s quarantine policy in separating children from parents. The picture that accompanied the article showed Xi Jinping with a Chinese flag background where the stars were replaced with coronaviruses. Throughout the article, “anti-Chinese dog whistles” (i.e., China virus, Chinese virus or Wuhan virus) was used to label the virus, except in the last two sentences.<sup>53</sup> The difference in labeling the coronavirus between the positive treatment article and negative treatment article served to test commonly-made claims that exposure to such “dog whistles” would increase anti-Chinese prejudice by associating the spread of the virus with Chinese people.<sup>54</sup> The content of the negative treatment article negatively framed the facts of the

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<sup>50</sup> WHO Headquarters (HQ), “Policy Considerations for Implementing a Risk-Based Approach to International Travel in the Context of COVID-19, 2 July 2021,” Memo (World Health Organization, July 2, 2021), <https://www.who.int/publications/i/item/WHO-2019-nCoV-Policy-Brief-Risk-based-international-travel-2021.1>.

<sup>51</sup> “Advice for the Public on COVID-19 – World Health Organization,” World Health Organization, October 1, 2021, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>.

<sup>52</sup> Steven Lee Myers et al., “Power, Patriotism and 1.4 Billion People: How China Beat the Virus and Roared Back,” *The New York Times*, February 5, 2021, sec. World, <https://www.nytimes.com/2021/02/05/world/asia/china-covid-economy.html>.

<sup>53</sup> The last two sentences of each treatment article were made to look as similar as possible despite conveying opposing views in order to standardize the articles to the control, as the last two sentences either claim that the Chinese government is violating a WHO recommendation stated from the control article or is following a WHO recommendation stated from the control article.

<sup>54</sup> DFR Lab, “U.S. Politicians Exploit Coronavirus Fears with Anti-Chinese Dog Whistles,” Medium, March 17, 2020, <https://medium.com/dfrlab/u-s-politicians-exploit-coronavirus-fears-with-anti-chinese-dog-whistles-ff61c9d7e458>.

New York Times article while also taking inspiration from a CNN article that highlighted the story of a COVID-positive 4-year-old who was separated from his family in order to criticize the inhumane nature of China's Zero Tolerance Policy for COVID.<sup>55</sup>

### Survey Questions After Exposure to Randomly Assigned News Article

In order to obscure the purpose of the experiment such that participants do not model their survey responses to fit their impression of the experiment's purpose, questions about China's efficacy of handling the pandemic, the WHO's efficacy of handling the pandemic, trust of the WHO, trust of the United Nations, and trust of various media sources followed participant exposure to a randomly assigned news article.<sup>56</sup> This set of questions also help to ease participants into answering sensitive questions about attitudes toward Chinese Americans later.

The questions about the efficacy of China or the WHO in handling the pandemic can help measure whether approval of China's or the WHO's handling of the pandemic has a confounding effect on how participants respond to the news articles. For example, the positive treatment article may not have any effect on the participant if the participant already believes that China is doing a poor job of handling the pandemic, since loyalty to preconceived beliefs can block the positive priming effects of the article. The questions about institutional trust of the WHO and the United Nations served as measures to investigate if trust of political institutions has any interesting interaction with attitudes toward Chinese Americans. The question about trust of various media sources was important in investigating media trust as a confounding variable in the relationship between media framing effects and attitudes toward Chinese Americans, especially since prior research has found a significant correlation between trust in digital media and levels of prejudice against Asian Americans.<sup>57</sup> Variables concerning level of media trust, political leaning of media bias, and type of media trust are derived from different combinations of selecting trusted media sources from a list of eight relatively well-known online news outlets in the media trust question.<sup>58</sup>

### Measuring Attitudes Toward Chinese Americans

After answering the questions about the efficacy of China's or the WHO's pandemic handling and the questions about institutional trust and media trust, participants' attitudes toward Chinese Americans are collected through two sets of matrix questions that ask the participants to rate how much they agree to a statement made about Chinese Americans on a four-point scale.<sup>59</sup> Each matrix contains five statements, and the statements are inspired by items in Alfieri and Marta's

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<sup>55</sup> Nectar Gan and Steve George, "Separated from His Parents, an Infected 4-Year-Old Highlights the Human Cost of China's Zero-Covid Policy," *CNN*, September 17, 2021, <https://www.cnn.com/2021/09/17/china/human-cost-covid-quarantine-mic-intl-hnk/index.html>.

<sup>56</sup> See Appendix B for the specific questions asked.

<sup>57</sup> Tsai et al., "Intergroup Contact, COVID-19 News Consumption, and the Moderating Role of Digital Media Trust on Prejudice Toward Asians in the United States: Cross-Sectional Study."

<sup>58</sup> Details about how these media trust variables are coded can be found in the codebook of Appendix D.

<sup>59</sup> See copy of matrix questions in Appendix B.

Allophilia Scale,<sup>60</sup> as well as a couple of items from Ho and Jackson's Attitude Toward Asian (ATA) Scale.<sup>61</sup> The scaling of the attitude scores indicated from answers to the items was similar to the measurement of outgroup attitudes in Wright and Duong's "COVID-19 Fake News and Attitudes toward Asian Americans" study, in that five subscales resulted from measuring participants' attitudes toward Chinese Americans: comfort, engagement, kinship, enthusiasm, and affection.<sup>62</sup>

The "comfort" subscale measured participants' level of ease with Chinese Americans.<sup>63</sup> This dependent variable was created from aggregating participants' levels of agreement to five items: "I tolerate Chinese Americans," "I feel comfortable interacting with Chinese Americans," "I am okay with Chinese Americans being my neighbors or living in my area," "I am worried about the presence of Chinese Americans in my community," and "I don't mind taking public transportation with Chinese Americans." Participants reported levels of agreement with these items on a five-point Likert scale, from zero to four.<sup>64</sup> To fit the comfort subscale scores to the range of zero to four, the aggregation of participants' scores of comfort towards Chinese Americans measured by the five items was divided by five.<sup>65</sup>

The "engagement" subscale measured participants' willingness to actively seek out engagement with Chinese Americans.<sup>66</sup> This dependent variable was created from responses to the question: "How much do you agree with [this] statement? Chinese Americans should have stayed in China where they belong." Participants reported their willingness to engage with Chinese Americans through answering this question, on a scale of negative four to zero.<sup>67</sup> The variable for engagement towards Chinese Americans was then scaled to fit the scale of zero to four by adding four to the original scores.<sup>68</sup>

The "kinship" subscale measured participants' sense of belonging or community with Chinese Americans. This dependent variable is measured through participants' levels of agreement to the statement: "Chinese Americans do not fit into American society." Participants reported their

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<sup>60</sup> Sara Alfieri and Elena Marta, "Positive Attitudes Toward The Outgroup: Adaptation and Validation of the Allophilia Scale," *Testing, Psychometrics, Methodology in Applied Psychology (TPM)* 18 (June 1, 2011): 99–115.

<sup>61</sup> Colin Ho and Jay W. Jackson, "Attitude Toward Asian Americans: Theory and Measurement," *Journal of Applied Social Psychology* 31, no. 8 (August 1, 2001): 1553–81, <https://doi.org/10.1111/j.1559-1816.2001.tb02742.x>.

<sup>62</sup> Wright and Duong, "COVID-19 Fake News and Attitudes toward Asian Americans."

<sup>63</sup> This variable is named "comfort\_chinese" in the dataset.

<sup>64</sup> While most questions followed the scale of 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely," the scores for the statement "I am worried about the presence of Chinese Americans in my community" were reverse-coded such that 4 = "Not at all," 3 = "A little," 2 = "A moderate amount," 1 = "A lot," and 0 = "Completely." The "num\_q17\_1\_reverse" variable in the Appendix D codebook is a reflection of this reverse coding.

<sup>65</sup> The new resulting dependent variable is called "scaled\_comfort\_chinese" in the dataset. See Appendix D codebook for more details.

<sup>66</sup> This variable is named "engagement\_chinese" in the dataset.

<sup>67</sup> The scale follows: 0 = "Not at all," -1 = "A little," -2 = "A moderate amount," -3 = "A lot," and -4 = "Completely".

<sup>68</sup> This new dependent variable is called "scaled\_engagement\_chinese" in the dataset. More details about this variable can be found in the Appendix D codebook.



kinship with Chinese Americans through answering this question, on a scale of negative four to zero.<sup>69</sup> The variable for kinship towards Chinese Americans was then scaled to fit the scale of zero to four by adding four to the original scores.<sup>70</sup>

The “enthusiasm” subscale measured the extent of participants’ favorable impression of Chinese Americans through participants’ levels of agreement to the statement: “I value the contributions of Chinese Americans to my community.”<sup>71</sup> Participants reported their enthusiasm towards Chinese Americans on a scale from zero to four.<sup>72</sup>

The “affection” subscale measured the extent of participants’ fondness towards Chinese Americans as an aggregation of participants’ levels of agreement to the items: “Chinese Americans are not a threat to American communities” and “I respect Chinese Americans.”<sup>73</sup> Participants reported their affection towards Chinese Americans on a scale from zero to four.<sup>74</sup> To fit the affection subscale scores to the range of zero to four, the aggregation of participants’ scores of comfort towards Chinese Americans measured by the two items was divided by two.<sup>75</sup>

The five subscales (comfort, engagement, kinship, enthusiasm, and affection) were used as dependent variables to measure attitudes toward Chinese Americans on those five dimensions, where a higher or more positive subscale score indicated more positive attitudes toward Chinese Americans on the dimension informed by the subscale. For example, a high score on the comfort subscale would indicate a high level of comfort with Chinese Americans.

After the matrix questions, participants were asked to estimate what percentage of Chinese Americans they thought had COVID. The purpose of this question was to measure the association of Chinese Americans with harboring the illness of coronavirus. The higher the percentage reported by the participant, the higher the participant's impression of the Chinese American population being connected to the spread of COVID. The addition of this question was inspired by the use of a similar question in Morris’s “The priming effects of media frames in regard to news images and stereotypes held by Hispanic audiences.”<sup>76</sup>

### Comparison Population For Chinese Americans

I decided to repeat the matrix questions and COVID percent estimate question with a comparison population, such that I can be sure that the attitudes toward Chinese Americans as reported by

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<sup>69</sup> The scale follows: 0 = "Not at all," -1 = "A little," -2 = "A moderate amount," -3 = "A lot," and -4 = "Completely".

<sup>70</sup> This new dependent variable is called “scaled\_kinship\_chinese” in the dataset. More details about this variable can be found in the Appendix D codebook.

<sup>71</sup> This variable is named “enthusiasm\_chinese” in the dataset.

<sup>72</sup> The scale follows: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," -3 = "A lot," and 4 = "Completely".

<sup>73</sup> This variable is named “affection\_chinese” in the dataset.

<sup>74</sup> The scale follows: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," -3 = "A lot," and 4 = "Completely".

<sup>75</sup> The new resulting dependent variable is called “scaled\_affection\_chinese” in the dataset. See Appendix D codebook for more details.

<sup>76</sup> Morris, “The Priming Effects of Media Frames in Regard to News Images and Stereotypes Held by Hispanic Audiences.”

the participants are not influenced by the priming of COVID — since the topic of all possibly displayed news articles is related to COVID. Since white people appear to be the least likely to be stigmatized by COVID priming,<sup>77</sup> I chose Irish Americans to be the comparison population. Thus, after participants answered questions about the United States' influence and China's influence in the world as well as a question about the importance of limiting China's power in the world,<sup>78</sup> participants answered the same questions measuring attitudes toward Chinese Americans but altered to measure attitudes toward Irish Americans.

The questions about U.S. influence and China influence in the world served to provide a break between answering questions about attitudes toward Chinese Americans and answering questions about attitudes toward Irish Americans. These questions were derived from the 2021 Chicago Council Survey.<sup>79</sup>

The questions about attitudes toward Irish Americans and the question about providing an estimate for the percentage of Irish Americans who had COVID marked the end of the survey.

### **Participant Procedure**

Participants would log into Mechanical Turk as workers, see the survey task listing, and then join the survey through a link on the MTurk task page. There would be instructions on how to access the survey and the compensation for completing the survey as well as a brief introduction to the study above the survey link. Below the survey link is a box where participants enter a unique survey code (derived from completing the Qualtrics survey) so that they can prove that they completed the survey and receive \$2.10 as compensation for their participation. Thus — in order to participate in the study — participants accessed the survey through a link on MTurk, completed the survey in Qualtrics, received a survey code, and then copy and pasted that survey code into the blank field on the MTurk page to receive compensation.

### **Data Collection**

After the IRB approved the survey experiment,<sup>80</sup> the survey was deployed on March 15th, 2022. The 514 survey responses were collected within a day. Although the MTurk survey responses were set to be auto-approved on March 25th, survey responses were inspected and approved the day after all survey responses were completed.<sup>81</sup> Thus, the approved MTurk respondents received their promised \$2.10 the day after they completed the survey.

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<sup>77</sup> Lu Yao et al., "Priming COVID-19 Salience Increases Prejudice and Discriminatory Intent against Asians and Hispanics," *Proceedings of the National Academy of Sciences* 118, no. 36 (September 7, 2021): 1–7, <https://doi.org/10.1073/pnas.2105125118>.

<sup>78</sup> These questions can be previewed in Appendix B.

<sup>79</sup> CHICAGO COUNCIL ON GLOBAL AFFAIRS, "2021 CHICAGO COUNCIL SURVEY," July 30, 2020, <https://www.thechicagocouncil.org/sites/default/files/2021-11/2021%20CCS%20Report%20Toplines%20.pdf>.

<sup>80</sup> IRB Study ID: STUDY2021\_00000511

<sup>81</sup> Only 5 MTurk workers were rejected from receiving compensation because they did not enter a valid survey code given upon completion of the survey.

## IV. Results

In a preliminary analysis of relationships between the five dependent variables and the control and treatment groups, I found no statistically significant relationship when comparing the effect of the experimental treatment on each dependent variable through one-way ANOVAs. The one-way ANOVAs revealed that there was no statistically significant difference in participants' comfort with Chinese Americans, inclination to seek engagement with Chinese Americans, kinship with Chinese Americans, enthusiasm towards Chinese Americans, and affection towards Chinese Americans between the control, positive treatment, and negative treatment groups.<sup>82</sup> Controlling for race, age, and party affiliation in ordered logistic regression models that tested the effect of the experimental treatments on the log odds of reporting a higher level of positive attitudes toward Chinese Americans did not yield statistically significant results either. Thus, my hypothesis that participants in the negative treatment group will report lower levels of positive feelings towards Chinese Americans than participants in the control group and positive treatment group is not statistically supported by the data in this experiment.

I also examined ordered logistic regressions that modeled the relationship between one of the dimensions of attitude towards Chinese Americans and the treatment groups with an interaction between party affiliation and treatment group assignment while controlling for race and age. The results from these ordered logistic regression models were also statistically insignificant, such that my expectation for an interaction between party affiliation and exposure to the experiment's negative treatment was not statistically supported.

However, I found interesting results when examining the effect of the positive treatment on Trump supporters' attitudes toward Chinese Americans. Figure 1 shows the mean attitude scores of non-Trump supporters versus Trump supporters for all five dependent variables across all three experimental conditions, with 95% confidence intervals.

Figure 1 reveals that Trump supporters generally reported lower scores of positive feelings toward Chinese Americans than non-Trump supporters, especially scores of kinship and engagement towards Chinese Americans. This observation seems consistent with findings from Wright and Duong that report a statistically significant correlation between anti-Asian prejudice and "right-wing authoritarianism."<sup>83</sup>

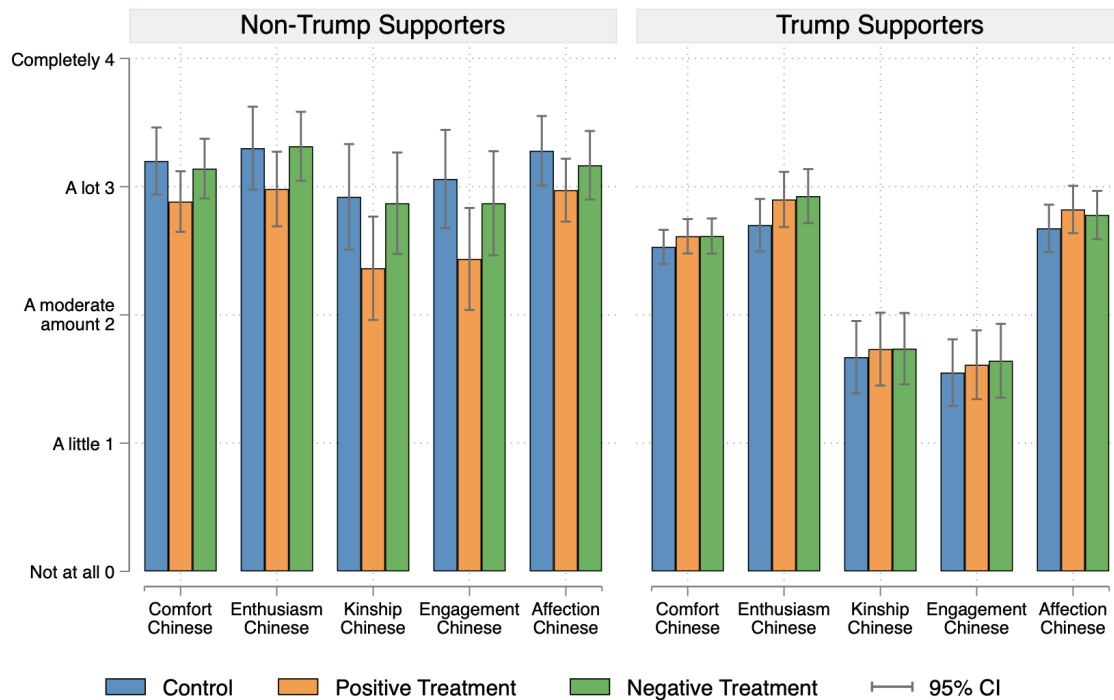
The bar graph also shows that the Trump supporters in the positive treatment generally reported higher scores of positive attitudes toward Chinese Americans across all five dependent variables compared to the control group Trump supporters. However, Trump supporters in the negative treatment group seem to also report greater levels of positive attitudes toward Chinese Americans than Trump supporters in the control group. The difference between the mean attitude

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<sup>82</sup> One-way ANOVA results for: scaled\_comfort\_chinese and treatmentgroup ( $F(2, 467) = [0.93], p = 0.3946$ ), scaled\_engagement\_chinese and treatmentgroup ( $F(2, 467) = [0.50], p = 0.6098$ ), scaled\_kinship\_chinese and treatmentgroup ( $F(2, 472) = [0.46], p = 0.6301$ ), enthusiasm\_chinese and treatmentgroup ( $F(2, 472) = [1.32], p = 0.2694$ ), and scaled\_affection\_chinese and treatmentgroup ( $F(2, 466) = [0.40], p = 0.6702$ )

<sup>83</sup> Chrysalis L Wright and Hang Duong, "COVID-19 Fake News and Attitudes toward Asian Americans," *Journal of Media Research* 14, no. 1 (March 2021): 5–29, <https://doi.org/10.24193/jmr.39.1>.

**Figure 1: Bar Graph of Attitudes Toward Chinese Americans Across the Experimental Conditions For Non-Trump Supporters Versus Trump Supporters**



Note: All five dependent variables have been rescaled to a common five-point likert scale for ease of comparison.

score of Trump supporters in the control group and the mean attitude score of Trump supporters in the positive group appears to be relatively similar to the difference between the mean attitude score of Trump supporters in the control group and the mean attitude score of Trump supporters in the negative group, across all five dependent variables. This could suggest that interactions observed between supporting Trump and the effect of the treatments on attitudes toward Chinese Americans most likely come from the difference in the effect of the treatments on Trump supporters versus non-Trump supporters.

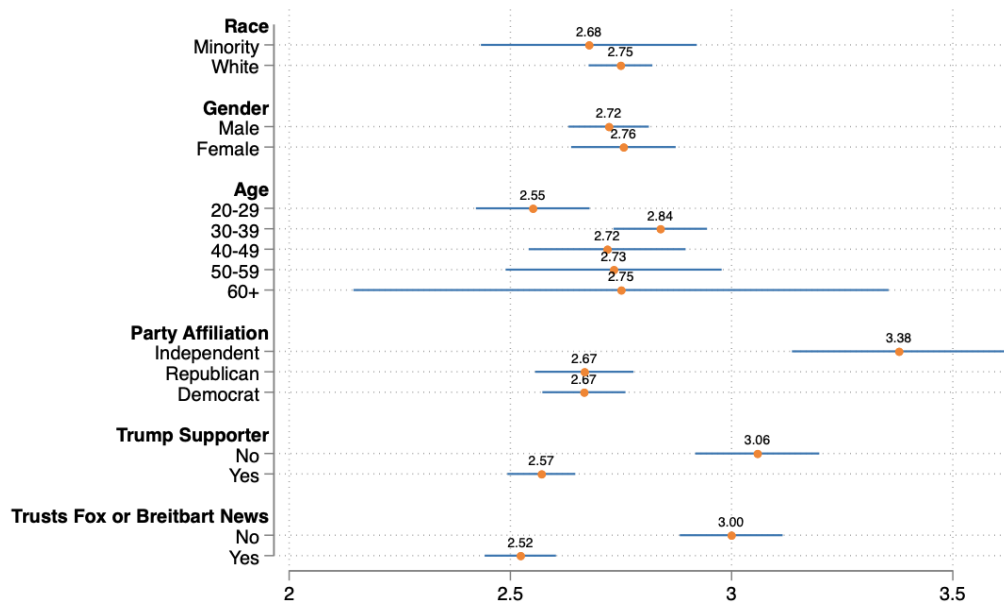
Another notable trend in Figure 1 is that the mean attitude scores for non-Trump supporters are lower in the positive treatment than in the control, across all five dependent variables. At the same time, non-Trump supporters in the negative treatment group reported levels of positive attitudes toward Chinese Americans either lower than or similar to the levels reported by non-Trump supporters in the control group. These observations could indicate that just priming the topic of COVID in association with news about China could influence lower scores of positive attitudes toward Chinese Americans from non-Trump supporters. The possibility that mentioning COVID in relation to China lowers non-Trump supporters' positive attitudes toward Chinese Americans would best explain why non-Trump supporters in the positive treatment group reported noticeably lower scores of positive attitudes toward Chinese Americans than the non-Trump supporters in the control group across all five dependent variables.

Figures 2a to 2e explore relationships between the five dependent variables and non-treatment variables of interest. The mean scores of comfort, enthusiasm, kinship, engagement, and

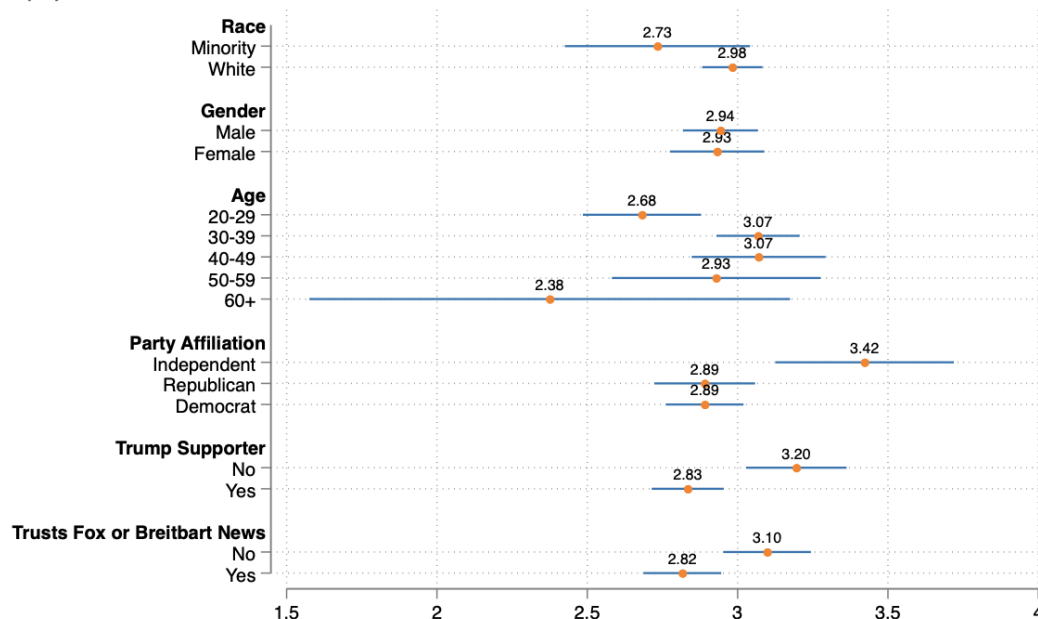
affection towards Chinese Americans are compared over race, gender, age, party affiliation, support of Trump, and whether participants trusted *Fox News* or *Breitbart News*.

**Figure 2: Mean Attitude Towards Chinese Americans Over Control Variables of Interest**

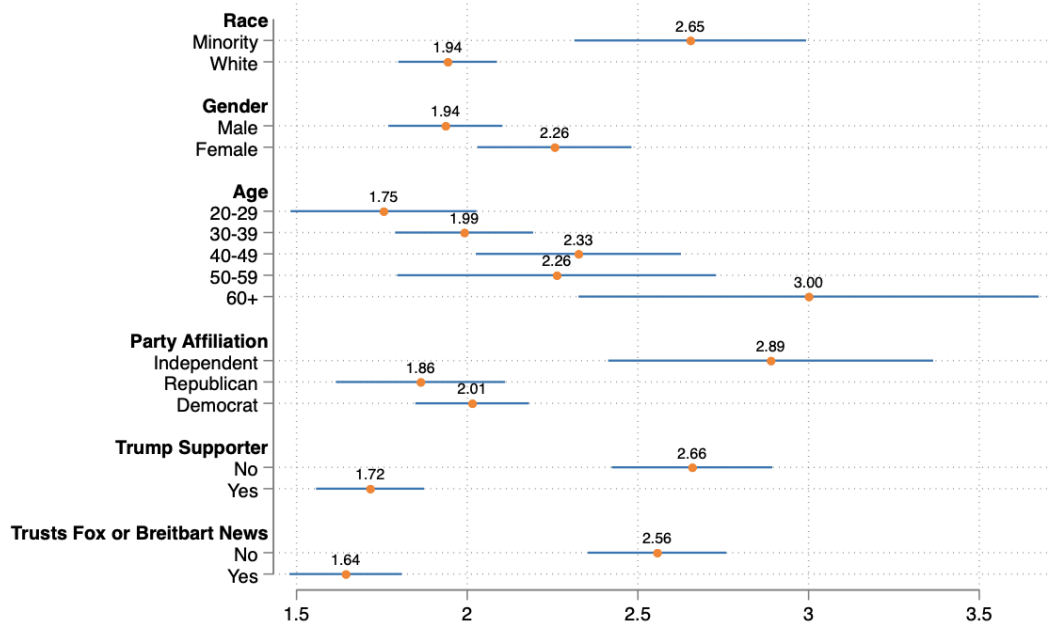
**(A) Mean Scores of Comfort Towards Chinese Americans**



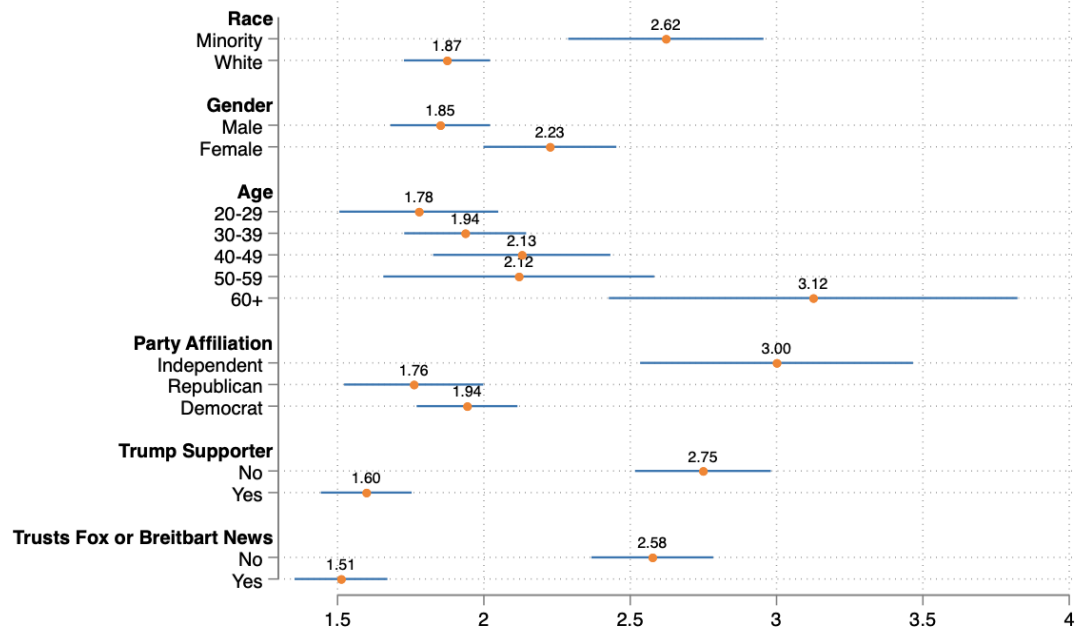
**(B) Mean Scores of Enthusiasm Towards Chinese Americans**



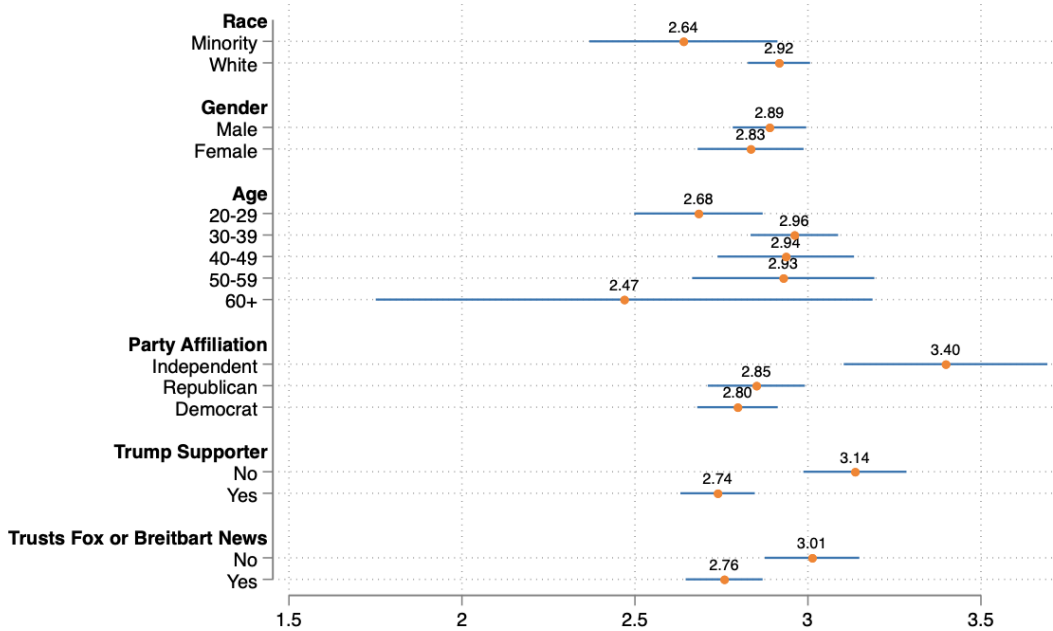
### (C) Mean Scores of Kinship Towards Chinese Americans



### (D) Mean Scores of Engagement Towards Chinese Americans



### (E) Mean Scores of Affection Towards Chinese Americans



Figures 2a to 2e show that participants who identify as Independents reported more positive attitudes toward Chinese Americans than Republicans and Democrats across all five dependent variables. The figures also highlight a statistically significant difference between the mean scores of positive attitudes toward Chinese Americans for non-Trump supporters and Trump supporters, across all five dependent variables.<sup>84</sup> As Figure 1 also shows, Trump supporters reported lower levels of positive attitudes toward Chinese Americans than non-Trump supporters.

Interestingly, participants who trust *Fox News* and *Breitbart News* reported similar low levels of positive attitudes toward Chinese Americans as Trump supporters across all five dependent variables. Just as Trump supporters overall reported lower mean scores of positive attitudes toward Chinese Americans than non-Trump supporters, participants who trust *Fox News* or *Breitbart News* reported lower mean scores of positive attitudes toward Chinese Americans than participants who did not say they trust *Fox News* or *Breitbart News*. This observed difference in mean attitude scores between participants who trust *Fox News* or *Breitbart News* and participants who don't trust *Fox News* or *Breitbart News* appears to be statistically significant, as well.<sup>85</sup>

<sup>84</sup> T-test results for: scaled\_comfort\_chinese and trumpsupport ( $t(468) = 6.5614$ ,  $p = 0.0000$ ), enthusiasm\_chinese and trumpsupport ( $t(457) = 3.5016$ ,  $p = 0.0005$ ), scaled\_kinship\_chinese and trumpsupport ( $t(457) = 6.7562$ ,  $p = 0.0000$ ), scaled\_engagement\_chinese and trumpsupport ( $t(452) = 8.3872$ ,  $p = 0.0000$ ), and scaled\_affection\_chinese and trumpsupport ( $t(451) = 4.2965$ ,  $p = 0.0000$ )

<sup>85</sup> T-test results for: scaled\_comfort\_chinese and foxbreitbart\_trust ( $t(453) = 6.8131$ ,  $p = 0.0000$ ), enthusiasm\_chinese and foxbreitbart\_trust ( $t(473) = 2.8568$ ,  $p = 0.0045$ ), scaled\_kinship\_chinese and foxbreitbart\_trust ( $t(473) = 6.9568$ ,  $p = 0.0000$ ), scaled\_engagement\_chinese and foxbreitbart\_trust ( $t(468) = 8.1488$ ,  $p = 0.0000$ ), and scaled\_affection\_chinese and foxbreitbart\_trust ( $t(467) = 2.8719$ ,  $p = 0.0043$ )

The similarities between the observed effect of supporting Trump on attitudes toward Chinese Americans and the observed effect of trusting *Fox News* or *Breitbart News* on attitudes toward Chinese Americans shown in Figures 2a to 2e might suggest that there is a connection between Trump supporters' low scores of positive attitudes toward Chinese Americans and trust of right-wing media. Since right-wing media tends to repeat anti-Asian “dog whistle” rhetoric from Trump and other right-wing politicians,<sup>86</sup> the consumption of right-wing news by Trump supporters may be the causal mechanism for Trump supporters' reported lower positive attitudes toward Chinese Americans — as compared to non-Trump supporters. The fact that Trump supporters and non-Trump supporters exhibit similar statistically significant differences in mean attitude scores as participants who trust right-wing media and participants who don't offers supporting evidence that trust in right-wing media could potentially be the cause of Trump supporters' low positive attitudes toward Chinese Americans relative to non-Trump supporters.

To further investigate the effect of this potential interaction between supporting Trump and experimental condition assignment on attitudes toward Chinese Americans, I developed five ordered least squares regression models that include a variable representing the interaction between supporting trump and experimental condition assignment and controls for race, age, and party affiliation. Each model tested the relationship between one of the five dimensions of positive attitude towards Chinese Americans and the interaction variable. The results of each OLS regression are shown in Table 4.

Table 4 reports that the only statistically significant relationships in the models are between Trump supporters' exposure to the positive treatment and Trump supporters' comfort and enthusiasm towards Chinese Americans. The regression results show a statistically significant relationship between the positive treatment and Trump supporters' comfort towards Chinese Americans ( $p = 0.048$ ) such that, on average, Trump supporters in the positive treatment group report scores of comfort towards Chinese Americans 0.376 units higher than the comfort scores of Trump supporters in the control group — controlling for race, age, and party affiliation. The statistically significant relationship between the positive treatment and Trump supporters' enthusiasm towards Chinese Americans ( $p = 0.045$ ) indicates that, controlling for all other variables in model for enthusiasm towards Chinese Americans, Trump supporters in the positive treatment group on average report scores of enthusiasm towards Chinese Americans 0.508 units higher than the scores of enthusiasm reported by Trump supporters in the control group.

Figures 3a to 3e demonstrate the marginal effects of the interaction between supporting Trump and the positive treatment on scores of comfort towards Chinese Americans, enthusiasm towards Chinese Americans, kinship towards Chinese Americans, engagement towards Chinese Americans, and affection towards Chinese Americans, respectively.

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<sup>86</sup> DFR Lab, “U.S. Politicians Exploit Coronavirus Fears with Anti-Chinese Dog Whistles.”

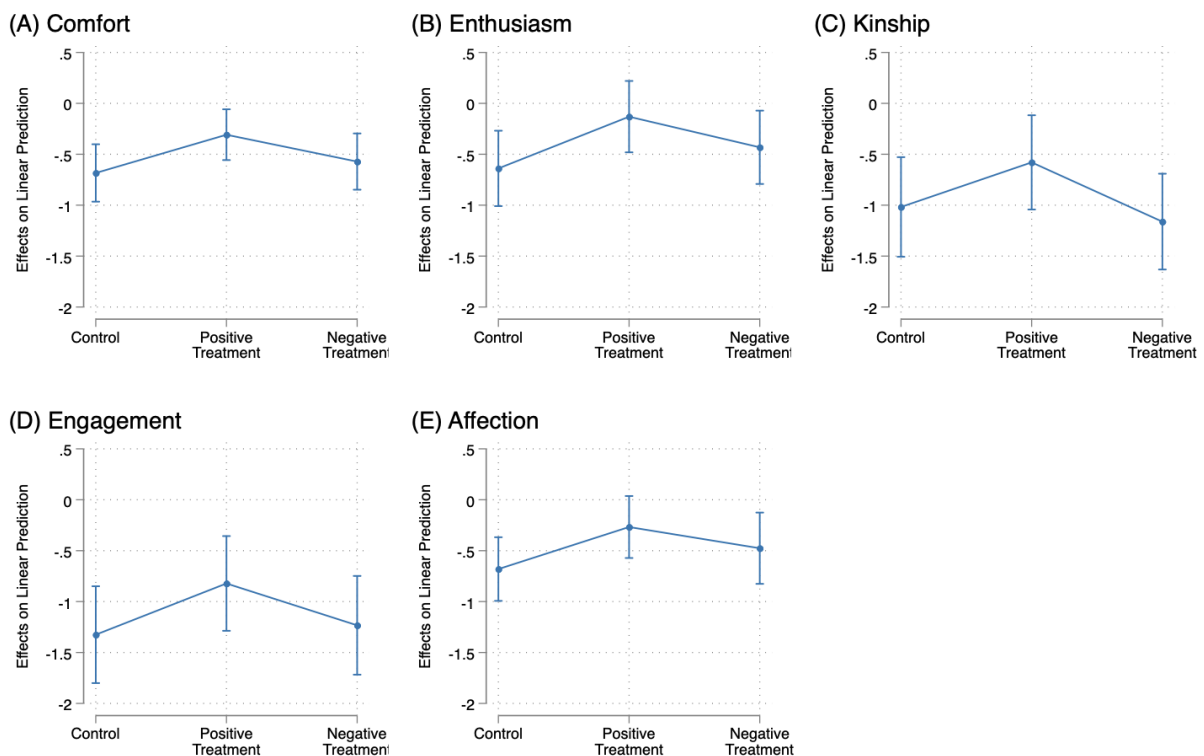


**Table 4: Effects of Interaction Between Treatment and Trump Support on Dimensions of Attitude Towards Chinese Americans, Controlled For Race, Age, and Party Affiliation**

	(1)	(2)	(3)	(4)	(5)
	Comfort Towards Chinese Americans	Enthusiasm Towards Chinese Americans	Kinship Towards Chinese Americans	Engagement Towards Chinese Americans	Affection Towards Chinese Americans
Positive Treatment	-0.277 (-1.66)	-0.285 (-1.40)	-0.377 (-1.38)	-0.438 (-1.63)	-0.244 (-1.42)
Negative Treatment	-0.0211 (-0.12)	0.0358 (0.17)	0.119 (0.44)	-0.0532 (-0.20)	-0.0746 (-0.40)
Supported Trump	-0.684*** (-4.77)	-0.639*** (-3.39)	-1.018*** (-4.09)	-1.325*** (-5.48)	-0.681*** (-4.28)
Positive Treatment # Supported Trump	0.376* (1.98)	0.508* (2.01)	0.438 (1.32)	0.503 (1.56)	0.413 (1.94)
Negative Treatment # Supported Trump	0.112 (0.58)	0.207 (0.82)	-0.144 (-0.43)	0.0922 (0.28)	0.205 (0.91)
White	0.189 (1.63)	0.364* (2.28)	-0.541** (-3.04)	-0.515** (-3.01)	0.393** (2.88)
Age	0.00616 (1.64)	0.00297 (0.53)	0.0293*** (4.56)	0.0258*** (3.95)	0.00553 (1.22)
Republican	-0.428*** (-3.32)	-0.315 (-1.79)	-0.502* (-2.00)	-0.606* (-2.52)	-0.289 (-1.75)
Democrat	-0.632*** (-5.33)	-0.459** (-2.96)	-0.703*** (-3.32)	-0.830*** (-4.32)	-0.553*** (-3.64)
Constants	3.300*** (16.03)	3.261*** (11.11)	2.688*** (7.08)	3.066*** (8.58)	3.179*** (13.21)
Observations	454	458	458	453	452
Note: z statistics in parentheses. * = p<0.05 ** = p<0.01 *** = p<0.001					

Figure 3 shows that the marginal effect of the interaction between supporting Trump and the positive treatment on scores of comfort towards Chinese Americans is the weakest out of the two statistically significant relationships between that interaction variable and reported attitude towards Chinese Americans. Figure 3a demonstrates that the marginal effect of supporting Trump on comfort towards Chinese Americans increases from the control group to the positive treatment group by about 0.4 units on average. Although Figure 3a shows that, for comfort towards Chinese Americans, the effects on linear prediction become more positive from the control group to the positive treatment group, the confidence interval for the positive treatment's effects on linear prediction does not pass the value of zero. This indicates that the effect of supporting Trump on comfort towards Chinese Americans for participants in the positive treatment group is negative, just like for participants in the control group and the negative treatment group. Thus, the marginal effect of the interaction between supporting Trump and the positive treatment on scores of comfort towards Chinese Americans does not appear to be relatively strong.

**Figure 3: Average Marginal Effects of Trump Support on Attitudes Toward Chinese Americans with 95% Confidence Intervals**



On the other hand, Figure 3b shows faint evidence of a positive effect of supporting Trump on enthusiasm towards Chinese Americans for the positive treatment since the confidence interval for the positive treatment's effects on linear prediction passes the value of zero. The figure also shows that the marginal effect of supporting Trump on enthusiasm towards Chinese Americans increases from the control group to the positive treatment group by about 0.5 units on average.

The statistically significant interaction between Trump support and the positive treatment in influencing higher scores of comfort and enthusiasm towards Chinese Americans in the positive treatment group versus in the control group can potentially be explained by the notable presence of trust in right-wing news sources in Trump supporters that is noticeably lacking in the survey sample of non-Trump supporters. The sample of participants who had a right-leaning<sup>87</sup> or right-wing<sup>88</sup> bias in trusting news media sources consisted entirely of Trump supporters. While non-Trump supporters who only trust *Fox News* were only about 4.88% of all non-Trump supporters in the participant pool, about 11.86% of all Trump-supporting participants only trusted *Fox News*.

Zero non-Trump supporters in the participant pool trusted only *Breitbart News* while six participants in the Trump-supporting group only trusted *Breitbart News*. Since right-wing news pundits are considered the worst offenders of anti-China and anti-Chinese “dog whistles,”<sup>89</sup> the statistically significant odds that Trump supporters report lower scores of positive attitudes toward Chinese Americans than non-Trump supporters can perhaps be explained by exposure to anti-China and anti-Chinese rhetoric through right-wing media. Then, when Trump supporters are exposed to the positive treatment article, the positive framing of China in the article could have introduced a positive perspective of China and Chinese people that counteracted or lessened their negative impressions of Chinese Americans influenced by their preexisting exposure to anti-China rhetoric through right-wing media. Thus, the statistically significant effect of the positive treatment on Trump supporters’ comfort, enthusiasm, and affection towards Chinese Americans in the study could be explained by the introduction of a positive impression of China that challenged the negative impressions the Trump supporters potentially gained from right-wing media.

One-way ANOVA tests on the difference between the mean scores of Trump-supporting participants’ comfort, engagement, kinship, enthusiasm, and affection towards the comparison population of this study (Irish Americans) across the different experimental conditions revealed that there was no statistically significant difference between the mean scores of Trump supporters’ attitudes toward Irish Americans across the control, positive treatment, and negative treatment groups.<sup>90</sup>

I also ran similar OLS models on Irish Americans as a placebo test. The results of those ordered logistic regressions are displayed in the table below.

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<sup>87</sup> “Right-leaning bias” observations were defined as trusting *Breitbart News* and *Fox News* with other news sources except *MSNBC* and *CNN*.

<sup>88</sup> “Right-wing bias” observations were defined as trusting only *Breitbart News* and *Fox News*.

<sup>89</sup> DFR Lab, “U.S. Politicians Exploit Coronavirus Fears with Anti-Chinese Dog Whistles,” Medium, March 17, 2020, <https://medium.com/dfrlab/u-s-politicians-exploit-coronavirus-fears-with-anti-chinese-dog-whistles-ff61c9d7e458>.

<sup>90</sup> One-way ANOVA results for: comfort\_irish and treatmentgroup if trumpsupport = 1 ( $F(2, 289) = [0.74]$ ,  $p = 0.4793$ ), engagement\_irish and treatmentgroup if trumpsupport = 1 ( $F(2, 288) = [0.03]$ ,  $p = 0.9707$ ), kinship\_irish and treatmentgroup if trumpsupport = 1 ( $F(2, 291) = [0.80]$ ,  $p = 0.4518$ ), enthusiasm\_irish and treatmentgroup if trumpsupport = 1 ( $F(2, 291) = [0.43]$ ,  $p = 0.6519$ ), and affection\_irish and treatmentgroup if trumpsupport = 1 ( $F(2, 290) = [1.07]$ ,  $p = 0.3427$ ).

**Table 6: Placebo Test of Interaction of Treatment and Trump Support on Dimensions of Attitude Towards Irish Americans, Controlled For Race, Age, and Party Affiliation**

	(1)	(2)	(3)	(4)	(5)
	Comfort Towards Irish Americans	Enthusiasm Towards Irish Americans	Kinship Towards Irish Americans	Engagement Towards Irish Americans	Affection Towards Irish Americans
Positive Treatment	-0.232 (-1.60)	-0.0416 (-0.22)	-0.266 (-1.00)	-0.393 (-1.45)	-0.287 (-1.54)
Negative Treatment	-0.0746 (-0.47)	-0.0154 (-0.07)	-0.0130 (-0.05)	0.137 (0.53)	-0.298 (-1.48)
Supported Trump	-0.723*** (-5.70)	-0.577** (-2.92)	-0.995*** (-4.13)	-1.143*** (-4.78)	-0.719*** (-4.16)
Positive Treatment # Supported Trump	0.355* (2.09)	0.218 (0.90)	0.0608 (0.19)	0.420 (1.27)	0.513* (2.22)
Negative Treatment # Supported Trump	0.178 (0.98)	0.142 (0.54)	-0.119 (-0.36)	-0.175 (-0.54)	0.488* (2.02)
White	0.128 (1.14)	0.471** (3.11)	-0.755*** (-4.61)	-0.696*** (-4.29)	0.479** (3.28)
Age	0.00683* (2.00)	0.00781 (1.55)	0.0264*** (4.04)	0.0256*** (3.89)	0.00141 (0.28)
Republican	-0.355** (-2.77)	-0.244 (-1.41)	-0.563* (-2.22)	-0.633** (-2.63)	-0.232 (-1.36)
Democrat	-0.592*** (-5.14)	-0.458** (-3.07)	-0.687*** (-3.32)	-0.871*** (-4.52)	-0.492** (-3.19)
Constants	3.320*** (16.58)	2.925*** (10.39)	3.022*** (8.37)	3.088*** (8.66)	3.220*** (11.67)
Observations	455	457	456	454	455
Note: z statistics in parentheses. * = p<0.05 ** = p<0.01 *** = p<0.001					

Table 6 shows no overall statistically significant relationships between attitudes toward Irish Americans and the experimental conditions. However, the table does show results for a statistically significant relationship between Trump supporters' comfort towards Irish Americans and the positive treatment ( $p = 0.037$ ) and statistically significant relationships between Trump supporters' affection towards Irish Americans and the positive and negative treatments ( $p = 0.027$  and  $p = 0.044$ , respectively). The results report that Trump supporters' in the positive treatment group report scores of comfort towards Irish Americans 0.355 units higher than the comfort scores of Trump supporters in the control group. For affection towards Irish Americans, Trump supporters' score of affection towards Irish Americans is 0.513 units higher in the positive treatment group than in the control group and 0.488 units higher in the negative treatment group than in the control group.

I honestly do not know how to explain the statistically significant effects of the positive and negative treatments on Trump-supporting participants' reported affection towards Irish Americans and the statistically significant effect of the positive treatment on the Trump supporters' reported comfort towards Irish Americans shown in the OLS placebo test results. My best possible explanation for these findings would be that Trump supporters adopted Trump's platform and principles associated with "white protectionism" such that exposure to any news about non-white or perceived foreign citizens would evoke a defensive pride in identities aligned with whiteness such that Trump supporters would report higher levels of comfort towards Irish Americans in the positive treatment and affection towards Irish Americans in any of the two treatment groups than in the control group.

## V. Discussion

Overall, the results from the survey experiment did not support the my hypothesis that participants who read a news article that frames China in a negative light will report lower levels of positive feelings towards Chinese Americans than participants who read a neutral news article about COVID safety policies and participants who read a news article that frames China in a positive light. The lack of support for this hypothesis could be attributed to participants not having enough exposure to the negative treatment. The average amount of time that participants in the negative treatment group spent on responding to the survey was about five minutes. This statistic implies that, on average, participants in the negative treatment group did not spend much time reading the news article while taking the survey. In the future, if this experiment was to be replicated, this issue could be resolved by adding a timer for one minute to the page with the news article for all experimental conditions or adding an additional question after the news article for the purpose of checking if participants actually read the article.

Another possible revision for this survey experiment would be to reorder the questions measuring attitudes toward Chinese Americans and attitudes toward Irish Americans, such that the questions measuring attitudes toward Irish Americans would be before the questions measuring attitudes toward Chinese Americans. Perhaps, extraneous questions unrelated to China can create more distance between the treatment articles and the measures of attitudes. These additions would help to obscure the purpose of the study better as to improve controlling the experiment for any social desirability bias.

The observation that the overall mean scores of positive attitudes toward Chinese Americans for non-Trump supporting participants in the study were lower in the positive treatment group than in the control group raises questions about whether priming COVID in relation to articles about China caused these lower scores in positive attitudes toward Chinese Americans. The lack of statistically significant difference between attitudes toward Chinese Americans in the treatment groups for non-Trump supporters could be due to raising awareness of the topic of COVID while discussing news about China. Perhaps the positive treatment article about China's COVID safety procedures was not actually perceived as "positive" by a group of participants because of the mentioning of COVID. In the future, I would create a new positive treatment article that associated a different, "more positive" topic with China (i.e., an article that reports on pandas gifted by the Chinese government or an article that emphasizes Chinese culture or cuisine).

The statistical significance of the relationship between reporting lower scores of positive attitudes toward Chinese Americans and supporting Trump aligned with previous findings of a correlation between anti-Asian prejudice and conservative views,<sup>91</sup> as well as prior findings of an association between anti-Asian prejudice and "right-wing authoritarianism."<sup>92</sup> However, comparing attitudes toward Chinese Americans by party affiliation revealed no statistically significant difference between the mean attitude scores of Democrats and Republicans.<sup>93</sup> Assuming that Republicans align with conservative views, the lack of difference between Democrats' and Republicans' reported attitudes toward Chinese Americans contradicts findings of a correlation between anti-Asian prejudice and conservative views. This contradiction can be resolved if the study acknowledges that party affiliation does not measure political ideology in a relatively precise manner. A party label can encompass a broad range of ideologies on the political spectrum. A question that asks about political leaning on a 5-point scale from leftist to conservative would be a more precise measure of political ideology than party affiliation. Thus, I would recommend the addition of a political ideology scale question as another revision to the survey in this experiment.

The OLS regression results of attitudes toward Irish Americans yielded the most unexpected statistically significant relationships between the treatment groups and Trump-supporting participants' affection towards Irish Americans and between the positive treatment and Trump-supporting participants' comfort towards Irish Americans. I provided some explanation for these statistically significant results by referencing the principle of white protectionism associated with Donald Trump's political platform.<sup>94</sup> However, I would encourage more research

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<sup>91</sup> Tsai et al., "Intergroup Contact, COVID-19 News Consumption, and the Moderating Role of Digital Media Trust on Prejudice Toward Asians in the United States: Cross-Sectional Study."

<sup>92</sup> Wright and Duong, "COVID-19 Fake News and Attitudes toward Asian Americans."

<sup>93</sup> ANOVA results for: comfort\_chinese and partyaffiliation if partyaffiliation = Democrat or Republican ( $F(1, 422) = [0.00]$ ,  $p = 0.9904$ ), engagement\_chinese and partyaffiliation if partyaffiliation = Democrat or Republican ( $F(1, 422) = [1.50]$ ,  $p = 0.2219$ ), kinship\_chinese and partyaffiliation if partyaffiliation = Democrat or Republican ( $F(1, 427) = [1.04]$ ,  $p = 0.3084$ ), enthusiasm\_chinese and partyaffiliation if partyaffiliation = Democrat or Republican ( $F(1, 427) = [0.00]$ ,  $p = 0.9996$ ), and affection\_chinese and partyaffiliation if partyaffiliation = Democrat or Republican ( $F(1, 422) = [0.31]$ ,  $p = 0.5756$ )

<sup>94</sup> Rogers M. Smith and Desmond King, "White Protectionism in America," *Perspectives on Politics* 19, no. 2 (June 2021): 460–78, <https://doi.org/10.1017/S1537592720001152>.

into this phenomenon. I would also recommend testing a different comparison population, such as Anglo-Saxon Americans.

## **VI. Conclusion**

While the survey experiment results did not support my initial hypothesis, the experiment reported statistically significant relationships between exposure to the positive treatment and Trump supporter's scores of comfort, enthusiasm, and affection towards Chinese Americans. The experiment results report that — at a statistically significant level — Trump supporters in the positive treatment group reported higher scores of comfort and enthusiasm towards Chinese Americans than Trump supporters in the control group, controlling for race, age, and party affiliation. This finding suggests that exposing Trump supporters to news media that positively portray China can potentially lessen their negative impressions of Chinese Americans.

However, graphs of the marginal effect of Trump support on attitudes toward Chinese Americans show that the interaction effect between supporting Trump and exposure to the positive treatment on attitudes toward Chinese Americans is relatively weak, and the marginal effect graphs do not match the predictions of my hypothesis for the experimental results. While my hypothesis predicted that the positive treatment would induce a significant positive effect on Trump supporters' attitudes toward Chinese Americans, the marginal effects revealed that the improvement in Trump supporters' attitudes, after exposure to the positive treatment, was relatively small.

Finally, the implications of these MTurk study results should be tested in a more representative sample of the U.S. population, since white people were overrepresented in this study's participant pool. More research should follow this first empirical attempt to test whether positive or negative framing of media portrayals of China affects Americans' attitudes toward Chinese Americans, in order to derive more conclusive evidence that positive media portrayals of China will increase positive attitudes toward Chinese Americans in Trump supporters.

## *Appendix A: Consent Form*

Thank you for considering taking this survey, which is part of a research study led by Renee Nikolov at Carnegie Mellon University and funded by the Dietrich College of Humanities & Social Sciences.

**Summary** The answers you provide in this survey will help researchers gain knowledge about the media's relationship to opinions of certain U.S. sub-populations during the COVID-19 pandemic era. No personally identifiable information will be collected, including IP addresses.

**Purpose.** This study investigates Americans' opinions towards certain U.S. sub-populations in the context of the COVID-19 pandemic. This research study may aid in finding the potential sources of prejudice such that we can reduce negative bias against certain groups in the United States.

**Procedures.** After reviewing and completing this consent form, participants will take a survey that is estimated to take 10-12 minutes to complete. First, participants answer a series of demographic questions. Then, they will be asked to read an article about COVID safety policy. After reading the article, participants will respond to a series of questions about their trust in international political bodies and mainstream media outlets as well as opinions of certain U.S. sub-populations.

**Participant Requirements.** Participation in this study is limited to individuals aged 18 and older and those who reside in the United States.

**Risks.** The risks and discomfort associated with participation in this study are no greater than those ordinarily encountered in daily life or during other online activities. Responses from the survey are anonymized, and the survey collects no personally identifiable information, including IP addresses.

**Benefits.** There may be no personal benefit from your participation in the study aside from the compensation outlined below, but the knowledge received may be of value to humanity.

**Compensation.** You will be compensated \$2.10 for completing the survey. Partial payment will be not given if you do not complete the survey. There are no costs to you if you participate in this study.

**Confidentiality.** The data captured for the research does not include any personally identifiable information about you. Your IP address will not be captured.

**Right to Ask Questions & Contact Information.** If you desire additional information or have any questions about this study now or later, please contact the Principal Investigator by e-mail at [rnikolov@andrew.cmu.edu](mailto:rnikolov@andrew.cmu.edu) or by mail at Renee Nikolov, Institute for Politics and Strategy, 5032 Forbes Avenue, SMC 3228, Pittsburgh, PA 15289.

If you have questions pertaining to your rights as a research participant; or to report concerns to this study, contact the Office of Research integrity and Compliance at Carnegie Mellon University. Email: [irb-review@andrew.cmu.edu](mailto:irb-review@andrew.cmu.edu). Phone: 412-268-1901 or 412-268-5460.

**Voluntary Participation.** Your participation in this research is voluntary. You may discontinue participation at any time during the survey. You may print a copy of this consent form for your records.

Consent\_1 Are you 18 years or older? [Yes, No]

Consent\_2 I have read and understand the information above. [Yes, No]

Consent\_3 I want to participate in this research and continue with the survey. [Yes, No]



## *Appendix B: Survey Questions*

### **Pre-Treatment Demographic Questions**

Q1 What is your race/ethnicity (choose all that apply)?

[White, Black, Native American/Indigenous, Asian, Latino, Other]

Q2 What is your age? [Fill in a number between 0 and 100]

Q3 What is your gender? [Male, Female, Non-binary / third gender, Prefer not to say]

Q4 What is your level of education?

[Some high school or less, High school graduate, Some college/university, Completed an undergraduate degree, Graduate school or equivalent]

Q5 Are you a U.S. citizen? [Yes, No, Prefers not to say]

Q6 What is your party affiliation? [Republican, Democrat, Independent, Other]

Q7 Did you support Donald J. Trump in the 2020 election? [Yes, No, Prefer not to say]

Q8 Are you satisfied with the 2020 presidential election results? [Yes, No]

Q9 If you are Independent, how much do you lean left or right?

Lean Left: [Not Applicable, Center or adjacent, Off-center, Mildly leaning left, Significantly leaning left, Pretty much leftist]

Lean Right: [Not Applicable, Center or adjacent, Off-center, Mildly leaning right, Significantly leaning right, Pretty much conservative]

### **Post-Treatment Questions**

Q10 Do you think the Chinese government has done a good job of fighting the spread of COVID-19 in China? [Yes, No]

Q11 Do you think the World Health Organization (WHO) has done a good job of fighting the spread of COVID-19? [Yes, No]

Q12 Do you think the recommendations of the World Health Organization (WHO) are useful?

[Yes, No]

Q13 Do you trust the World Health Organization (WHO)? [Yes, No]

Q14 Do you trust the United Nations? [Yes, No]

Q15 Indicate which (if any) news media sources you trust.

[Fox News, MSNBC, NPR, Breitbart News, CNN, ABC News, The New York Times, The Washington Post]

### **Matrix Questions Measuring Attitudes Toward Chinese Americans**

Q16 How much do you agree with each statement? [Not at all, A little, A moderate amount, A lot, Completely]

16.1 “I tolerate Chinese Americans.”

16.2 “I feel comfortable interacting with Chinese Americans.”

16.3 “I am okay with Chinese Americans being my neighbors or living in my area.”

16.4 “I value the contributions of Chinese Americans to my community.”

16.5 “Chinese Americans do not fit into American society.”

Q17 How much do you agree with each statement? [Not at all, A little, A moderate amount, A lot, Completely]

17.1 “I am worried about the presence of Chinese Americans in my community.”

17.2 “Chinese Americans are not a threat to American communities.”

17.3 “I respect Chinese Americans.”

17.4 “I don't mind taking public transportation with Chinese Americans.”

17.5 “Chinese Americans should have stayed in China where they belong.”

### **Questions About U.S. Influence and China Influence in the World**

Q19 I would like to know how much influence you think each of the following countries has in the world. Please answer on a 0 to 100 scale.

China: [Insignificantly influential, Not very influential, Somewhat influential, Extremely influential]

United States: [Insignificantly influential, Not very influential, Somewhat influential, Extremely influential]

Q20 How important do you think limiting China's influence around the world is for U.S. foreign policy?

[Not at all important, Slightly important, Moderately important, Very important, Extremely important]

## *Appendix C: Control and Treatment News Articles Used in the Experiment*

### Control

#### WHO Releases COVID Safety Advice to the Public



The World Health Organization HQ in Geneva, Switzerland (Source: [REUTERS/Denis Balibouse](#))

In light of the outbreak of the new Delta variant, the World Health Organization (WHO) advises the public to get vaccinated as soon as possible. The organization also recommends wearing a mask that fits properly when physical distancing is not feasible and when indoors. People should keep at least 4 feet away from others, even if they don't seem to be infected. Those who test positive for COVID or develop COVID-like symptoms should self-isolate until they recover.

In regard to international travel, the WHO advises its member states to not mandate proof of COVID-19 vaccination for travelers leaving or entering a country. "Instead of mandating proof of COVID-19 vaccination, national officials should provide alternative measures of mandated COVID testing or quarantining prior to travel for unvaccinated travellers or those who have no proof of vaccination," remarked a member of the WHO Strategic Advisory Group of

Experts on Immunization (SAGE). The organization requests member countries to consider lifting testing and/or quarantine measures to individual travelers who are fully vaccinated at least two weeks prior to traveling or have natural immunity to COVID-19 through getting it within the 6 months prior to travelling. COVID testing and quarantining requirements should be lifted from travel requirements when they are deemed no longer necessary.

When member states are implementing quarantine and testing measures for international travelers, the WHO strongly advises that they respect the autonomy and human rights of these travelers throughout the implementation of such measures. Quarantining and testing measures should only be reserved for travelers who pose significant risk of carrying COVID: those who are unvaccinated, did not gain natural immunity to COVID-19, and/or do not have proof of COVID vaccination. Member states should develop and update their COVID safety travel measures in response to regularly-conducted risk assessments. However, if these member countries do not have the resources to conduct such risk assessments or are concerned about the developing risk of exposure to new virus variants through international travel/trade, then the implementation of more stringent travel restrictions is justified so long as these travel restrictions are time-limited.

### Positive Treatment

## China COVID Policy Protects Citizens Against Delta Variant



Li Zhiji, a 36-year-old volunteer, receives the COVID-19 vaccine in Wuhan, China (Source: [China Daily](#))

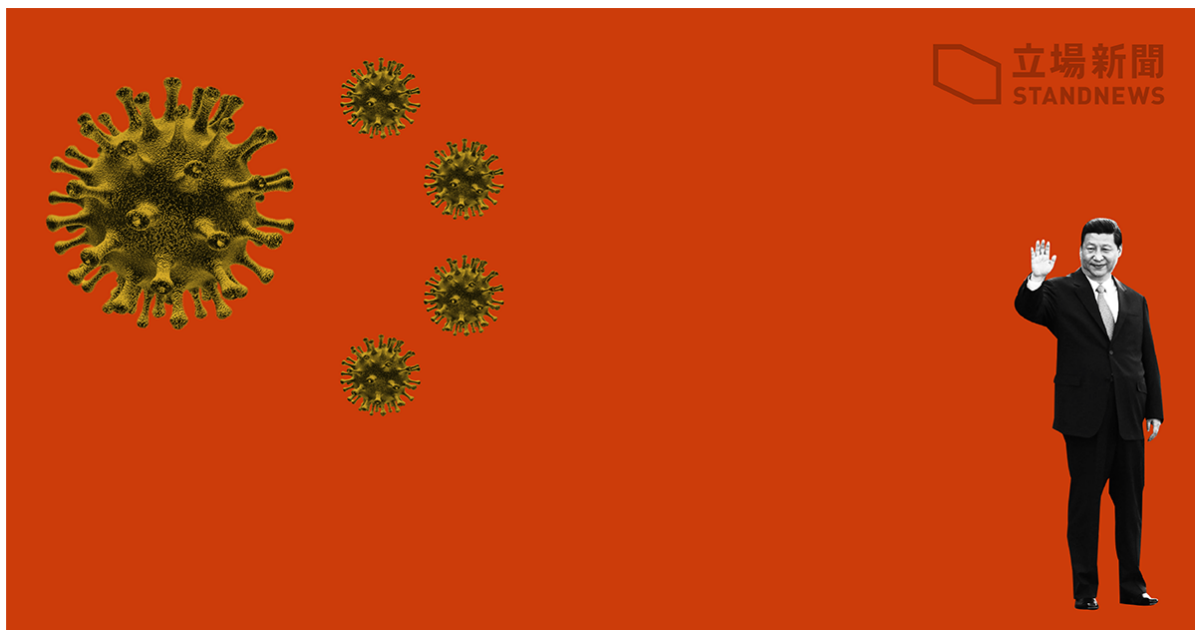
In light of the outbreak of the new Delta variant, China is adding more protective measures of COVID safety to mitigate the spread of the new variant and keep the number of COVID cases low in the country. The regulations include mass testing of communities with outbreaks, quarantining of infected individuals and those in contact with the infected, as well as keeping the border closed to tourists. The Chinese government has been facilitating these new measures with the cooperation of its citizens.

The Chinese government has taken the containment and eradication of COVID outbreaks very seriously. It has built enough quarantine centers to immediately house people within 12 hours of a positive COVID test result but also isolate hundreds of close contacts from each positive case. The government has also employed volunteers and other officials to create an efficient network of workers to shut down virus hotspots. Volunteers assigned to assist with community-wide quarantines help communities in self-isolation gather groceries and other necessities while in isolation as well as police quarantine violations. Zhu Ge Liang, a citizen who was quarantined a few months ago, remarks, “The volunteers were a blessing when I was in isolation for testing positive. They took care of me and brought me takeout food and medicine while I was sick.”

China has continued to keep its borders closed from international travel. Air travel is the main way of entering China, but international flights have been limited to one weekly international passenger flight per airline. International students studying in Chinese universities are not allowed to fly back to China to resume their studies, and the government has stopped issuing visas to international students. However, mainland Chinese citizens are allowed to return home from overseas so long as they test negative for COVID and obtain a health code as evidence of their negative COVID status. Chinese residents traveling home from abroad are required to undergo a 14 to 21 day quarantine before entering the country. According to the WHO, these strong protective measures are justified because of the growing concern of risking exposure to the new Delta variant through international travel/trade. China is taking extra precautions to prevent more cases of COVID from entering its borders.

### Negative Treatment

## China Enforces Wuhan Virus Policy With A New Variant on the Rise



China has enacted obsessive measures in trying to contain the Wuhan virus (Source: [Stand News](#))

In light of the outbreak of the new China virus variant, China is cracking down on the virus in order to mitigate the spread of the new variant and keep the number of COVID cases low in the country. China's Zero-Tolerance Policy includes mass testing of communities with outbreaks, isolation of infected individuals and those in contact with the infected, as well as shutting out tourists and other foreigners. The Chinese government has been enforcing these new measures with the coercion of its citizens.

The Chinese government has taken the containment and eradication of the China virus outbreaks very seriously. It has built enough quarantine centers to immediately house people within 12 hours of a positive Chinese virus test result but also isolate hundreds of close contacts from each positive case, even separating children from families. "I haven't seen my daughter in weeks," laments Zhou Lieng, whose five-year-old was taken into a government isolation pod. The government has also employed volunteers and other officials to create a network of workers to shut down virus hotspots. In areas of outbreaks, the government has sanctioned the closure of local bars and entertainment as well as conducted neighborhood lockdowns.

China has continued to keep its borders closed from international travel. Air travel is the main way of entering China, but international flights have been limited to one weekly international passenger flight per airline. International students studying in Chinese universities are not allowed to fly back to China to resume their studies, and the government has stopped issuing visas to international students. However, mainland Chinese citizens are allowed to return home from overseas so long as they test negative for the Wuhan virus and obtain a health code as evidence of their negative virus status. Chinese residents traveling home from abroad are required to undergo a 14 to 21 day quarantine before entering the country. This goes against the WHO's recommendation to consider lifting testing and/or quarantine measures to individual travelers who are fully vaccinated at least two weeks prior to traveling or have natural immunity to COVID-19 through getting it within the 6 months prior to travelling. China is taking unnecessary COVID precautions to keep international travelers out of the country.

## Appendix D: Codebook For Variables of Interest in Statistical Analysis

<u>Variable Name</u>	<u>Description</u>
durationinseconds =	how long in seconds the participant took to complete the survey
recaptchascore =	recaptcha score of participant (indicating likelihood that participant is a bot)
race =	response to “What is your race/ethnicity (choose all that apply)?” Choices being: White, Black, Latino, Asian, Native American/Indigenous, and Other
num_race =	number of race/ethnicity identifiers selected by participant
white =	dummy race variable where: 0 = “Minority” and 1 = “White”
black =	dummy race variable where: 0 = “Other Races” and 1 = “Black”
multiracial =	dummy race variable where: 0 = “Monoracial” and 1 = “Multiracial”
other =	dummy race variable where: 0 = "Black/White," 1 = "Latino," 2 = "Asian," 3 = "Native American/Indigenous," and 4 = "Other"
age =	numeric variable indicating age in years old
agelevel =	a variable that divides age into levels of age ranges where: 1 = ages less than 30, 2 = ages 30 to 40, 3 = age 40 to 50, 4 = ages 50 to 60, and 5 = ages 60+
gender =	categorical variable indicating gender where: 0 = “Male” and 1 = “Female”
education =	categorical variable indicating level of education where: 0 = "Some high school or less," 1 = "High school graduate," 2 = "Some college/university,"

	3 = "Completed an undergraduate degree," and 4 = "Graduate school or equivalent"
citizenship =	response to "Are you a U.S. citizen?" where: 0 = "No" and 1 = "Yes"
partyaffiliation =	categorical variable indicating party affiliation of the participant where: 0 = "Independent," 1 = "Republican," 2 = "Democrat," and 3 = "Other"
partyaffiliation2 =	clone of the variable "partyaffiliation" that omits the category of "Other" (partyaffiliation = 3)
trumpsupport =	response to "Did you support Donald J. Trump in the 2020 election?" where: 0 = "No" and 1 = "Yes"
bidensatisfaction =	response to "Are you satisfied with the 2020 presidential election results?" where: 0 = "No" and 1 = "Yes"
independentleftlean =	variable indicating to which extent Independent-identifying participant politically leans left, where: 0 = "Center or adjacent," 1 = "Off-center," 2 = "Mildly leaning left," 3 = "Significantly leaning left," and 4 = "Pretty much leftist"
independentrightlean =	variable indicating to which extent Independent-identifying participant politically leans right, where: 0 = "Center or adjacent," 1 = "Off-center," 2 = "Mildly leaning right," 3 = "Significantly leaning right," and 4 = "Pretty much conservative"
china_covideffective =	response to "Do you think the Chinese government has done a good job of fighting the spread of COVID-19 in China?" where: 0 = "No" and 1 = "Yes"
who_covideffective =	response to "Do you think the World Health Organization (WHO) has done a good job of fighting the spread of COVID-19?" where: 0 = "No" and 1 = "Yes"
who_rec_useful =	response to "Do you think the recommendations of the World Health Organization (WHO) are useful?" where:



	0 = “No” and 1 = “Yes”
whotrust =	response to “Do you trust the World Health Organization (WHO)?” where: 0 = “No” and 1 = “Yes”
unitednationstrust =	response to “Do you trust the United Nations?” where: 0 = “No” and 1 = “Yes”
media =	response to “Indicate which (if any) news media sources you trust.”  choices being: Fox News, MSNBC, NPR, Breitbart News, CNN, ABC News, The New York Times, and The Washington Post
nummedia =	number of media sources trusted by participant (out of news sources provided by survey question)
mediatrust =	type of trust in media indicated by participant through selection of trusted news sources, where:  “No trust” is indicated by no selection of trusted news sources  “Mainstream trust” is indicated by media selections excluding “Breitbart News”  “Left-lean bias” is indicated by media selections excluding “Breitbart News” and “Fox News”  “Right-wing bias” is indicated by media selections of only “Breitbart News” and “Fox News”  “Right-lean bias” is indicated by media selections including “Breitbart News” and “Fox News” but excluding “CNN” and “MSNBC”  “Trust all media” is indicated by choosing all 8 news sources listed in the media trust question  The name of one of eight news sources listed indicates trust solely in that news source (ex. “Fox News” indicates that the participant only chose “Fox News” as a trusted news source.)  “Mixed perspectives” labels the remaining observations where more than one news source was selected as trusted news sources
mediatrust_level =	dummy mediatruster variable where: 0 = “Trust no media,” 1 = “Trust some media,” and

	2 = “Trust all media”
mediatrust_bias =	dummy variable that indicates partisan bias in media trust of participant, where: 0 = “No clear media bias,” 1 = “Left-lean bias,” 2 = “Right-lean bias,” and 3 = “Right-wing bias”
mainstream_mediatrust =	dummy mediatrust variable where: 0 = “Trust not only mainstream media” and 1 = “Trust only mainstream media”
breitbart_only =	dummy mediatrust variable where: 0 = “Trust other sources besides Breitbart News” and 1 = “Trust Breitbart News only”
foxbreitbart_trust =	dummy variable that indicates whether participants trust Fox News or Breitbart News where: 0 = “Does not trust Fox News or Breitbart News” and 1 = “Trusts Fox News or Breitbart News”
chinainfluence =	response “I would like to know how much influence you think each of the following countries has in the world. - China” on a numeric scale from 0 to 3, where: 0 = "Insignificantly influential," 1 = "Not very influential," 2 = "Somewhat influential," and 3 = "Extremely influential"
usinfluence =	response to “I would like to know how much influence you think each of the following countries has in the world. - United States” on a numeric scale from 0 to 3, where: 0 = "Insignificantly influential," 1 = "Not very influential," 2 = "Somewhat influential," and 3 = "Extremely influential"
limitingchinaimportance =	response to “How important do you think limiting China’s influence around the world is for U.S. foreign policy? - Importance of limiting China's influence” on a 0-4 numeric scale, where: 0 = "Not at all important," 1 = "Slightly important," 2 = "Moderately important," 3 = "Very important," and 4 = "Extremely important"
num_q16_1 =	response to “How much do you agree with each statement? - I tolerate Chinese Americans” on a 0-4 numeric scale, where: 0 = "Not at all,"

	1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q16_2 =	response to "How much do you agree with each statement? - I feel comfortable interacting with Chinese Americans" on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q16_3 =	response to "How much do you agree with each statement? - I am okay with Chinese Americans being my neighbors or living in my area" on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q16_4 =	response to "How much do you agree with each statement? - I value the contributions of Chinese Americans to my community" on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q16_5 =	response to "How much do you agree with each statement? - Chinese Americans do not fit into American society" on a -4 to 0 numeric scale 0 = "Not at all," -1 = "A little," -2 = "A moderate amount," -3 = "A lot," and -4 = "Completely"
num_q17_1 =	response to "How much do you agree with each statement? - I am worried about the presence of Chinese Americans in my community" on a -4 to 0 numeric scale, where: 0 = "Not at all," -1 = "A little," -2 = "A moderate amount," -3 = "A lot," and -4 = "Completely"

num_q17_1_reverse =	num_q17_1 reverse coded given by: $\text{num\_q17\_1} + 4$
num_q17_2 =	response to “How much do you agree with each statement? - Chinese Americans are not a threat to American communities” on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q17_3 =	response to “How much do you agree with each statement? - I respect Chinese Americans” on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q17_4 =	response to “How much do you agree with each statement? - I don't mind taking public transportation with Chinese Americans” on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q17_5 =	response to “How much do you agree with each statement? - Chinese Americans should have stayed in China where they belong” on a -4 to 0 numeric scale, where: 0 = "Not at all," -1 = "A little," -2 = "A moderate amount," -3 = "A lot," and -4 = "Completely"
covidpercentestimate_chinese =	response to “What percentage of Chinese Americans do you think have COVID?” where participants gave a numerical estimate from 0-100
affection_chinese =	response variable that measures participant’s feelings of affection towards Chinese Americans given by:  $\text{num\_q17\_2} + \text{num\_q17\_3}$  *a higher score indicates more feelings of affection towards Chinese Americans

scaled_affection_chinese =	the variable “affection_chinese” scaled to fit the range of 0 to 4 given by: affection_chinese/2
comfort_chinese =	<p>response variable that measures participant’s feelings of ease with Chinese Americans given by:</p> $\text{num\_q16\_1} + \text{num\_q16\_2} + \text{num\_q16\_3} + \text{num\_q17\_1\_reverse} + \text{num\_q17\_4}$ <p>*a higher score indicates more feelings of ease with Chinese Americans</p>
scaled_comfort_chinese =	the variable “comfort_chinese” scaled to fit the range of 0 to 4 given by: comfort_chinese/5
kinship_chinese =	<p>response variable that measures participant’s sense of belonging with Chinese Americans given by: num_q16_5</p> <p>*a higher score indicates a greater sense of belonging with Chinese Americans</p>
scaled_kinship_chinese =	the variable “kinship_chinese” scaled to fit the range of 0 to 4 given by: kinship_chinese+4
engagement_chinese =	<p>response variable that measures participant’s inclination to seek contact with Chinese Americans given by: num_q17_5</p> <p>*a higher score indicates a greater inclination to seek contact with Chinese Americans</p>
scaled_engagement_chinese =	the variable “engagement_chinese” scaled to fit the range of 0 to 4 given by: engagement_chinese+4
enthusiasm_chinese =	<p>response variable that measures extent of participant’s favorable impression of Chinese Americans given by: num_q16_4</p> <p>*a higher score indicates a greater favorable impression of Chinese Americans</p>
aggregate_chinese =	<p>calculation of participant’s average score responding to questions about attitude towards Chinese Americans, given by:</p> $(\text{num\_q16\_1} + \text{num\_q16\_2} + \text{num\_q16\_3} + \text{num\_q16\_4} + \text{num\_q16\_5} + \text{num\_q17\_1} + \text{num\_q17\_2} + \text{num\_q17\_3} + \text{num\_q17\_4} + \text{num\_q17\_5})/10$
chineseattitude =	<p>measurement of participant’s overall attitude towards Chinese Americans as the average of the response variable scores, given by:</p> $(\text{affection\_chinese} + \text{comfort\_chinese} + \text{kinship\_chinese} +$

	<p>engagement_chinese + enthusiasm_chinese)/5</p> <p>*a higher score indicates a more positive attitude towards Chinese Americans</p>
num_q21_1 =	<p>response to “How much do you agree with each statement? - I tolerate Irish Americans” on a 0-4 numeric scale, where:</p> <p>0 = "Not at all,"</p> <p>1 = "A little,"</p> <p>2 = "A moderate amount,"</p> <p>3 = "A lot," and</p> <p>4 = "Completely"</p>
num_q21_2 =	<p>response to “How much do you agree with each statement? - I feel comfortable interacting with Irish Americans” on a 0-4 numeric scale, where:</p> <p>0 = "Not at all,"</p> <p>1 = "A little,"</p> <p>2 = "A moderate amount,"</p> <p>3 = "A lot," and</p> <p>4 = "Completely"</p>
num_q21_3 =	<p>response to “How much do you agree with each statement? - I am okay with Irish Americans being my neighbors or living in my area” on a 0-4 numeric scale, where:</p> <p>0 = "Not at all,"</p> <p>1 = "A little,"</p> <p>2 = "A moderate amount,"</p> <p>3 = "A lot," and</p> <p>4 = "Completely"</p>
num_q21_4 =	<p>response to “How much do you agree with each statement? - I value the contributions of Chinese Americans to my community” on a 0-4 numeric scale, where:</p> <p>0 = "Not at all,"</p> <p>1 = "A little,"</p> <p>2 = "A moderate amount,"</p> <p>3 = "A lot," and</p> <p>4 = "Completely"</p>
num_q21_5 =	<p>response to “How much do you agree with each statement? - Irish Americans do not fit into American society” on a -4 to 0 numeric scale, where:</p> <p>0 = "Not at all,"</p> <p>-1 = "A little,"</p> <p>-2 = "A moderate amount,"</p> <p>-3 = "A lot," and</p> <p>-4 = "Completely"</p>
num_q22_1 =	<p>response to “How much do you agree with each statement? - I</p>

	am worried about the presence of Irish Americans in my community” on a -4 to 0 numeric scale, where: 0 = "Not at all," -1 = "A little," -2 = "A moderate amount," -3 = "A lot," and -4 = "Completely"
num_q22_1_reverse =	num_q22_1 reverse coded given by: num_q22_1 + 4
num_q22_2 =	response to “How much do you agree with each statement? - Irish Americans are not a threat to American communities” on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q22_3 =	response to “How much do you agree with each statement? - I respect Irish Americans” on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q22_4 =	response to “How much do you agree with each statement? - I don't mind taking public transportation with Irish Americans” on a 0-4 numeric scale, where: 0 = "Not at all," 1 = "A little," 2 = "A moderate amount," 3 = "A lot," and 4 = "Completely"
num_q22_5 =	response to “How much do you agree with each statement? - Irish Americans should have stayed in Ireland where they belong” on a -4 to 0 numeric scale, where: 0 = "Not at all," -1 = "A little," -2 = "A moderate amount," -3 = "A lot," and -4 = "Completely"
covidpercentestimate_irish =	response to “What percentage of Irish Americans do you think have COVID?” where participants gave a numerical estimate from 0-100

affection_irish =	variable that measures participant's feelings of affection towards Irish Americans given by: $\text{num\_q22\_2} + \text{num\_q22\_3}$  *a higher score indicates more feelings of affection towards Irish Americans
scaled_affection_irish	the variable "affection_irish" scaled to fit the range of 0 to 4 given by: $\text{affection\_irish}/2$
comfort_irish =	variable that measures participant's feelings of ease with Irish Americans given by:  $\text{num\_q21\_1} + \text{num\_q21\_2} + \text{num\_q21\_3} + \text{num\_q22\_1\_reverse} + \text{num\_q22\_4}$  *a higher score indicates more feelings of ease with Irish Americans
scaled_comfort_irish =	the variable "comfort_irish" scaled to fit the range of 0 to 4 given by: $\text{comfort\_irish}/5$
kinship_irish =	variable that measures participant's sense of belonging with Irish Americans given by: $\text{num\_q21\_5}$  *a higher score indicates a greater sense of belonging with Irish Americans
scaled_kinship_irish =	the variable "kinship_irish" scaled to fit the range of 0 to 4 given by: $\text{kinship\_irish}+4$
engagement_irish =	response variable that measures participant's inclination to seek contact with Irish Americans given by: $\text{num\_q22\_5}$  *a higher score indicates a greater inclination to seek contact with Irish Americans
Scaled_engagement_irish =	the variable "engagement_irish" scaled to fit the range of 0 to 4 given by: $\text{engagement\_irish}+4$
enthusiasm_irish =	variable that measures extent of participant's favorable impression of Irish Americans given by: $\text{num\_q21\_4}$  *a higher score indicates a greater favorable impression of Irish Americans
aggregate_irish =	calculation of participant's average score responding to questions about attitude towards Irish Americans, given by:



	$(\text{num\_q21\_1} + \text{num\_q21\_2} + \text{num\_q21\_3} + \text{num\_q21\_4} + \text{num\_q21\_5} + \text{num\_q22\_1} + \text{num\_q22\_2} + \text{num\_q22\_3} + \text{num\_q22\_4} + \text{num\_q22\_5})/10$
irishattitude =	<p>measurement of participant's overall attitude towards Irish Americans as the average of the response variable scores, given by:</p> $(\text{affection\_irish} + \text{comfort\_irish} + \text{kinship\_irish} + \text{engagement\_irish} + \text{enthusiasm\_irish})/5$ <p>*a higher score indicates a more positive attitude towards Irish Americans</p>
treatmentgroup =	<p>dummy treatment group variable where:</p> <p>0 = "Control,"</p> <p>1 = "Positive Treatment," and</p> <p>2 = "Negative Treatment"</p>

## Appendix E: Robustness Check of OLS Model Through Ordered Logistic Regressions

Out of concern that the OLS was not the best fit to model the relationship between the dependent variables and the treatment groups, I also ran ordered logistic regressions with the same variables in the OLS models. I use the ordered logistic regression results as a robustness check of the OLS models. The results of the ordered logistic regression models for attitudes toward Chinese Americans are displayed below in Table 7.

**Table 7: Ordered Logistic Regression of the Interaction Between Treatment and Trump Support on Dimensions of Attitude Towards Chinese Americans, Controlled For Race, Age, and Party Affiliation**

	(1)	(2)	(3)	(4)	(5)
	Comfort Towards Chinese Americans	Enthusiasm Towards Chinese Americans	Kinship Towards Chinese Americans	Engagement Towards Chinese Americans	Affection Towards Chinese Americans
Positive Treatment	-0.829 (-1.82)	-0.843* (-1.99)	-0.552 (-1.41)	-0.696 (-1.72)	-0.696 (-1.75)
Negative Treatment	-0.186 (-0.37)	-0.0725 (-0.15)	0.174 (0.42)	-0.0552 (-0.13)	-0.0993 (-0.20)
Supported Trump	-1.680*** (-4.24)	-1.491*** (-3.82)	-1.392*** (-3.79)	-1.836*** (-4.86)	-1.505*** (-4.36)
Positive Treatment # Supported Trump	1.029* (2.04)	1.248* (2.56)	0.708 (1.55)	0.845 (1.82)	1.029* (2.27)
Negative Treatment # Supported Trump	0.374 (0.69)	0.490 (0.93)	-0.177 (-0.37)	0.0943 (0.19)	0.337 (0.62)
White	0.443 (1.46)	0.509 (1.75)	-0.775** (-3.09)	-0.647** (-2.76)	0.631* (2.25)
Age	0.0172 (1.88)	0.0120 (1.18)	0.0374*** (4.25)	0.0368*** (4.06)	0.0161 (1.85)

Republican	-1.228*** (-3.32)	-0.835* (-2.19)	-0.875* (-2.22)	-0.988* (-2.50)	-1.141** (-2.78)
Democrat	-1.631*** (-4.60)	-1.105** (-3.10)	-1.050** (-2.98)	-1.225*** (-3.53)	-1.592*** (-3.98)
Observations	454	458	458	453	452
Note: z statistics in parentheses. * = p<0.05 ** = p<0.01 *** = p<0.001					

Table 7 shows that the statistically significant relationship between Trump supporters' comfort and enthusiasm toward Chinese Americans still holds in the ordered logistic regression model.

However, the ordered logistic regressions also display a weakly statistically significant relationship between exposure to the positive treatment and enthusiasm towards Chinese Americans ( $p = 0.046$ ) — controlling for the interaction effect between supporting Trump and experimental condition assignment, race, age, and party affiliation. The regression results also show a statistically significant relationship between level of affection towards Chinese Americans and the interaction of the positive treatment and Trump supporting participants, controlling for all other variables in the affection towards Chinese Americans model ( $p = 0.023$ ).

Table 8 shows the ordered logistic regression results for the placebo test models with Irish Americans.

**Table 8: Ordered Logistic Regression of Interaction Between Treatment and Trump Support on Dimensions of Attitude Towards Irish Americans, Controlled For Race, Age, and Party Affiliation**

	(1) Comfort Towards Irish Americans	(2) Enthusiasm Towards Irish Americans	(3) Kinship Towards Irish Americans	(4) Engagement Towards Irish Americans	(5) Affection Towards Irish Americans
Positive Treatment	-0.531 (-1.28)	-0.468 (-1.20)	-0.426 (-1.10)	-0.552 (-1.44)	-0.835* (-2.00)
Negative Treatment	-0.219 (-0.46)	-0.274 (-0.62)	0.0517 (0.12)	0.259 (0.67)	-0.743 (-1.63)
Supported Trump	-1.607*** (-4.43)	-1.291** (-3.29)	-1.268*** (-3.70)	-1.409*** (-4.17)	-1.639*** (-4.50)
Positive Treatment # Supported Trump	0.745	0.709	0.202	0.544	1.231**

	(1.59)	(1.52)	(0.45)	(1.20)	(2.59)
Negative Treatment #					
Supported Trump	0.414	0.477	-0.295	-0.349	1.059*
	(0.80)	(0.92)	(-0.60)	(-0.76)	(2.09)
White	0.311	0.752**	-0.965***	-0.901***	0.842**
	(1.00)	(2.85)	(-4.31)	(-4.16)	(2.89)
Age	0.0159	0.0146	0.0353***	0.0347***	0.0113
	(1.85)	(1.62)	(3.89)	(3.81)	(1.24)
Republican	-1.083**	-0.554	-0.848*	-0.992**	-0.798*
	(-3.10)	(-1.54)	(-2.06)	(-2.63)	(-2.10)
Democrat	-1.582***	-0.978**	-0.933**	-1.214***	-1.283***
	(-4.83)	(-2.96)	(-2.59)	(-3.73)	(-3.51)
Observations	455	457	456	454	455
Note: z statistics in parentheses. * = p<0.05 ** = p<0.01 *** = p<0.001					

Table 8 demonstrates that the statistically significant relationship between Trump supporters' reported attitudes of comfort and enthusiasm and exposure to the positive treatment — controlling for race, age, and party affiliation — was not replicated in the placebo test with Irish Americans in the ordered logistic regressions, either. The results of the regression model for comfort towards Irish Americans and the regression model for enthusiasm towards Irish Americans reveal that there is no such statistically significant relationship between Trump supporters' exposure to the positive treatment and their reported attitude scores of comfort towards Irish Americans and enthusiasm towards Irish Americans.

However, the results of the ordered logistic regression model of affection towards Irish Americans yields a surprising statistically significant relationship between affection towards Irish Americans and the positive treatment ( $p = 0.046$ ). The regression results also show a statistically significant interaction between supporting Trump and effects of the positive and negative treatments on affection towards Irish Americans ( $p = 0.009$  and  $p = 0.036$ , respectively).

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