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Research Article

Does mislabeling COVID-19 elicit the perception of threat and reduce blame?

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Abstract: Associating a life-threatening crisis with a geographic locality can stigmatize people from that area. However, such a strategy may reduce the public blame attributed to the government because the perceived foreign threat establishes a scapegoat, which transfers that blame. In the context of the COVID-19 pandemic, we investigated whether the "Chinese Virus" label placed on COVID-19 has elicited opposition to Chinese immigrants and reduced public blame attributed to the federal government. We used a survey experiment during the COVID-19 pandemic, and a list experiment to measure perceived threat. The descriptive analysis suggested a negative attitude toward Chinese immigrants overall, in which conservatives expressed stronger negative attitudes than did liberals and moderates. While labelling COVID-19 as the "Chinese Virus" did not make a difference overall, our exploratory results shows that it led to a significant increase in liberals' perception that Chinese immigrants are a threat. However, the "Chinese Virus" label showed no effect overall in reducing the extent to which either liberals or conservatives attributed blame to the federal government.

Keywords: COVID-19, Stigma, Blame, Identity, List experiment

Supplements: Open data, Open materials, Preregistered

As of April 21 2021, the COVID-19 virus has infected more than 142 million people worldwide (World Health Organization, 2021), including more than 31 million in the U.S., and led to over 565,000 deaths (Centers for Disease Control and Prevention, 2021a). The pandemic has also raised important issues of racial inequality, as COVID-19 has affected racial and ethnic minority groups disproportionately (Centers for Disease Control and Prevention, 2021b). Among these, minority groups such as Chinese Americans and immigrants, or even broadly-defined Asian Americans, are experiencing an increased number of hate crimes and attacks, which is possibly attributable to COVID-19's association with China, where the virus broke out first. Hence, political leaders have associated the COVID-19 pandemic frequently with China and the Chinese government. On March 16, 2020, President Trump referred to COVID-19 as the "Chinese Virus", which provoked considerable discussion and criticism. Immediately after assigning the virus this controversial label, the number of cases of hate language and attacks against Chinese communities that have been reported in multiple localities in the U.S. began to increase (Tavernise & Oppel, 2020). A descriptive analysis of social media content suggested that there was an increase in Sinophobic racial slurs on Twitter and 4chan's Politically Incorrect message board (/pol/) after President Trump labeled COVID-19 as the "Chinese Virus" (Schild, Ling, Blackburn, Stringhini, Zhang, & Zannettou, 2020). However, it is questionable whether the "Chinese Virus" label, which is a symbolic action that potentially stigmatizes Chinese people, was the direct cause of the increased violence observed against Chinese communities in the U.S. in such a short time, or just a general expression of anti-China attitudes which rose during the Trump

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administration. (Pew Research Center, 2020)

As immigration policy is becoming one of national leaders' central concerns in the political agenda, changes in public opinions of immigrants may well influence the current political landscape (Aaroe, Petersen, & Arceneaux, 2017). In this study, we argue that the "Chinese Virus" label can be understood as a strategy to elicit the perception that the Chinese are a threat, and create a scapegoat which transfers blame away from the federal government. In a performance-based accountability system, particularly when government performance is associated directly with people's lives, the way they perceive government performance may influence their support of the president. As the COVID-19 coincidentally broke out in the U.S. during the beginning of the presidential campaign in 2020, the way the incumbent president at that time, President Trump, handled the threatening event influenced the reelection outcome significantly. Therefore, it is expected that while he attempted to address the spread of COVID-19 actively, the president would take advantage of such an event to reduce public blame strategically. Evidence from this study helps us not only to understand the effectiveness of one common blame-avoidance strategy in a more polarized political environment, but also how vulnerable immigrants, as a growing segment of the U.S. population, are during a public health emergency.

In summary, we propose that the "Chinese Virus" label may stigmatize Chinese immigrants and elicit the perception that Chinese communities pose a threat, while also reducing the blame people attribute to the federal government because the label enhances a shared national identity by emphasizing a foreign threat. To test our hypotheses, we designed an online survey experiment in which we manipulated the name of COVID-19, and used a list experiment to examine the level to which Chinese immigrants were perceived to be a threat and people attributed blame to the federal government during the early stage of the pandemic.

Hypotheses

Stigmatization and Perceived Threat

We hypothesize that labeling COVID-19 the "Chinese Virus" stigmatizes Chinese or even broader East Asian communities in the U.S., which enhances the perception that Chinese immigrants are a threat during the pandemic. The guidance for naming new diseases that the World Health Organization (WHO) issued suggests that naming a newly-discovered contagious disease according to a geographic locality stigmatizes people from that area (Fukuda, Wang, & Vallat, 2015). Stigma are attributes that "...extensively discredits an individual, reducing him or her from a whole and usual person to a tainted, discounted one" (Goffman, 1963, p. 3). They are natural reflections of a tangible threat to physical health or symbolic threat to group identity, and therefore, stigmatizing out-group members is a defensive function to protect in-group members. In fact, associating the disease with foreign groups primes tropes of immigrants as disease vectors easily, as the sensitivity of people's behavioral immune system against infectious diseases can determine their opinions of immigration policy (Aaroe et al., 2017).

Social stigma are constructed by a combination of biological processes and social forces. Stangor and Crandall (2000) proposed a mixed model that suggests a two-stage process of stigma formation. First, the initial perception of a tangible (e.g., health, safety, wealth, or social position) or symbolic (e.g., beliefs, values, or ideology) threat elicits the formation of a specific type of social stigma. Then, such stigma are accentuated, in turn, through the perception of differences that amplifies group differences and finally forms by sharing and conformity on the part of members within the group. Following this logic, Chinese communities in the U.S. may be particularly vulnerable to cues that lead to stigmatization because of a combination of both tangible and symbolic threats. Specifically, those include the current threat of the contagious, often fatal, disease and threats regarding human rights and international trade and politics (Lew-Williams, 2018). Therefore, our first hypothesis on the "Chinese Virus" effect is as follows:

H1: The "Chinese Virus" label enhances people's perception that Chinese immigrants in the U.S. constitute a threat.

Given the growing discussions of racial bias and stereotyping (Greenbaum, 2019), we assume that there has been a moderate level of social pressure against discriminating and stereotyping Chinese immigrants, although the Chinese and the broadly-defined East Asian communities have long been considered "perceptual foreigners" in the U.S. However, as stigmatizing foreign groups enhances in-group identity, the "Chinese Virus" label,

particularly when national leaders use it, may legitimize Chinese immigrants' stigmatization. Thus, expressing the perception that Chinese immigrants are a threat will no longer be considered socially undesirable when the virus is labeled the "Chinese Virus."

H2: The "Chinese Virus" label justifies stigmatization and therefore, will lead to less social desirability bias in expressing the perception that Chinese immigrants are a threat.

Scapegoat and the Transfer of the Blame

Blame avoidance is one of government officeholders' ubiquitous political tactics (Hood, 2011), and finding a scapegoat is a common strategy that transfers the blame from the original target to a new entity. For example, Moynihan (2012) identified such blame transfer/shift as one of the blame-avoidance strategies in the Katrina response network. Although the effectiveness of finding a scapegoat for blame avoidance varies according to the situation, social identity theory suggests that highlighting the out-group threat is more likely to consolidate the in-group congruence and reduce blame on in-group members.

One example of eliciting group identity in the public sector is the "rally effect", a phenomenon in which "...specific, dramatic, and sharply focused international events directly involving the United States...redound to the benefit, albeit short-lived, of an incumbent president's public approval rating" (Mueller, 1973, p. 21). Previous evidence has implied that eliciting the "rally effect" is a strategy that primes the in-group identity that is shared by the majority of the public. Research on behavioral economics and psychology has shown as well that a shared group identity may ease blame and increase support (e.g., Chen & Li, 2009; Levendusky, 2018). Identities can be constructed socially and primed in multiple ways. For example, addressing events that threaten a group strategically, for example, naming one contagious and life-threatening disease according to a foreign locality, may prime and consolidate in-group identity (Haidt, 2012). Therefore, depicting China as a scapegoat for the pandemic will prime U.S. citizens with a national identity that reduces the blame on their own government.

H3: The "Chinese Virus" label reduces the blame of the federal government's management of the pandemic.

As both the effects of the finding-a-scapegoat strategy and social stigmatization are related closely to social identity, we also address the "Chinese Virus" label's heterogeneous effects on ideological subgroups. Following the moral foundation theory (Graham, Haidt, & Nosek, 2009), we proposed that the label will have a smaller effect on liberals than conservatives in the U.S. The theory suggests that people construct their moral system according to five fundamental domains: Harm/care; Fairness/reciprocity; Ingroup/loyalty; Authority/respect, and Purity/sanctity (Graham, Nosek, Haidt, Iyer, Koleva, & Ditto, 2011). It shows further that people's value judgments in these domains vary depending on political ideologies. In our case, different values in two moral domains help explain the "Chinese Virus" label's heterogeneous effect. First, liberals care more about harm/care, which supports ideals of social justice and political equity, than do conservatives. In consequence, liberals may ignore or even condemn the "Chinese Virus" label, and the blame liberals attribute to the government may increase, because the label "Chinese Virus" violates the moral standard of harm/care explicitly. Second, conservatives construct their systems based on ingroup/loyalty more than liberals do. Therefore, liberals tend toward universalism and away from nationalism. The "Chinese Virus" label may arouse nationalism and patriotism in the U.S., given its long-term Sinophobia and the recent increasing tension in U.S.-China relations. As such, conservatives will be more defensive psychologically than liberals and perceive Chinese immigrants in general as a foreign threat when the "Chinese Virus" label is applied. In summary, we expected to find an ideologically polarized opinion of Chinese immigrants and the federal government's blameworthiness when the "Chinese Virus" label is mentioned:

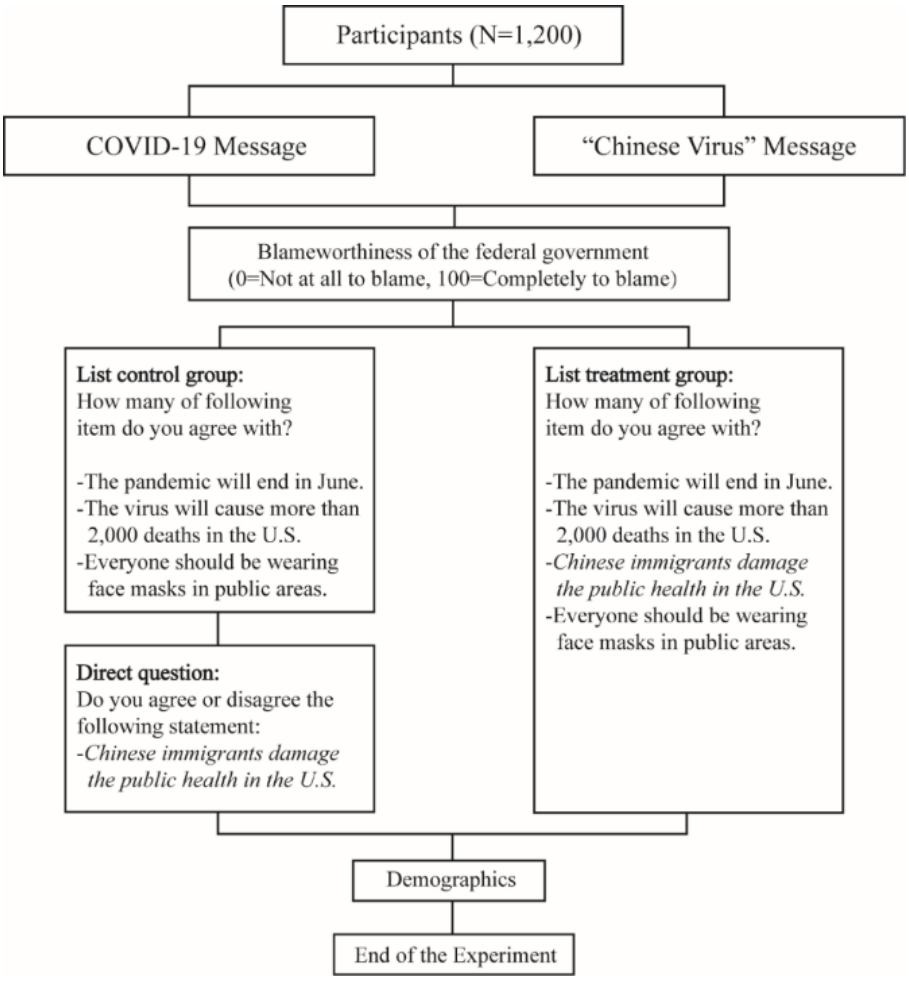
H4: The Chinese Virus label's effect is divided based on people's political ideology: Liberals are less likely to be affected by the label than conservatives with respect to Chinese immigrants as a perceived threat and blame attribution.[1]

Experiment

Design

We conducted an online survey experiment with a between-subject design (see: https://osf.io/bh258). Participants were assigned randomly to two different groups and read a message about the spread of COVID-19; however, the name of the virus was presented either as COVID-19 (control group) or the "Chinese Virus" (treatment group). The experimental procedure is illustrated in Figure 1. The survey was delivered on March 25, 2020 and closed on March 26 when the total number of participants met the preregistered sample size.

Figure 1.
Experimental Procedure



Participants

A total of 1,247 adult participants in the U.S. (53.42% female, Mage = 36) were recruited through Amazon Mechanical Turk (MTurk). 47 (3.8%) were eliminated because their surveys were incomplete. 86 subjects (7.2%) failed to answer the manipulation check question. A comparison between analysis before and after excluding these subjects shows no significant difference (See Appendix E). Thus, we keep these subjects in all the analyses, which makes the final sample size 1,200. Detailed information about the sample size and randomization balance checks are included in Appendix A.

Measurement

Perceived Threat

If Chinese are stigmatized by labeling COVID-19 the "Chinese Virus", an increase in the perception that Chinese immigrants are a threat can be expected. To capture this, we asked about people's agreement (agree or disagree) with the following statement: "Chinese immigrants damage the public health in the U.S.". Measuring opinions about such sensitive issues as racial prejudice and support for militant groups has long been considered to suffer from social desirability bias (Imai, 2011). In our situation, media coverage that criticized the "Chinese Virus" label may have created a sense of social pressure that may lead to dishonest answers. Therefore, we embedded a list experiment to address this problem. The experiment provided respondents a greater degree of privacy by asking only the number of statements with which they agreed. The participants were assigned randomly to two groups, in which there were three controversial statements in the list control group (3-item group), while the list treatment group (4-item group) included the same statements as those in the list control group, as well as one additional sensitive statement ("Chinese immigrants damage the public health in the U.S."), which was the focus of our interest. Because people were assigned randomly to the two groups, the proportion of the respondents whose answers to the sensitive statement was affirmative can be estimated by computing the difference between the two groups' mean responses. In the 3-item group, we also asked participants directly about their opinion of the sensitive statement, which helped us gauge the magnitude of any social desirability bias and test H2. The full text of the list experiment is showed in Figure 1.

Blameworthiness

To capture whether the "Chinese Virus" label reduced the blame on the federal government, we adapted McGraw's (1990) measurement to gauge people's perceived blameworthiness of the way the federal government is managing the pandemic. Specifically, we asked participants to indicate "To what extent do you believe the federal government deserves blame for the current COVID-19 (in the control group)/the "Chinese Virus" (in the treatment group) outbreak" on a 0-100 scale (0=not at all to blame, 100=completely to blame).

Results

H1: Chinese Immigrants' Perceived Threat

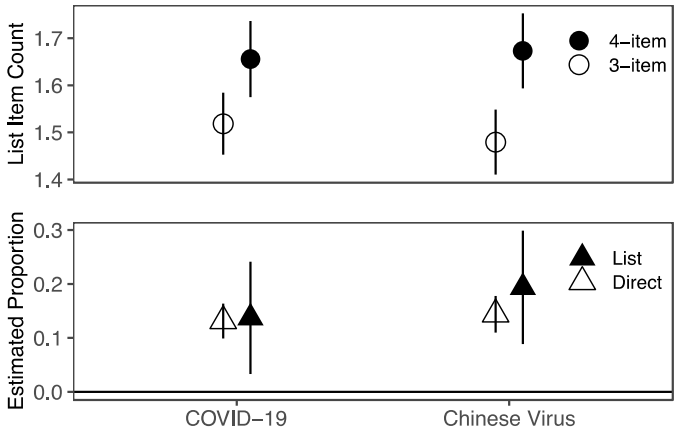
Our list experiment strategy detected a moderate level of Chinese immigrants' perceived threat, but, in general, the analysis found no evidence to support our first hypothesis. Table 1 shows the summary of item counts in the list experiment as a measure of Chinese immigrants as a perceived threat, of which our list experimental design provided an effective measure. First, in the 4-item subgroups of both the COVID-19 (CO) and "Chinese Virus" (CV) groups, the percentages of reports of extreme item counts (1 or 4) were less than 9%. As we could not detect over 90% of the respondents' opinions of each item, our list design provided good evidence that the respondents answered truthfully. Second, there was no evidence that respondents concentrated their answers on any single item's choice, so none of the items demonstrated a ceiling or floor effect. Moreover, we ran Blair and Imai's (2012) statistical test to determine whether the design effect failed to reject the null hypothesis that the sensitive item of our interest changed participants' attitudes toward other non-sensitive items ($p = 1.00$).

Table 1.
Item Count in the List Experiment

	COVID-19 Group				"Chinese Virus" Group			
	3 Item Group		4 Item Group		3 Item Group		4 Item Group	
	Frequency	Proportion	Frequency	Proportion	Frequency	Proportion	Frequency	Proportion
0	14	0.05	15	0.05	17	0.06	11	0.04
1	134	0.45	126	0.41	139	0.48	131	0.43
2	130	0.44	124	0.41	115	0.39	122	0.40
3	19	0.06	29	0.10	21	0.07	31	0.10
4			11	0.04			11	0.04
Sample size	297		305		292		306	

The upper panel in Figure 2 reports the item count means for the 3- and 4-item subgroups in both the CO and CV groups. The difference-in-means estimation (DIM) of the item count reflects the true proportion of participants who perceived that Chinese immigrants are a threat to public health in the sample, and the proportion comparisons between the direct and indirect measurements are shown in the lower panel of Figure 2. In the CO group, the proportion was 0.13 (90% CI: [0.10, 0.16]) in the direct question measurement and 0.14 (SE = 0.06, p = 0.03) from the list item count estimation, while in the CV group, the proportion was 0.14 (90% CI: [0.11, 0.18]) in the direct question measurement and 0.19 (SE = 0.06, p = 0.00) in the list item count estimation.

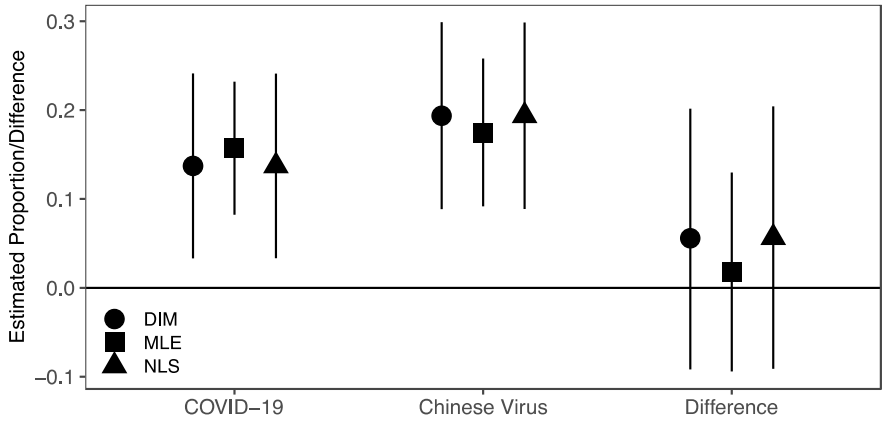
Figure 2.
List Item Count and Proportion of Participants who Reported Perceived Threat



Note: The upper panel shows the mean comparisons between the 3- and 4-item subgroups. The lower panel shows the comparison between the direct perceived threat proportion (direct) and the list item count difference-in-means estimation of perceived threat proportion (list). Bars are 90% confidence intervals.

Further analysis suggested that the "Chinese Virus" had no main effect on the level of perceived threat, which did not support H1. We employed the nonlinear least square (NLS) estimation as our major strategy to capture the treatment effect of the "Chinese Virus."[2] Rather than simply comparing DIMs of the item-count between groups, scholars have suggested using either the maximum likelihood estimation (MLE) or NLS estimation for subgroup analyses (Blair, Chou, & Imai, 2019). As a robustness check, we also compared the DIM (with the bootstrap CI), MLE, and NLS estimates (Figure 3). The MLE estimates were more efficient (as suggested by the smaller standard errors), but the coefficients were biased (deviated from the DIM and NLS estimates). Although this shows that the MLE's results were very similar to those of the other two estimations, its biases would increase greatly in the subsample analysis in which the sample sizes were smaller. Accordingly, we decided to use NLS as our major estimation strategy. The results showed that labeling COVID-19 the "Chinese Virus" led to a 0.06 proportion increase in perceived threat, but this effect was not statistically significant (SE = 0.09, p = 0.53).

Figure 3.
The "Chinese Virus" Label Treatment Effect



Note: "Difference" is the treatment effect of the "Chinese Virus" message. Bars are 90% confidence intervals.

Pre-treatment Effect

The "Chinese Virus" label's null effect may be attributable substantially to the pretreatment effect of news coverage and social media posts of "Chinese Virus". Druckman and Leeper (2012) proposed that a pre-treatment effect is more likely to be found when individuals are "…exposed and attentive to earlier communications similar to the experimental stimuli" (p. 878). As people increased the use of social media such as Facebook and Twitter to obtain and share information, particularly during lock-downs, we suspected that people who rely less on social media would be more sensitive to the treatment. Thus, we conducted subgroup analyses on the treatment effect conditioned on Facebook or Twitter use, taking both the proportion of participants who affirmed the threat detected in the list experiment and direct answers to the statement as the dependent variable. The subgroup analyses showed that the proportion of participants who perceived that Chinese immigrants pose a threat increased by 0.12 because of the "Chinese Virus" label among those who spend less than approximately half of the time using Facebook/Twitter to obtain news/information, but this effect was not statistically significant (SE = 0.12, p = 0.31, see Appendix C).

H2: Justification of Chinese Immigrants as a Perceived Threat

We found no statistically significant social desirability bias when participants expressed that they perceived Chinese immigrants as a threat (see Appendix D for the estimation strategy). In addition, our analysis offered no support for H2, as we did not find that the "Chinese Virus" label further justified the opposition to Chinese immigrants. Table 2 presents an estimation of social desirability in both the CO and CV groups in the full sample and political ideology subgroups. Our additional analysis also showed that the "Chinese Virus" label had no treatment effect on the proportion of the overt perception of threat in 3-item subgroups (see Table D.1). In summary, the perception that Chinese immigrants are a threat during the pandemic was generally expressed explicitly when social pressure was limited, and the "Chinese Virus" label did not further justify overt expression of the perceived threat.

Table 2.
Estimation of Social Desirability Bias

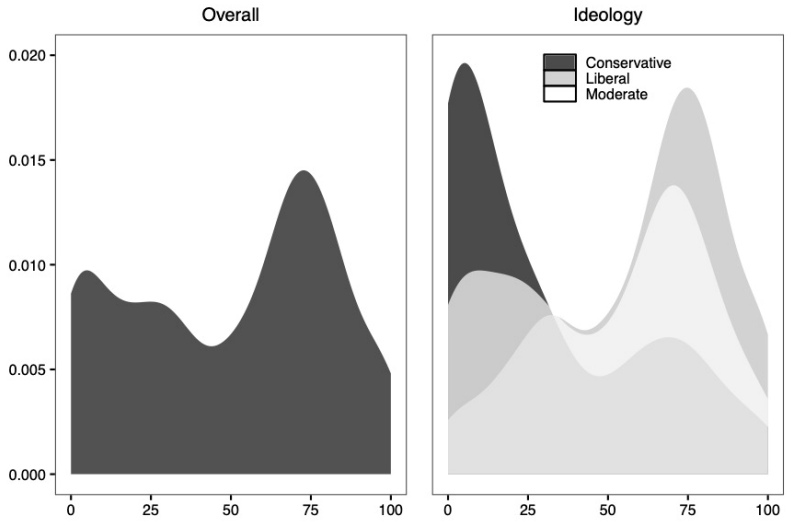
	COVID-19 Group			"Chinese Virus" Group		
	Overt Perceived Threat	Social Desirability Effect	*p*-value	Overt Perceived Threat	Social Desirability Effect	*p*-value
Overall	0.13	0.01	0.93	0.14	0.05	0.47
	(0.34)	(0.07)		(0.35)	(0.07)	
Liberal	0.08	-0.07	0.41	0.09	0.12	0.19
	(0.27)	(0.09)		(0.28)	(0.09)	
Conservative	0.22	0.11	0.52	0.25	0.03	0.86
	(0.42)	(0.16)		(0.44)	(0.17)	
Moderate	0.13	0.08	0.55	0.18	-0.03	0.85
	(0.34)	(0.13)		(0.39)	(0.14)	

Note: Standard deviations of overt perceived threat and standard errors of social desirability effects are in brackets. See Appendix D for model specification. The social desirability effect is the coefficient μ on y_i.

H3: Blameworthiness

Figure 4 shows that the blame assigned to the federal government was highly polarized (Mblame = 49.87, SD = 31.30), which is potentially attributable to the different opinions in ideological groups. Most conservatives attributed much less blame (M = 29.55, SD = 30.43) to the way the federal government is managing the pandemic than did liberals (M = 61.32, SD = 26.37). We found no supportive evidence for hypothesis H3 with respect to blameworthiness, as no main treatment effect of the "Chinese Virus" label was detected (see Table 3). Respondents' opinions of the federal government's blameworthiness were nested at 50 points for both the CO and CV groups.[3]

Figure 4.
Distribution Density of Blameworthiness



H4: Heterogeneous Treatment Effects of Perceived Threat and Blameworthiness

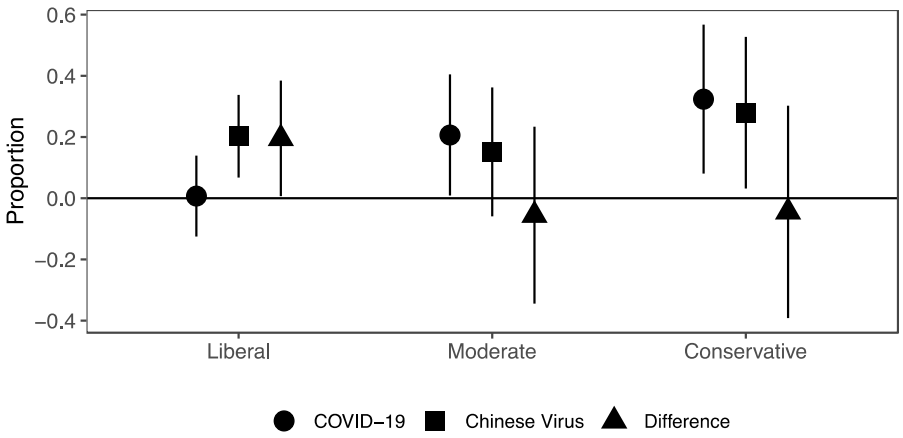
Our subgroup analyses supported H4 in part. While the null effect of blameworthiness was shown across all ideological groups (see Table 3), the "Chinese Virus" effects on Chinese immigrants' perceived threat were statistically significant among liberals. Specifically, the "Chinese Virus" led to a 0.20 proportion increase in liberals who expressed that they perceived Chinese immigrants as a threat (SE = 0.11, p = 0.09). The proportion of liberals who did so increased from 0.01 (SE = 0.08, p = 0.93) in the CO group to 0.20 (SE = 0.08, p = 0.01) in the CV group. However, after controlling the False Discovery Rate attributable to multiple tests in our analysis (Benjamini & Hochberg, 1995), the finding on liberals is not statistically significant[4]. Although conservatives' attitudes attributable to the "Chinese Virus" treatment effect did not change, the levels of perceived threat they expressed were highest among all ideological subgroups. The proportion of conservatives who reported that they perceived that Chinese immigrants are a threat was 0.32 (SE = 0.15, p = 0.03) in the CO group and 0.28 (SE = 0.15, p = 0.06) in the CV group, which the treatment did not affect. In addition, we found no significant change of perceived threat among moderates. The results of each ideological subgroup are shown in Figure 5.

Table 3.
The Federal Government's Blameworthiness

	Overall	Liberals	Conservatives	Moderates
"Chinese Virus"	0.987	-0.149	3.975	-4.404
	(1.808)	(2.185)	(3.597)	(3.511)
Constant	49.383***	61.400***	27.684***	48.362***
	(1.277)	(1.592)	(2.467)	(2.412)
N	1,199	586	287	303
R^2	0.0002	0.00001	0.004	0.005

Note: All models were estimated with ordinary least squares. Standard errors are in brackets.
*$p < .1$; **$p < .05$; ***$p < .01$

Figure 5.
Heterogeneity in the "Chinese Virus" Label Treatment Effect



Note: "Difference" is the treatment effect of the "Chinese Virus" message. Bars are 90% confidence intervals.

Discussion and Conclusion

People have evolved to respond to life threats even with respect to their attitudes. Therefore, the way a deadly contagious disease such as COVID-19 is labeled is an important public issue. This study provides several important findings about Americans' opinion of Chinese immigrants. First, although from a less representative sample, the finding of our list experiment showed that during the early stage of the pandemic, a significant proportion of Americans perceived Chinese immigrants unfavorably, among which there were more conservatives than moderates and liberals. Second, we did not find that the "Chinese Virus" label had a significant effect on the perception that Chinese immigrants pose a threat. However, the label had heterogeneous treatment effects on different ideological subgroups, as shown in our exploratory analysis. In contrast to our expectation, the label showed no effect on conservatives and moderates, but it had a significant effect on liberals who generally favor immigrants in the U.S. This finding is consistent with Aarøe et al. (2017), who reported that people's opinion of immigrants is related closely to their behavioral immune system's sensitivity. In general, anti-immigration sentiments are more likely to be elicited in people who are highly sensitive (e.g., people who feel disgust easily). Importantly, Aarøe et al. (2017) pointed out that the behavioral immune system's sensitivity affects conservatives and liberals' anti-immigration attitudes differently. Conservatives will oppose immigration because of the nature of their ideology, while liberals will show an ideological inconsistency: Treatments that suggest a direct connection between infectious disease and an immigrant group will elicit a psychological defense mechanism that prompts them to perceive immigrants unfavorably even though it is inconsistent with their ideology.

However, there are several important limitations in our study that require readers to interpret our findings cautiously. First, the "Chinese Virus" label's null treatment effect overall may have derived from multiple sources that our research design did not fully address. For example, the treatment effect estimation may not have been sufficiently accurate to capture its actual effect because of the larger measurement error in the list experiment strategy (Blair, Coppock, & Moor, 2020). Another possibility is that unfavorable attitudes against Chinese immigrants during the pandemic have been elicited widely even in the absence of the "Chinese Virus" label, as people's political attitudes are attributable in part to their behavioral immune sensitivity (Aarøe et al., 2017) and thus, they consider immigrants a source of threat. Therefore, they may have paid more attention to media reports and discussions on social media about COVID-19's origin in China in the early stage of the pandemic. Such a well-documented connection may also justify people's unfavorable attitudes toward Chinese

immigrants, which undermines the social norm against discrimination and xenophobia. In addition, the results may suffer from a substantial pre-treatment effect, in that participants in this study had established their opinions of the "Chinese Virus" label prior to the treatment. When the treatment matched their prior attitude, people did not react; in contrast, participants may have rejected the contrasting experimental treatment. The magnitude of the pre-treatment effect depended upon the extent to which participants were exposed to the pre-treatment and how strongly they held their prior attitude when responding to the experimental treatment. Our additional analysis that adjusted for participants' daily use of social media implied that most participants may have been exposed to news about "Chinese Virus" before the experiment. We did find important evidence that the treatment was more likely to affect people who use social media less. This indicates that our findings constitute a rather conservative inference about the "Chinese Virus" effect. Thus, without careful control of the potential pre-treatment effect, our null finding in the full sample may be problematic. However, our analysis still showed that the "Chinese Virus" label was more likely to affect liberals, which led to their unfavorable perceptions of Chinese immigrants.

Second, our findings were drawn from a convenience sample on MTurk that has limited ability to be generalized. A particularly important disadvantage of our sample is that conservatives were underrepresented. Therefore, considering our subgroup analyses on participants' opinions of Chinese immigrants, the proportion of people in the U.S. who perceive that the Chinese are a foreign threat to U.S. public health may be underestimated. In addition, the MTurk sample ignored people with limited access to the internet, and these people may have reacted more to the treatment effect. Finally, we may reasonably expect that the "Chinese Virus" label's effect may operate differently at the state level, given that Chinese immigrants are distributed unevenly across the country. A convenience sample on MTurk did not allow us to capture such variation with sufficient statistical power. However, we do believe our findings on liberals shed light on the way the label affects the opinion of Chinese immigrants on the internet.

Third, our experiment showed only stigmatization's short-term effect, and thus, we recommend analysis of the "Chinese Virus" label's causal effect in the long-term. The way this label will affect people's perceptions of Chinese immigrants and political attitudes toward immigration policy in the U.S. depends upon public discussion among political elites.

Acknowledging all of these limitations, we encourage future studies that replicate our experiments in different contexts using a more representative sample. However, our study still provides several important insights. First, our findings suggested that the label "Chinese Virus" did elicit liberals' unfavorable perceptions of Chinese immigrants. Liberals constituted 57% of our full sample, and therefore, we argue that it is not a negligible effect. Since this exploratory finding does not hold after adjusting the p value to the avoid multiple comparison problem, this finding merits replications and further examination. Second, our list experiment strategy revealed that people demonstrated negative perceptions of Chinese immigrants overtly during the pandemic. This result provides a preliminary observation of current public opinion of Chinese immigrants. Unlike that of other ethnic groups, Americans' opinions of Chinese immigrants may be influenced by the image of China and the U.S.-China relation rather than their political views on immigration in general. Indeed, a recent poll showed that during the COVID-19 outbreak, more than 60% of respondents reported a negative opinion of China itself (Devlin, Silver, & Huang, 2020).

Third, our experiment indicated that the label "Chinese Virus" is not an effective strategy to prevent the public from blaming the federal government for the way it is managing the pandemic. In an increasingly polarized political environment in which ideological identities are more salient, people's political standpoints may reduce the effectiveness of blame-avoidance strategies. Using ideological-related issues, such as immigration, to achieve blame-avoidance had no effect on the people who shared the same ideology because the government's blameworthiness was predetermined. Similarly, when ideological conflict persists, finding a scapegoat did not affect the level of blame, although a negative perception of the scapegoat was elicited. This finding is consistent with previous research on political motivational reasoning, which suggests that people explain or assign biased weight even to hard evidence and data in a way that justifies expectations that are based strongly on their ideological or partisan identities (Hart & Nisbet, 2012; James & Van Ryzin, 2017).

In conclusion, this study provided evidence that labeling a disease according to a locality can lead to the perception that the people in that area are a threat even in the short term, while a following question is how long such an attitude will hold. In addition, we showed that making one foreign group a scapegoat did not

reduce the blame attributed to the government during the pandemic. Thus, while the label provides no political benefits, it may substantially harm Chinese immigrants and even broadly-defined Asians. President Trump's frequent use of similar phrases, such as "Wuhan Virus" and "Kung Flu" during his campaign may have further adverse effects on the Chinese community over a longer period (Lee, 2020). As our findings suggested that the label had a significant effect on liberals who disapproved of President Trump, we wonder whether the general public shares the unfavorable attitude and potential xenophobia. In contrast to studies of other ethnic groups, less research has focused on Chinese or broadly-defined Asian Americans. Because the social judgment of Asian Americans developed through a different trajectory compared to that of African Americans and Hispanics, research that focuses on Asian Americans may offer additional insights into understanding the decision-making process in an increasingly diverse political environment.

Notes

1. This hypothesis was modified after our preregistration, in which we proposed a heterogeneous effect of the "Chinese Virus" label based on people's partisanship. However, our data analysis following Blair, Chou, and Imai (2019) showed an unexpected measurement error of perceived threat in the Republican group using the list experiment (see Appendix B for the design effect tests for the sample overall and each subgroup). Although the error may have resulted from the small proportion of Republicans in the sample, it made it impossible to test the hypothesis without bias. Thus, following Duflo et al.'s (2020) suggestion, we switched to political ideology, which is a broader concept that shapes people's political opinion (Jost, Federico, & Napier, 2009), to demonstrate the heterogeneous effect.
2. The analytical method was determined after data collection to fit the data's features, and thus, it was not preregistered.
3. Our effect size estimate of blameworthiness is d = .009, with a 95% confidence interval of [-.109, .127]. A total of 381,498 participants are needed to have an 80% probability of detecting the estimated effect size at the .05 level.
4. The result suggests that the significant treatment effect at the .1 level on liberals only persisted in the unadjusted model (before adjustment: p=0.09; after adjustment: p=0.27). However, we suggest that these findings are still worthwhile to report as it comes from an explanatory analysis. Confirmation of the ideological heterogenous effect of perceived threat should be examined and replicated more carefully in future studies.

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