Mask-wearing and Trustworthiness in a Modified Investment Game: A Pilot Study

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Abstract - Since the early days of the COVID-19 Pandemic, face masks have emerged as a flashpoint of controversy in public discourse. While most Americans appreciate the public health importance of mask-wearing, some view masks as an unwanted imposition; some still, an affront to deep-seated values of individual liberty. In this paper, we present the results of an experiment aimed at assessing what effects, if any, face mask usage has on perceptions of an individual's trustworthiness. While previous studies have used images of masked faces to elicit survey responses, this experiment used self-reported mask usage as a primer in a modified investment game to assess potential relations between mask usage and perceived trustworthiness. We find evidence to suggest individuals who report wearing masks more frequently are trusted more than individuals who report seldom wearing masks. Given the importance of trust between often-masked medical professionals and the public in the setting of infectious disease outbreaks, we believe the findings of this experiment may prove fruitful in elucidating the effects of personal protective equipment (PPE) usage on perceptions of trustworthiness.

Keywords - Mask-wearing, Trustworthiness, Trust Game, Investment Game, Public Health

Introduction

Over the past year, mask-wearing has become increasingly controversial among the American public despite a preponderance of scientific evidence suggesting it is a highly effective way to prevent the spread of COVID-19. Some political commentators have asserted that masks have become a central fixture of the 'culture war' between liberal and conservative Americans.[1] Perhaps a case in point, Fox News Host Tucker Carlson likened mask-wearing among children outdoors to child abuse in an astonishing April 2021 prime time segment.[2] The proliferation of such extreme opinions has impeded the global effort to control the spread of COVID-19, which will continue well into the future as vaccine access remains minimal in poorer regions of the world. What's more, with a significant proportion of First World populations unwilling to be vaccinated,[3] it is unclear whether wealthy nations can even achieve herd immunity *within their borders* despite broad availability of vaccines. As such, masks will likely remain instrumental in preventing infections — and by extension, the emergence of potentially vaccine-evading strains — in the years to come. The public health significance of mask-wearing makes it an important topic for social science research. This paper seeks to investigate the correlation between mask-wearing propensity and perceptions of trustworthiness among a cohort of 20 undergraduate students at the University of Pennsylvania.

Previous researchers have used survey data to explore the relationship between mask-wearing and perceived trustworthiness of faces. Current evidence is mixed; some researchers have found a positive correlation between the two variables[4], while others have found a negative correlation.[5] Importantly, this relationship has yet to be explored in an experimental setting. In 1995, researchers Berg, Dickhaut, and McCabe developed the investment game methodology to isolate trust and reciprocity in an experimental setting.[6] A decade later, James C. Cox used the original investment game as part of a

[1] Rick Rojas, "Masks Become a FlashPoint in the Virus Culture Wars," New York Times, June 11, 2020 https://www.nytimes.com/2020/05/03/us/coronavirus-masks-protests.html.
[2] Martin Pengelly, "Fox News Host Tucker Carlson Claims Making Children Wear Masks is Abuse," The Guardian, April 27, 2021, https://www.theguardian.com/us-news/2021/apr/27/tucker-carlson-fox-news-masks-biden-cdc.
[3] "Global Attitudes: COVID-19 Vaccines," Ipsos, accessed April 14, 2022, https://www.ipsos.com/en-ro/global-attitudes-covid-19-vaccine-january-2021.
[4] Olivera-La Rosa, et al, "Keep Your (social) Distance: Pathogen Concerns and Social Perception in the Time of COVID-19," *Personality and Individual Differences* 166 (2020): 110200, https://doi.org/10.1016/j.paid.2020.110200.
[5] Marini, et al, "The Impact of Facemasks on Emotion Recognition, Trust Attribution and Reidentification." *Scientific Reports* 11, no. 1 (2021): 1-14. https://www.nature.com/articles/s41598-021-84806-5.
[6] Berg, et al, "Trust, Reciprocity, and Social History," *Games and Economic Behavior* 10, no. 1 (1995): 122-142

triadic (three game) design to isolate the effect of other-regarding preferences on the amount sent by the investor and trustee.[7] In our experiment, an investment game was conducted, similar to the original as conceived of by Berg, et al. (1995), with one principal modification: the propensity of trustees to wear masks in various situations was quantified by a pre-experiment survey taken by all participants. Investors were shown the mask-wearing score of their respective trustee, similar to the "social history" revealed to participants in the original investment game.[8]

The object of our pilot study was to investigate whether previous survey findings that link mask-wearing to perceived trustworthiness could be replicated in a laboratory setting. Ultimately, we found that investors on average sent more to trustees who reported wearing masks more frequently, though this finding was not statistically significant ($p = .4316$). We also found that investors who scored highly in mask-wearing frequency sent significantly larger amounts to their respective trustees ($p = .0302$). During an infectious disease outbreak, trust between impacted communities and public health officials is vital to containment. A qualitative study conducted in Sierra Leone during the 2014 Ebola outbreak suggested that the PPE worn by health workers frightened patients and contributed to a breakdown in trust between health workers and the community.[9] For that reason, we believe our research, which is the first to investigate mask usage and trustworthiness in a laboratory setting, may hold policy implications, which will be discussed in a later section of this paper.

Literature Review

In researching the relationship between mask-wearing and trustworthiness, we analyzed several key sources from the literature. One study found that mask-wearers are perceived to be more likely to be ill, yet more trustworthy, and more socially desirable.[10] Moreover, Mehta et al. (2020) suggested that mask-wearing can help enhance people's communication skills and can make certain patients feel more comfortable.[11] On the other hand, Marini et al. (2021) found that standard mask-

[7] Cox, James C, "How to Identify Trust and Reciprocity," *Games and Economic Behavior* 46, no. 2 (2004): 260-281.
[8] Berg, et al, "Trust, Reciprocity, and Social History," 132.
[9] Joanna Raven, et al, "Health Workers' Experiences of Coping with the Ebola Epidemic in Sierra Leone's Health System: a Qualitative Study," *BMC Health Services Research* 18, no. 251 (2018): 5, https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-018-3072-3.
[10] Olivera-La Rosa, et al, "Keep Your (Social Distance): Pathogen Concerns and Social Perception in the Time of COVID-19," 1.
[11] Mehta, Urvakhsh Meherwan, Ganesan Venkatasubramanian, and Prabha S. Chandra, "The "Mind" Behind the "Mask": Assessing Mental States and Creating Therapeutic Alliance Amidst COVID-19," *Schizophrenia Research* 222 (2020): 503.

wearing impairs emotional recognition and lowers trust among subjects.[12] Freud (2020) also found that mask-wearing can impair the way people recognize faces, changing their ability to recognize emotions.[13] With currently contrasting findings, we aimed to further study and clarify whether mask-wearing can increase perceptions of a person's trustworthiness. More specifically, while Olivera-La Rosa's findings were based on self-reporting through survey questions, our study aims to investigate trustworthiness and mask-wearing behavior through a modified investment game in order to demonstrate the economic implications of face masks.

In terms of methodology, Berg et al. (1995) created a game to study trust in an investment setting.[14] A study by Cox (2004) utilizes different iterations of this investment game to isolate trust, reciprocity, and other-regarding preferences.[15] He found that trust arises from beliefs about another person's altruistic and reciprocating behavior. Our study utilized a similar methodology as Berg et al. and Cox, with the exception of the introduction of face masks and with the use of points instead of money. We firstly hypothesized that mask-wearing increases perceptions of altruistic and reciprocating behavior, which in turn leads to higher payoffs in an investment game due to increased trust between subjects. Secondly, because trustworthiness is a social norm[16] we hypothesized that mask-wearing increases the perception of one's ability to follow the emerging norm of mask-wearing in the time of COVID-19, making them more likely to adhere to trustworthiness. While Barcelo and Sheen (2020) exhibited that mask-wearing is still not a universal norm, we believed that it is a more accepted norm for our test subjects in a university setting because the university has placed policies on mask-wearing around campus.[17]

In addition to these hypotheses, our study aimed to further find whether there is a difference in the amount returned by mask-wearers and non-mask wearers to the senders in an investment game to explore potential reciprocity effects beyond perceptions of trustworthiness. Based on Fehr and Schmidt (1999), people fall under a spectrum of self-interest and altruism based on studying experiments involving the

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[12] Marini, Marco, et al, "The Impact of Facemasks on Emotion Recognition, Trust Attribution and Re-identification," *Scientific Reports* 11, no. 1 (2021): 1-14, https://www.nature.com/articles/s41598-021-84806-5.

[13] Freud, Erez, et al, "The COVID-19 pandemic masks the way people perceive faces," *Scientific reports* 10, no. 1(2020), 1-8, https://www.nature.com/articles/s41598-020-78986-9.

[14] Berg, et al, "Trust, Reciprocity, and Social History," 122-142.

[15] Cox, James C, "How to Identify Trust and Reciprocity," 260-281.

[16] Bicchieri, Cristina, et al, "Trustworthiness is a social norm, but trusting is not," *Politics, Philosophy & Economics* 10, no. 2 (2011), 170-187.

[17] Barceló, Joan, and Greg Chih-Hsin Sheen, Voluntary Adoption of Social Welfare-Enhancing Behavior: Mask-wearing in Spain During the COVID-19 Outbreak, *PloS one* 15, no. 12 (2020), e0242764, https://doi.org/10.1371/journal.pone.0242764.

ultimatum game.[18] We predicted that mask-wearers fall under the "fair types," which Fehr and Schmidt describe, because they are more cognizant of the positive externalities of mask-wearing during a global pandemic, making them have a higher propensity towards altruistic outcomes.

Methodology

In order to answer our research question, we planned to use a pre-experiment survey and an investment game administered through an online experiment. Firstly, we opted to utilize a pre-experiment survey to obtain information on mask-wearing behaviors of both senders and receivers. More specifically, we used a series of 7-point likert scale questions in order to objectively distinguish low and high frequency of mask-wearing in various environments and activities. Those with a score of 4-5 were characterized as low frequency mask-wearers while those with a score of 6-7 were considered high frequency mask-wearers. In sum, the pre-experiment survey aimed to categorize our respondents which will inform our results on mask-wearing and perception of trustworthiness.

Secondly, after the pre-experiment survey, we strategized to empirically study the level of trustworthiness towards mask-wearers and non-mask wearers through examining the amount sent and returned in an investment game. We specifically chose the economic investment game because according to Cox, the investment game exhibited trust among subjects because a sender would only give a positive amount as their first move if they trust that the receiver would return some positive amount after the initial amount sent is tripled.[19] In addition, we wanted to show that mask-wearing has real economic implications through a controlled game, which could affect government policies surrounding mask-wearing in the future. Overall, the combination of the pre-experiment survey and the controlled investment game will aid us in understanding whether mask-wearing plays a role in increasing perceptions of trustworthiness among senders and receivers.

Theoretical Predictions

If current evidence suggesting a positive correlation between mask-wearing propensity and perceived trustworthiness[20] is to be believed, we would expect to observe a positive correlation between receiver mask-wearing score and amount of

[18] Fehr, Ernst, and Klaus M. Schmidt. A Theory of Fairness, Competition, and Cooperation. *The Quarterly Journal of Economics* 114, no. 3 (1999): 817-868.
[19] Cox, James C, "How to Identify Trust and Reciprocity," 263.
[20] Olivera-La Rosa, et al, "Keep your (social) Distance: Pathogen Concerns and Social Perception in the time of COVID-19," 1.

points sent by the sender in the investment game. If evidence suggesting the contrary is correct[21, 22], we would expect to observe a negative correlation. The chief theoretical explanation for a negative correlation, as posited by Marini, et al (2018) involves an impairment in facial processing and trust attribution caused by surgical mask use. However, our methodology does not involve facial processing at all, as our participants are responding to the mask-wearing score of their counterpart, rather than visually reacting to a masked face. As such, our study, along with future research, may help to differentiate between a 'normative' and 'facial processing' effect, if such effects exist. This, however, is not the primary goal of our study.

If a positive correlation between mask-wearing propensity and perceived trustworthiness is observed, a different theoretical explanation would be required. One possible explanation involves a potential normative "halo effect." Previous studies have established that trustworthiness is a social norm.[23] Given the high rates of mask-usage among the American public and the injunctive messages proliferated through government and media urging the use of surgical masks in public over the past year, mask-wearing is likely a social norm in much of the United States. It is possible that senders allocate more money to receivers who rate highly on mask-wearing because mask-wearing is a social norm, and compliance with one norm may have a halo effect that suggests future compliance with others, like trustworthiness. In that case, senders are inferring that mask-wearers are more trustworthy given their compliance with the mask-wearing norm. In a previous study, the mere exposure of participants to a descriptive norm message concerning healthy eating was sufficient to increase their predictions of the healthy-eating habits of other participants.[24] The authors described this phenomenon as a halo effect, invoking the well-known psychological bias to rate physically attractive people higher on unrelated positive attributes, such as intelligence.

Research Design

We obtained observations on twenty individuals ranging from eighteen to fifty three years of age. Prior to our experiment, participants filled out a brief survey designed to elicit their mask wearing behaviors. We asked each participant to rank on a scale of one to seven the likelihood that they would wear a mask in a variety of situations and environments, both indoors and outdoors. Following the completion of the survey, the average of all mask wearing responses was calculated and assigned to a corresponding

[21] Marini, Marco, et al, "The Impact of Facemasks on Emotion Recognition, Trust Attribution and Re-identification," 1-14.
[22] Joanna Raven, et al, "Health Workers' Experiences of Coping with the Ebola Epidemic in Sierra Leone's Health System: A Qualitative Study," 5.
[23] Bicchieri, Cristina, et al, "Trustworthiness is a social norm, but trusting is not," 170-187.
[24] Hawkins, et al, "The Halo Effect of a Descriptive Social Norm Message," *Appetite* 130 (2018): 307.

profile for each participant. Next, a total of ten investment game sessions were conducted where participants were randomly assigned to a partner and role. For the purposes of this experiment we called the proposer "sender" and the responder "receiver." Five minutes prior to each investment game session, senders received an email with a link to their unique game lobby and a one sentence bio containing the mask wearing score for the receiver in their session. The receiver received the same email, minus the one sentence bio containing the mask wearing score for their partner. In each session, participants were directed to a unique online game lobby and were instructed to read the directions for the modified investment game. After reading these instructions participants were asked to complete a quiz to verify their understanding of the game, which started after both participants completed this assessment.

Due to the constraints of the Covid-19 pandemic, we did not equate in game points with dollars or another sum of money. At the beginning of the investment game, senders were allocated ten points which corresponded with ten raffle tickets towards a gift card prize purchased with a grant provided to us through the Philosophy, Politics, and Economics Department at the University of Pennsylvania. Receivers were allocated zero points at the start of the experiment. First, senders decided how many of their ten points to send to the receiver. Any positive amount of points sent to the receiver was tripled before the transfer to the receiver was completed. Then, the receiver would decide how many of their newly acquired points to return to the sender. Each pair of participants was asked to play the investment game only once, with no subsequent rounds. Pairs were given an unlimited amount of time to make their decisions concerning the transfer of points to their partner. The participants spent no more than ten minutes playing the game.

As a follow up to the investment game, we surveyed all participants one week after their session. We asked senders whether the decision to send a positive amount of points to the receiver was influenced by the fact that receivers began with no endowment of points. We also asked receivers whether the decision to send a positive amount of points to the sender was influenced by the fact that they did not begin with an endowment of points. All participants had the opportunity to elaborate on what motivated them to send any positive amount to their investment game partner.

Data Analysis

Table 1. Participant Mask Scores and Point Transfers

Group Number	Sender Score	Points Sent	Reciever Score	Points Returned	Sender Final	Reciever Final
1	6	5	5	5	10	10
2	7	5	6	5	10	10
3	7	5	4	0	5	15
4	6	5	5	5	10	10
5	7	5	7	15	20	0
6	5	2	5	3	13	3
7	5	3	7	9	16	0
8	5	5	7	5	10	10
9	7	10	7	25	25	5
10	7	5	7	10	15	5

Table 1 lists the mask scores for each participant and the point transfer decisions made by each participant. For the purposes of the analysis, we categorize a mask wearing score of six or greater as a high mask wearing score and a score of five or lower as a low mask wearing score. Based on the results of the post experiment survey, seven senders and all ten receivers responded that their decision to transfer a positive amount of points was not influenced by the unequal endowment at the beginning of the game. This means that a minority of our senders were motivated to send a positive amount of points through inequality aversion, or guilt, and all of our receivers were motivated to send a positive amount of points due to reciprocity.

The regression analyses offer more detailed conclusions with regards to understanding the relationship between our variables. We will unpack the results of such analyses as follows. First, we ran a multivariate regression using mask scores for senders and receivers as independent variables and sender transfers as the dependent variable. This first regression analysis tests our theoretical prediction that individuals with high mask wearing preferences are perceived as more trustworthy than those with low mask wearing scores. It also tests whether high mask wearing individuals are more generous than low mask wearing individuals, where generosity is quantified by the amount of points transferred to the receiver. The second regression analysis uses receiver mask wearing scores as the independent variable and the proportion of receiver point transfers as the dependent variable. This model probes whether a higher mask wearing score is associated with higher displays of reciprocity, quantified by the proportion of point back transfer by receivers. The proportion of receiver point transfers was used rather than the actual point counts to prevent distortion in the data caused by variability in the initial point transfers by senders. The third regression analysis explores motivations of receivers in their decision on how many points to

transfer back to the sender. This model probes whether high mask wearing individuals are correlated with higher displays of reciprocity, and attempts to identify the key motivators for a positive point return.

Table 2. Regression Analysis of Mask Wearing Scores vs. Sender Point Transfers

Multiple Regression of Mask Scores vs Sender Transfers

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-6.16	5.05	-1.22	0.26
Sender Score	1.32	0.64	2.05	0.08
Reciever Score	0.50	0.51	0.98	0.36
Significance F: 0.14				
R / Adjusted R Square: 0.43 / 0.26				

Table 2 describes the results of a multiple regression analysis where sender point transfers are the dependent variable, and mask wearing scores for the senders and receivers are the independent variables. For this model, the significance of the F statistic does not meet our alpha threshold of 0.05. This means that this pilot experiment does not contribute any evidence for our theoretical prediction that individuals who wear masks more frequently are perceived as more trustworthy by others. Given that the F statistic was insignificant, neither of the independent variables were significant with respect to this model. As such, we are unable to reject the null hypothesis that greater mask wearing frequency is associated with trustworthiness.

Table 3. Regression Analysis of Receiver Mask Wearing Scores vs. Proportion of Receiver Point Transfers

Regression of Reciever Mask Scores vs. Proportion of Reciever Transfers

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-0.80	0.39	-2.04	0.08
Reciever Score	0.22	0.06	3.46	0.01
Significance F: 0.01				
R / Adjusted R Square: 0.6 / 0.55				

Table 3 describes the results of the regression analysis where the proportion of receiver point transfers is the dependent variable and the receiver mask wearing scores are the independent variable. The F statistic meets our alpha threshold of 0.05, meaning that this model is statistically significant. Our R and adjusted R square values show that this model fits the data fairly well, and that at least fifty five percent of the variation in the data set is explained by using receiver mask wearing scores as our independent variable. The *p*-value for receiver scores meets our alpha threshold of 0.05 percent with a wide margin, which offers evidence in support of the prediction that individuals with high mask wearing scores exhibit greater degrees of reciprocity. For each increase in one unit of mask wearing frequency scores for receivers, the proportion of receiver transfers back to senders increased by 0.22 percentage points. As such, individuals with

higher mask wearing scores demonstrate greater displays of reciprocity than individuals with lower mask wearing scores.

Table 4. Regression Analysis of Potential Reciprocity Motivators vs. Proportion of Receiver Point Transfers

Regression of Potential Transfer Motivators vs. Proportion of Recipient Transfers				
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-0.76	0.42	-1.82	0.11
Proportion Sent	-0.19	0.40	-0.48	0.64
Reciever Score	0.23	0.07	3.29	0.01
Significance F: 0.04				
R / Adjusted R Square: 0.61 / 0.5				

To further explore our findings under the regression analysis reported in table 3, we ran another multivariate regression analysis that uses the proportion of points transferred by the sender and the receiver scores as independent variables and the proportion of points transferred back by the receivers as the dependent variable. Again, the F statistic meets our alpha threshold of 0.05, which indicates that this model is also statistically significant. Our R and adjusted R square values show that this model also fits the data fairly well, and that at least fifty percent of the variable in the data set is explained based on our independent variables. However, only the receiver score variable had a significant *p*-value. This means that for each increase in a receiver's mask wearing score, the proportion of point transfers by recipients increases by 0.23 percentage points. This provides evidence that supports the claim that individuals that practice mask wearing and have higher mask wearing scores are motivated to display reciprocal behavior due to their compliance with other social norms, rather than how generous the initial sender point transfer may have been. Further research may be conducted on whether individuals who comply with mask wearing norms exhibit behavior in line with the social norm of reciprocity compared with individuals who comply with mask wearing norms less often.

Conclusion, Finding Implications, and Policy Prescriptions

Mask-wearing has been recommended and advised by countless health and political professionals around the world. Despite innumerable research concluding the benefits of wearing a mask, the politicization of this health crisis has created stark divides. The COVID-19 pandemic has continued throughout the United States for over a year and yet the fragmentation of the American public has created a political quandary out of a public health crisis. "Anti-maskers" continue to vocally resist wearing any type of mask on the basis of protecting personal liberties. Not only are individuals in this country opposing basic scientific studies, but they are claiming fake news as their information sources. Violent distrust and misunderstanding have permeated our

country, and through our research, we have worked to discover the means of trustworthiness within the realm of wearing a mask.

The United States holds no uniformity in policy when it comes to public health mandates, penalties, enforcement, and non-compliance measures. The established heterogeneity of language surrounding mask mandates and the COVID-19 pandemic only furthers distrust and establishes divides within the American public. Not only does the COVID-19 pandemic show the lack of uniformity when it comes to public protection, but it's revealed the mass extent to which partisan politics infiltrated public health decisions. The great American political divide, exacerbated through the efforts of the Trump administration, is apparent in the decisions of individuals to wear masks. The stark polarization of contemporary politics, especially within the global health system, has created distrust.

Through our research, we did not find evidence in support of the claim that mask wearing behavior significantly improves how trustworthy an individual is viewed by others. However, we do find evidence in support of the claim that individuals who exhibit a high degree of mask wearing behavior demonstrate greater displays of reciprocity. Mask wearing scores were positively correlated with the proportion of points that recipients transferred back to the sender. Furthermore, the proportion of recipient transfers to senders was significantly and positively correlated with receiver mask wearing scores. In other words, if an individual were to often engage with the norm of wearing a mask, they may be more likely to exhibit reciprocal behavior to a greater extent than individuals who do not comply with the norm of wearing a mask. With these initial findings, we suggest that future researchers utilize a bigger sample size in the modified investment game to report a more accurate relationship between mask-wearing and trustworthiness. When this relationship is more established, we suggest that governments and public health officials continue encouraging the public to wear their masks in order to be perceived more trustworthy by those around them. Campaigns with a trust perspective may be more effective because they could appeal to people's pursuit of approval from those around them. By utilizing this perspective in their messaging as countries slowly recover from COVID-19, further outbreaks from the virus can be prevented.

While we succeeded in determining a relationship between reciprocity and mask-wearing, our research proposition did not take into account participants' political orientation. While this would not have changed the results of the study, it could allow for us to expand our understanding of trust and reciprocity into a more generalized political sphere. Does today's vast polarization stem from general distrust of different parties' agendas, or is it more individualized such as seeing someone with or without a mask? Not only would we be able to understand the decision making process across political lines, but our research could help discover and further understand how political organizations and individuals were capable of establishing today's great political divide within the United States.

Appendix A. Mask-Wearing Behavior Survey

Dear Participants,

Thank you for participating in this study. We are students from the College studying mask-wearing during COVID-19. We are conducting this study to know about your experiences and attitudes towards mask-wearing. If you have agreed to answer this questionnaire, you will also be included in our experiment proper over Zoom where you will have a chance to win a $30 Amazon gift card. You will receive an email with details about this once you complete the survey.

The following questionnaire will take approximately 5 minutes to complete.

If you have any questions about the survey, please email us at josellep@sas.upenn.edu.

We sincerely appreciate your input!

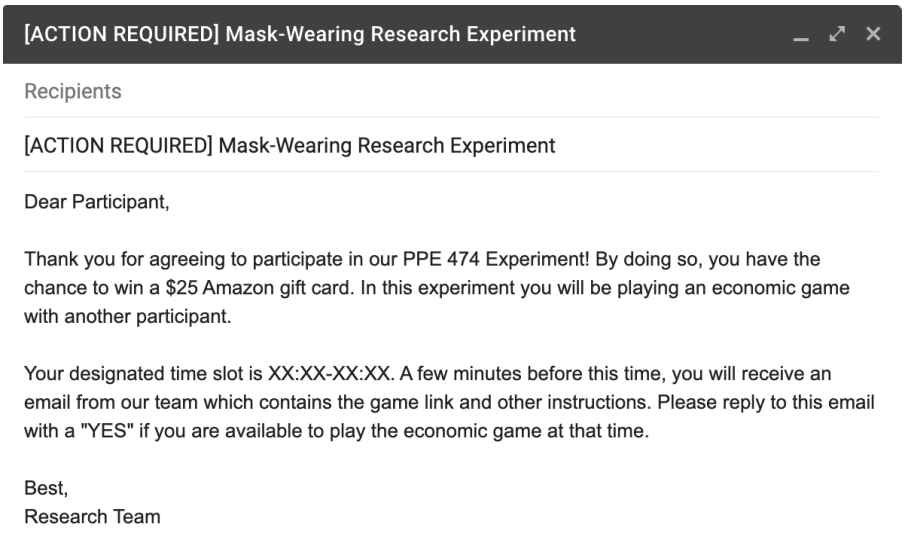
Please rate how likely you wear a mask in the following places. (1- Extremely Unlikely; 7- Extremely Likely)

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
Friend's house	○	○	○	○	○	○	○
Gym	○	○	○	○	○	○	○
Grocery	○	○	○	○	○	○	○
Work	○	○	○	○	○	○	○
School	○	○	○	○	○	○	○
Gas Station	○	○	○	○	○	○	○
Cafe	○	○	○	○	○	○	○
Pharmacy	○	○	○	○	○	○	○
Restaurants	○	○	○	○	○	○	○
Park	○	○	○	○	○	○	○

Please rate how likely you wear a mask in the following activities. (1- Extremely Unlikely; 7- Extremely Likely)

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
Playing sports	○	○	○	○	○	○	○
Going for a run outside	○	○	○	○	○	○	○
Visiting a museum or library	○	○	○	○	○	○	○
Waiting for food in a restaurant (indoor)	○	○	○	○	○	○	○
Waiting for food in a restaurant (outdoor)	○	○	○	○	○	○	○
Attending a gathering at your friend's place	○	○	○	○	○	○	○
Going to the beach	○	○	○	○	○	○	○
Shopping at a mall	○	○	○	○	○	○	○
Attending a religious service	○	○	○	○	○	○	○
Going to a bar	○	○	○	○	○	○	○

Appendix B. Confirmation Email



[ACTION REQUIRED] Mask-Wearing Research Experiment

Recipients

[ACTION REQUIRED] Mask-Wearing Research Experiment

Dear Participant,

Thank you for agreeing to participate in our PPE 474 Experiment! By doing so, you have the chance to win a $25 Amazon gift card. In this experiment you will be playing an economic game with another participant.

Your designated time slot is XX:XX-XX:XX. A few minutes before this time, you will receive an email from our team which contains the game link and other instructions. Please reply to this email with a "YES" if you are available to play the economic game at that time.

Best,
Research Team

Appendix C. Experiment Emails

Game Link Email format to Investor (Sender):

Dear participant,

Thank you for agreeing to participate in our group's experiment today. You have been randomly paired to play an economic game with a participant who scored **SEVEN (7)** on a scale of 1-7 for frequency of mask use in various activities and places.
After the game, please send us a screenshot of your results by replying to this email.

Click the **game link** at the **BEGINNING** of your designated time and complete the game within **10 minutes**. If you have any trouble with playing the game, please find this **zoom link** where you can ask questions to the researchers.

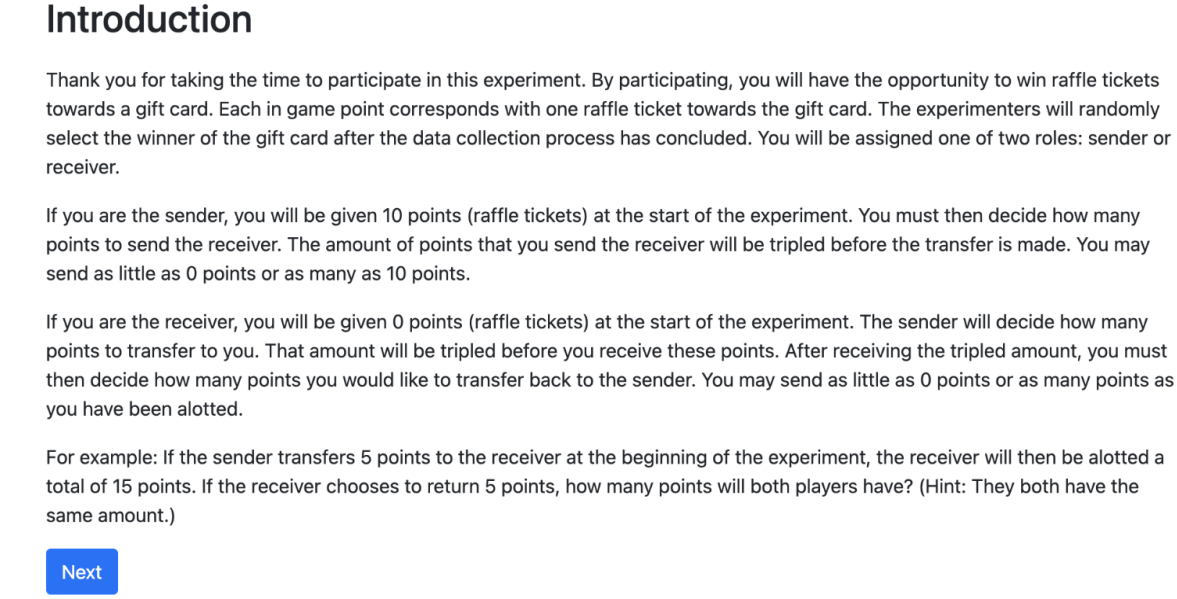
Game Link Email format to Trustee (Receiver):

Dear participant,

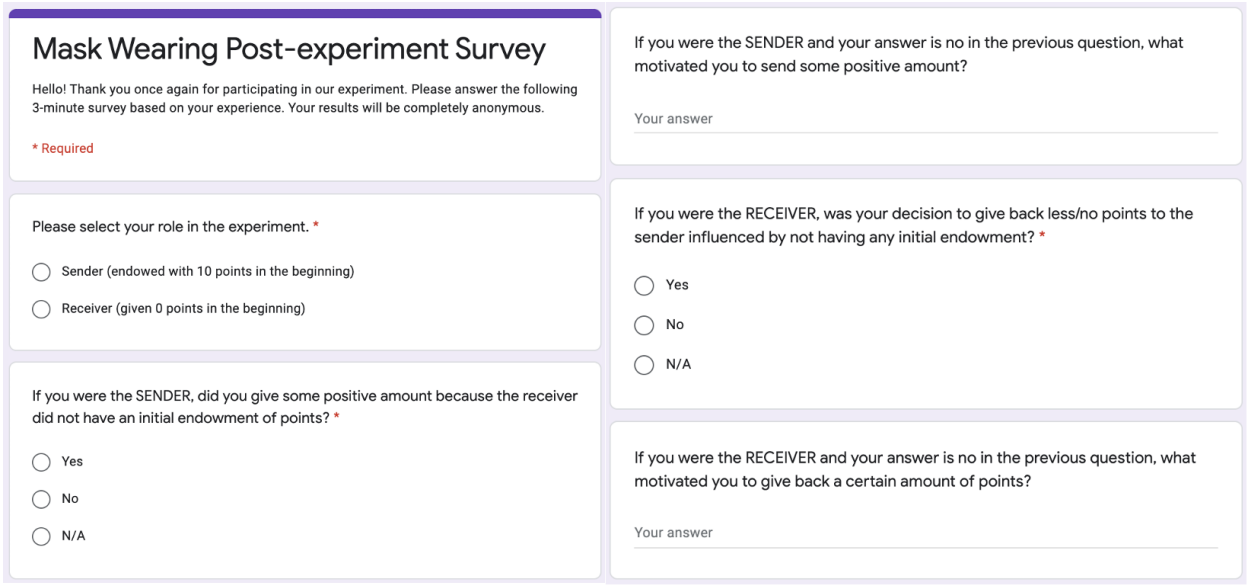
Thank you for agreeing to participate in our group's experiment today.
After the game, please send us a screenshot of your results by replying to this email.

Click the **game link** at the **BEGINNING** of your designated time and complete the game within **10 minutes**. If you have any trouble with playing the game, please find this **zoom link** where you can ask questions to the researchers.

Appendix D. Investment Game



Appendix E. Post-Experiment Survey



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