

Effect Of Audio-based Anthropomorphized Message And Humanoid Facial Expression On People’s Compliance and Anticipatory guilt

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Background & Hypotheses

Promotion of social causes can be rather ineffective in many societies, due to the sense of diffused responsibility and the lack of immediate personal gain. Past research suggested using anthropomorphism, or presenting human qualities in non-human objects, as a cost-effective tool in promoting social causes (Ahn et al., 2014). The effect of anthropomorphism is explained by an anticipated feeling of guilt, since such feeling of guilt can influence people’s emotion and attitude and also serve as a motivation to help strangers (Ceder, 2017; Lindsay, Yun & Hill, 2007).

However, a replication of Ann et al. (2014)’s study failed to discover any significant findings (William et al., 2007). The researchers suggested that some characteristics of anthropomorphized campaign would influence the effectiveness of anthropomorphism-compliance tool. Previous study has shown that if people receive an audio message, they are more likely to infer that the message is generated by human than if they saw it in a textual form (Schroeder & Epley, 2016). Thus, we are interested in how people may respond to audio message that is anthropomorphized vs. non-anthropomorphized. In addition, we suspect that an appreciable part of the effect of anthropomorphism found in Ann et al. (2014)’s study is due to the presence of humanlike expression on the character, and if we remove such factor while retaining the anthropomorphized message, we should observe a weaker effect of anthropomorphism on people’s compliance to the message.

Hypotheses:

- Verbally anthropomorphizing a social cause appeal should increase people’s compliance to the message as well as their anticipated feeling of guilt.
- Adding a humanlike expression to the character in the message (the face in our study) should result in a higher rate of compliance to the message and an increased level of anticipatory guilt.
- The effect of anthropomorphism should depend on the presence of humanlike expression such that when the character has a humanlike expression, the difference between anthropomorphized message and non-anthropomorphized message is larger compared to when the character lacks expression.
- The higher the level of anticipatory guilt is, the more compliance to the message people would report (i.e. anticipatory guilt is positively correlated with compliance level).

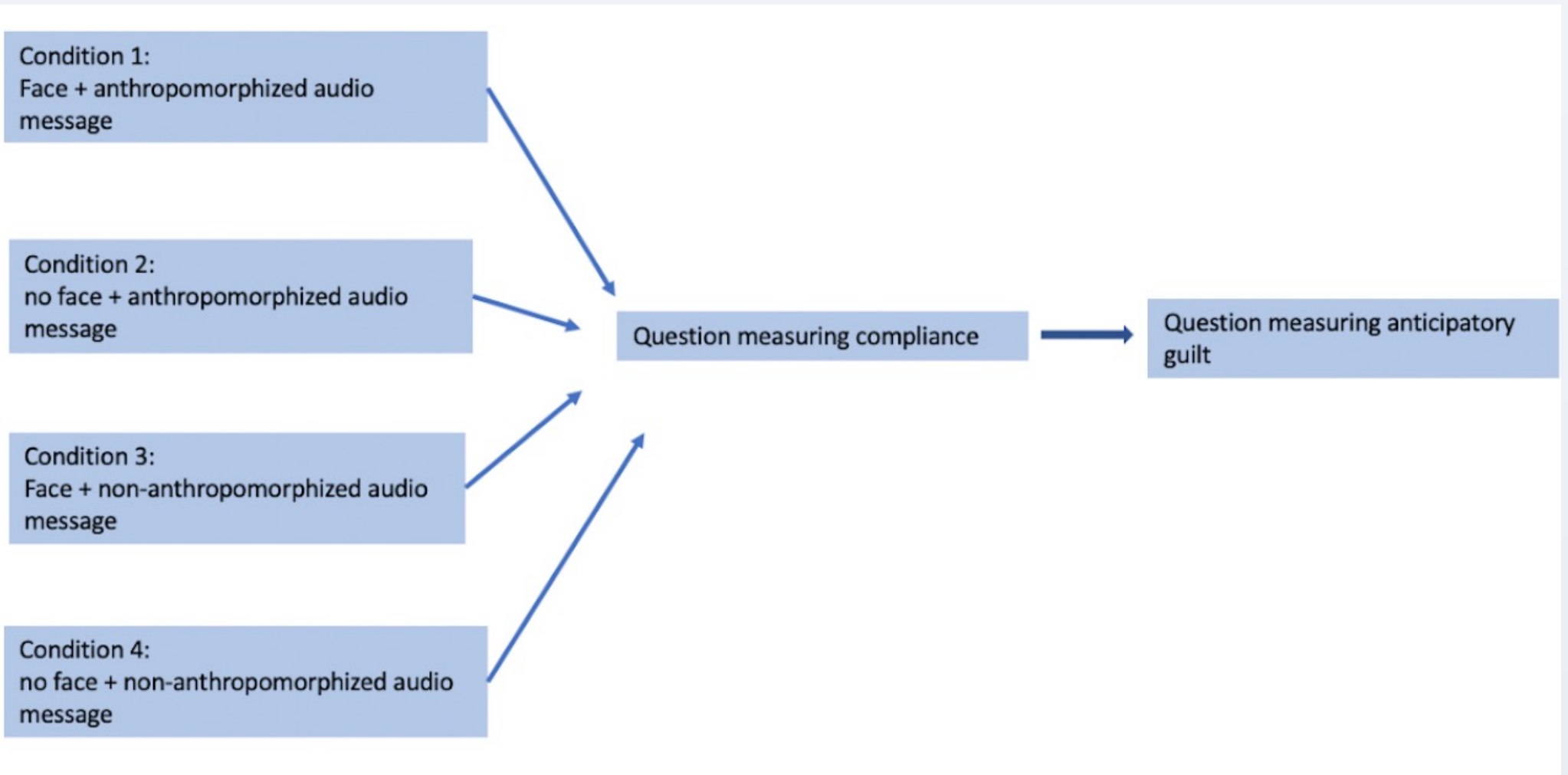
Methods

Subjects are friends and family of the authors in this study. We have a sample size of 60, among which 43 are females, 17 are males. All the participants are Asians, and the average age is 20.58. There are 24 freshmen, 18 sophomore, 4 junior, and 14 senior. Using convenience sampling, we sent out the survey link in social media and recruited participants who voluntarily responded to the survey.

We have two independent variables, one is the version of an audio-based message that persuade people to comply with it, the other one is the presence of face. We manipulate the independent variable using between subjects. Each of the independent variable include two qualitative levels, for audio-based message the levels are: anthropomorphized audio-based message and non-anthropomorphized audio-based message; for face the levels are: the object have a face and the object don’t have a face. Our dependent variables are participants' compliance with the audio message and their feelings of anticipatory guilt.

Procedure:

Participants in each condition looked at one picture and listened to a short audio, then answered 1 question measuring compliance and 4 questions measuring anticipatory guilt.

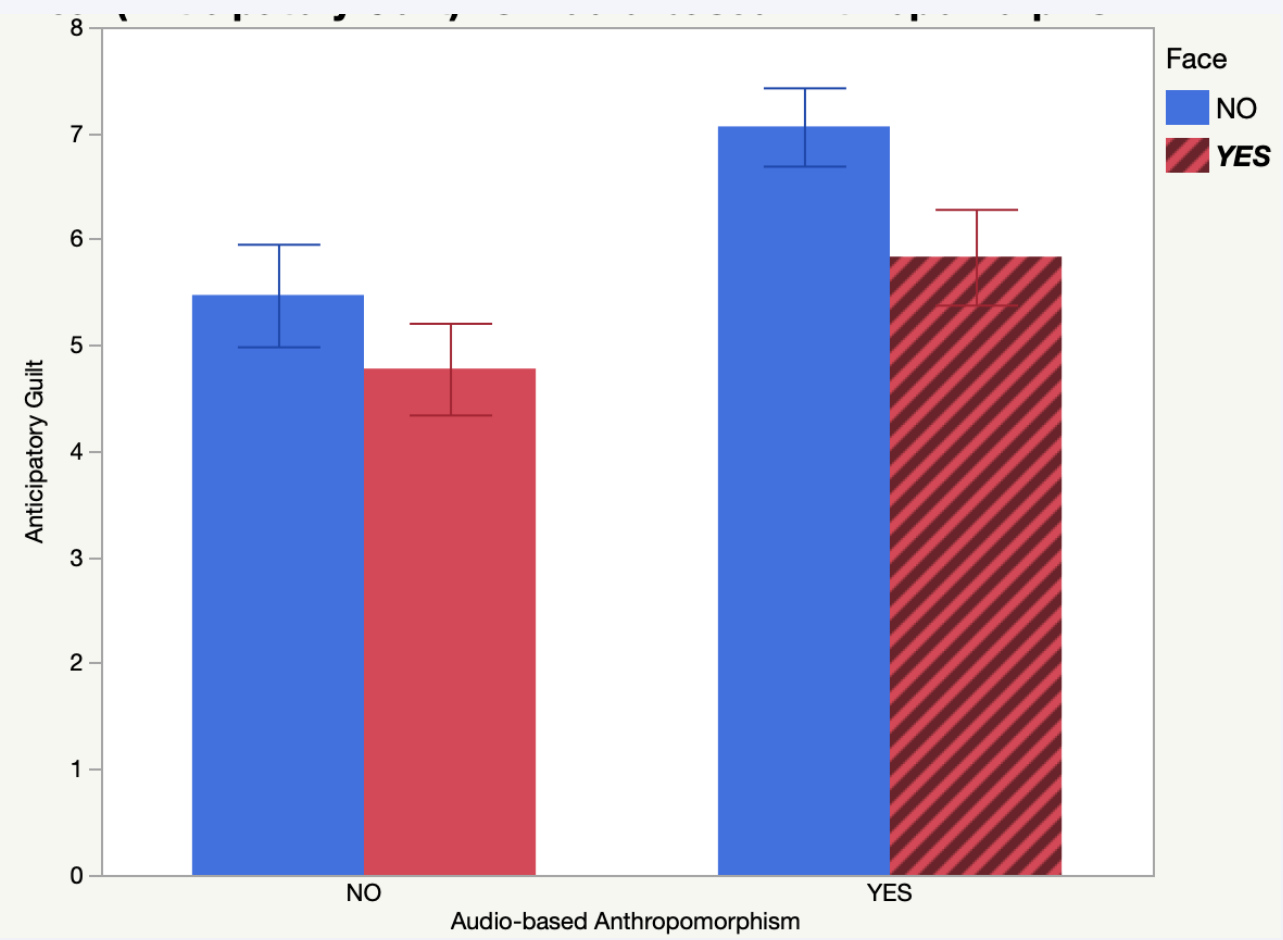


Material



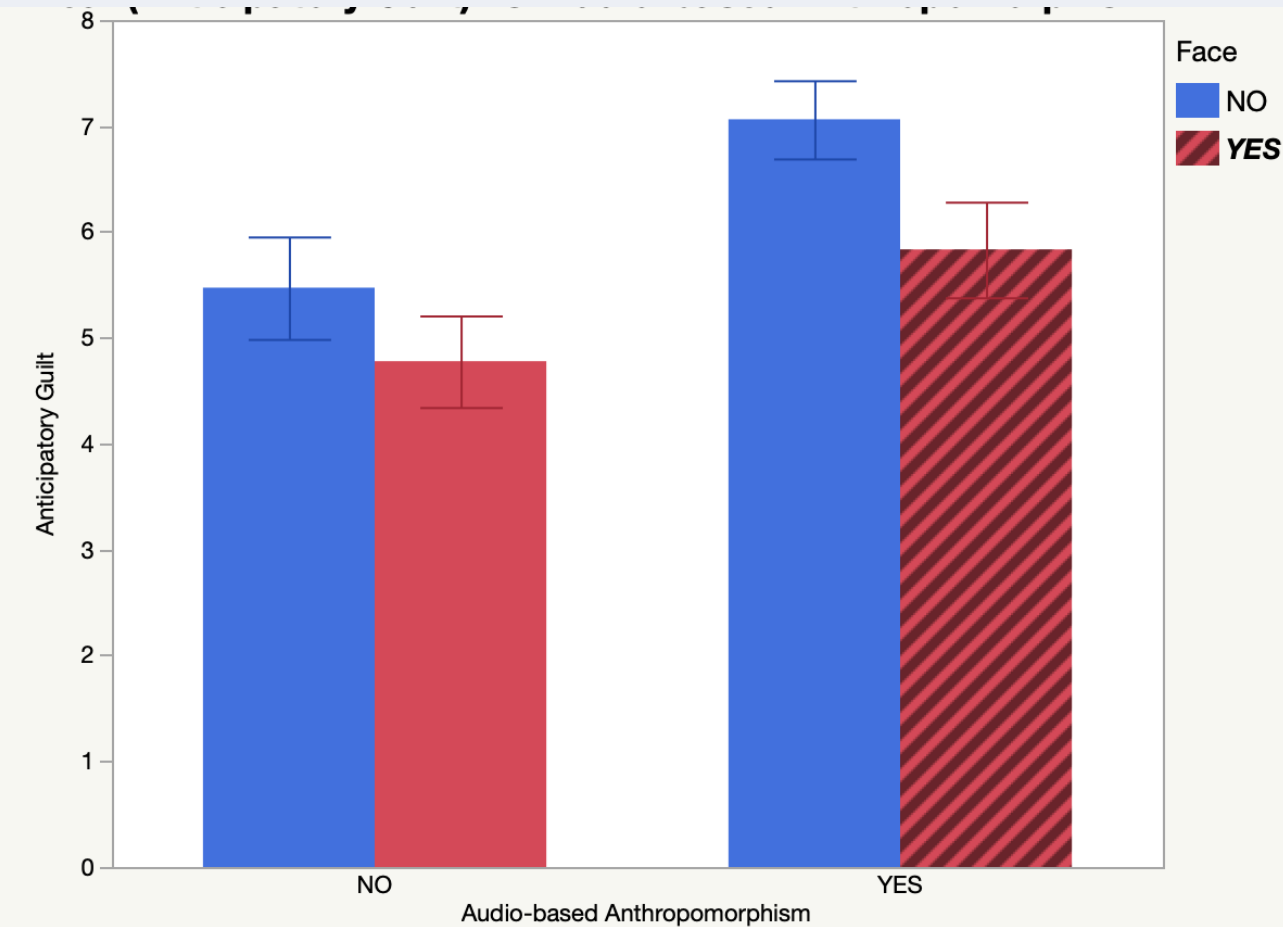
Results

Compliance



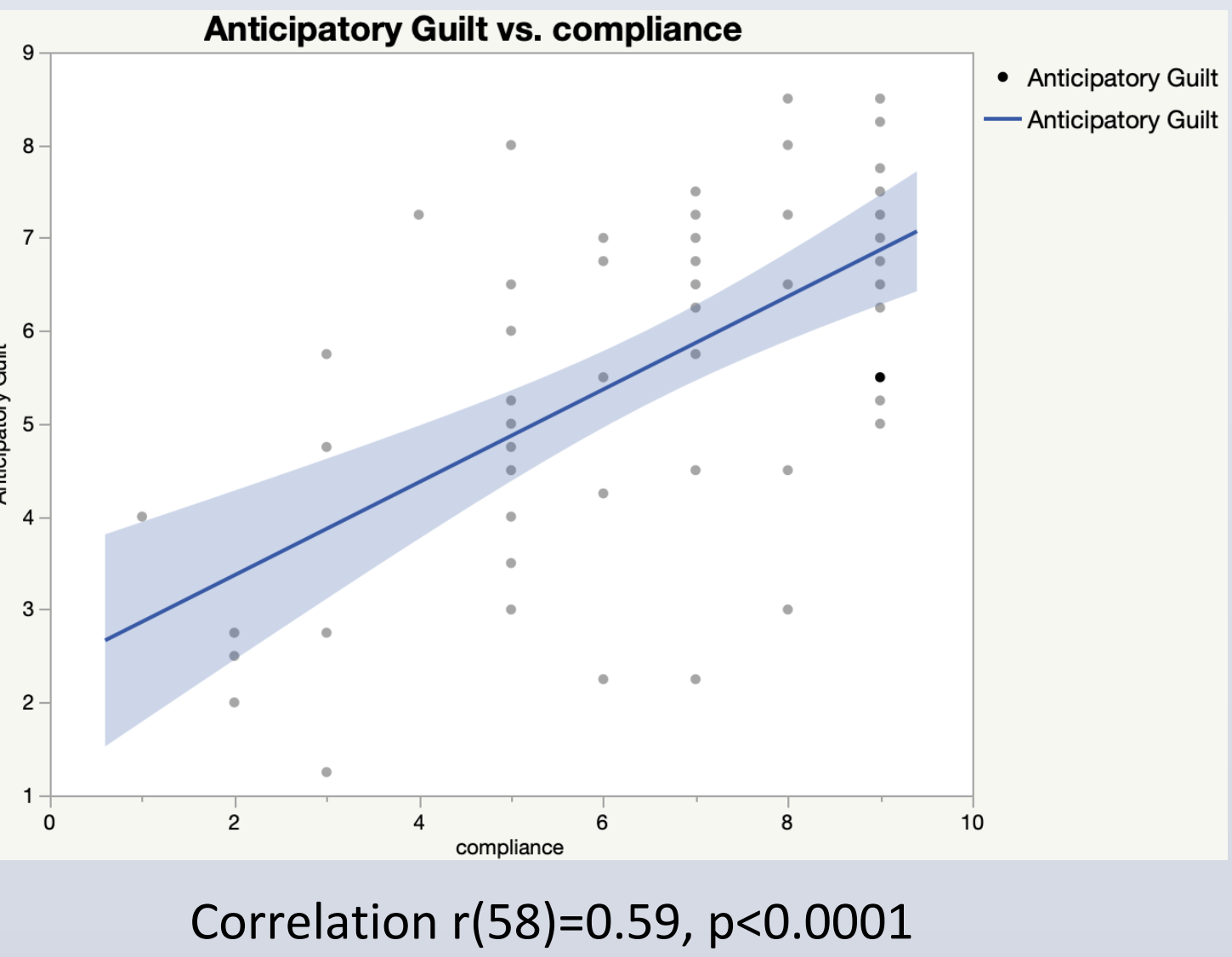
Face ($F(1,56)=3.30$, $p=0.075$)
Audio-based Anthropomorphism ($F(1,56)=1.90$, $p=0.17$)
Face*Audio-based Anthropomorphism ($F(1,56)=0.64$, $p=0.43$)

Anticipatory Guilt



Face ($F(1,56)=5.25$, $p=0.026$)
Audio-based Anthropomorphism ($F(1,56)=8.69$, $p=0.005$)
Face*Audio-based Anthropomorphism ($F(1,56)=0.11$, $p=0.745$)

Correlation



Discussion

We failed to find a significant effect of either face or anthropomorphism on participants’ compliance rate and we found a significant effect of both face and anthropomorphism on participants’ guilt rate by using a factorial ANOVA and a between subject design. Overall, our hypothesis is partially accurate.

We successfully predict that anthropomorphism has a significant effect on stimulating the feeling of guilt. Also, as we predicted, anticipatory guilt is positively correlate with compliance rate.

Spuriously, the conditions that have face on the trash can have lower rating on both compliance and guilt. It is possible that the crying face on the trash can advocate a negative feeling which will decrease people’s compliance.

Although we alternate the content of recording, the voice was done by a student. If we use the voice of a robot, it might result in more significant effect for that it eliminates the effect of human voice.

Our sample composes of 60 Asian college students which is relatively small and could lead to inaccurate results due to insufficient sample size. Cultural difference might play a role in the final results of rejecting our hypothesis as well.

Future Directions

This study contributes to the discussion between anthropomorphism and anticipatory guilt by indicating the influence of audio-based anthropomorphized message on participants’ feeling of anticipatory guilt. Since we surprisingly found out that conditions with humanoid face on study stimuli resulted in lower participants’ compliance and feelings of anticipatory guilt, more questions have raised for future research. One possible cause for this result might be the type of facial emotion on the anthropomorphized object. In our study, for example, the anthropomorphized trash bin had a sad face, signified by tears and downward corners of mouth. We surmised that people might be less relate to negative facial emotion than to positive facial emotion. Thus, further research might focus on whether types of facial emotion on anthropomorphized objects affects people’s compliance and feeling of anticipatory guilt.

References

- Ahn H.K., Kim H.J., Aggarwal P. (2014). Helping Fellow Beings: Anthropomorphized Social Causes and the Role of Anticipatory Guilt. *Psychological Science*, Vol. 25(1) 224–229.
- Ceder, J. (2017). Anticipatory and Reactive Guilt Appeals: Their Influence on Consumer Attitudes and the Moderating Effect of Inferences of Manipulative Intent (Dissertation).
- Lindsey, L. L. M., Yun K.A., & Hill, J.B. (2007). Anticipated Guilt as Motivation to Help Unknown Others: An Examination of Empathy as a Moderator. *Communication Research*, 34(4), 468–480.
- Williams L.A., Masser B., Sun J. (2015). Revisiting the Effect of Anthropomorphizing a Social Cause Campaign.