Senior Projects Spring 2020   Bard Undergraduate Senior Projects

Spring 2020

The Cost of Avoidance: Predicting Avoidant Behavior versus Confrontational Behavior in Response to Interpersonal Conflict

Charlie Heath Wood
Bard College

Recommended Citation

The Cost of Avoidance: Predicting Avoidant Behavior versus Confrontational Behavior in

Response to Interpersonal Conflict

Senior Project Submitted to

The Division of Science, Mathematics, and Computing

of Bard College

by

Charlie Wood

Annandale-on-Hudson, New York

May 2020

Acknowledgments

Thank you first and foremost to my advisor, Kristin Lane. This project in its current, completed form would not exist without your guidance, input, and support.

Thank you to the entire staff of the psychology department for being so passionate and eager to help your students learn and succeed.

Thank you Stuart Levine for being my first psychology professor at Bard and teaching me the importance of speaking my ideas loudly and "with force". I'm sure we would have had a great discussion about the implications that my project has on theories of obedience. Rest in peace, Stuart.

Thank you to my family and friends, and to my mom and dad especially for being fundamental, unwavering pillars of support throughout my college career and throughout my life. If I didn't have you as parents, this Sproj would have never happened (though maybe that wouldn't have been so bad).

And thank you to Finlay, Baxter, Siouxsie, Hannibal, and Jackson – those canines and felines that brought me comfort whenever I thought of home.

Table of Contents

Abstract

When faced with an interpersonal conflict, people respond with avoidance or confrontation. Past research demonstrates that avoidance generally does more harm than good. The goal of this proposal is to investigate what causes an individual to be avoidant despite the negative consequences associated with avoidance. Supported by the extant literature, this proposal offers an argument for two specific factors that influence how a person responds to conflict, which are: 1) "need for social connection", which describes the extent to which someone feels socially included or excluded, and 2) "modeled behavior", which describes a person replicating a behavior they see someone else express. My hypotheses are: 1) participants with a high need for social connection (i.e. they feel socially excluded) will be more avoidant than individuals with a low need; 2) participants who witness someone model avoidant behavior will be likely to also express avoidant behavior; and 3) there will be an interaction effect between these two factors such that the influence of modeled behavior will depend on whether the participant has a high or low need for social connection, and vice versa. To test these hypotheses, 212 undergraduate students will be assigned to one of four possible conditions in a study that will experimentally induce either a high or low need for social connection, and will model either avoidant or confrontational behavior. At the end of the study, participants will be given $12 instead of the advertised $16 as compensation. This study is interested to see which participants will avoid the conflict by accepting the money, and which participants will confront the conflict by refusing the incorrect payment. Predicted results coincide with predictions stated in the hypotheses. Limitations and future directions are discussed.

Introduction

Imagine you are standing in the insufferably long TSA security line at an airport (a distant memory I almost miss during quarantine) when someone cuts in front of you. How you respond will certainly depend on a number of factors, but ultimately, much like the concept of "fight or flight", your options are two-fold: let it slide, or do something about it. This predicament lends itself to the general question that is a focus of this paper: what motivates people to be confrontational or avoidant when dealing with an interpersonal conflict? This study attempts to identify and test two specific factors that influence whether someone is ultimately either confrontational or avoidant.

I will first argue that a person's level of need for social connection will influence their behavior; specifically, the more someone feels left out and consequently has a higher need to be socially connected, the more avoidant that person will be. Similarly, someone who feels included and has a low need for social connection will likely be confrontational. Second, I will argue that modeled behavior will influence how someone behaves. Specifically, if a person observes someone else modeling avoidant behavior, that person will then be likely to also express avoidant behavior. The argument is the same for confrontational behavior.

Avoidance versus confrontation

When it comes to being cut in line at the airport, both types of responses have their pros and their cons. Being confrontational may win you back your spot, though your assertiveness may inadvertently deem you a security risk to the TSA and consequently delay you further as you get "randomly selected" for more in depth security screenings. Being avoidant, on the other hand, may help to prevent further problems, though you will definitely be further delayed by the cutter in front of you and may later lambaste yourself for not standing up for yourself.

Despite the potential validity of both response types, one study elucidates that a confrontational response strategy is invariably more beneficial for the person responding to conflict. The authors of the study found that conflict avoidant behavior in response to workplace incivility – defined as "low intensity deviant acts with ambiguous intent to harm the target [of the incivility]" – resulted in more harmful psychological consequences for participants than did responding with confrontational behavior (Hershcovis, Cameron, Gervais & Bozeman, 2018, p. 163). These harmful psychological consequences included: decreased psychological forgiveness, which involves the target of workplace incivility forgiving the perpetrator, serving to alleviate the psychologically detrimental effects that result from harboring negative emotions toward the perpetrator and the self; decreased well-being for the target of incivility, which was measured as emotional exhaustion; and increased enacted incivility, whereby recipients of incivilities reciprocated the same incivilities toward others. Confrontational individuals, on the other hand, experienced less psychological stress and more psychological forgiveness, which allowed for better interpersonal relationships within the workplace.

So, according to the results of this study, avoidant behavior is counter-intuitively more costly, both socially and psychologically, than confrontational behavior. These results prompt one to wonder why avoidance is ever a preferred strategy at all in response to low-intensity conflict. Of course for something high-intensity – for example, getting robbed – avoidance, i.e. complying and not fighting back, would be most logical. Although, avoidance could still have its consequences as, in light of the issue of psychological forgiveness, even after high-intensity conflicts such as this it may take a few therapy sessions for a victim to forgive himself and be absolved of the harmful thought-loop, "I should've done something".

Further evidence of the negative consequences associated with avoidance comes from a study that investigated the effect that sexual harassment has on a female interviewee's performance during a job interview. By inserting a few subtly sexually-harassing questions (e.g. "Do you have a boyfriend?") into an otherwise normal, innocuous job interview, researchers found that participants who were subject to the sexual harassment were rated by objective observers to be less competent and less intelligent than control participants and, overall, performed worse than controls by speaking less fluently, giving lower quality answers, and asking fewer job-related questions. (Woodzicka & LaFrance, 2005; Woodzicka & LaFrance, 2005). It is important to note that while some of the participants confronted the interviewer by asking questions such as, "why is that relevant?" most participants avoided direct confrontation. The authors hypothesize that these avoidant participants were rated less competent by objective observers because of the frequency with which they smiled during the interview.

Counter-intuitively, these participants smiled more often than control participants, particularly immediately after hearing the harassing questions. The researchers hypothesized, correctly, that women faced with subtle sexual harassment would react by smiling more often, however their smiles would not be genuine and would instead be "social" smiles, differentiated from genuine smiles in part by a lack of wrinkles around the eyes. The researchers utilized a method known as the Facial Acting Coding System (FACS; Ekman & Friesen, 1978) to code for smiles, which is a comprehensive system that exhaustively breaks down all possible facial muscle movements into what the system calls "action units". Using this system to look particularly at smiles when reviewing silent video footage of the interviews, the researchers indeed found that the participants in the subtle sexually harassing condition gave more social smiles than participants in the control condition.

It is unclear exactly why the women who gave social smiles were rated as less competent, however it seems true that these smiles served as a way of avoiding the conflict. Instead of calling out the harassing interviewer, understandably, the women chose to smile through the conflict in their efforts to land the job, perhaps in order to convey the message that they were not negatively affected by the inappropriate inquiries. Though the intention was for the avoidance to work in their favor, this tactic instead had an adverse effect on the female participants. While it is uncertain whether direct confrontation would have resulted in more favorable outcomes, avoidance nonetheless did not work. This raises the primary, more specific research question that is the crux of this proposal: what causes an individual to be avoidant despite the negative consequences associated with avoidance?

Reasons for avoidance

One reason may be one's denial that there even exists a conflict that needs to be confronted. Upon completion of the interview in the aforementioned study, the researchers asked participants about the degree to which they felt sexually harassed, and the degree to which they imagined others would feel sexually harassed in the same scenario. The participants reported feeling sexually harassed significantly less than they imagined others would feel in the same situation. In other words, they imagined other people would feel harassed whereas they themselves did not feel they had been harassed. The researchers propose that this dissonance may actually be a way for the participants to confront the situation. In this way, they are able to make a complaint about the inappropriate sexual nature of the interview but not have to admit their own vulnerability during the encounter, a sort of half-confrontational, half-avoidant response.

Another study illustrates that avoidance may actually be the default coping strategy for some, despite their desire to be confrontational. Researchers conducting a study investigating people's responses to racism found that participants who imagined witnessing acts of racism significantly over-predicted how angry they would feel about the act and how much they would socially reject the perpetrator of the racist act (Kawakami et al., 2009). In the study, participants were assigned to either an "experience" condition wherein they would witness first-hand a confederate participant use a racial slur when talking about another confederate participant, or to a "forecaster" condition in which they would simply imagine this scenario. As it turns out, antithetical to the forecasters' predictions, participants in the "experience" condition were rather indifferent to hearing the racial slur, as they "reported little [emotional] distress regardless of the type of comment [the types of comment were none, moderately racist, and extremely racist]" (Kawakami et al., 2009, p. 277). And, when later in the study the participant had to choose between pairing up for a task with the confederate who said the slur or pairing with the other confederate who was the target of the slur, participants didn't show a significant preference either way.

As evidenced by the forecasters' predictions, the participants in the "experience" condition surely must have been aware of the presence of the conflict created when the confederate used the racial slur. We would like to think that when we witness injustices in the world, it would be a "no-brainer" to take a stand and confront the injustice head on. Why, then, did participants in this study not confront the apparently racist confederate, or at least report feeling distressed at having witnessed the racism? Why did they not display a preference for the target of the racism when picking a partner and instead choose rather indifferently? Perhaps, in the heat of the moment, like the women in the job interview study, the participants resorted to

attempting to deny the presence of the conflict. If the participants react indifferently, then they don't have to take on the responsibility of rectifying the issue, and they don't have to take on the emotional baggage that accompanies distressing conflicts. Still, this does not directly answer the question: what makes someone avoid a conflict rather than confront it? As previously mentioned, the present study offers an argument for two causal factors that play a role in predicting avoidant versus confrontational behavior.

Need for social connection (NSC)

The first factor is what this proposal terms "Need for Social Connection". For some, conflict-avoidant behavior is preferred in order to avoid exacerbating a conflict because the anticipated negative consequence – exacerbated conflict – outweighs the potential gain of resolution achieved through confrontation; in other words, avoidant people would rather walk away from the conflict than have it blow up in their face by confronting it. The present study proposal operates under the assumption that the anticipated cost associated with exacerbated conflict is an anticipated social cost because avoidant individuals predict that confrontational behavior will have negative social ramifications; or, predict that conflict-avoidance will result in better social outcomes.

This theoretical understanding is supported by a study in which an anticipation of future loneliness in older people predicted conflict-avoidant behavior because the older-aged participants feared that confrontational behavior would potentially damage their current and much desired social ties (Oberhauser, Neubauer & Kessler, 2017). For these participants – who scored significantly higher than other participants on a measure of anticipated loneliness – the potential cost of losing social connection outweighed the potential gains that would be obtained

by resolving a conflict through confrontation, and this fear prompted them to be conflict avoidant.

Alternatively, but still in accordance with this social-ramifications theoretical underpinning, another study found that middle-aged men used avoidance as a conflict-coping strategy more often than older aged men when faced with two specific conflict types, which the authors labeled "problem solving" and "authority-conflict", demonstrating an interaction between age and conflict type on behavioral response to conflict (Feifel & Strack, 1989). The authors theorize that this may be because older aged individuals feel that they actually have less to lose when responding with confrontational behavior to these specific conflict types. Thus, older aged individuals are more willing to be confrontational compared to middle-aged men who are more worried about potential social costs incurred through confrontational behavior. However, the authors point out that, in general, both middle-aged and older-aged men preferred a problem solving coping strategy instead of an avoidance coping strategy across conflict types. Problem solving, as defined by the authors as "tackling a situation or taking direct action", can be used interchangeably with the term "confrontation" (Feifel & Strack, 1989, p. 27).

Similar to the study regarding the discrepancy between imagined and actual responses to racism, but more directly associated with need for social connection, one study found that although women reported that they would confront a sexist or otherwise offensive interviewer during a job interview regardless of the level of social cost, women were actually less likely to confront if there was a higher social cost at stake than if there was a lower social cost (Shelton & Stewart, 2004). To operationalize social cost, women were assigned to either a "low cost" condition, wherein they interviewed for a job at a charity that was not competitive at all and offered low wages, or to a "high cost" condition in which they interviewed for a highly selective,

highly competitive job that offered a large salary. Using the same sexist and offensive questions that Woodzicka and LaFrance used, participants in a forecasting condition predicted that they would confront the interviewer for being so inappropriate regardless of what job they were interviewing for. However, as shown in the study, when women have more to lose in terms of social standing/social hierarchy, they are more likely to avoid the conflict and simply appease the instigator of the conflict.

Comparing these results to those from the Feifel & Strack article, which compared conflict-coping strategies between middle-aged and older aged men, it would seem that both women in general and middle-aged men similarly resort to avoidance instead of confrontation. However, for middle-aged men this is only in response to certain conflict types. Combining the results from both articles would seem to illustrate that men in general prefer confrontation across conflict types, while women in general seem to prefer avoidance. This is not conclusive, however, because unlike the Feifel & Strack article, research on women's conflict-coping strategies have not compared responses to different conflict types. One may make the assumption that women in general are more avoidant than men, though more research would need to be conducted in order to come to an empirically based conclusion regarding these gender differences.

This need-for-social-connection hypothesis and its reasoning are further supported by a two-experiment study that was conducted in order to establish and validate a projective measure that assesses, what the authors termed, "need for affiliation" (Shipley & Veroff, 1952). The experimenters found that participants who were both primed to fear social rejection and participants who had recently experienced social rejection more often projected feelings associated with social separation, fear of isolation, and need for affiliation. This study is

important because it establishes the possibility of experimentally inducing feelings of social

inclusion/isolation. Using this concept to predict social behavior, one may theorize that

individuals who express a high need for affiliation will intuitively choose to avoid conflict, rather

than confront it, in order to maintain what social connections they presently have. This idea is

supported by theoretical concepts regarding passiveness, aggressiveness, and assertiveness

proposed by Duckworth and Mercer (2006):

> Passiveness [which can be used interchangeably with "avoidance" for the purposes of the
>
> present study proposal] is characterized by an over-attention to the opinions and needs of
>
> others and the masking or restraining of personal opinions and needs. This over-attention
>
> to and compliance with the opinions and needs of others may serve as a strategy for
>
> conflict avoidance and/or maintenance of particular sources of social "reinforcement." (p.
>
> 80)

So, people who harbor a general need for the establishment and maintenance of social

connections are more likely to avoid conflict in order to fulfill this need.

This concept was actually validated by an experiment that used a virtual game that was

developed in order to induce feelings of ostracism. Termed "Cyberball", researchers developed a

videogame that had participants pass a ball between two other computer-programmed players.

These computer-players would either continually pass the ball to the participant to make him feel

included, or would only pass to each other to make him feel ostracized (Williams et al., 2000;

Ruggieri et al., 2013). Players had an option to quit the game at anytime, and this option was

utilized faster and more often by participants in the ostracism condition. Indeed the game evoked

visceral reactions from participants as the authors Williams et al. (2000) recount:

> Another [ostracized participant] wrote, "Felt like I was having fun. Then I didn't get the

disc back and felt left out, ignored." Still another wrote, "Surely green is trying to appear

nice with purple... I assume he 'wants' to please 'her' and disregard my feeling about

her!... As I leave I'm somewhat happy their behavior will surely make them guilty when

they will notice I went away. As I leave I remember it is quite the same in my real

life...and this is the most painful!"

In the latter participant's description, "green" and "purple" refer to the two other players in the

game. This participant's imaginative love story between green and purple, however, is not

something I will attempt to explain.

In support of the theory that a strong need for social connection causes someone to be

avoidant, the researchers conducted a second experiment wherein they found that ostracized

participants were more likely to conform and give incorrect responses on a perception test, much

like Asch's seminal line test (Williams et al., 2000). Immediately following completion of

Cyberball, participants were asked to complete a perception test wherein the participant observed

a simple geometric shape like a square on screen for five seconds. Then the participant was

shown a slide that contained six geometrically-complicated figures, but only one contained the

original simple shape inside it. The test was set up so that the participant was ostensibly one of

six participants concurrently completing the task, and that the participant would be the sixth

person to answer, being able to see each previous participant's answer. If the five other

confederate participants unanimously gave the wrong answer, participants in the ostracized

condition were more likely than particiapnts in the inclusion condition to conform and also give

the wrong answer.

So, to put this finding into terms of avoidance and confrontation, when participants faced

the internal conflict of whether to object and provide the right answer, or instead just follow the

herd, the participants who needed social connection avoided creating further conflict and did what they could to appease the others. In this instance, it would have been confrontational to provide the correct answer. However, by being avoidant, the participants felt they stood a better chance of being accepted by the incorrect majority.

Modeled behavior

In addition to the influence of anticipated social consequences, this proposal argues that avoidant behavior, as well as confrontational behavior for that matter, can be explained by modeled behavior, wherein a person replicates a behavior expressed by someone else. More specifically, if a person observes someone else respond to conflict with either avoidance or confrontation, that observer will be primed to act similarly and will model that behavior.

This hypothesis is generated in part from the results of a study wherein people who experience rude behaviors are likely to enact those behaviors toward other people (Foulk et al., 2016). In this study, the researchers had undergraduate students participate in negotiation exercises with a partner. Throughout the course of the 7-week study, participants had the opportunity to negotiate with 16 different partners. After each negotiation exercise, part of the participant's task was to rate their partner on a variety of scales, including a scale for rude behavior. The authors found that if a participant had a rude partner, on the subsequent negotiation exercise their new partner would rate the participant as ruder, implying that the participant is modeling the rude behavior that they previously experienced. The authors term this process a "contagion effect", imagining rude behavior spreads like a cold. However, in principle, this process works the same as modeling behavior. In light of the results of the previously mentioned study regarding workplace incivilities, it would seem that the potential for modeling

rude behaviors is particularly true if the person is conflict-avoidant in response to those rude behaviors. (Hershcovis et. al, 2018).

This behavioral modeling hypothesis is additionally supported by inferences generated from the results of a study that demonstrate that witnessing rude behavior in the workplace first thing in the morning negatively affects task performance and primes individuals to observe more rude behaviors throughout the work day (Woolum, Foulk, Lanaj & Erez, 2017). In the study, some participants were shown video footage first thing in the morning that ostensibly depicted workplace interactions for the purposes of a critical thinking exercise. However, some of the target videos depicted rude interactions between employees. In one video, for example, when asked by a fellow employee to cover his shift, the employee being asked did not look up from his work and "responded rudely to the request" (Woolum et. al., 2017, p. 1663).

The authors did not explicitly state what the rude remark was, nor did they explain how the employee who was the recipient of the rude remark responded to this workplace incivility. However, in the discussion section, when the authors use the results to offer advice to managers – saying that the negative effects of workplace rudeness can be curtailed "if managers take measures to limit rudeness in the morning (e.g., by being polite and *voiding rude remarks* [italics added for emphasis])" – the authors imply that no one was confronting the instigators of these rude behaviors (Woolum et. al., 2017, p. 1667). So, one can infer that people generally behaved with avoidance in response to rude behaviors, perhaps by staying quiet or walking away. This inference helps explain why the researchers also found that people who witnessed rude behaviors early in the morning were more likely than others to avoid social interactions all together. I am arguing that these individuals experienced increased avoidance because they witnessed others

express avoidance. Perhaps if they had watched video footage of someone confronting the rude

employee they would not be so avoidant.

Interaction between social connection and modeling behavior

Certain formative studies in the field of psychology point to an interaction effect between

need for social connection and modeling behavior. For example, in Asch's line test, participants

who felt a greater threat of being ostracized by the majority for giving the correct answer were

more likely to concede and give the wrong answer than if the social threat was not so high (Asch,

1951). For instance, when participants had to give their answers aloud after multiple

confederates unanimously gave the same wrong answer, participants were more likely to

conform to the group. However, when participants were allowed to give their answers in private,

they were less likely to conform. So, in this case, the level of need for social connection felt by

the participant has an influence on whether or not the participant models behavior. Here I

understand modeled behavior to be a component of conformity. Theoretically, when someone

alters their behavior to match that of the group, the group is essentially modeling the behavior for

the person to match. This process of matching modeled behavior for social purposes is

understood as conformity. And, when someone models the group's behavior though the person

knows it is incorrect, that person is being avoidant in response to conflict (confrontation would

require the person to go against the group).

In Latane and Darley's seminal smoke-filled room study, participants were more likely to

report smoke entering the room if they were alone than if they were with two other confederates

who did not react to the smoke (Latane & Darley, 1968). While the ambiguous nature of the

threat caused participants to look to others for information, the results also indicate that

participants did not want to act in a way that would ostracize them from the group. An

overwhelming majority of participants who were alone in the room found the threat to be worthy

of reporting. Participants in the group condition must have similarly found the threat to be

alarming, but did not want to act contrary to the group's modeled behavior and therefore

conformed.

The present research

This study proposal attempts to tackle the question: what motivates people to be avoidant

in response to interpersonal conflict despite the negative consequences associated with

avoidance? My first hypothesis (H1) is that a person's level of need for social connection will

predict avoidance versus confrontation. Specifically, a high need for social connection will

predict avoidance, and a low need will predict confrontation. My second hypothesis (H2) is that

the type of behavior that is modeled for someone will influence his or her behavior. Specifically,

if a person observes avoidant-modeled behavior, that person will express avoidance. If the

person observes confrontational behavior, that person will be confrontational. My third

hypothesis (H3) predicts an interaction between these two factors. A person's level of need for

social connection will predict whether or not they model certain behaviors. Specifically, if

someone has a low need for social connection (which predicts confrontational behavior), and

observes avoidant-modeled behavior (which predicts avoidance), that person will not be

motivated to replicate avoidant-modeled behavior and will instead still be confrontational.

Additionally, if someone has a high need for social connection (which normally predicts

avoidance), but that person observes confrontational-modeled behavior, that person will be

motivated to also be confrontational as a way of developing a social tie with the person modeling

the behavior.

To test these hypotheses, participants will be randomly assigned to one of four possible conditions, which are created from having two levels of need for social connection (high and low) and two levels of modeled-behavior (avoidant and confrontational). After both independent variables have been manipulated, the participant will be presented with the experimental conflict: being given the incorrect amount of money as payment for participation. According to my hypotheses, assignment to condition will predict whether participants are confrontational or avoidant in response to this conflict.

Methods

Participants

Using G-power, I calculated the number of participants that would be needed for the study using a two-tailed logistic regression with a power of .95, alpha of .05, R^2 other X value of 0.81, and X parm π of 0.50. This resulted in 108 participants when accounting for 1 independent variable. The current study manipulates two independent variables, resulting in a total of 216 participants. These 216 participants will be undergraduate students recruited from university campuses. A 2x2 experimental design will yield 4 conditions, allocating 54 undergraduate participants per condition. A random number generator procedure will be used to assign participants to condition. Limiting participants to undergraduate students limits the influence of potential extraneous variables, including age. Recruiting strategies will include campus-wide emails that include an advertisement flyer as an attachment sent out to all undergraduate students. The flyer will instruct interested volunteers to fill out an online form where they will enter their email address and answer some questions in order to be considered for potential participation in the study. The flyer will also inform participants that they will receive $16 for participation. This will be a salient part of the flyer. The flyer should say something similar to

"Do you want $16? Participate in this study and receive $16 (sixteen dollars) just for playing

video games!" It is imperative that participants are unequivocally informed that they will receive

$16 for participating. Flyers will also be posted on salient bulletin boards around the campus as

well as near the library, the bathrooms, the dining halls, and other high-traffic areas.

Exclusions.

Participants will be excluded if they meet DSM criteria for social anxiety, depression,

and/or psychosis because these mental illnesses may influence participants' behaviors

independent of the anticipated influence of the manipulated variables, which would make it

difficult to disentangle whether the collected data are the result of the manipulated variables or

the result of individual mental illnesses/personality traits. The flyer will prompt interested

students to complete an online form that will include inventories for social anxiety, depression,

and psychosis. Participants who are successfully screened will receive a follow-up email

regarding scheduling a time that is convenient to conduct the experiment. Participants who

submit a form that indicates a potential diagnosis of social anxiety, depression, or psychosis will

receive an email thanking them for their time and informing them that their participation is not

needed but their willingness to volunteer is appreciated. The email will also include information

regarding mental health resources available on their campus and in the local area.

Experimental location.

The location of the experiment should be in a professional looking office building in

order to increase legitimacy and ensure active participation from volunteers. The location will

require three separate rooms. The first is the waiting room, where participants will first enter and

be greeted by the experimenter. This is also a room where later one of the DVs will be measured.

The second room is the receptionist's room, which has three functions: 1) this is where the

participant will sign the consent form; 2) this is where one of the experiment's two independent

variables will be manipulated; 3) this is where the primary dependent variable will be observed.

The third and final room will be the computer room. This is where the other independent variable

will be manipulated and where a test will be administered for the purposes of maintaining the

cover story. See figure 1 for an illustration of the experimental location.

Computer Room:
• One IV manipulated
• Test given for cover story

Computer

CHAIR

DESK

CHAIR

Receptionist's Room:
• Consent forms
• One IV manipulated
• Primary DV observed

CHAIR | CHAIR

Waiting Room:
• Participant greeted
• Secondary DV observed

CHAIR

CHAIR

Entrance
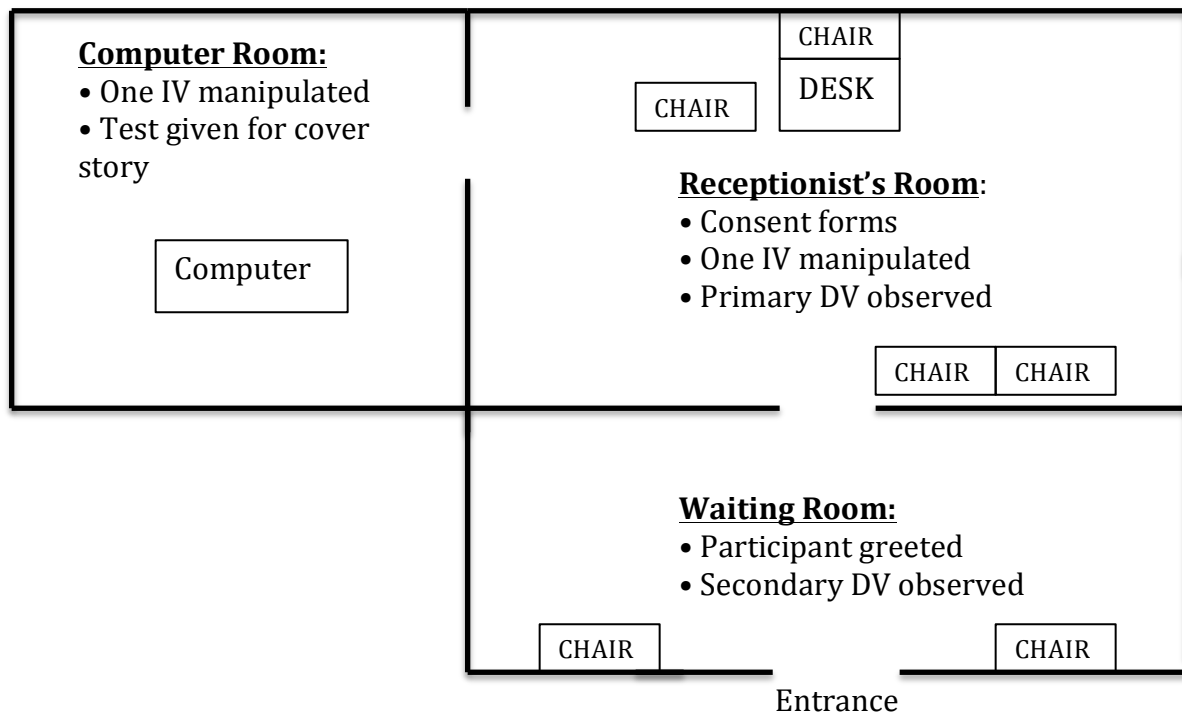
Figure 1. A drawing of the ideal schematics for the office space in which the experiment should

occur. There are three rooms: waiting room, receptionist's room, and computer room.

Overview.

Participants will be told that they are participating in a study that is examining the effect

that playing computer games has on test-taking abilities. When participants arrive at the location

of the experiment, they will enter into the waiting room. From here, the experimenter will greet

them and usher them into the receptionist's room. Here, participants will sign a consent form

(see appendix A). It will inform participants that the goal of the study is to assess the impact that

playing computer games has on test-taking abilities, and that they are free to leave the study at any point and still receive compensation. The experimenter will additionally offer oral consent, explicitly stating that the participant is free to leave at any time, and that the participant will receive $16 for participating, regardless of whether the participant chooses to leave early.

For the study, two independent variables will be counterbalanced and manipulated. One of these variables involves the participant playing a videogame on a computer. This will occur in the computer room. To maintain the cover story, after the participants plays the videogame, a "spot-the-difference" test will be administered (see appendix B). The other IV manipulation will occur in the receptionist's room.

After both of the IV's have been manipulated, the experimenter will follow a script for a false debriefing (see appendix C) in the receptionist's room, then exit into the waiting room. At this point, the receptionist will clearly and visibly count out $12 with one ten-dollar bill and two one-dollar bills, an incorrect amount of compensation, and will offer it to the participant. How the participant reacts (with avoidance or confrontation) is the primary dependent variable being observed. If participants are confrontational – i.e. they question or otherwise confront the receptionist – then the study is terminated. If the participants are avoidant – i.e. they accept the money and leave – then they will exit through the waiting room where the experimenter will be waiting. At this time, a secondary dependent variable will be observed. The participant will either confront the experimenter about the incorrect sum of money, or the participant will again avoid the conflict and attempt to leave. The study will be terminated following these two potential outcomes. See figure 2 below for a flowchart delineating the procedural steps.

```
                    ┌─────────────────────┐
                    │   Greet participant │
                    │     and receive     │
                    │       consent       │
                    └─────────────────────┘
                              ↓
                    ┌─────────────────────┐
                    │     Independent     │
                    │      Variable       │
                    │ Manipulation: IV₁   │
                    │      or IV₂         │
                    └─────────────────────┘
                              ↓
                    ┌─────────────────────┐
                    │     Independent     │
                    │      Variable       │
                    │ Manipulation: IV₁   │
                    │      or IV₂         │
                    └─────────────────────┘
                              ↓
                    ┌─────────────────────┐
                    │    Receptionist     │
                    │     underpays       │
                    │    participant      │
                    └─────────────────────┘
```

Greet participant and receive consent

Independent Variable Manipulation: IV_1 or IV_2

Independent Variable Manipulation: IV_1 or IV_2

Receptionist underpays participant

Participant confronts conflict by refusing money

Participant avoids conflict by accepting money

Participant exits into waiting room and sees the experimenter

Participant confronts experimenter about payment

Participant avoids experimenter and attempts to leave

End study and debrief participant

Figure 2. A flowchart delineating the steps involved in the procedural plan.

Materials

Screenings for mental illnesses.

Participants will be screened for social anxiety using the Social Phobia Inventory (SPIN);

for depression using the revised Beck's Depression Inventory (BDI-II); and for psychosis using

the Community Assessment of Psychic Experiences (CAPE-42). The purpose of screening for

these mental illnesses is to control for certain personality traits as extraneous variables because

these traits may interfere with and mitigate the desired influence of the manipulated independent

variables within the study. In other words, these mental illnesses/personality traits may explain

the data more than the manipulation of the IVs; to prevent this, the online form will screen for

participants who meet the criteria for these particular mental illnesses.

SPIN. The SPIN is an effective measure for the screening of social phobia,

demonstrating good psychometric properties, including test-retest reliability, internal

consistency, and convergent and divergent validity (Connor et. al, 2000). The SPIN consists of

17 items rated on a scale of 1-4, resulting in a total possible score of 68 (see appendix D). A

score of 19 separates participants who have social phobia from healthy controls. For the purposes

of this study, any volunteer who scores a 19 or higher will be excluded from participating in the

experiment.

BDI-II. The BDI-II, a 1996 revision of the original BDI developed by Aaron Beck, is

effective in evaluating for depression and demonstrates good psychometric properties (Beck,

Steer & Brown, 1998; Wang & Gorenstein, 2013; Dozois, Dobson & Ahnberg, 1998). The BDI-

II consists of 21 items rated from 0-3 on level of severity for a total possible score of 63. A score

of 21 or higher indicates at least moderate depression, so for the purposes of this study, any

volunteer who scores a 21 or higher will be excluded from participating.

   CAPE-42. CAPE-42 is a valid and reliable self-report measure for assessing psychosis

(Konings et. al, 2006). The measure is a 42-item self-report that measures two dimensions of

psychotic symptoms: frequency (1 = "never"; 2 = "sometimes"; 3 = "often"; 4 = "almost

always") and degree of stress caused by symptoms (1 = "not distressed"; 2 = "a bit distressed"; 3

= "quite distressed"; 4 = "very distressed"). The measure also accounts for three different

subscales of psychotic symptoms: positive, negative, and depressive. Total scores range from 42-

168. The positive subscale uses 20 items and has a score range of 20-80. A cut-off score of 50 on

the positive subscale has been shown to effectively detect psychosis in participants (Boonstra,

Wunderink, Systema, & Wiersma, 2009). For the purposes of this study, any volunteer who

scores a 50 or higher on the positive subscale will be excluded from participating in the

experiment.

Cyberball.

   Cyberball is a videogame that has been used to make people feel ostracized or not

(Williams, Chung & Choi, 2000). The game was invented in order to test the effects of

"cyberostracism" compared to the effects of real-life ostracism on people's mood and behavior.

The game involves the participant believing that they are playing an online game with two other

real people, however these two players are actually computer generated and behave according to

an algorithm. During the game, the three players pass a ball amongst each other and appear to

freely choose whom to pass the ball to.

When it was initially developed, the research goals resulted in four possible game modes in order to vary the level of ostracism: overinclusion, inclusion, partial ostracism, and complete ostracism. For the purposes of the present study, only the inclusion and complete ostracism modes will be used. The game will be accessed on a computer that has downloaded the game using a website link (http://www.empirisoft.com/cyberball.aspx) that was created by Kipling D. Williams, who was one of the researchers on the original Cyberball study (Williams et. al, 2000). Once the participant accesses the game, the procedure outlined in the original study will be followed:

Participants picked one of seven colors to represent themselves in the game. Their color choice was confirmed, and they were informed which colors the other players had chosen (in fact, the computer randomly assigned the other players' colors). This was the only information provided about the other players.

For each turn a message and animation were presented on the screen, detailing what had happened. The message and animation varied according to who threw and who caught the flying-disc as well as whether the throw and the catch were good. The message had the following structure: "[Thrower] threw the flying-disc to [receiver]. It was a good (bad) throw. [Receiver] caught (did not catch) it." [Thrower] and [receiver] were replaced with the respective player's chosen color in the appropriately colored word. In cases in which the participant was either the thrower or receiver, then "You" (in the participant's chosen color) was placed appropriately in the message. To maintain enough variability to make the interaction interesting, the probability of a good throw or a good catch was set at .9. This was held constant for all players (both the participant and the computer-generated players) in all conditions.

When participants received the flying-disc, they had the choice of whom to throw to next by selecting that player's color. On each of the turns that participants were not in possession of the flying-disc, they were simply notified of what had happened the previous turn and given the option to continue. An algorithm controlled the computer-generated players' throws. The probability that they would throw it to the participant was programmed according to the quantity of ostracism condition to which participants were assigned. The time taken by each of the computer-generated players to make their decision and throw the flying-disc was varied each turn to increase the believability that they were also "real" participants. (Williams et. al, 2000).

Following the procedure established by Williams et. al (2000), the participants will have a chance to throw the ball once and receive the ball once. After this, they will be assigned either to the inclusion group or the complete ostracism group. The participant will be told they can quit at any time; otherwise, the game will end after 20 total passes or turns. According to the Williams study, participants in the complete ostracism condition played for an average of 11 turns before quitting, and participants in the inclusion condition played for an average of 13.7. For a manipulation check, as in the original study, data will be collected for each participant regarding how many passes occur before they quit. Participants in the inclusion mode should, on average, remain in the game for more passes than participants in the complete ostracism mode.

Inclusion. To induce a feeling of belonging and reduced need for social connection, the computer players will pass the ball equally between the participant and each other. The participant thus consistently has a 33% chance of receiving the ball at any given time.

Complete Ostracism. To induce a feeling of ostracism and a strong need for social connection, the computer players will pass the ball to each other and exclude the participant. The

player will have a 0% chance of receiving the ball. While 0% may seem extreme, this was the

level they used in the original study that effectively accounted for the greatest impact on

subsequent mood and behavior.

Independent Variables (IV).

The present proposal postulates that two independent variables (IV's) predict

avoidant/confrontational behavior. These are "need for social connection" (NSC) and "modeled

behavior". Each IV has 2 levels. See Table 1 below for the four possible conditions.

Table 1

Four Possible Conditions

High NSC, Avoidant Model	Low NSC, Avoidant Model
High NSC, Confrontational Model	Low NSC, Confrontational Model

Note: This table shows the four possible conditions to which participants will be assigned in the

2x2 experimental design. *NSC* stands for "Need for Social Connection". *"Model"* refers to the

type of behavior that is modeled for participants.

Need for social connection (NSC). This variable will be manipulated using Cyberball in

order to affect a participant's sense of belonging and social connection. The two levels are high

NSC and low NSC. Once the participant has completed the game, the experimenter will usher

the participant into the receptionist's room to either offer a false debriefing or manipulate the

second IV.

High NSC. In order to induce an amplified need to belong, participants in this condition will be assigned to the complete-ostracism mode of Cyberball. The lack of inclusion in the game will make participants feel ostracized and consequently need social connection.

Low NSC. In order to induce a sense of belonging and social connection, participants in this condition will be assigned to the inclusion mode of Cyberball. Being included by the two computer players will make the participant feel complacent in their social connectedness and therefore have a low need for social connection.

Modeled behavior. Depending on assignment to condition, the experimenter will model avoidant behavior or will model confrontational behavior. The experimenter will pretend to be privately consulting with the receptionist about some documents in the receptionist's room, but will be within eyesight and earshot of the participant. The receptionist will have a desk against the back wall of the room, and across the room will be two chairs facing the desk. The experimenter will ask the participant to sit for a moment in one of the chairs while he confers with the receptionist. Then, a confederate colleague of the experimenter will engage in a staged confrontation with the experimenter following one of two scripts detailed below. This colleague will have been sitting in a chair next to the receptionist for the entirety of the study from the moment the participant entered the room but will not have said anything. In the two behavior-modeling conditions, the confederate will make a rude remark at the experimenter, to which the experimenter will respond with either avoidance or confrontation.

Avoidant-modeled behavior. In this condition, the experimenter and confederate will follow the avoidance script (see appendix E). The confederate will say two rude remarks to the experimenter. For the first remark, the experimenter will ask a question about paperwork, to which the confederate will respond, "Well, maybe if you actually read them like you were

supposed to, you'd know." This comment will go unacknowledged. The confederate will then

say, "It's always us doing all the work." The experimenter will respond to the conflict by rolling

his eyes and looking down, but will not verbally respond to the confederate. After this, the

confederate will leave the room oblivious to the experimenter's response. The experimenter will

then proceed with the study as necessary (either moving onto manipulating the social connection

variable or moving onto the false debriefing).

Confrontational-modeled behavior. In this condition, the experimenter and confederate

will follow the confrontation script (see appendix E). The confederate and experimenter will

create the same conflict mentioned above. In this condition, however, after the confederate's

second rude remark, the experimenter will respond to the conflict with verbal protest, asserting

that the confederate's remark was inappropriate, thereby acknowledging and confronting the

conflict. The confederate will then leave the room, and the experimenter will then proceed with

the study as necessary (either moving onto manipulating the social connection variable or

moving onto the false debriefing).

Dependent Variables (DV).

The data being collected revolve around the participants' behavioral responses to being

incorrectly compensated. After the two IV's have been manipulated according to condition and

the experimenter has offered a false debriefing according to a script (see appendix C), the

receptionist will offer the participant $12 (twelve dollars) by counting out one ten-dollar bill and

two one-dollar bills, instead of the advertised $16 (sixteen dollars). As mentioned, the

disseminated flyer will unequivocally inform the participant that they should be receiving $16.

The value of $16 compensation will also be stated in the consent form they sign at the beginning

of the study, and will also be explicitly told to them when the experimenter provides oral consent

at the beginning of the study. When given the incorrect amount of money from the receptionist, participants will either avoid the conflict by accepting the money, or they will confront the receptionist regarding the incorrect compensation. Participants' behavioral responses to the conflict will be codified in three potential ways: initial behavior, degree of disturbance, and latent behavior.

Initial Behavior. Initial behavior will be labeled as a dichotomous, categorical variable: avoidant or confrontational. This is how the participant initially responds to the created conflict.

Avoidant Initial Behavior. If the participant fails to verbally acknowledge or protest the conflict, and ultimately exits the receptionist's room with the incorrect compensation, then the participant is said to be avoidant. An independent coder who is blind to condition will watch video footage and code participants' behaviors. A participant who accepts the payment, and therefore avoids the conflict, will be assigned a "0" for this DV for data analysis.

Confrontational Initial Behavior. If the participant acknowledges the conflict that has been created by verbally protesting or otherwise verbally acknowledging the conflict, then the participant is said to be confrontational, and for data analysis will be assigned a "1" for this DV by an independent coder who is blind to condition. This verbalization can include questions such as, "Are you sure that's right?" "Isn't it supposed to be $16?" "Wait, what?" and "Are you dumb?" Additionally, confrontation may take the form of assertions and declarations such as "Oh, excuse me, I thought it was supposed to be $16", "I don't think it's $12", "You owe me four bucks, pal", and "You must be dumb."

Degree of Disturbance. This DV is applicable only to those participants who are initially avoidant. The purpose of this DV is to analyze a spectrum of avoidant behavior and observe any ways in which participants may be attempting to confront the conflict other than verbal

acknowledgment. This is accomplished by visually analyzing the ways in which the participant seems to be disturbed by the conflict. This will be operationalized according to a spectrum of behavior that indicates discomfort with the conflict. Two independent raters will watch video footage of the conflict-interaction and assess the participant's body language and verbal cues and score their expressed level of disturbance on a 7-point scale (1 = low disturbance, indicating high avoidance, 4 = moderate disturbance, and 7 = high disturbance, indicating low avoidance, nearing confrontation). Scores will be based on such behaviors as looking around the room, scratching the head, saying "um" or "hmm", or otherwise giving non-linguistic indicators that they are unsettled by the conflict. The two scores will be averaged to create one score. In analysis, disturbance scores will be compared to condition-type to see if there exists any correlation between condition-type and severity of disturbance with the conflict.

Latent Behavior. This DV is applicable only to participants who were initially avoidant. As participants leave the receptionist's room while carrying the incorrect compensation, they will have to exit through the waiting in which the experimenter will be waiting. The experimenter will be pretending to engage in some sort of side work or busy work, such as reorganizing magazines or other papers. The experimenter will say, "Goodbye, thanks again for participating." It is here that the initially avoidant participant has the opportunity to confront the experimenter regarding the incorrect compensation. It will be interesting to see whether participants are more comfortable confronting someone with whom they are not directly in conflict, since the participant is in direct conflict with the receptionist and not the experimenter. The participant's behavior here will again be labeled avoidant or confrontational, "0" or "1" as coded by an independent coder who is blind to condition while watching video footage of the experiment.

Avoidant Latent Behavior. If the participant again does not verbalize the conflict to the experimenter and proceeds to attempt to open the door to exit the office, the experimenter will say to the participant, "hang on one second, [insert participant's name]. Earlier when I said the study was over, that wasn't actually true. However, at this time the study really is over. Please follow me back into the receptionist's room so I can explain." The experimenter will then offer the participant the debriefing sheet (see appendix F), and will explain its contents regarding the research questions and hypotheses, and answer any questions. After this, the experimenter will give the participant the correct compensation. Avoidant latent behavior will be labeled "0" in data analysis.

Confrontational Latent Behavior. Confrontation will be operationalized as verbal interaction with the experimenter regarding incorrect compensation, and for data analysis will be assigned a "1" for this DV. If the participant is confrontational, the experimenter will say to the participant, "Please follow me into the receptionist's room." From there, the experimenter will say, "So earlier when I said the study was over, that wasn't actually true. However, at this time the study really is over. Allow me to explain." The experimenter will then offer the participant the debriefing sheet (see appendix F), and will explain its contents regarding the research questions and hypotheses, and answer any questions. After this, the experimenter will give the participant the correct compensation.

Spot-the-difference Test

For the purposes of maintaining the cover story, after the participants play Cyberball, they will be given two pictures and will have one minute to spot as many differences as they can between the two similar images that have small differences between them (see Appendix B). They will be given a pen and told to circle the areas of the pictures that are different from the

other. There will be seven total differences between the images, but the participants will not be

told how many differences there are so it will remain ambiguous to them how well they did.

Procedure

Successfully recruited participants will arrange a time with the research team to come to

the location of the experiment to participate. Upon entering the space, the experimenter – who

will be the same gender across conditions in order to account for gender influence as a potential

extraneous variable – will greet the participants in the waiting room and will ask that the

participants to turn off their cellphones. The experimenter will then usher the participants into

the receptionist's room where the experimenter will offer oral consent and where the participants

will sign the consent form. The participant will then undergo the variable manipulations

appropriate to the condition to which they are assigned. The order of the variables will be

counterbalanced so that some participants undergo modeled behavior manipulation first while

others first undergo the social connection manipulation. Immediately after the social connection

manipulation involving Cyberball, the participant will complete the "spot-the-difference" test.

After both independent variables have been manipulated (need for social connection and

modeled behavior), the experimenter will offer a false debriefing in the receptionist's room. He

will then tell the participant to get payment from the receptionist – who will be the same gender

across conditions in order to account for gender influence as a potential extraneous variable. The

experimenter will then exit into the waiting room. The receptionist will administer incorrect

compensation by counting out $12 with one ten-dollar bill and two one-dollar bills instead of the

advertised $16. After the appropriate DV data has been observed, the experimenter will

terminate the study and offer the true debriefing.

<div align="center">

Predicted Results

</div>

Initial behavior

To determine if I can reject the null hypothesis – that desire for social connection and modeled behavior do not influence behavioral response to conflict – I will conduct a logistic regression. I am using this specific analysis because my dependent variable is categorical and dichotomous. According to a PDF titled "Psychology 5741 Logistic Regression" used by Colorado University, a logistic regression works by first using a linear function to find what is termed the *liability (L)* that some dependent variable will occur (Psychology 5741, n.d.). In the case of this experiment, this will be the liability that someone will be confrontational. It then uses this L value in a different equation to determine the *probability (Pr)* that this outcome will occur. Again, in my analyses, the outcome is the participant behaving with confrontation. The general regression equations are these:

$$L = b_0 + b_1X_1 + b_2X_2 + b_3X_1xX_2$$

$$Pr(Y = State\ 1) = \frac{exp(L)}{1 + exp(L)}$$

"L" represents the liability that a certain outcome will occur. "b_0" is the intercept, "b_1" and "b_2" are the beta weights, or effect sizes, for the two main effects of the predictor variables, and "b_3" is the beta weight for the interaction effect between them. "Pr" is the probability that the outcome will occur. Plugging in the variables in my study, the equations would look like this:

$$L = b_0 + b_1NSC + b_2ModeledBehavior + b_3NSCxModeledBehavior$$

$$Pr(Confrontation) = \frac{exp(L)}{1 + exp(L)}$$

NSC represents the "need for social connection" predictor variable. Using SPSS, I will run the data in order to obtain a beta weight for need for social connection, for modeled behavior, and for the interaction between the variables.

I predict that there will be a significant main effect for both IVs as well as an interaction. The main effects suggest that there is a difference among need for social connection conditions, and among modeled behavior conditions, indicating that need for social connection and modeled behavior independently have an effect on whether people are ultimately avoidant or confrontational. Specifically, the first main effect suggests that participants who feel included and therefore have a low need for social connection will be more confrontational than participants who feel excluded and have a high need for social connection. The second main effect suggests that people who witness someone else being confrontational are more likely to be confrontational themselves, and people who witness avoidant behavior will be avoidant themselves. The interaction will qualify the main effects, suggesting that the influence of one IV is dependent on the level of the other IV. Specifically, I predict that the propensity for participants with a high need for social connection to express avoidant behavior will be attenuated by their assignment to the confrontational-modeled behavior condition. In other words, if a person feels excluded and has a high need for social connection, but observes someone being confrontational, then that person is more likely to be confrontational than avoidant. Additionally, someone who observes avoidant-modeled behavior, but has a low need for social connection, is more likely to be confrontational than avoidant (see Figure 3 below).
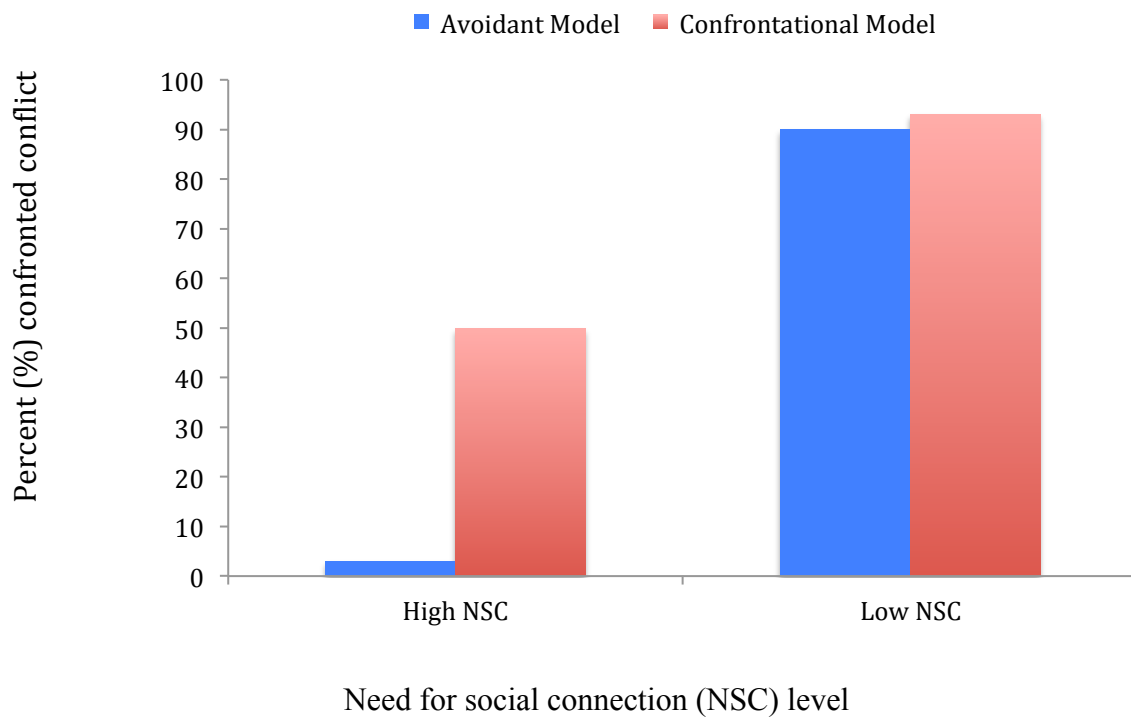
Figure 3. Percentage of participants who confronted the receptionist about the money according to need for social connection and behavior-type modeled conditions. The graph shows a main effect for each IV as well as an interaction.

Degree of disturbance

To determine if I can reject the null hypothesis – that desire for social connection and modeled behavior do not influence degree of disturbance – I will run a 2 (Need for Social Connection) x 2 (Modeled Behavior) ANOVA. The two "need for social connection" levels will be low and high. The two modeled behavior levels will be confrontational and avoidant. I predict that there will be a main effect for each IV as well as an interaction between the two. The main effects will indicate that there exists a difference between need for social connection conditions, and between modeled behavior conditions.
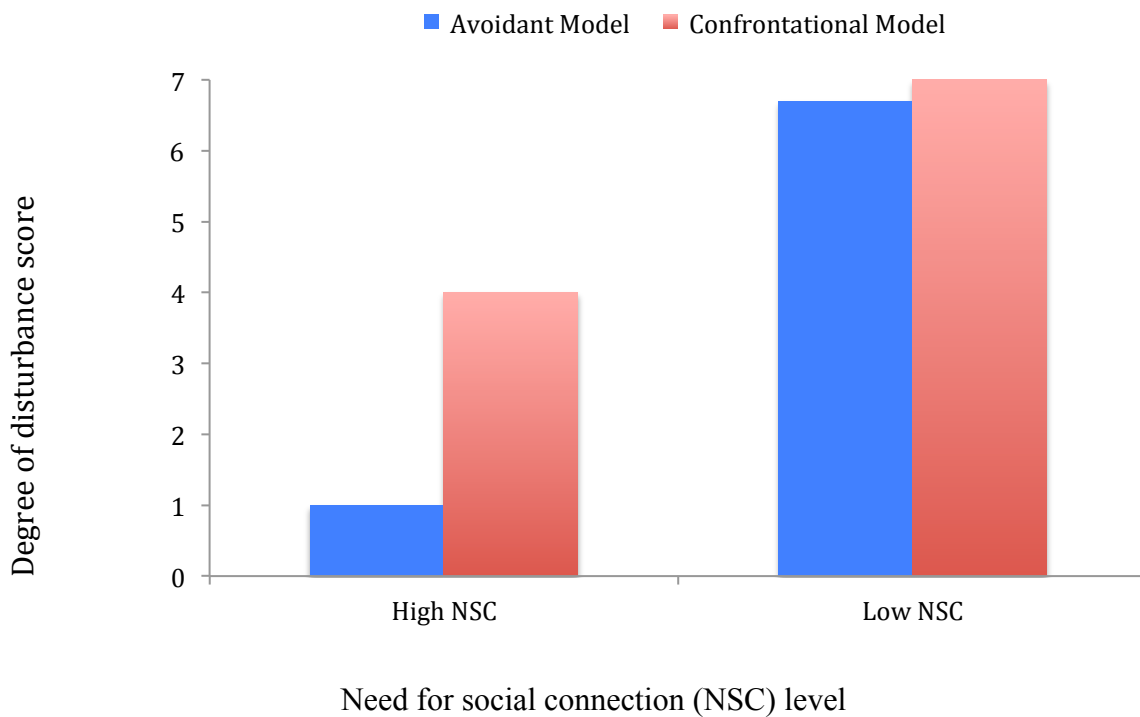
The main effect for need for social connection will suggest that, in general, participants with a high need for social connection will be less visibly disturbed by the conflict, indicating

high avoidance. Participants with a low need for social connection will be more visibly disturbed by the conflict, indicating less avoidance.

The main effect for modeled behavior will suggest that, in general, participants who observe avoidant-modeled behavior will be less visibly disturbed by the conflict, indicating high avoidance. Participants who observe confrontational-modeled behavior will be more visibly disturbed by the conflict, indicating low avoidance.

The interaction effect will suggest that the influence of need for social connection on behavior is dependent upon the level of the modeled behavior variable, and vice versa. Specifically, individuals who feel excluded and have a high need for social connection (which predicts low disturbance), but who observe confrontational-modeled behavior (which predicts high disturbance) will demonstrate higher disturbance than individuals who observed avoidant-modeled behavior. Additionally, individuals who have a low need for social connection (which predicts high disturbance), but observe avoidant-modeled behavior (which predicts low disturbance), will still demonstrate high disturbance. See figure 4 below.
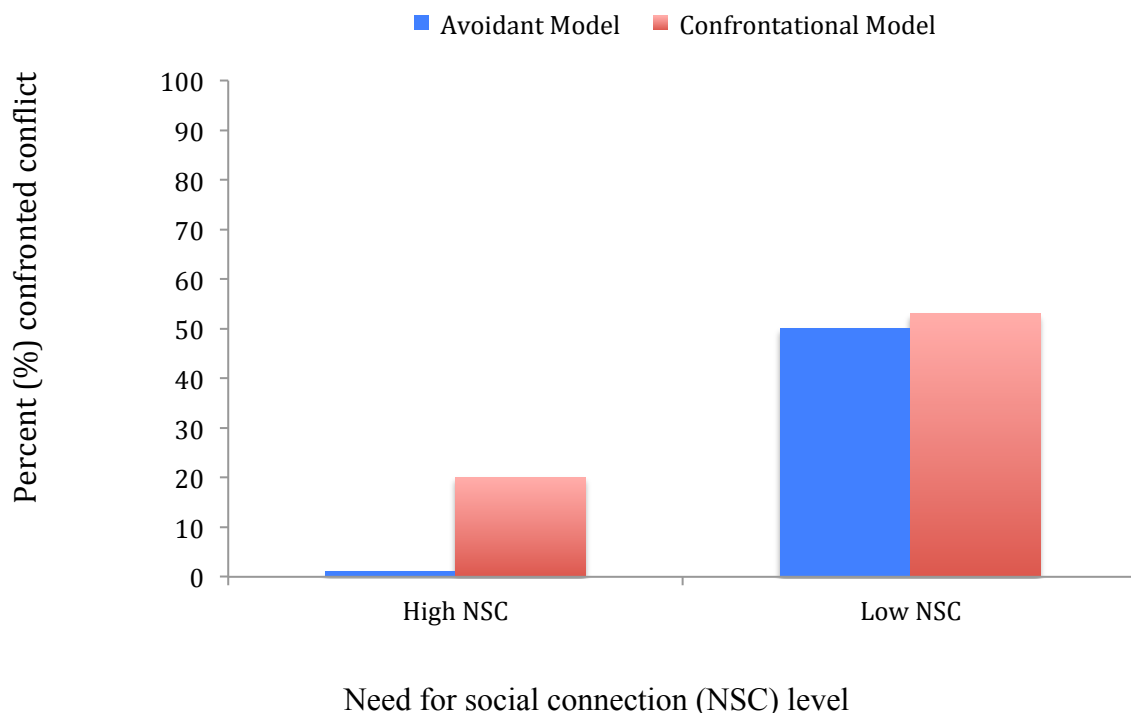
Figure 4. Scores on the degree of disturbance measure according to need for social connection and behavior-type modeled conditions. The graph shows a main effect for each IV as well as an interaction.

Latent behavior

To determine if I can reject the null hypothesis, that need for social connection and modeled behavior do not influence latent behavior, I will use a logistic regression. The reasoning for and process of using a logistic regression for this dependent variable are the same as the reasoning and process for the initial behavior dependent variable.

I predict that there will be a significant main effect for both IVs as well as an interaction. The main effect for need for social connection suggests that participants who feel included and therefore have a low need for social connection will be more confrontational than participants who feel excluded and have a high need for social connection. These participants will be more likely to confront the experimenter about the incorrect payment. The second main effect suggests

that people who witness someone else being confrontational are more likely to be confrontational with the experimenter, and people who witness avoidant behavior will be avoidant with the experimenter. The interaction will qualify the main effects, suggesting that the influence of one IV is dependent on the level of the other IV. Specifically, I predict that the propensity for participants with a high need for social connection to express avoidant behavior will be attenuated by their assignment to the confrontational-modeled behavior condition. In other words, if a person feels excluded and has a high need for social connection, but observes someone being confrontational, then that person is more likely to be confrontational with the experimenter than avoidant. Also, someone who observes avoidant-modeled behavior, but has a low need for social connection, is more likely to be confrontational with the experimenter than avoidant. On the whole, however, because these participants were initially avoidant, they will be less confrontational overall compared to other participants. See figure 5 below.

Figure 5. Percentage of participants who confronted the experimenter according to need for social connection and behavior-type modeled conditions. The graph shows a main effect for each IV as well as an interaction.

Discussion

Goals of the study

Past research indicates that responding to interpersonal conflict with avoidance does more harm than good (Hershcovis, Cameron, Gervais & Bozeman, 2018). This proposal strives to provide an answer to the question: what motivates people to respond to interpersonal conflict with avoidance despite the negative consequences associated with avoidance? To do so, this proposal offers an experiment that will test whether two independent factors can effectively predict if a person will respond to interpersonal conflict with avoidance or confrontation. The two factors that are manipulated are "need for social connection" and "modeled behavior". In the experiment, participants are made to feel a high or low need for social connection by being made to feel ostracized or included by their social group, and participants observe the experimenter model either avoidant or confrontational behavior. The participants face the experimental conflict when they are given the wrong amount of money as compensation for participating ($12 instead of the advertised $16).

Anticipated findings

As demonstrated by the predicted results, this study proposes to find that participants who have a high need for social connection will be more avoidant than participants who have a low need. Additionally, participants who observe avoidant-modeled behavior will be more avoidant than participants who observe confrontational-modeled behavior. There is also a predicted interaction effect whereby a high need for social connection will prompt a participant to actually

model confrontational behavior, and a low need for social connection will prompt an individual to not model avoidant behavior and just be confrontational. So, the effect of one predictor variable depends upon the level of the other predictor variable.

For those participants who are initially avoidant, it is predicted that individuals with a high need for social connection or individuals who observe avoidant-modeled behavior will show little disturbance to the conflict. They will likely take the incorrect amount of money without any indication of protest or look of concern. On the other hand, individuals with a low need for social connection or individuals who observe confrontational-modeled behavior will show high disturbance, demonstrated by more scratching of the head or the uttering of nonlinguistic sounds such as "um" or "uh". Their acknowledgement of the conflict will be visible by their body language and/or nonlinguistic utterances, however they will still ultimately not confront the conflict directly.

Participants who are initially avoidant have a second chance to confront the experimenter in the waiting room. Because these participants have already demonstrated their tendencies toward avoidance, these participants will be more avoidant in this latent behavior measurement than the general population of participants. However, it will still be the case that these participants will be more avoidant if they have a high need for social connection or if they observe avoidant-modeled behavior than if they have a low need or they observe confrontational-modeled behavior.

Strengths

The arguments for "need for social connection" and "modeled behavior" as predictors of behavioral-responses to conflict have solid empirical support. Previous research shows that people who fear social ramifications for being confrontational are likely to be avoidant

(Duckworth & Mercer, 2006; Feifel & Strack, 1989; Oberhauser, Neubauer & Kessler, 2017; Shelton & Stewart, 2004; Woodzicka & LaFrance, 2005). Additionally, research indicates that people tend to model the behavior of others, particularly either rude or avoidant behaviors (Foulk et al., 2016, Latane & Darley, 1968, Woolum, Folk, Lanaj & Erez, 2017). I propose that confrontational behavior can be similarly modeled.

The use of a logistic regression to analyze the data for initial behavior and latent behavior allows for the analysis of an interaction effect. While it was initially thought that a Chi-squared test would be appropriate, this test would only demonstrate a main effect for each variable without accounting for an interaction effect. It is this interaction effect, however, that is most interesting. While previous research has shown the effect that social ostracism or inclusion and modeled behavior have on behavior, none has examined the interaction between these two variables.

Limiting participants to undergraduate students accounts for age as a potential confounding variable. Older adults who have presumably faced many challenges in their lives may, in general, handle conflicts differently than a more naïve cohort of undergraduate students. If this experiment were to be conducted, it would additionally be important to narrow down which college in particular or from which region of the country students are being recruited from because region likely plays a role in whether someone defaults to avoidance or confrontation as a coping strategy (I imagine New York City and Los Angeles would be quite opposite from one another).

Limitations

Operationalizing degree of disturbance to account for a spectrum of avoidant behaviors with an objective scale is tricky. The one used for this experiment (1 = low disturbance, 7 = high

disturbance) is rather relative. Who's to say whether a particular action, such as a head scratch, is indicative of high disturbance around a 7 or is more moderate like a 5? This scale is used at the discretion of the rater. What would make the scale more accurate within the experiment is to codify one participant as the epitome of a "1" and have another as the epitome of a "7", and rate all other participants relative to those standards. However, this would make the study difficult to replicate because each trial would have a new standard for what is classified as a "1" and what is classified as a "7".

This study does not use a control condition. Including a third control condition complicated the logistic regression statistical analyses to a point that was beyond the scope of this project. If the study was actually run and the analyses generated results that were different than the ones predicted, it would be difficult to assess what accounted for these differences without a control condition. However, while a control condition may make for clearer results, the use of a logistic regression still allows for the observance of independent main effects as well as an interaction between variables.

Future directions

If I saw the results that I predicted, I would like to conduct an experiment that factors in the gender of the participant as an independent variable. It would be interesting to see if there is a main effect for gender as well as a potential for an interaction that indicates whether someone's gender affects how that person responds to either social connection or modeled behavior.

Additionally manipulating the gender of the receptionist or the experimenter could generate different results, as people may be potentially more avoidant when in conflict with a person of a particular gender. The experiment could also manipulate the perceived attractiveness

of the receptionist and the experimenter to see if people are more willing to be confrontational if the instigator of a conflict is more or less attractive.

Like Milgram's shock experiment, it would be interesting to manipulate the status of the experimenter. Perhaps it is the experimenter's perceived authority that prevents people from being confrontational. If the experimenter is a fellow undergraduate student wearing a t-shirt, perhaps participants will be more confrontational.

Lastly, this experiment views need for social connection as a "state" as opposed to a "trait". The experiment attempts to induce a feeling of inclusion or exclusion long enough to influence participants' behaviors, however this inducement is ultimately ephemeral. More ingrained, foundational personality traits may play a role in how someone responds to the experiment. Using self-reports or other measures to assess participants' personality traits, such as the Big 5, may provide more understanding regarding avoidant and confrontational behaviors.

References

Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgments.

In H. Guetzkow (Ed.), *Groups, leadership and men; research in human relations* (pp.

177–190). Carnegie Press.

Beck, A.T., Steer, R.A., & Brown, G.K. (1996). Manual for the Beck Depression Inventory-II.

San Antonio, TX: Psychological Corporation

Boonstra, N., Wunderink, L., Systema, S., & Wiersma, D. (2009). Improving detection of first-

episode psychosis by mental health-care services using a self-report questionnaire. *Early*

Intervention in Psychiatry, 3(4), 289-295.

Connor, K.M., Davidson, J.R.T., Churchill, L.E., Sherwood, A., Weisler, R.H., & Edna, F.

(2000). Psychometric properties of the social phobia inventory (SPIN): New self-rating

scale. *British Journal of Psychiatry, 176*(4), 379-386).

Dozois, D. J. A., Dobson, K. S., & Ahnberg, J. L. (1998). A psychometric evaluation of the Beck

Depression Inventory–II. *Psychological Assessment, 10*(2), 83–

89. https://doi.org/10.1037/1040-3590.10.2.83

Duckworth, M.P., & Mercer, V. (2006). Assertiveness training. In J.E. Fisher & W.T.

O'Donohue (Eds.). *Practitioner's guide to evidence-based psychotherapy* (pp. 80-

92). Springer US.

Ekman,P., & Friesen, W.V. (1978). *Facial Action Coding System Manual.* Palo Alto, CA:

Consulting Psychologists Press.

Feifel, H., & Strack, S. (1989). Coping with conflict situations: middle-aged and elderly men.

Psychology and aging, 4(1), 26-33.

Foulk, T., Woolum, A., & Erez, A. (2016). Catching rudeness is like catching a cold: The

contagion effects of low-intensity negative behaviors. *Journal of Applied Psychology*, *101*(1), 50–67. https://doi.org/10.1037/apl0000037

Hershcovis, M. S., Cameron, A.-F., Gervais, L., & Bozeman, J. (2018). The effects of confrontation and avoidance coping in response to workplace incivility. *Journal of Occupational Health Psychology*, *23*(2), 163–174. https://doi.org/10.1037/ocp0000078

Kawakami, K., Dunn, E., Karmali, F., & Dovidio, J. F. (2009). Mispredicting Affective and Behavioral Responses to Racism. *Science*, *323*(5911), 276–278. https://doi.org/10.1126/science.1164951

Konings, M., Bak, M., Hanssen, M., Os, J.V., & Krabbendam, L. (2006). Validity and reliability of the CAPE: a self-report instrument for the measurement of psychotic experiences in the general population. *Acta Psychiatrica Scandinavica, 114*(1), 55-61.

Latane, B., & Darley, J. M. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology, 10*(3), 215–221. https://doi.org/10.1037/h0026570

Oberhauser, L., Neubauer, A. B., & Kessler, E.-M. (2017). Conflict Avoidance in Old Age: The Role of Anticipated Loneliness. *GeroPsych*, *30*(2), 61–70. https://doi.org/10.1024/1662-9647/a000168

Psychology 5741 (Neuroscience) Logistic Regression. (n.d.). Psych.Colorado.edu. Retrieved February 26, 2020, from http://psych.colorado.edu/~carey/Courses/PSYC5741/handouts/Logistic%20Regression.pdf

Ruggieri, S., Bendixen, M., Gabriel, U., & Alsaker, F. (2013). Cyberball: The Impact of Ostracism on the Well-Being of Early Adolescents. *Swiss Journal of Psychology*, *72*(2),

103–109. https://doi.org/10.1024/1421-0185/a000103

Shelton, J.N. & Stewart, R. E. (2004). Confronting Perpetrators of Prejudice: The Inhibitory

Effects of Social Costs. *Psychology of Women Quarterly*, *28*(3), 215–223.

https://doi.org/10.1111/j.1471-6402.2004.00138.x

Shipley, T. E., Jr., & Veroff, J. (1952). A projective measure of need for affiliation. *Journal of

Experimental Psychology, 43*(5), 349–356. https://doi.org/10.1037/h0059738

Wang, Y.-P., & Gorenstein, C. (2013). Psychometric properties of the Beck Depression

Inventory-II: A comprehensive review. *Revista Brasileira de Psiquiatria*, *35*(4), 416–

431. https://doi.org/10.1590/1516-4446-2012-1048

Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored

over the Internet. *Journal of Personality and Social Psychology*, *79*(5), 748–762.

https://doi.org/10.1037/0022-3514.79.5.748

Woodzicka, J. A., & LaFrance, M. (2005). The Effects of Subtle Sexual Harassment on

Women's Performance in a Job Interview. *Sex Roles*, *53*(1–2), 67–77.

https://doi.org/10.1007/s11199-005-4279-4

Woodzicka, J.A., & LaFrance, M. (2005). Working on a smile: Responding to sexual

provocation in the workplace. In R.E. Riggio & R.S. Feldman (Eds.). *Applications of

nonverbal behavior* (pp. 141-160). Lawrence Erlbaum Associates.

Woolum, A., Foulk, T., Lanaj, K., & Erez, A. (2017). Rude color glasses: The contaminating

effects of witnessed morning rudeness on perceptions and behaviors throughout the

workday. *Journal of Applied Psychology*, *102*(12), 1658–1672.

https://doi.org/10.1037/apl0000247

Appendix A

INFORMED CONSENT AGREEMENT

Study title: The Impact of Videogames on Test-Taking

Principal investigator: Charlie Wood

Background. The goal of this study is to examine the potential effect that playing video games has on someone's performance on particular tests.

What you will do in this study. You will play a short videogame and subsequently you will have one minute to spot as many differences as you can between two similar images. Depending on which group you are assigned to, you may either play an online videogame called Cyberball or the classic videogame Pong.

Study time. The study will take roughly 30 minutes to complete.

Risks and benefits. This study may evoke feelings of stress for individuals who have difficulty playing videogames. The one minute timed test may evoke feelings of stress due to the pressured nature of taking the test. The benefits of participating include supplementing the existing research on the psychological effects that videogames have on people. The results of this study could shed light on ways to improve individuals' performances on tests.

Compensation. All participants will be monetarily compensated $16 for their time.

Your rights as a participant. Participation in this study is completely voluntary. You may withdraw at any time with no questions asked and no penalty, and will still receive compensation.

Confidentiality. Only the research team will access your performance on the aforementioned test and data will in no way be traced back to you if published publicly.

Contact. If you have any questions regarding this study please do not hesitate to ask now or contact Charlie Wood, email: cw6098@bard.edu. If you have any questions regarding participant rights please contact the Institutional Review Board, email: irb@bard.edu.

Consent. By signing below, I am agreeing to participate in this study and affirm that I am at least 18 years old. I affirm that the research has been explained to me and that I am participating voluntarily, and may withdraw at any time.

_____ _____

Participant name (printed) Preferred pronouns (*optional*)

_____ _____

Participant signature Date

_____

Researcher signature

Appendix B

"SPOT THE DIFFERENCE" TEST

Instructions: For the next 60 seconds, please circle as many differences as you can find. Please

circle the location of the difference on both images. After the 60 seconds are up, please answer

the follow-up question below.

Appendix C

FALSE DEBRIEFING SCRIPT

After both IV's have been manipulated, and before the incorrect compensation has been offered to the participant, the experimenter will offer a false debriefing for the participant following this script. It should be delivered in a casual, conversational manner in order to minimize suspicion from the participant.

Experimenter: Okay [insert name of participant], that's the end of the study, thank you very much for your time today. Now when we started the study we couldn't really tell you everything about it because your knowing may have influenced your behavior, but basically we're testing whether different types of videogames have different effects on people's capacities to focus on a task. Some people play Cyberball, some people play pong, some play minesweeper; we're looking to see if there's any relationship between the type of game and how much people focus on something. And I'm sure you probably have some questions, but unfortunately due to time constraints I can't answer them right now, but please feel free to email us at the same email address we contacted you with if you do have any questions, alright? Thanks again [insert participant name]. You can go ahead and get your money from the receptionist over there. Have a nice day! [*Experimenter leaves into the waiting room*].

Appendix D

SCREENINGS FOR MENTAL ILLNESSES

SPIN

SPIN

name _____

date _____

beside each statement below, please tick the box that best describes how you have been feeling during the last week or other agreed time period:

		0: not at all	1: a little bit	2: some -what	3: very much	4: extre -mely
1	I am afraid of people in authority					
2	I am bothered by blushing in front of people					
3	parties and social events scare me					
4	I avoid talking to people I don't know					
5	being criticized scares me a lot					
6	I avoid doing things or speaking to people for fear of embarrassment					
7	sweating in front of people causes me distress					
8	I avoid going to parties					
9	I avoid activities in which I am the centre of attention					
10	talking to strangers scares me					
11	I avoid having to give speeches					
12	I would do anything to avoid being criticized					
13	heart palpitations bother me when I am around people					
14	I am afraid of doing things when people might be watching					
15	being embarrassed or looking stupid are among my worse fears					
16	I avoid speaking to anyone in authority					
17	trembling or shaking in front of others is distressing to me					

total score =

Connor KM, et al. *Psychometric properties of the Social Phobia Inventory.* Br J Psych 2000; 176: 379-386.

Appendix E

Behavior Modeling Script

The experimenter will enter the receptionist's room with the participant, where the receptionist and the confederate colleague will be sitting at the receptionist's desk looking at papers. The confederate should be slouching and crossing his arms, essentially exuding non-relational body language. The desk will be against the back wall facing into the room. The experimenter will ask the participant to sit in one of the two chairs positioned across the room from the desk so that the participant will be able to see and hear the receptionist, the experimenter, and the confederate. The experimenter will walk over to the receptionist and pretend to confer about some papers.

Experimenter [to receptionist]: Hey [insert receptionist's name], do you still have copies of those two forms, the one from Brown and the other Yale one?

Receptionist: Yeah, I think so. Let me see. [*Retrieves two pieces of paper with writing on them*].

Experimenter: Great thanks. [*Mutters to self but still audibly*] I just need to check again if they say the same thing about filling out the inventories.

Confederate: [*While looking down at papers in a slightly rude, snarky tone, but not over dramatic enough to raise suspicion*] Well maybe if you actually read them like you were supposed to you'd know.

Experimenter stares at the confederate for three seconds then continues looking at the papers. Receptionist glances at confederate then goes back to looking at papers.

Confederate: [*Muttering to himself*] It's always us doing all the work.

Here, the experimenter will model either avoidant or confrontational behavior:

A) <u>Avoidant</u>: Experimenter says nothing, rolls his eyes, shakes his head slightly, does not look up at the confederate, and continues looking over the papers.

B) <u>Confrontational</u>: The experimenter says to the confederate in a calm and rational tone, "Listen [insert name of confederate], I don't know if you've had a rough day or what's going on but your attitude right now is inappropriate and unprofessional. We're in the middle of a trial. If you're disgruntled about something we can discuss it later, but please wait until after we've conducted the experiment."

In both cases, the confederate then sighs, gets up, and leaves the room through the waiting room and exits.

The experimenter watches the confederate leave then looks over the two papers for 15 seconds more.

Experimenter [to receptionist]: Do you have the ones we used yesterday?

Receptionist: Yes, one sec. [*Pulls out another paper*]. Here you go.

Experimenter: Great, thanks. [*Looks it over for about 10 seconds*]. You know what I'll come back to it later, I still can't tell which we're supposed to use. [To participant] Sorry about that [*insert participant's name*].

At this point the experimenter either offers the false debriefing of the experiment, or moves onto the NSC manipulation using Cyberball. To do the latter, the experimenter will say, "Please follow me into this room over here to play a quick computer game."

Appendix F

DEBRIEFING SHEET

Study title. Predictors of Avoidance and Confrontational Behavior: Desire for Social Connection and Modeled Behavior.

Principal Investigator. Charlie Wood

Thank you for participating!

Purpose of the study. The purpose of this study is to investigate what motivates people to either avoid conflict or confront conflict. The study hypothesizes that people who have a strong desire to be socially connected to other people will respond to conflict with avoidance, and people who have a low desire will respond with confrontation. Additionally, the study hypothesizes that people who see someone else being confrontational will likely be confrontational themselves, and people who see someone being avoidant will likely be avoidant themselves. To test these hypotheses, the study used different videogames to influence whether you had a high desire, low desire, or neutral desire for connection. Additionally, the experimenter and a confederate colleague may have been involved in a fake confrontation while you were in the room. During this, the experimenter either exhibited avoidant or confrontational behavior. This was done in an effort to influence your behavior when you were given the wrong amount of money at the end of the study. We wanted to see whether you would accept the wrong amount or whether you were confrontational about it.

We urge you **not to discuss this study with anyone who is participating or who may participate in this study in the future**, as this may potentially skew data.

Contact. If you have any questions or concerns regarding this study, please do not hesitate to contact Charlie Wood, email: cw6098@bard.edu. And if you have any questions or concerns

regarding your rights as a participant please contact the Institutional Review Board, email:

irb@bard.edu.