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Exploring Peer Perspectives on Autistic Students: A Vignette Study

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EXPLORING PEER PERSPECTIVES ON AUTISTIC STUDENTS: A VIGNETTE STUDY

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EXPLORING PEER PERSPECTIVES ON AUTISTIC STUDENTS:
A VIGNETTE STUDY

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ABSTRACT

A 2x2 design was undertaken to determine the effects of vignette character gender and autism disclosure status on social distance scores, reading comprehension performance, and false memory induction. The introduction focuses on the theoretical threads taken from the autism, false memory, and gender literatures and how they combine to create the underpinning of the current design. A second more controlled study was compelled by initial false impressions of the deleterious effects of fast completion times. This second study resulted in lengthened completion times and improved vignette comprehension. Two-way MANOVAs with gender and autism disclosure serving as independent variables on the effect of the linear combination of reading comprehension, false memories, and social distance scores were run. The multivariate analyses turned out significant results for the effect of autism disclosure and the interaction of autism disclosure and vignette character gender on the linear combination of social distance, false memory, and reading comprehension scores. Follow-up analyses indicated that the majority of this effect was derived through the significant effect of disclosure on social distance scores.

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Introduction

This study seeks to examine neurotypical peer perceptions of vignette characters that display behaviors associated with autism. The study has four conditions that are differentiated by whether the autism diagnosis is disclosed to the participant and the gender of the vignette character (man or woman). The study explores three hypotheses: 1) Social distance scores and number of false memories will be negatively correlated, 2) autism disclosure will moderate social distance scores and exacerbate false memories, and 3) female vignette characters will be rated lower on the social distance scale in both disclosure and non-disclosure conditions.

Discussion of Language Surrounding Autism

Language is important when addressing minority groups. As such, both community and style guide resources were consulted in the creation of this thesis to adhere to appropriate and respectful language whenever possible. Both sources from the American Psychological Association and autism advocacy groups indicated that identity-first language is preferable (American Psychological Association, 2022; 2023; Brown, 2011).

Gender and Autism

The current study is incorporating gender into the analysis of peer perceptions of autistic students. Mathews et al. (2014) and Butler and Gillis (2011) form the theoretical framework for assessing neurotypical peer attitudes towards autistic people. The two studies examined college student attitudes towards peers with disclosed and non-disclosed autism. Though they form the framework they both failed to use autistic women as vignette characters.

Butler and Gillis (2011) examined the differential effects of behavioral description and labeling effects through the use of a 3x2 design. There were three levels of behavioral description, threshold behavioral descriptions, mild behavioral descriptions, and a control condition with no behavioral description. Butler and Gillis (2011) found significant effects for behavioral description but no effect for labeling. Three explanations for the lack of labeling effect were proposed, in light of the Mathews et al. (2014) study results only one provides decent explanatory power. Participants may not have been familiar enough with Asperger's syndrome.

Mathews et al. (2014) exclusively analyzed labeling effects with three levels, disclosed autism, typical label, and no label. Mathews et al. (2014) found significant differences between the disclosure and no label conditions. There were no significant differences for the typical label condition with either disclosure or control. Mathews et al.

(2014) proposed that the typical label condition may have been a confound due to participants identifying with the typical label.

Autism research is trending towards a more gender-conscious stance, acknowledging the unique lived experiences of non-male autistic people (Moore et al., 2023; Strang et al., 2020). While this study is taking a narrow scope of gender expression, examining the specific intersection of femininity and autism, there is a growing body of work demonstrating the increased prevalence of transgender autistic people's experiences (Warrier et al., 2020). Autism research has a history of centering male experiences and of downplaying non-male autistic people through the initial formulations of the diagnosis like Kanner's (1943) initial casework through to the modern era with the likes of Baron-Cohen's (2002) "extreme male brain" theory of autism. This male-dominated approach has led to two lines of inquiry: How does the presentation of autism differ by gender and how is the subjective experience of non-male autistic people different? These two questions inform the two major approaches to autism research that of clinical, diagnosis and treatment, and non-clinical, the lived experiences of autistic people. The next few paragraphs will address these concerns in the presented order.

Work into the different presentation of autism in women and girls can be termed as research into the female autism phenotype (FAP). This line of research is seeking an answer for the discrepancies in diagnosis based on birth sex. The *DSM-V-TR* (2022) notes

that there is a sex discrepancy in diagnosis of three to one from boys to girls and that girls are typically diagnosed later when they are diagnosed. The FAP theory implicates both biological and cultural factors as avenues of research to determine the reason for the discrepancy. Hull et al. (2020) examines the FAP theory and how it relates to the common behavioral indicators used to identify autism. The researchers first outline the competing theory to FAP theory which is the Female Protective Effect Theory (FPE). FPE theory proposes that genetic and environmental factors that girls are exposed to have an inhibitory effect on the expression of autistic behaviors. The theory is based on the evidence that girls are less likely to be diagnosed with autism than boys who express similar levels of impairment. Hull et al. (2020) points out some of the limitations of this approach which include: inconclusive evidence that autistic females carry a heavier genetic load to express autistic traits, that no protective factor has been identified with support, that the X chromosome is a protective factor but causal evidence is lacking, and the assumption that the sex-based diagnosis discrepancy is accurate.

The FAP theory acknowledges that these biological differences could be found as true but would not be the only cause for diagnosis discrepancies based on sex and time of diagnosis. It is acknowledged by Hull et al. (2020) that even within the population of autistic females there is a discrepancy between those with low and high IQs with low IQ autistic females being far more likely to receive a diagnosis. Though, it is also noted that this trend is tending in the opposite direction of diagnosis for the broader autism population where boys are being diagnosed “with greater variation in presentation” (Hull

et al., 2020, p. 308). The researchers believe that the most likely explanation for these divergences in diagnosis is that autistic females present their symptoms differently, which would be critical in a diagnosis based so heavily in behavioral signifiers.

Hull et al. (2020) specifies four main domains that autism may diverge between autistic males and females: 1) social relationships, 2) relational interests, 3) internalizing problems, and 4) camouflaging. It is noted that autistic females have a stronger desire for relationships than autistic males but it may be harder to maintain these relationships and autistic females may have a harder time coping with relationship conflict. Research has also noted a difference in restrictive and repetitive interests based on gender with males preferring mechanical topics and females preferring relational topics. It is noted that the intensity of female interests may be aberrant, but the subject matter being more typical allows them to avoid scrutiny from teachers, parents, and clinicians. Another difference noted by Hull et al. (2020) is that autistic males are more likely to have co-occurring externalizing problems while, autistic females are more likely to have internalizing problems. This means that the expression of autism is much different for boys and girls seeking diagnosis. The final issue for diagnosing autism in females is that of camouflaging. Camouflaging is the process of using conscious or unconscious strategies to mask one's condition, in this case autism.

These four differences in autism expression in females require more research as the acknowledgement of sex differences in autism presentation is still in its infancy.

Another area of research that has been gaining some steam is assessing differences in subjective lived experiences between autistic men and women. Kanfiszer et al. (2017) noted that the UK autism community had a focus on underlying causes of autism rather than life experiences and how to improve them (p. 661). This is significant in noting the shift in autism research during the last 10 years. Most prior research focused heavily on diagnosing autistic youth and on treatments that allowed them to fit in with their neurotypical peers. The shift to addressing the issues of autistic people and how the systems around autistic people may be more at fault for their discomfort than their disability itself is a new concept.

Even though there has been a slight shift in research to privilege lived experiences, studies still focus on the feelings of parents, teachers, and clinicians rather than that of autistic people. For instance, a research paper concerning the experience of autistic girls in adolescence only had six of 58 quotations from the girls with the remaining quotations coming from mothers (Cridland et al., 2013). The limitation section of the same paper felt that more family should have been interviewed as well as teachers and clinicians who interacted with the girls. This disregard for the lived realities of autistic people feels all the more stark when research presents itself as asking autistic people but instead they are talking to their parents.

In a similar vein but more focused on the autistic participants, Milner et al. (2019) examined the female experience of autism with a sample that ranged from 11 to 55 years

old. This thematic analysis closed in on the concepts that made the intersection of autism and femininity unique. The women and the girls in the study highlighted a difference in social expectations between autistic men and women, that of masking. The participants felt that autistic women felt increased pressure to mask their diagnosis while autistic men were expected to just be themselves. This could be related to the differential rates of externalizing and internalizing disorders discussed above.

At this stage of the research no definitive conclusion has been reached. Instead, there are a multitude of theories concerning the diagnosis discrepancy and avenues identified for further research. The current study aims to examine if there is a differential preference for autism symptoms as expressed by men and women. This is to say, that the symptomologies presented are identical with the manipulation being the gender of the vignette character. This is intended to give insight into whether neurotypical peers judge women more harshly than men for presenting the same symptoms. This is an examination of one of the environmental pressures that autistic people face, the expectations of peers.

False Memories

False memories are recollections that have been distorted in some capacity, typically through post-event interference (Loftus & Pickrell, 1995). False memories pose an interesting question concerning the veracity of human memory: Should we rely on our memories? While this question in the abstract is relatively benign, the applications of false memory research have run the gamut of benign, like falsely remembered words,

from a word list, to quite serious, like falsely remembered experiences of abuse. The following sections will be used to provide some historical context to the field of false memory research before closing in on the work that is most relevant to the proposed study.

List-Based Paradigms

False memory research concerning list-based paradigms is the most basic form of false memory research. It has little use outside the laboratory and has mainly been used to establish the existence, maintenance, and mechanisms of false memory. List-based approaches found that if participants were presented a list of words either visually or aurally, they could be induced to remember words that were not on the list. This was accomplished by creating lists that were all semantically related to a key word that was not presented to participants (Deese, 1959; Roediger & McDermott, 1995; Underwood, 1965). The applied side of false memory is more robust though, with the two main areas of application being eyewitness testimony and recovered memories.

Eyewitness Testimony

Research on eyewitness testimony and its many inaccuracies predate the psychological research on false memories. The most notable contributor to eyewitness testimony research in the field of psychology is Elizabeth Loftus who shifted the conversation from the inaccuracies in testimony itself, to the reason for said inaccuracies (Loftus, 1975). As such, the questions posed by Loftus investigated the issue in a now-

classic study where participants were shown videos of car crashes and were then asked questions.

Loftus and Palmer (1974) investigated whether an individual word in a question could change the responses or participants, and then to see if the memory was changed or an uncertainty just fossilized. This was accomplished through participants viewing a video of a car crash and then receiving a survey where the question concerning the collision had the verb modified. This resulted in significant variation in speed estimates of the car. To determine if participants had just used the word to solidify their notions of vehicular impact or if they had their memories altered, participants were asked back to answer a question of whether there was broken glass at the scene of the crash. This too varied significantly by the manipulated verb, demonstrating that the question itself had an effect on the reconstruction of the memory.

In this rather succinct experiment, Loftus and Palmer (1974) demonstrated the fallibility of memory and that, rather than just influencing answers, leading questions can alter a witness's memory. While one study certainly does not explain the entirety of the false memory research on eye-witness testimony, the goal of this section is to establish the malleability of memory and the importance of said malleability.

Recovered Memories

Recovered memories came to prominence in both the psychological literature and the public consciousness in the 1980s and 1990s, due to widespread reports of recovered

memories of child abuse, child sexual abuse, and satanic ritual abuse (SRA: Loftus, 1993). The concept of memory repression is not new to psychology. It was first posed by Freud in the 19th century. The Freudian concept failed to garner much widespread usage, in part due to the many different meanings and mechanisms that Freud ascribed to repression during his life (Takarangi et al., 2008).

Loftus and Pickrell (1995) demonstrated the ability to implant false memories through their lost-in-the-shopping-mall experiment. The researchers recruited partner pairs as participants. Each pair had a subject, the participant actually partaking in the research, and a relative, someone who had knowledge of the participant's childhood. After talking with the relative, the researchers constructed booklets for the participants containing three true events that were relayed to the researchers by a relative of the participant and the false memory of the shopping mall incident. The shopping mall incidents were constructed with the help of the relative to make sure the event was plausible and that the participant had not been lost in a shopping mall around the age of five. Participants completed the booklet with their recollection of the events or wrote "I do not remember this" if they did not remember the event. After the booklets were completed and mailed back to the researchers there were two follow-up interviews (Loftus & Pickrell, 1995, p.722).

In each of the interview sessions the participants were instructed to describe the memories in as much detail as possible and were prompted further by the interviewer.

After they had exhausted their memories, participants were asked to rate the clarity of their memory on a 10-point scale with 1 being *not clear at all* and 10 being *extremely clear*. Then they were asked to rate their confidence in retrieving more details about the memory given more time on a five-point scale with 1 being *not confident* and 5 being *extremely confident*. Of the 72 true memories participants were able to recall 49 of them, only 68%. Six of the 24 false memories were "remembered" meaning a quarter of participants believed they remembered the false shopping mall incident at the beginning of the first interview. The study concluded that they had established a proof of concept for the implantation of false memories (Loftus & Pickrell, 1995).

Takarangi et al. (2008) summarized the findings regarding the effectiveness of implanting false memories through various research paradigms. A meta-analysis demonstrated that overall, researchers had successfully implanted memories 33% of the time. Takarangi et al. (2008) listed out some of the false memories that had been implanted including: spilling punch at a wedding, animal attacks, a hot air balloon ride, and putting slime in a teacher's desk. It was also outlined that some of the research got more sophisticated in how they presented the subject with memory cues. This provided a solid basis for the idea that false memories could be meaningfully implanted into others unknowingly. The ways that researchers implanted memories often mirrored memory exercises used by therapists. This was meant to demonstrate how well meaning therapists might actually create false remembrances in their clients.

Applications to the Current Study

The issue most relevant to this project concerning false memories is: How do one's perceptions, preconceptions, and beliefs affect what memories people create? The baseline for this phenomenon was established by Bartlett's (1932) *The War of the Ghosts* study. In this study Bartlett (1932) had participants read a short story adaptation of Native American folklore twice and then attempt to recreate the story 15 minutes after their initial exposure and up to six-and-a-half years later. The most general finding was that reconstructions were able to identify the main plot points but muddied the details even 15 minutes after initial exposure. It was found that the reconstructions were more in-line with modern story telling techniques that participants would have been more familiar with. To demonstrate an example, Bartlett (1932) claimed that weather was congruent with the mood or atmosphere of the story in reconstructions, a common literary technique of the day, though notably not one employed in the original story. From this, Bartlett (1932) claimed that the most plausible explanation was that memory was a reconstructive process. This meant that memories could not be taken out of the mind as they occurred originally instead pieces of the original were reconstructed to constitute a memory and as such the gaps were filled with available knowledge like common literary devices of the time period.

The trend of the unreliability of memory was continued through the list-learning paradigm described above where both Deese (1959) and Roediger and McDermott (1995)

advocated for an associative model of memory which was affirmed and strengthened by the establishment of the spreading-activation theory of semantic processing (Collins & Loftus, 1975; Quillian, 1962). In the simplest terms, the spreading-activation theory of semantic processing, henceforth spreading-activation theory, asserts that when a concept is excited by exposure it creates a neural pulse outward to related topics, thus priming the related topics as well. This was the explanation forwarded to explain how false memories could be created from list-learning paradigms where there was no narrative structure to map our preconceptions onto (Deese, 1959; Roediger & McDermott, 1995).

With the theoretical underpinnings of false memory creation and maintenance laid bare, is there precedent for false memory production in relatively benign narrative stimulus materials without the qualifier of full-scale reproduction? A handful of authors have investigated the issue of post-event interference with memory and whether schema consistency was a factor. Kleider et al. (2008) studied how participants remembered information presented as both pictorial and written stimuli, and how the schema consistency affected their recall in a remember/know judgement at an interval of 30-minutes or two days. The schema employed was about gender-consistency for a handyman and a homemaker, where both individuals were depicted as doing all actions. One group saw the characters performing schema-consistent actions, while the other group saw the characters performing schema-inconsistent actions. The schematic-consistency was independently tested before the experiment to ensure the stimuli had the intended gender effects. They found that if participants made a source attribution error,

identified an inconsistent actor, it was more likely to be schema consistent. This lends credence to the idea that when there are gaps in our memory, we fill them with schema-congruent information unknowingly. It was also demonstrated that the strength of stereotype consistent false recall increased with the length of delay between exposure and retest (Kleider et al., 2008).

Schema-consistent, false recognition was further explored by Yamada and Itsukushima (2013), though interestingly they analyzed the difference in recall between schema-consistent objects and actions. Their slides demonstrated 10 schema-consistent objects and 10 schema-consistent actions. The questions included the 20 schema-consistent objects and actions depicted in the slides, as well as 10 schema-consistent object distractors, 10 schema-consistent action distractors, 10 schema-inconsistent object distractors, and 10 schema-inconsistent action distractors. They noted that schema-consistent action targets were recalled at a higher rate than schema-consistent object targets. Though, schema-consistent object distractors were falsely recalled at a higher rate than schema-consistent action distractors. Schema-inconsistent object and action distractors were almost never falsely recalled. This study effectively demonstrated how false recall frequently aligns with a participant's schema (Yamada & Itsukushima, 2013).

The use of schemas to complete memories accurately and inaccurately has been extended to narrative audio presentations (Lampinen et al., 2000), partisan memories of political events (Armaly & Enders, 2022), context-dependent locations of items in

photographs (Lew & Howe, 2016), and eye-witness testimony (Tuckey & Brewer, 2003). This consistent finding across different media, schema, and foci demonstrates strong evidence for schema consistent false memories. This lends credence to the idea that one's schema about a group may influence the kind of details that one remembers or falsely-remembers from a vignette.

Current Study

The current study was a 2x2 design using a vignette. The two independent variables were autism disclosure (disclosed or not) and gender of the vignette character (man or woman). The disclosure status was manipulated by presenting a slide before the participant read the vignette that explained whether the vignette character was autistic and a college student (disclosed) or just a college student (not disclosed). The gender of the vignette character was manipulated through name and pronoun choices. The female vignette character was identified as "Jane" and feminine pronouns were used to describe her. The male vignette character was identified as "John" and masculine pronouns were used to describe him. Following the presentation of the vignette participants filled out a modified Social Distance Scale pertaining to the vignette character (Bogardus, 1933). Then lastly, they responded to 10 statements about the vignette indicating "true" if the statement described something that happened in the vignette or "false" if the statement described something that did not happen in the vignette. Five of the statements were just facts about the vignette and five statements were stereotypes about autistic people that

did not actually occur in the vignette. This was meant to assess whether their preconceptions about autism influenced their memory of the vignette.

The proposal for this project listed the hypotheses as follows: 1) Social distance scores and number of false memories will be negatively correlated, 2) autism disclosure will moderate social distance scores and exacerbate false memories, and 3) female vignette characters will be rated lower on the social distance scale in both disclosure and non-disclosure conditions. On further review, the design of the experiment compelled more analyses than listed in the December 2023 proposal. We tested the effects of gender and autism disclosure on the linear combination of reading comprehension, false memories, and social distance. Further, though not the subject of hypotheses in the proposal, a safeguard orthogonal experiment was run after the original when early unfounded suspicion arose of fast completion times in that original.

Hypothesis Rationale

Hypothesis one is supposed to address the idea of semantic processing. It is assumed that participants who more negatively rate autistic individuals in the vignette have stronger schemas about autism which should lead to an increase in false memory occurrences due to gap filling in memory reconstruction (Collins & Loftus, 1975; Quillian, 1962).

Hypothesis two relies on similar presuppositions about semantic processing. It is assumed that more favorable social distance scores occur when the participant either has

a positive schema or no schema for autism. While false memories should be influenced by a negative schema due to the nature of the false memory statements. As such, these scores should be inversely correlated and highly subject to autism disclosure (Butler & Gillis, 2011; Collins & Loftus, 1975; Mathews et al., 2014; Quillian, 1962).

Hypothesis three relies on the negative perceptions discussed in the autism and gender section. The subjective experiences listed by autistic girls and women state that they felt they were under more pressure to conform to neurotypical norms. This increased criticism of the social behaviors of girls should be manifested in the lower social distance scores because the behavior between the vignettes is identical with only the gender or disclosure changing (Hull et al., 2020; Kanfiszer et al., 2017; Milner et al., 2019).

Method

Participants

Participants were recruited from the Psychology Department research pool as afforded by the SONA Systems software package to take the survey on Qualtrics. Through this method 119 participants were recruited. Following data exclusion for those who completed the survey in under 180 seconds or did not meet inclusion criteria (i.e., being under the age of 18 or did not complete the study), 90 remained. Participants were majority female (75.6%) and had an age range of 18 to 52 (M = 19.86, SD = 3.84). Approximately 60% of the participants identified as white, 26.7% were Black or African American, 12.2% identified as Other (12.2%), 1.1% were Asian (1.1%).

Measures

Vignettes being used in the study were adapted from the vignettes used by Mathews et al. (2014; See Appendix A). There were originally three vignettes in the Mathews et al. (2014) study. To better facilitate false memories the three vignettes were collapsed into one larger vignette of 512 words, with the goal of creating a contiguous story for participants to read. To accomplish this some additional interactions and general structure changes were required to make enough story parameters to serve as items on a memory questionnaire.

Some characteristics were adapted from the behavioral descriptions provided by Butler and Gillis (2011) for their vignette study.

The vignette in this document is rendered on a single page for efficiency. We delivered the vignette in rather large font occupying two consecutive pages on Qualtrics to ensure that the vignette was properly absorbed. To create the conditions for disclosure and non-disclosure, there was a slide preceding the vignette that stated the name of the character, that they were a student, and in the disclosure condition, that they were autistic. Stereotypic names were utilized to imply the gender of the vignette character, John for male and Jane for female, along with correct gendered pronouns. For this study, disclosure and non-disclosure of autism diagnosis was one independent variable, while gender of the vignette character was the second.

We have used a few items that could plausibly engender memories as a function of an *a priori* description. For example, John/Jane's feverish approach to the furniture moving (Appendix A) could be remembered as "aggressive" as a function of the *a priori* description. There are bolded pegs in Appendix A that serve as the basis for positive or negative assertions in Appendix C.

Social Distance

The Social Distance Scale is a self-report questionnaire using Likert responses (Bogardus, 1933; See Appendix B). Questions on The Social Distance Scale were modified for the current study to better reflect the lived realities of undergraduate

students. The Social Distance Scale has demonstrated good reliability even when being modified for use with different populations (Adewuya & Makanjuola, 2005; Jahnke et al., 2015). The Social Distance Scale has been found to maintain a high level of reliability even in application to varied groups (α=.77 - .91; Hanson, 2018; Jahnke et al., 2015). The modified Social Distance Scale used in this study has seven items rated on a seven-point Likert scale, with *0* being *do not agree at all* and *6* being *completely agree*. The ratings on the modified Social Distance Scale served as one of the dependent variables for this study. In the current study reliability for the Social Distance Scale remained high (Experiment 1 α = .87; Experiment 2 α = .91).

False Memories

The false memory task is a series of 10 statements concerning the vignette. Participants were asked to identified statements about events that actually occurred within the vignette as *True* while statements that indicated something that did not occur within the vignette should be indicated *False*. The 10 statements were divided into five false statements meant to engender false recollections based on individual biases concerning autistic individuals and five statements that were just facts about the vignette to check for attention.

Procedure

This study received approval from the Institutional Review Board (IRB) at Stephen F. Austin State University, before the beginning of data collection. Participants

were recruited through the Psychology Department research pool as afforded by the SONA Systems software package. Participants who were a part of the study, were randomly assigned a condition when they began the survey on Qualtrics. The survey began with an informed consent document outlining the basic procedures, time for completion, and level of risk. If participants consented to continue, they reached a page to fill out their age. Participants below the age of 18 were sent to the end of the study and thanked for their participation. The rest moved on to complete demographics before moving onto the stimulus materials.

Initially, participants encountered a screen that described the main character, specifically their gender and autism disclosure were manipulated here. Participants in a disclosure condition saw the statement "John/Jane is an autistic college student" while those in the non-disclosure condition just read "John/Jane is a college student." The vignettes themselves only differed marginally in their usage of pronouns and one mention of autism in disclosure conditions. After reading the vignette, participants were presented with, in order, the modified Social Distance Scale and then the recollection task. Following the completion of all test materials, participants were presented with a debriefing message that explained the purpose of the study and contained information for contacting the Counseling Center or the researchers if the participants desired. Participants who were recruited through the SONA Systems software package were compensated with research credits.

Results

At a point where the majority of data points in Experiment 1 were collected, a data inspection was run to insure of basic soundness of the Qualtrics program. A fraction of participants completed the experiment in a time under 180 seconds that seemed implausibly fast for commitment to the task and comprehension of the vignette that served as the independent variable. A second, orthogonal experiment was launched among Dr. Scott Drury's students for extra credit. In a recorded video message and written instructions, students were instructed to use a desktop computer and asked to go through the experiment carefully. The instructions themselves were augmented to increase commitment to reading the vignette. Early concerns about Experiment 1 proved unfounded as vignette comprehension was shown to be high as a function of memory-item performance. However, the percentage completing in more than 180 seconds improved dramatically from 73.95% in Experiment 1 to 97.50% in Experiment 2.

Score Calculation

Scores were calculated in the same fashion for both experiments and this paragraph will describe how the raw data were transformed into the dependent variables. False memory scores were calculated by giving a point for correctly identifying a statement as false and no points for misidentifying it as true.

This means that false memory scores were higher for participants less susceptible to false memories and lower for those who were. Reading comprehension questions were scored in the same way with higher scores indicating more correct assertions. Social distance scores appeared as a seven-point Likert scale from 1 to 7. Higher scores on the social distance scale indicate more closeness. Two items on the social distance scale were reverse-coded, those being: "I believe people like the vignette character should be institutionalized" and "I would never associate with someone like the vignette character." Participants were excluded from analysis if they did not complete all survey materials or if they completed the survey in under 180 seconds. Average reading rates are variable but the average appears to be around 250 words per minute (Brysbaert, 2019). With the knowledge that most undergraduates do not read consent documents we estimated the time to read the approximately 500-word vignette at 120 seconds leaving approximately 3 seconds per question. This would be an overall quick pace which is why we felt that 180 seconds would be an appropriate cutoff for finding participants who just clicked through the survey.

Experiment 1- General Performance

We observed comprehension of the vignette and general commitment to the task in five questions of reading comprehension, wherein chance would predict a global mean of 2.50, that for $n = 88$ participants $M = 4.16$, $SD = 0.80$. A one-sample t-test indicated $t(87) = 19.44$, $p < .01$, $d = 0.80$, a strong suggestion of participant commitment.

Similarly, the false memory items showed a mean correct score of $M = 3.26$, $SD = 1.17$, wherein higher scores indicated rejection of false assertions about the vignette. The *t*-test indicated $t(87) = 6.11$, $p < .01$, $d = 1.17$, also strongly suggesting participant commitment. As mentioned above, data were omitted due to completion times faster than 180 seconds. Among the remaining sample $n = 88$, we observed that accuracy across the false memory ($r = -.13$, $p = .24$) and reading comprehension ($r = .17$, $p = .11$) tasks were negatively correlated with completion times, but not significantly so.

Multivariate Analysis and One-Way Post Hoc Tests

The data was analyzed using a two-way multivariate analysis of variance (MANOVA) because there were two categorical independent variables (disclosure status and vignette character gender) and three interval dependent variables (false memories, reading comprehension, and social distance scores). A main effect for autism was found on the three dependent variables, $F(3, 82) = 4.59$, $p < .01$, Wilks' $\Lambda = .86$, but not for gender, $F(3, 82) = 1.38$, $p = .23$, Wilks' $\Lambda = .95$. There was a significant interaction for gender and autism in our MANOVA, $F(3, 82) = 4.84$, $p < .01$, Wilks' $\Lambda = .85$.

Table 1

Descriptive Statistics for Experiment 1 MANOVA

	Gender		Mean	Std. Deviation	N
Social Distance Score	Man	Nondisclosure	4.18	1.08	23
		Disclosure	4.79	1.19	22
		Total	4.48	1.16	45
	Woman	Nondisclosure	3.77	1.26	23
		Disclosure	4.77	1.17	20
		Total	4.24	1.31	43
	Total	Nondisclosure	3.98	1.18	46
		Disclosure	4.78	1.16	42
		Total	4.36	1.23	88
Reading Comprehension	Man	Nondisclosure	4.26	0.75	23
		Disclosure	3.82	0.73	22
		Total	4.04	0.77	45
	Woman	Nondisclosure	3.96	0.93	23
		Disclosure	4.65	0.49	20
		Total	4.28	0.83	43
	Total	Nondisclosure	4.11	0.85	46
		Disclosure	4.21	0.75	42
		Total	4.16	0.80	88
False Memory	Man	Nondisclosure	3.74	1.01	23
		Disclosure	2.95	1.43	22
		Total	3.36	1.28	45
	Woman	Nondisclosure	3.13	1.06	23
		Disclosure	3.20	1.06	20
		Total	3.16	1.04	43
	Total	Nondisclosure	3.43	1.07	46
		Disclosure	3.07	1.26	42
		Total	3.26	1.17	88

To assess which relationships were significant, customary one-way *post hoc* analyses were conducted. A Bonferroni correction was applied to the p-values to account for multiple simultaneous tests. There was significant difference between the disclosure of autism ($M = 4.76$, $SD = 1.16$) and control ($M = 3.98$, $SD = 1.18$) conditions on the

social distance score, F (1, 86) = 10.04, $p < .01$. The difference between the disclosure of autism (M = 4.21, SD = 0.75) and control (M = 4.11, SD = 0.85) were non-significant for reading comprehension, F (1, 86) = 0.38, p = .54. The difference between the disclosure of autism (M = 3.07, SD = 1.26) and control (M = 3.43, SD = 1.07) conditions were non-significant for false memories, F (1, 86) = 2.15, p = .15. There were no significant differences between male (M = 4.48, SD = 1.16) and female (M = 4.23, SD = 1.29) vignette characters for social distance scores, F (1, 86) = 0.94, p = .34.

Table 2

Main Effects and Interaction of Experiment 1 Multivariate Tests [a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.98	1336.074[b]	3.00	82.00	0.00
	Wilks' Lambda	0.02	1336.074[b]	3.00	82.00	0.00
	Hotelling's Trace	48.88	1336.074[b]	3.00	82.00	0.00
	Roy's Largest Root	48.88	1336.074[b]	3.00	82.00	0.00
Gender	Pillai's Trace	0.05	1.380[b]	3.00	82.00	0.25
	Wilks' Lambda	0.95	1.380[b]	3.00	82.00	0.25
	Hotelling's Trace	0.05	1.380[b]	3.00	82.00	0.25
	Roy's Largest Root	0.05	1.380[b]	3.00	82.00	0.25
Autism	Pillai's Trace	0.14	4.588[b]	3.00	82.00	0.01
	Wilks' Lambda	0.86	4.588[b]	3.00	82.00	0.01
	Hotelling's Trace	0.17	4.588[b]	3.00	82.00	0.01
	Roy's Largest Root	0.17	4.588[b]	3.00	82.00	0.01
Gender* Autism	Pillai's Trace	0.15	4.844[b]	3.00	82.00	0.00
	Wilks' Lambda	0.85	4.844[b]	3.00	82.00	0.00
	Hotelling's Trace	0.18	4.844[b]	3.00	82.00	0.00
	Roy's Largest Root	0.18	4.844[b]	3.00	82.00	0.00

a. Design: Intercept + Gender + Autism + Gender * Autism

b. Exact statistic

There were no significant differences between male (M = 4.04, SD = 0.77) and female (M = 4.28, SD = 0.83) vignette characters for reading comprehension, F (1, 86) = 1.91, p = .17. There were no significant differences between male (M = 3.36, SD = 1.28) and female (M = 3.16, SD = 1.04) vignette characters for false memories, F (1, 86) = 0.60, p = .44. For more information on the statistics please refer to Tables 1 and 2.

Hypothesis Analysis

Hypothesis one was assessed with a bivariate correlation which did not support the hypothesis. No items on the social distance scale correlated significantly with false memory scores (r = -.19 - .18). The second hypothesis reached significance for the effect of autism disclosure on social distance scale scores F (1, 87) = 10.04, p < .01 and not false memories F (1, 86) = 2.15, p = .15. The third hypothesis proposed that there would be a main effect for gender, that female vignette characters would receive lower social distance scores than males regardless of disclosure status F (1,87) = 0.94, p = .34. Hypothesis three was not supported by the data.

Experiment 2

This addendum to the experiment was approved by the IRB at Stephen F. Austin State University prior to data collection. Participants were recruited from the Psychology Department through an extra credit assignment in class. Participants were directed access the survey through a link provided by the professor to take the survey on Qualtrics. Through this method, 40 participants were recruited. Following data exclusion for those

who completed the survey in under 180 seconds or did not meet inclusion criteria (i.e., being under the age of 18 or did not complete the study), 39 remained. Participants were majority female (79.5%) and had an age range of 19 to 50 (M = 24.23, SD = 7.02). Approximately 69% of the participants identified as white, 17.9% were Black or African American, 2.6% identified as American Indian or Alaska Native, 5.1% identified as Other, and 5.1% were Asian.

The procedure was almost identical to Experiment 1, including order of questions, measures, and demographic questions. The only differences occurred during instruction where prior to agreeing to the survey participants were requested to take their time and use a desktop computer through video instructions. Additionally, a single sentence was added to the vignette introduction page to encourage participants to take their time.

General Performance

We observed comprehension of the vignette and general commitment to the task in five questions of reading comprehension, wherein chance would predict a global mean of 2.50, that for n = 39 participants M = 4.29, SD = 0.80. A one-sample t-test indicated $t(37) = 13.75$, $p < .01$, $d = 0.80$, a strong suggestion of participant commitment. Similarly, the false memory items revealed a correct answer mean of M = 3.42, SD = 1.24. The t-test indicated $t(37) = 4.56$, $p < .01$, $d = 1.24$, also strongly suggesting participant commitment. Only one participant had to be removed for completing the survey in under 180 seconds. Among the remaining sample n = 39, we observed that

accuracy across the false memory (r = -.09, p = .60) items was slightly negatively correlated with completion times while reading comprehension (r = .08, p = .62) were slightly positively correlated with completion times.

Multivariate Analysis

The data was analyzed using a two-way MANOVA because the variables remained the same as Experiment 1. The main effect for autism on the linear combination of false memories, reading comprehension, and social distance scores was insignificant, F (3, 32) = 1.98, p = .14, Wilks' Λ = .84, The main effect of gender on the linear combination of false memories, reading comprehension, and social distance scores was non-significant, F (3,32) = 2.383, p = .09, Wilks' Λ = .82. The interaction for gender and autism also failed to reach significance in experiment 2, F (3, 32) = 0.35, p = .79, Wilks' Λ = .97. The lack of significance in the overall MANOVA for Experiment 2 generally precludes using one-way *post hocs* but some one-way analyses were necessitated by the specific hypothesis predictions.

Table 3

Descriptive Statistics for Experiment 2 MANOVA

	Gender		Mean	Std. Deviation	N
Social Distance Score	Man	Nondisclosure	4.70	0.93	10
		Disclosure	5.52	1.04	8
		Total	5.06	1.04	18
	Woman	Nondisclosure	3.73	1.02	10
		Disclosure	4.70	1.64	10
		Total	4.21	1.42	20
	Total	Nondisclosure	4.21	1.07	20
		Disclosure	5.06	1.43	18
		Total	4.62	1.31	38
Reading Comprehension	Man	Nondisclosure	4.10	0.99	10
		Disclosure	4.13	0.83	8
		Total	4.11	0.90	18
	Woman	Nondisclosure	4.50	0.71	10
		Disclosure	4.40	0.70	10
		Total	4.45	0.69	20
	Total	Nondisclosure	4.30	0.86	20
		Disclosure	4.28	0.75	18
		Total	4.29	0.80	38
False Memory	Man	Nondisclosure	3.30	1.57	10
		Disclosure	3.63	1.19	8
		Total	3.44	1.38	18
	Woman	Nondisclosure	3.60	1.26	10
		Disclosure	3.20	1.03	10
		Total	3.40	1.14	20
	Total	Nondisclosure	3.45	1.39	20
		Disclosure	3.39	1.09	18
		Total	3.42	1.24	38

Hypothesis Analysis

To start with the first hypothesis that social distance scores would be negatively correlated with false memories, a bivariate correlation was run and two items on the social distance scale correlated significantly with false memory scores. The items that

achieved significance referred to being neighbors with, $r = .39$, $p = .02$, and talking with, $r = .35$, $p = .03$, the vignette character. Any items achieving significance is a departure from the Experiment 1 data, but there is not a conclusion that can be readily drawn from this. The second hypothesis predicted that both social distance scores and false memories would differ based on autism disclosure. Autism disclosure did not have a significant effect on false memory scores, $F(1, 36) = 0.02$, $p = .88$. Autism disclosure did not have a significant effect on social distance scores after a Bonferroni correction was applied, $F(1, 36) = 4.35$, $p = .04$. The third hypothesis proposed that there would be a main effect for gender, that female vignette characters would receive lower social distance scores than males regardless of disclosure status, this hypothesis was not supported by the data following a Bonferroni correction, $F(1, 36) = 4.35$, $p = .04$.

Table 4

Main Effects and Interaction of Experiment 2 Multivariate Tests [a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.98	511.281[b]	3.00	32.00	0.00
	Wilks' Lambda	0.02	511.281[b]	3.00	32.00	0.00
	Hotelling's Trace	47.93	511.281[b]	3.00	32.00	0.00
	Roy's Largest Root	47.93	511.281[b]	3.00	32.00	0.00
Gender	Pillai's Trace	0.18	2.383[b]	3.00	32.00	0.09
	Wilks' Lambda	0.82	2.383[b]	3.00	32.00	0.09
	Hotelling's Trace	0.22	2.383[b]	3.00	32.00	0.09
	Roy's Largest Root	0.22	2.383[b]	3.00	32.00	0.09
Autism	Pillai's Trace	0.16	1.983[b]	3.00	32.00	0.14
	Wilks' Lambda	0.84	1.983[b]	3.00	32.00	0.14
	Hotelling's Trace	0.19	1.983[b]	3.00	32.00	0.14
	Roy's Largest Root	0.19	1.983[b]	3.00	32.00	0.14
Gender* Autism	Pillai's Trace	0.03	.353[b]	3.00	32.00	0.79
	Wilks' Lambda	0.97	.353[b]	3.00	32.00	0.79
	Hotelling's Trace	0.03	.353[b]	3.00	32.00	0.79
	Roy's Largest Root	0.03	.353[b]	3.00	32.00	0.79

a. Design: Intercept + Gender_ + Autism + Gender_ * Autism

b. Exact statistic

Discussion

Both Experiments 1 and 2 were underpowered, but fundamentally sound experiments. Upon initial skimming of the survey durations for Experiment 1 there was concern that the large range from less than 60-seconds to over 6000-seconds might indicate a failure of control, leading to compromised internal validity. As such, Experiment 2 was undertaken to address these concerns by soliciting a new sample that was implored to use a computer and take their time on the study. This resulted in relatively similar performance metrics, but a marked decrease in quick completion times. It appears after running Experiment 2 that the 180-second cutoff for data inclusion was sound.

Implications of Analyses Experiment 1

The general results of the MANOVAs for Experiments 1 and 2 were in line with the previous work done on peer perceptions of autistic students. In Experiment 1, we found a significant main effect for autism disclosure on the linear combination of reading comprehension, false memories, and social distance scores, while also finding a main effect for autism along the same linear combination. Notably, gender failed to reach significance in the overall MANOVA.

One-way *post hocs* confirmed that autism disclosure had a significant effect on social distance scores, somewhat in contradiction to previous research. The remaining one-way *post hoc* analyses were non-significant for the effect of disclosure on reading comprehension and false memories. One-way *post hocs* were also non-significant for the effect of gender on social distance scores, reading comprehension, and false memories.

Implications of Analyses Experiment 2

The results of the MANOVA for Experiment 2 were non-significant for main effects of both gender and autism and the interaction was non-significant. This likely occurred due to the much smaller sample and precluded one-way *post hocs* for further testing. Though the tests of the false memories and reading comprehension against chance were quite strong. This confirmation meant that the results from Experiment 1 could be viewed more favorably, despite not having measures in place to control mediums of access to the survey or the time spent on the survey.

Hypothesis Testing

Hypothesis one was intending to find an effect of stereotype or preconceived notions on social distance scores and false memories. It was hypothesized that false memories would be derived from stereotypes about autistic people and thus affect the social distance scores for those with high levels of false remembrance. This proved to be non-significant during analysis of Experiment 1 for all items on the Social Distance Scale. Experiment 2 found significant correlations between false memories and the items

concerning talking to people like the vignette character and the willingness to be neighbors with someone like the vignette character. The significance was only marginal but demonstrated that there could be a trend like the one hypothesized.

Hypothesis two was meant to gauge whether autism disclosure had a direct effect on social distance scores and false remembrances. This proved significant for social distance scores as had been previously demonstrated in the literature, but did not reach the threshold for significance for false remembrances. It was shown through analysis that false remembrance rates were significantly different than chance and mildly affected by survey duration.

Hypothesis three was supposed to demonstrate that being a woman led to higher social distance despite disclosure status. This was posed because research into female representations of autism posited that there was higher social pressure on autistic women and girls to "mask" and appear normal to peers. The results of our analysis were nonsignificant with gender not having a main effect.

Vignette Justifications

The vignette itself was derived from the work of Butler and Gillis (2011) and Mathews et al. (2014). Butler and Gillis (2011) did not find a significant effect for labels, instead their results only differed significantly by behavioral description. Mathews et al. (2014) found a label effect but also included more dependent variables through the use of behavioral, cognitive, and affective attitudes. The current study took information from

both and improved where possible by removing the “typical” label confound and maintaining the behavioral components though all vignettes. Butler and Gillis (2011) also had the issue of using Asperger’s which is less known than autism as a class.

False Memory Justifications

The false memory paradigm is also of import. The literature review discussed a range of options for inducing false memories such videos, list-learning, full recall, and autobiographical memories. The false memory measure used in this study appeared to demonstrate appropriate implantation, but did not fall under any one of the above categories. It could be argued that the false memory items did not appropriately tap into participants’ preconceived notions about autistic people and thus failed to garner significance across disclosure. It could also be argued that the True/False format did not leave enough variation to tease out the mild effects of false memory.

Gender Justifications

The lack of a gender effect in the study is complicated to explain. Evidence of an effect of gender on social phenomena is well documented. Though, this trend is much less noticeable in the literature surrounding autism. Theoretically, it could be argued in a number of capacities as to why gender lacked significance. Firstly, marginalized positions in society act as intersections where the effects can be demonstrably different than just a stacking of disadvantage. In this scenario the autism disclosure would supersede gender and nullify the effect of gender on participants. A second explanation might be a lack of

concept for autistic women. The literature is heavily biased toward male representations of autism through likes of Cohen's (2002) extreme male brain theory. This would leave a vacuum for the preconceived notion of autistic women. A third explanation could be a bias in the vignette that dampened gender effects. While at the time of study the use of the *Lord of the Rings* and videogames as interests for the vignette character seemed innocuous, it is true that these are traditionally considered to be male interests. Any or all of these factors could have played a role in the nonsignificant effect of gender within the study.

The results indicated that the original false memory questionnaire had power and had a false memory implantation rate similar to that described by Takarangi et al. (2008) landing at approximately 35%. There was also a strong main effect for autism disclosure which is in line with the research conducted by Mathews et al. (2014) and Butler and Gillis (2011). While Experiments 1 and 2 did not succeed in validating the proposed hypotheses they did open the door for further research to iterate and potentially find more potent effects.

Limitations

This study did suffer from an overall lack of control over participants. Validity checks should have been used to better understand if participants were engaged with the task or just clicking through the survey. The nature of the study being online means that participants were free to take the study at any time and place they might desire, while this

is a boon for the ease of collecting data it reduces the internal validity of the study because we cannot be sure that the study received the full attention of participants. A second issue of control is that Qualtrics did not allow us to force lingering on the vignette slides to encourage careful or complete reading, this led to some participants completing the entire survey in less than a minute and having to be excluded. A final limitation of the study was the use of original measures for false remembrance. This original measure seemed to perform better than chance for the implantation of false remembrances, but it cannot be determined if this was due to the questions being vague and misleading or actually tapping into participant stereotypes concerning autistic peers.

Future Directions

Future studies could attempt to assess transgender autistic peers as vignette characters, because the prevalence of transgender identities in the autistic community seems to be higher than that of the whole population (Warrier et al., 2020). It also would likely be in the best interest of future studies to find less extreme reverse-coded items for the social distance scale. Specifically, the question about institutionalization had the lowest standard deviation of all items and was the only item that participants had a limited range on, with participants rating the item as a one. Exclusively analyzing labeling and gender means that there was not control for the behavioral description. Behavioral descriptions that follow the DSM guidance for severity could have lent more validity to the study as a whole (Butler & Gillis, 2011). It could be helpful to use a

measure to gauge participant familiarity with autism, so there is more empirical evidence that the familiarity or schema was the cause of the differences.

Conclusion

This study upheld the belief that college students do prefer a fair amount of social distance from perceived or disclosed autistic peers, but could not fully address how false memories might play into this phenomenon. The original materials of the study had strong face validity and performed significantly better than chance, but could not be assessed as to how well they accomplished their specific function. The study lacked power to discern if the gender of a vignette character significantly affected social distance scores or false remembrances, though there was a significant interaction between disclosure status and vignette character gender in the overall model.

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Appendix A

It is move-in day in the dorms and you are carrying some of your belongings into your new room in one of the co-ed suites. John (Jane), one of your suitemates who lives in the opposite room to yours, walks into the room. John (Jane) is the same year in school as you (and is autistic or no statement). You notice the furniture in the shared living space is arranged in a way that makes the space more cramped.

During the first day in your humanities course, the professor explains that each student will be randomly assigned to a partner with whom they will work on a number of group projects. Together these group projects will be worth 50% of your final grade. The professor tells you that you will be working with John (Jane), your suitemate. As a part of the first group project, you are instructed to choose a contemporary fiction book to compare and contrast to a literary classic. You ask John (Jane) if they have any ideas, and they immediately state that they would like to use the Lord of the Rings Trilogy. You tell them that you think that is a good idea, but you mention that you are worried because it is more than 1,200 pages, which may be too long for the current assignment. You try to name three other books that you think would be more appropriate. You ask John (Jane) if they have any additional ideas.

In response, they begin a five-minute explanation of why they think the Lord of the Rings Trilogy is the best choice. Every time you attempt to ask them about another book, they immediately return to their discussion of the Lord of the Rings Trilogy.

You decide to join a campus club focused on community service and volunteer work. You hope to make friends with someone at the first meeting because you do not know anyone else in the club. When you enter the meeting room, the club president introduces you to another member, your suitemate who you did not know was in this club. You greet John (Jane) and ask them about why they joined the club. John (Jane) is reading the club brochure and **does not look at you but still responds.** You have not seen them much in the suite and so ask about their hobbies. John (Jane) pulls out a video game magazine and explains their favorite game to you. You attempt to talk about yourself with them, **but the conversation keeps getting turned towards videogames**. You feel like John (Jane) is more interested in videogames than talking with you.

A week later you decide to ask if John (Jane) can help you rearrange the furniture. You start to move around the sofa but **John (Jane) gets upset and moves it back to its original position with no explanation.** You brush it off and decide to move around the furniture on your own. John (Jane) sees that the furniture was moved and **frantically requests that everything be moved back to the way it was.**

Appendix B

Please indicate on a 7-point scale your agreement to the following statements, with a 1 indicating strongly disagree and a 7 indicating strongly agree, answer in reference to someone who acts like the vignette character.

1. I believe people like the vignette character should be institutionalized.

    a. Strongly disagree
    b. Disagree
    c. Somewhat disagree
    d. Neither agree nor disagree
    e. Somewhat agree
    f. Agree
    g. Strongly agree

2. I would be willing to be friends with someone like the vignette character.

    a. Strongly disagree
    b. Disagree
    c. Somewhat disagree
    d. Neither agree nor disagree
    e. Somewhat agree
    f. Agree
    g. Strongly agree

3. I would be willing to have someone like the vignette character as a romantic partner.

    a. Strongly disagree
    b. Disagree
    c. Somewhat disagree
    d. Neither agree nor disagree
    e. Somewhat agree
    f. Agree
    g. Strongly agree

4. I would be willing to talk to someone like the vignette character.

    a. Strongly disagree
    b. Disagree
    c. Somewhat disagree
    d. Neither agree nor disagree
    e. Somewhat agree
    f. Agree
    g. Strongly agree

5. I would have someone like the vignette character as a colleague at work.

    a. Strongly disagree
    b. Disagree
    c. Somewhat disagree
    d. Neither agree nor disagree
    e. Somewhat agree
    f. Agree
    g. Strongly agree

6. I would have someone like the vignette character as a neighbor.

    a. Strongly disagree
    b. Disagree
    c. Somewhat disagree
    d. Neither agree nor disagree
    e. Somewhat agree
    f. Agree
    g. Strongly agree

7. I would never associate with someone like the vignette character

    a. Strongly disagree
    b. Disagree
    c. Somewhat disagree
    d. Neither agree nor disagree
    e. Somewhat agree
    f. Agree
    g. Strongly agree

Appendix C

Indicate whether the following statements are True or False concerning the vignette.

1. The club that the narrator and vignette character were at was focused on community service and volunteer work.
    a. True
    b. False
2. The narrator found out that videogames were one of the vignette character's hobbies.
    a. True
    b. False
3. The narrator moved the furniture in the suite by themselves.
    a. True
    b. False
4. The narrator was hesitant about using the Lord of the Rings Trilogy for the book report because of the length.
    a. True
    b. False
5. The vignette character did not respond to the narrator's attempts at conversation at the club meeting.
    a. True
    b. False

6. The vignette character was aggressive toward the narrator when they suggested moving the furniture.

    a. True
    b. False

7. The vignette character was described as "having a meltdown" when they realized the furniture had been moved.

    a. True
    b. False

8. The vignette character was roommates with the narrator.

    a. True
    b. False

9. The vignette character was willing to change topics when the narrator suggested it.

    a. True
    b. False

10. When asked about book report options the vignette character suggested three options.

    a. True
    b. False

VITA

After completing his work at the Indiana Academy for Science, Mathematics, and Humanities, Muncie, Indiana, in 2018, Justin Linville entered Ball State University in Muncie, Indiana. He received the degree of Bachelor of Arts of psychological science and creative writing from Ball State University in May 2022. In August of 2022, he entered the Graduate School of Stephen F. Austin State University and received the degree of Master of Arts of psychology in May of 2024.

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