Exploring Heterosexism Through Relationship Perception of

Same and Other Sex Avatar Stimuli

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Abstract

Heterosexism refers to discrimination against gay men and lesbians manifested in cultural institutions that gives heterosexuals an advantage (Herek, 2007). In the current study participants rated the likelihood that avatars were in different types of relationships based on a video of a short interaction. Video dyads were depicted in scenes that suggested they were clearly friends, clearly a romantic couple, or it was unclear (Level of Ambiguity: Clearly Friends, Neutral, Clearly Couple). The avatars were comprised of Male-Male, Male-Female, or Female-Female dyads (Couple Sex). A 3 (Level of Ambiguity) X 3 (Couple Sex) X 2 (Participant Gender) analysis of variance showed significant main effects for Level of Ambiguity and Couple Sex for ratings of likelihood that they were co-workers, were in a romantic relationship for less than one year, and were in a romantic relationship for more than one year. Interactions between Level of Ambiguity and Couple Sex occurred for coworkers, in a romantic relationship for less than one year, and in a romantic relationship for more than one year. Further studies of the impact of heterosexism on relationship perception could increase awareness of the issue and provide policy makers with a convincing argument to work toward changing negative societal attitudes.

Exploring Heterosexism Through Relationship Perception of Same and Other Sex Avatar Stimuli

People have preconceived notions of what a relationship is supposed to look like. Typical stereotypes include that a relationship consists of a man and a woman, and such stereotypes usually manifest themselves in heterosexism. Herek (2007) defined this term by stating "heterosexism can be understood as a cultural ideology embodied in institutional practices that work to the disadvantage of sexual minority groups even in the absence of individual prejudice or discrimination" (p. 2). If this type of prejudice is operating, people might not, for example, assume two males living together are in a romantic relationship. Instead, they would be more likely to say two males are just friends or roommates. In contrast, one man and one woman are often assumed to be a romantic couple. For example, in social situations, such as eating at a restaurant, servers frequently assume a man and a woman are a couple, but not two men or two women.

Anti-gay Prejudice

Anti-gay prejudice is linked to heterosexism, but a person without anti-gay prejudice may still act in ways that demonstrate heterosexism (Herek, 2007). One example of this is that a person may know gay men and lesbians and have no problem being friends with them but may vote against legalizing same-sex marriage. According to previous research, certain individual difference variables predict anti-gay prejudice. Goodman and Moradi (2008) studied attitudes and behaviors of heterosexual college students toward gay men and lesbians. They found that traditional gender-role attitudes, a tendency to dictate strict rules, and being dominant in social situations were positively correlated with anti-lesbian and anti-gay attitudes and behaviors. Other factors influencing acceptance of gay men and lesbians are age, with younger people expressing more acceptance than older people, and level of education, with better educated individuals

reporting more acceptance (Kite & Whitley, 2010). Women are more accepting of gay men and

lesbians than are men (Kite & Whitley, 1996). Both women and men are more accepting of gay

men and lesbians if they know a gay man or lesbian personally, but women are more likely to

report being friends with gays and lesbians (Herek & Capitanio, 1996). Although the existing

literature examines attitudes toward gay men and lesbians as an abstract target, few studies have

documented behavioral responses to gays and lesbians such as a reaction to seeing two men

holding hands while walking down the street (Kite & Whitley, 1998).

Implicit Attitudes

In most studies of anti-gay prejudice, participants complete surveys about their explicit

attitudes toward gay men and lesbians. More recently, however, researchers have begun to

explore implicit attitudes towards homosexuality. Clow and Olson (2010), for example,

measured positive and negative attitudes toward homosexuality by allowing people to either

approach or avoid words associated with same-sex oriented individuals. That is, to assess

people's implicit attitudes, researchers showed participants either homosexual or heterosexual

words and asked them to choose either to push or pull the lever after each word. A response

compatible with prejudice was either pushing a homosexual word or pulling a heterosexual word.

Responses incompatible with prejudice were pulling homosexual words and pushing

heterosexual words. Participants also completed questionnaires measuring explicit prejudice

against gays. Results showed that high prejudice individuals, as measured by the explicit

questionnaire, made more prejudice-compatible than prejudice-incompatible responses and low

prejudice individuals made more prejudice-incompatible than prejudice-compatible responses.

Another interesting finding was that high prejudice individuals were faster when responding

compatibly to the stimuli, suggesting that choosing a prejudiced response was more automatic

for high prejudice participants. However, low prejudice people did not differ in reaction time when responding incompatibly or compatibly, meaning that no response was more automatic than another for low prejudice people.

Workplace Discrimination

Negative attitudes toward same-sex relationships and the people in them can affect the workplace as well. Going to work can be stressful for gay and lesbian individuals who face hostile environments from coworkers or from authority figures who fail to recognize the gay person's romantic relationship. Many problems gay and lesbian individuals face in the workplace and in other social interactions stem from heterosexism, which results in adverse effects for those individuals. Ragins and Cornwell (2001) studied the effect of workplace discrimination on gay people by surveying employed gay men and lesbians. Results showed that gay people who lived in an area that offered protective legislation for gay people, whose companies offered diversity training in regard to sexual orientation, and whose companies enacted supportive policies were less likely to experience discrimination at work. Gays and lesbians in these work environments also were more likely to disclose their sexual orientation at work. Moreover, gays who perceived discrimination in their workplace had more negative attitudes toward work and received fewer promotions.

Smith and Ingram (2004) also studied how gays were affected by unsupportive social interactions in the workplace. They found that heterosexism was positively correlated with depression and unsupportive social interactions. Not surprisingly, gays and lesbians who revealed less about their sexual orientation at work experienced fewer unsupportive interactions. Unsupportive actions could include negative feedback, negative comments or jokes about gays and lesbians, or little encouragement to improve and work toward a promotion.

Relationship Perception

Few studies have examined people's perceptions of heterosexual relationships compared with gay and lesbian relationships. However, Rateau (2004) looked at heterosexual men's judgments of heterosexual and homosexual relationships. In this study, participants rated relationships on several different dimensions, including "sharing joys and sorrows," "being faithful," and "living together." All participants completed the same survey twice; however, one group first completed the survey about heterosexual couples and then homosexual couples, the other group first completed the survey about homosexual couples and then heterosexual couples. A sample question read, "Would you say that two homosexual persons form a couple if they share material possessions?" Participants rated each question by choosing either "yes," "I guess so," "I guess not," and "no." Results showed that people rated heterosexual and homosexual couples similarly when they took the heterosexual questionnaire first. However, when participants answered the questions about homosexual couples first, they rated certain dimensions higher for heterosexual relationships. These dimensions were "establishing a family," "building a serious relationship," and "sharing material possessions." These findings suggest that heterosexism may be primed by the context of the situation. People who exhibit heterosexist behaviors tend to ignore the presence of homosexuality. However, if those people are primed to think about homosexuality, this may affect their reported beliefs about how heterosexual relationships should operate.

Using Visual Cues to Perceive Gay Men and Lesbians

Research suggests that heterosexual men behave differently around gay men than around other heterosexual men. Miller and Malloy (2003) tested this idea using the social stigma theory, which is the idea that people of low status are stigmatized and responded to with disgust.

Because gay men are a stigmatized group, researchers predicted that heterosexual men would have more negatives views of their gay counterparts. These researchers matched one heterosexual man with a gay man and asked them to speak to each other and evaluate each other's personalities. Miller and Malloy expected the heterosexual men's evaluations of gay men would be less differentiated than the gay men's evaluations of heterosexual men. The experimenters also evaluated body language by videorecording the interactions. Results showed that gay men asked more questions than did heterosexual men, that heterosexual men talked about their partners and sports more than did gay men, and that heterosexual men displayed more positive nonverbal actions (e.g., smiling, leaning toward the other person) than did gay men. The results also showed that heterosexual men who used more positive nonverbal behaviors were liked more by their gay partners. However, gay partners who used more positive nonverbal behaviors were liked less by their heterosexual partners. These results indicate that gay men and heterosexual men interpret the body language of other men differently. Other results supported the idea that less masculine heterosexual men rated gay men more positively than did more masculine heterosexual men, as assessed by the Attitude Toward Gays Scale (Herek, 1994). This indicates that masculinity affects a heterosexual man's rating of a gay man.

Buck (2007) examined the effect of timing of sexual orientation disclosure on stereotypes about gays and lesbians. Participants saw one of two videos. Each video showed two males interacting. The video focused on one male, who was either gay or heterosexual. The target male revealed his sexual orientation by mentioning taking a boyfriend or a girlfriend to the movies. In one condition, the target male revealed his sexual orientation in the beginning of the video. In the other condition, the target male waited until the end to mention his sexual orientation. The same male was identified as gay in one condition and identified as heterosexual in another condition so

his appearance was not a factor. Participants rated the target on a list of personality traits embedded with stereotypical gay male traits such as "melodramatic" and "artsy." Results showed when the target was identified as gay at the beginning of the video, people rated the gay target as more stereotypical on the trait measures than when the target identified as gay at the end of the video. Hence, if people know someone is gay before getting to know them, it affects their impression of the target.

Nussbaum (2002) asked participants to guess a target's sexual orientation after viewing a silent five-second video of the target. Participants and targets included gay males and females as well as heterosexual males and females. Participant attractiveness was not assessed; however, target attractiveness was assessed by a group of expert raters, and, based on this, Nussbaum grouped targets by attractiveness. Therefore, ratings of attractive heterosexual men were compared to ratings of attractive homosexual men and ratings of unattractive heterosexual men were compared with ratings of unattractive homosexual men. The same comparisons were used with female targets. Participants' predictions about the targets' sexual orientation were accurate across target sex for 14 out of 24 targets or 58.3%; inaccurate for 20.8% of targets and ambivalent for 20.8% of targets. For heterosexual targets, people accurately assessed sexual orientation 91.7% of the time; people only accurately assessed gay targets' sexual orientation 25% of the time. Nussbaum found a significant main effect for target attractiveness showing that people low and high in attractiveness were more likely to be judged as gay; targets with moderate attractiveness were more likely to be rated as heterosexual. There was no main effect for participant gender. An interaction between attractiveness of target and sexual orientation of the target occurred; targets with low or high attractiveness were more likely to be rated as gay; targets with moderate attractiveness were more likely to be rated as heterosexual. There was also

an interaction between attractiveness of target and gender of target; attractive males and unattractive females were seen as most likely to be gay. Nussbaum's (2002) results illustrate how visual cues can influence a person's perception of a target's sexual orientation.

Current Study

Based on the previous literature, research has found some points of interest in the area of heterosexism. For example, priming participants with the mention of gays or lesbians significantly changes people's responses so that responses for homosexual individuals are more stereotypical and negative and responses for heterosexual individuals are more positive attributes that emphasis family values (e.g., Rateau, 2004, Buck, 2007). Videos have been used in a few studies to measure how visual cues affect participants' ratings (e.g., Miller & Malloy; 2003; Buck, 2007; Nussbaum, 2002). However, few studies have attempted to measure heterosexism or its prevalence based on merely visual information. In the current study, participants viewed videos of two avatars interacting and rated their likelihood of being in different kinds of relationships based on the interaction. These interactions depicted dyads who were clearly friends, clearly a couple, or were not clearly either. Whether the couples were of the same or the opposite sex was also varied. I expected that participants would rate the avatars differently based on the sex of the couple and couple status. Of most interest is how participants rated romantic relationships. I expected that likelihood of romantic relationship ratings for all avatars regardless of Couple Sex would be similar in the Clearly Friends and Clearly Couple conditions. However, in the Neutral condition, I predicted that Male-Female avatars would be rated as more likely to be in a romantic relationship than same sex avatars.

Method

Participants

The experimenter obtained a sample of 126 (47 male, 79 female) undergraduate students who participated to fulfill part of their introductory course requirement. Six participants were dropped because they indicated their sexual orientation was something other than "heterosexual." The age range of participants was between 18 and 23 years old, with an average age of 19.29 years old. Eighty-seven percent of participants identified as White, 4.8 % identified as African American, 3.2% identified as Hispanic, 4% identified as having two or more ethnicities, and 0.8% identified as another ethnicity not listed.

Materials

The experimenter created avatars using The Sims 3 video game and recorded the avatars' interactions using IShowU HD. Each of the Sims depicted in the videos were the middle weight and musculature, were Caucasian, were young adults, and wore similar clothing. Each video was 30 seconds long, did not have sound, and showed the same amount of background information around the Sims (e.g., space around avatars, walls behind them). The experimenter created six sets of avatars: two Male-Male couples, two Female-Female couples, and two Male-Female couples. The avatars were filmed in three conditions that showed each set of avatars in a relationship ranging from Clearly Friends (talking in a kitchen), to Neutral (eating lunch together), to Clearly Couple (cuddling on a bed). Table 1 describes which videos were in which sequence. The six

Insert Table 1 about here

video sequences were shown on computer projection screens. Each participant saw three videos.

Attitudes toward homosexuality were assessed by the Homosexuality Attitude Scale (HAS; Kite & Deaux, 1986), embedded in a scale measuring participant attitude toward individuals with disabilities. The combined attitude scale had 22 questions, 12 of which were from the disabled individual attitude scale (Yuker, Block, & Younng, 1970) and 10 of which were the HAS. The test-retest reliability of the HAS was found to be .71 and the internal consistency produced alphas of .92 or higher (Kite & Deaux, 1986). The experimenter also used a Social Desirability Scale (Paulhus, 1991) to assess social desirability.

Procedure

Participants signed up for the study on an online database, with a maximum of 15 participants in each session. The participants then met at an on-campus classroom and received a study information sheet (see Appendix A). After they read through the information, the experimenter discussed the participants' right to withdraw with no penalty and explained that responses were anonymous (see Appendix B).

After students received the Student Response Form (see Appendix C), the experimenter explained how the charts should be read and what each rating meant. For example, in the first line of boxes, participants rated the question "How likely is it that these two individuals are acquaintances?" The experimenter then showed the first video clip. Respondents answered six questions relating to the relationship between the avatars with ratings using 5-point scales (1 =*not at all likely*; 5=*very likely*). The questions included how likely it was the avatars were acquaintances, friends, coworkers, roommates, in a relationship for less than one year, and in a relationship for more than one year. After the participants answered these questions, the experimenter paused the video and told the participants which avatar was Avatar A and which avatar was Avatar B. Participants then reported how much they liked each of the avatars using 5-

point rating scales (1=*strongly dislike*, 5= *strongly like*). This procedure was then repeated for the two remaining videos.

After the participants finished rating the videos, the experimenter distributed the social attitude measures and social desirability scale (see Appendix D). The experimenter told the participants that they had been selected to complete attitude measures for two different social groups and a survey about how well they could describe themselves. After participants completed the surveys, they were debriefed.

Results

Relationship perception was analyzed using a 3 (Level of Ambiguity; Clearly Friends, Neutral, Clearly Couple) X 3 (Couple Sex; Male-Male; Female-Female; Male-Female) X 2 (Participant Gender) between subjects analysis of covariance, with participant number used as a covariate to control for idiosyncratic responses.

Results showed a significant main effect for Level of Ambiguity for the items coworkers, roommates, in a relationship for less than one year, and in a relationship for more than one year (see Table 2). For the items assessing whether the avatars were coworkers and roommates,

Insert Table 2 about here

people saw the Clearly Friends and the Neutral conditions similarly, but believed it was least likely that avatars in the Clearly Couple condition were just coworkers or roommates. For the two items assessing whether the relationship was romantic, people saw the Clearly Couple and Neutral conditions as most likely for the avatars to be in a relationship. People rated the Clearly Friends condition as least likely to be in romantic relationships.

The only main effect for Participant Gender was found for the item assessing coworkers. Female participants rated avatars as being significantly more likely to be coworkers (*M*=3.05) than male participants (*M*=2.88), *F* (1, 375) = 3.87, *p*<.05.

A significant main effect for Couple Sex emerged for these items: coworkers, roommates, in a relationship for less than one year, and in a relationship for more than one year (see Table 3).

Insert Table 3 about here

For the item assessing coworkers, participants rated the Male-Male couple as the most likely to be coworkers; participants rated Female-Female couples and Male-Female couples as equally likely to be coworkers. For the roommate item, participants rated Male-Male couples and Female-Female couples similarly; participants rated Male-Female couples as least likely to be roommates. For the item assessing in a relationship for less than one year, people saw the Male-Female and Female-Female conditions similarly but believed it was least likely that Male-Male couples were in a relationship for less than one year. Participants rated the item in a relationship for more than one year the same way: Male-Female and Female-Female scores were similar and both were significantly lower than ratings for Male-Male couples.

For the roommate item, the significant main effect for Couple Sex was qualified by a significant Couple Sex X Participant Gender interaction, *F* (2, 356) = 3.39, *p* <.05. Simple effects tests showed men rated the likelihood of the avatars being roommates similarly for Male-Male couples (*M*=3.78), Male-Female couples (*M*=3.33), and Female-Female couples (*M*=3.25), *F* = 2.64, *ns*. Women saw a difference between conditions; they thought the Female-Female couple was most likely to be roommates (*M*=3.75), followed by the Male-Male couple (*M*=3.70) and the Male-Female couple (*M*=3.08), *F* = 9.03, *p* <.0001.

For the coworker item, there was a Level of Ambiguity X Couple Sex interaction (see Figure 1), $F (4, 375) = 3.80$, $p < .05$. Simple effects tests showed that participants rated the

Insert Figure 1 about here

avatars in the Clearly Couple condition similarly, $F = 2.37$, ns, regardless of Couple Sex. For the Clearly Friends condition, participants rated likelihood to be coworkers for the Male-Male couples ($M=3.04$) and Female-Female couples ($M=3.02$) similarly; the Male-Female couples were least likely to be seen as coworkers ($M=2.82$), $F (2, 124) = 7.21$, $p<.01$. For the Neutral condition, participants rated the Male-Male avatars as most likely to be coworkers ($M=3.77$) followed by the Male-Female avatars ($M=3.24$) and Female-Female avatars ($M=3.04$), $F (2,127) = 8.13$, $p<.01$.

For the in a relationship for less than one year item, there was a Level of Ambiguity X Couple Sex interaction (see Figure 2), $F (4, 378) = 2.82$, $p < .05$. For the Clearly Friends

Insert Figure 2 about here

condition, participants rated Male-Female couples ($M=2.89$) and Female-Female couples ($M=2.95$) similarly and Male-Male couples as least likely to be in a relationship for less than one year ($M=2.22$), $F (2, 125) = 6.17$, $p < .05$. For the Neutral condition, participants rated Male-Female couples as most likely to be in a relationship for less than one year ($M=3.71$) followed by Female-Female couples ($M=3.29$) and Male-Male couples ($M=2.49$), $F (2, 127) = 6.22$, $p < .05$. For the Clearly Couple condition, participants rated Male-Male couples as most likely to be in a romantic relationship for less than one year ($M=4.65$) followed by Female-Female couples ($M=4.25$) and Male-Female couples ($M=3.95$), $F (2, 123) = 8.12$, $p < .05$.

For the in a relationship for more than one year item (see Figure 3), there was a Level of

Insert Figure 3 about here

Ambiguity X Couple Sex interaction, $F(4, 378) = 4.93$, $p<.05$. For the Clearly Friends condition, participants rated Female-Female couples ($M=2.56$) as most likely to be in a romantic relationship for more than one year followed by Male-Female avatars ($M=2.44$) and Male-Male avatars ($M=1.91$), $F(2, 125) = 5.25$, $p <.05$. For the Neutral condition, participants rated Male-Female avatars ($M=3.24$) as most likely to be in a romantic relationship for more than one year followed by Female-Female avatars ($M=3.00$) and Male-Male avatars ($M=2.13$), $F(2, 127) = 8.71$, $p <.05$. For the Clearly Couple condition, participants rated Male-Male avatars as most likely to be in a romantic relationship for more than one year ($M=4.35$) followed by Female-Female avatars ($M=4.13$) and Male-Female avatars ($M=3.91$), $F(2, 123) = 10.61$, $p <.05$.

Discussion

The present study examined the influence of heterosexism on the perception of relationships. Whether members of an avatar dyad were perceived as friends or acquaintances did not depend on the sexual orientation of the two individuals or Couple Sex. However, perceptions of romantic relationships differed for gay couples in comparison to heterosexual couples. When the relationship was ambiguous, people saw heterosexual couples as more likely to be in romantic relationships than same sex couples. In the Couple condition, same sex couples were rated as more likely to be in romantic relationships than heterosexual couples. The results concerning rating romantic couples were consistent with previous research such as Rateau's (2004) finding that heterosexual men rated heterosexual couples as more likely to "build a serious relationship", although these effects emerged only when they were asked to rate gay couples before rating heterosexual couples. Consistent with the concept of heterosexism, people do see gay and heterosexual romantic couples differently. Such perception differences did not emerge for estimates about couples' likelihood of being friends or acquaintances.

Contrary to Kite and Whitley's (1996) meta-analytic study showing sex differences in anti-gay prejudice, results of this study showed that female and male respondents rated the questions similarly. The only question on which men and women differed was question, "How likely is it that these two individuals are roommates?" On this question, male participants rated all avatars similarly, regardless of Couple Sex, but female participants rated the Female-Female couples as significantly less likely than Male-Male couples to be roommates. These results suggest that females and males could have different definitions of the roommate relationship.

This is consistent with previous research findings that heterosexuals view heterosexual couples differently than homosexual couples (e.g. Goodman & Moradi, 2008; Rateau, 2008). Results in the current study showed that this difference occurs only when the relationship is not explicitly stated.

In the current study, all avatars were shown performing the same behavior in the same situation with the only differences being gender. The experimenter did not tell the participants the nature of the avatars' relationship, yet participants still rated avatars differently based on the sex of the avatars.

Strengths and Weaknesses

One strength of the current study was utilizing The Sims 3 avatars. Avatars eliminate the problem of confounding factors such as attractiveness and body language. Each avatar made the exact same movements, had the same body type, was Caucasian, was a young adult, and wore casual clothing. The videos were each 30 seconds in length with no sound. This removed the factor of voice cues from influencing the ratings. Another strength was never disclosing the sexual orientation of the avatars; participants saw the videos with little explanation of what was happening. Due to the invisible nature of sexual orientation, this allowed participants to rely on

cues other than appearance to make judgments about the avatars. In real world situations, gay men and lesbians may not disclose their sexual orientation to others. For example, in Ragins and Cornwell (2001), some gay men and lesbians expressed their decision to not disclose their sexual orientation to bosses or coworkers for fear of losing their jobs or facing disapproval. Other strengths of this study were a large sample size and the use of a valid and reliable instrument to assess anti-gay prejudice (the Kite & Deaux 1986 Homosexuality Scale). However, due to time limitations, the effect of individual attitudes was not analyzed in the current study but could be used in future research.

If real people were used instead of avatars, these results may have been different due to appearance and level of attractiveness cues. For example, Nussbaum (2002) found that females low in attractiveness and males high in attractiveness were more likely to be rated as gay. The weaknesses of this study were the relatively small number of male participants, that most participants were Caucasian, and that every participant was a university student. Also, every avatar was Caucasian. Future researchers could study relationship perception for targets of other races/ethnicities, indicating racial differences in relationship perception. These weaknesses decrease the ability to generalize findings to other populations. External validity is "the extent and manner in which the results of an experiment can be generalized to different subjects, settings, experimenters, and, possibly, tests" (Bracht & Glass, 1968, p. 438). Participants may behave differently when evaluating abstract avatars than they would in a natural setting where they are interacting with real people. There also might be differences in how people respond in short-term interactions, such as serving a couple in a restaurant, compared to long-term interactions, such as with co-workers or classmates. In the current study, participants may have tried to please the experimenter or other participants around them with the ratings they chose. In

a group setting, it is difficult to prevent participants from looking at each other's responses, for example. It is also difficult to control participants' nonverbal reactions, such as laughter at the videos. These group-level responses may have influenced ratings. I assessed social desirability, but due to time constraints could not examine whether the variable affected responses.

Future Directions

Relationship perception should be studied with larger, diverse populations. While the current study measured how individuals perceive relationships when shown videos, research should compare these ratings to how individuals perceive relationships in real life interactions. An important aspect of this study that was not assessed was how an individuals' attitude toward gay men and lesbians as measured by the Homosexuality Attitude Scale (Kite & Deaux, 1986) affected his or her relationship perception. Future studies could analyze this information to reveal more insight into how explicit attitudes affect relationship perception.

Studying how heterosexism interacts with perception of others is important for societal institutions such as the workplace and marriage. Many laws and policies still exist that discriminate against gays and lesbians such as rules preventing a gay or lesbian from seeing their partner in the emergency room. Herek (2010) discussed the importance of the effect of heterosexism on parenting. He argues that policy makers can use research results to bring about change and allow gay men and lesbians to have children. Similar to this argument, Polikoff (1993) advocates in favor of gay marriage and explains why legalizing gay marriage would do more positive things for the institution of marriage than negative. Bringing awareness of how heterosexism impacts everyday life to policy makers could forever influence the future of gays and lesbians.

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Table 1

Video Sequences

Sequence

	Seq. A	Seq. B	Seq. C	Seq. D	Seq. E	Seq. F
Video Order 1	M – M (1)	M – M (1)	M – F (1)	M – F (1)	F – F (1)	F – F (1)
Video Order 2	M – F (2)	M – F (3)	M – M (2)	F – F (2)	M – F (3)	M – F (2)
Video Order 3	F – F (3)	F – F (2)	F – F (3)	M – M (3)	M – M (2)	M – M (3)

Note: The top row denotes the video sequence (six total). The column to the far left denotes the order of videos. In each video space, letters correspond with avatar sex (e.g., M – M is Male – Male) and the number corresponds with Level of Ambiguity (i.e., 1 is Friends, 2 is Neutral, 3 is Couple). Each video was only in one sequence. There were two sets of avatars for each couple sex pairing which is why the letter and number codes are repeated.

Table 2

Relationship Perception by Level of Ambiguity

	Level of Ambiguity				
	Friends	**Neutral**	**Couple**	*F* **(2, 356)**	*p*
Coworkers	3.07^a (1.06)	3.18^a (1.15)	2.70^b (1.02)	6.18	<.001
Roommates	3.36^a (1.23)	3.26^a (1.11)	3.80^b (1.05)	8.16	<.0001
Romantic Relationship Less Than One Year	2.70^a (1.39)	3.34^b (1.39)	3.56^b (1.38)	13.16	<.0001
Romantic Relationship More Than One Year	2.32^a (1.30)	3.08^b (1.43)	3.30^b (1.49)	16.79	<.0001

Note: Numbers in parentheses are standard deviations. Tukey post hoc tests showed that means sharing a common subscript are not significantly different. Ratings were from 1 (not at all likely) to 5 (very likely) where higher numbers mean more likely.

Table 3

Relationship Perception by Couple Sex

| | **Couple Sex** | | | | |
	Male-Male	**Male-Female**	**Female-Female**	F (2,356)	p
Coworkers	3.33[a] (1.03)	2.78[b] (1.09)	2.84[b] (1.10)	10.00	<.0001
Roommates	3.70[a] (1.09)	3.18[b] (1.14)	3.53[a] (1.18)	6.96	<.001
Romantic Relationship Less Than One Year	2.74[a] (1.36)	3.38[b] (1.28)	3.48[b] (1.54)	10.53	<.0001
Romantic Relationship More Than One Year	2.40[a] (1.38)	3.06[b] (1.41)	3.22[b] (1.47)	11.67	<.0001

Note: Numbers in parentheses are standard deviations. Tukey post hoc tests showed that means sharing a common subscript are not significantly different. Ratings were from 1 (not at all likely) to 5 (very likely) where higher numbers mean more likely.

Appendix A: Study Information

Study Title   Exploring Relationship Perception through the Use of Avatar Stimuli

Study Purpose and Rationale
The purpose of this research project is to examine how people perceive relationships and what attitudes people have about certain social groups. Findings from this research may help see how people's attitudes influence their perception of a relationship.

Inclusion/Exclusion Criteria
To be eligible to participate in this study, you must be over the age of 18 and not have impaired vision.

Participation Procedures and Duration
For this project, you will be asked to watch three videos and rate the relationship depicted on different dimension. Then, you will be asked to fill out a survey of attitudes toward different social groups. It will take approximately 45 minutes to complete the rating and the survey. You will receive one credit hour for Psychology 100.

Data Confidentiality or Anonymity
All data will be maintained as anonymous and no identifying information such as names will appear in any publication or presentation of the data.

Storage of Data
Paper data will be stored in a filing cabinet in a locked room for one year and will then be shredded. The data will also be entered into a software program and stored on the researcher's password-protected computer for one years and then deleted. Only members of the research team will have access to the data.

Risks or Discomforts
There are no perceived risks for participating in this study.

Benefits
There are no perceived benefits for participating in this study.

Voluntary Participation
Your participation in this study is completely voluntary and you are free to withdraw your permission at anytime for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before signing this form and at any time during the study.

IRB Contact Information
For one's rights as a research subject, you may contact the following: For questions about your rights as a research subject, please contact the Director, Office of Research Compliance, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

Researcher Contact Information

Principal Investigator: Faculty Supervisor:

Kelley Hollander, Undergraduate Student   Dr. Mary Kite
Psychology   Social Psychology
Ball State University   Ball State University
Muncie, IN 47306   Muncie, IN 47306
Telephone: (765) 285-8197   Telephone: (765) 285-8197
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Appendix B: Experimental Script

Hello,

My name is Kelley Hollander, and I would like to welcome you into the lab today. You have come here for the avatar video study. Participation in this will earn you 1 research credit hour in PSYSC 100. If you wish to leave at any time you may with no penalty. All your responses will be anonymous and not connected to your name in any way.

Today you will be viewing three different videos. Each video shows two avatars or Sims interacting in a situation. You will be given a chart of different relationships. Your task is rate each set of avatars on how likely it is that the relationship between them falls into these categories. After that, you will be asked how much you like the avatars. Finally, you will be asked to fill out a survey about two different social groups. Then you are free to leave.

This study has few potential risks. If you have any questions or would like to have your data removed, please contact me (Kelley) at kmhollander@bsu.edu or contact my advisor Dr. Kite at mkite@bsu.edu. I greatly appreciate your participation in this study.

Thank you,

Kelley Hollander
Principle Investigator
kmhollander@bsu.edu
(812) 319-8645

Dr. Mary Kite
Advisor
mkite@bsu.edu
(765) 285-8197

Appendix C: Demographics and Relationship Dependent Measures

ID_____   Age_____

Race: Gender:

☐ White (Non-Hispanic)   ☐ Female

☐ African American   ☐ Male

☐ Hispanic

☐ American Indian

☐ Two or more

☐ Other

Sexual Orientation:

☐ Homosexual

☐ Heterosexual

☐ Bisexual

☐ Other

After viewing the videos please answer these questions. Put a check mark in the box to indicate your answer:

Video 1

How likely is it that these two individuals…	Not at all likely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
…are acquaintances?					
…are friends?					
…are coworkers?					
…are roommates?					
…have been in a romantic relationship for less than one year?					
…have been in a romantic relationship for more than one year?					

How much do you like…	Strongly Dislike	Dislike	Neither like nor dislike	Like	Strongly Like
Avatar A?					
Avatar B?					

Video 2

How likely is it that these two individuals…	Not at all likely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
…are acquaintances?					
…are friends?					
…are coworkers?					

…are roommates?					
…have been in a romantic relationship for less than one year?					
…have been in a romantic relationship for more than one year?					

How much do you like…	Strongly Dislike	Dislike	Neither like nor dislike	Like	Strongly Like
Avatar A?					
Avatar B?					

Video 3

How likely is it that these two individuals…	Not at all likely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
…are acquaintances?					
…are friends?					
…are coworkers?					
…are roommates?					
…have been in a romantic relationship for less than one year?					
…have been in a romantic relationship for more than one year?					

How much do you like…	Strongly Dislike	Dislike	Neither like nor dislike	Like	Strongly Like
Avatar A?					
Avatar B?					

Appendix D: Social Attitude Measure and Social Desirability Scale

I am studying attitudes of social measures. You have been selected to agree or disagree with statements about two different social groups.
It will take about 10 minutes to complete. Please answer every question to the best of your ability.
Remember to read each statement carefully!

Please read the statement and rate each one based on how much you either agree or disagree with it.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Many lesbians and gay men are very moral and ethical people.	○	○	○	○	○
2. The increasing acceptance of gay men or lesbians in our society in aiding in the deterioration of morals.	○	○	○	○	○
3. Physically disabled persons are just as intelligent as non-disabled persons.	○	○	○	○	○
4. State laws regarding private, consenting behavior between gay men or lesbians should be loosened.	○	○	○	○	○
5. Parents of disabled children should be less strict than other parents.	○	○	○	○	○
6. It is up to the government to take care of disabled people.	○	○	○	○	○
7. Lesbians or gay men endanger the institution of family.	○	○	○	○	○
8. Most disabled people feel sorry for themselves.	○	○	○	○	○
9. Disabled people are often grouchy.	○	○	○	○	○
10. Severely disabled people are harder to get along with than people with mild disabilities.	○	○	○	○	○
11. Homosexual behavior between two women or two men is just plain wrong.	○	○	○	○	○
12. Lesbians and gay men are a viable part of our society.	○	○	○	○	○
13. Most disabled people feel that they are not as good as other people.	○	○	○	○	○
14. You have to be careful what you say when you are around disabled people.	○	○	○	○	○
15. Gay or lesbian couples should be able to adopt children the same as heterosexual couples.	○	○	○	○	○

16. Gay men and lesbians just can't fit into our society.	○	○	○	○	○
17. It would be best for disabled persons to live and work in special communities.	○	○	○	○	○
18. The idea of marriage between lesbians and gay men seems ridiculous to me.	○	○	○	○	○
19. It is almost impossible for a disabled person to lead a normal life.	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20. Disabled people tend to keep to themselves most of the time.	○	○	○	○	○
21. Gay men and lesbians do need psychological treatment.	○	○	○	○	○
22. Disabled people are the same as anyone else.	○	○	○	○	○

How Accurately Can You Describe Yourself?

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Indicate for each statement whether it is Very Inaccurate, Moderately Inaccurate, Neither Accurate Nor Inaccurate, Moderately Accurate, or Very Accurate as a description of you.

	Very Inaccurate	Moderately Inaccurate	Neither	Moderately Accurate	Very Accurate
23. My first impressions of people usually turn out to be right.	○	○	○	○	○
24. It would be hard for me to break any of my bad habits.	○	○	○	○	○
25. I don't care to know what other people really think of me.	○	○	○	○	○
26. I have not always been honest with myself.	○	○	○	○	○
27. I always know why I like things.	○	○	○	○	○
28. When my emotions are aroused, it biases my thinking.	○	○	○	○	○

	Very Inaccurate	Moderately Inaccurate	Neither	Moderately Accurate	Very Accurate
29. Once I've made up my mind, other people can seldom change my opinion.	○	○	○	○	○
30. I am not a safe driver when I exceed the speed limit.	○	○	○	○	○
31. I am fully in control of my own fate.	○	○	○	○	○
32. It's hard for me to shut off a disturbing thought.	○	○	○	○	○
33. I never regret my decisions.	○	○	○	○	○
34. I sometimes lose out on things because I can't make up my mind soon enough.	○	○	○	○	○
35. The reason I vote is because my vote can make a difference.	○	○	○	○	○
36. My parents were not always fair when they punished me.	○	○	○	○	○
37. I am a completely rational person.	○	○	○	○	○
	Very Inaccurate	Moderately Inaccurate	Neither	Moderately Accurate	Very Accurate
38. I rarely appreciate criticism.	○	○	○	○	○
39. I am very confident of my judgments.	○	○	○	○	○
40. I have sometimes doubted my ability as a lover.	○	○	○	○	○
41. It's all right with me if some people happen to dislike me.	○	○	○	○	○
42. I don't always know the reasons why I do the things I do.	○	○	○	○	○
43. I sometimes lie if I have to.	○	○	○	○	○
44. I never cover up my mistakes.	○	○	○	○	○
45. There have been occasions when I have taken advantage of someone.	○	○	○	○	○

46. I never swear.	○	○	○	○	○
47. I sometimes try to get even rather than forgive and forget.	○	○	○	○	○
48. I always obey laws, even if I'm unlikely to get caught.	○	○	○	○	○
49. I have said something bad about a friend behind his/her back.	○	○	○	○	○
50. When I hear people talking privately, I avoid listening.	○	○	○	○	○
51. I have received too much change from a salesperson without telling him/her.	○	○	○	○	○
52. I always declare everything at customs.	○	○	○	○	○
53. When I was young, I sometimes stole things.	○	○	○	○	○
54. I have never dropped litter on the street.	○	○	○	○	○
55. I sometimes drive faster than the speed limit.	○	○	○	○	○
56. I never read sexy books or magazines.	○	○	○	○	○
57. I have done things that I don't tell other people about.	○	○	○	○	○
58. I never take things that don't belong to me.	○	○	○	○	○
59. I have taken sick-leave from work even though I wasn't really sick.	○	○	○	○	○
60. I have never damaged a library book or store merchandise without reporting it.	○	○	○	○	○

	Very Inaccurate	Moderately Inaccurate	Neither	Moderately Accurate	Very Accurate
61. I have some pretty awful habits.	○	○	○	○	○
62. I don't gossip about other people's business.	○	○	○	○	○

Figure 1

Level of Ambiguity X Couple Sex Interaction for Coworker Item
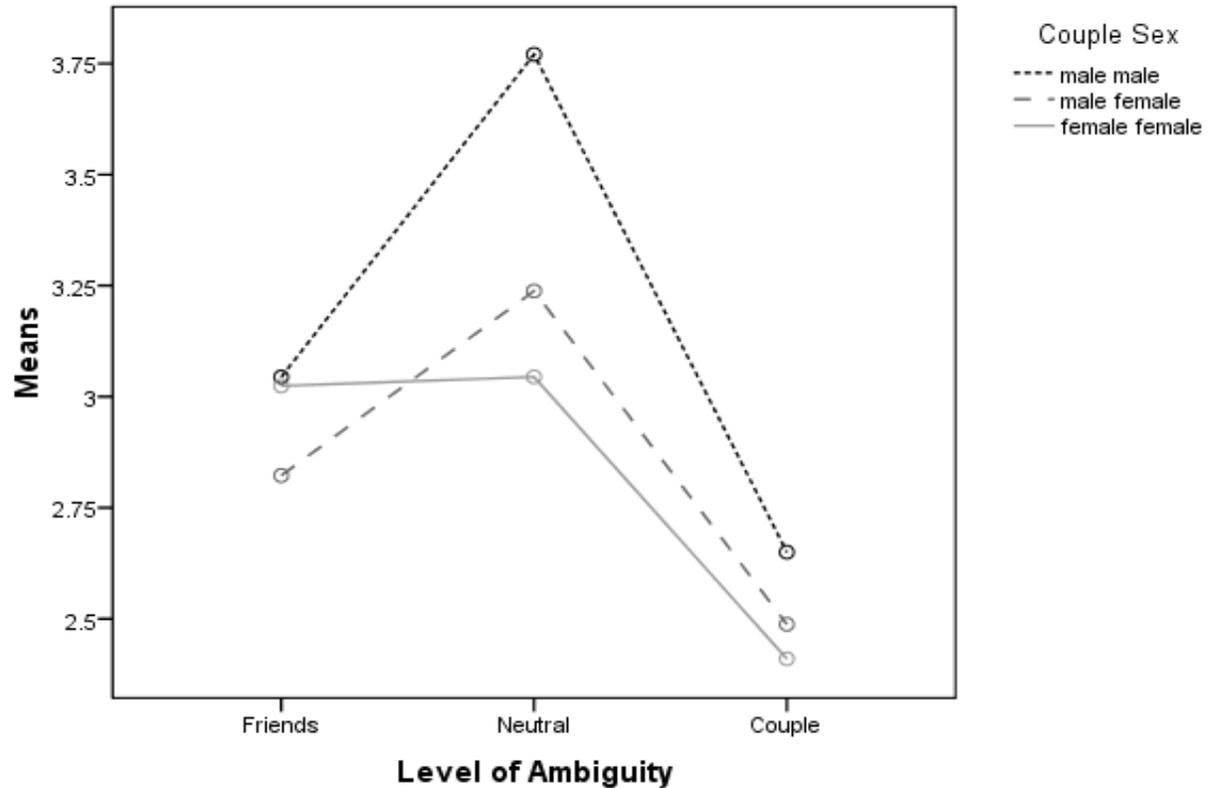

Figure 1. Ratings range from *1*=not at all likely to *5*=very likely. Each line represents one condition of avatar sex: Male-Male, Male-Female, and Female-Female. This figure illustrates the interaction between Level of Ambiguity and Couple Sex for the item "How likely is it that these two individuals are coworkers?" For the Friends condition, Male-Male avatars are rated as most likely to be coworkers followed by Female-Female avatars and Male-Female avatars. In the Neutral condition and Couple condition, Male-Male avatars are the most likely to be coworkers followed by Male-Female avatars and Female-Female avatars.

Figure 2

Level of Ambiguity X Couple Sex Interaction for Romantic Relationship for Less Than One Year Item
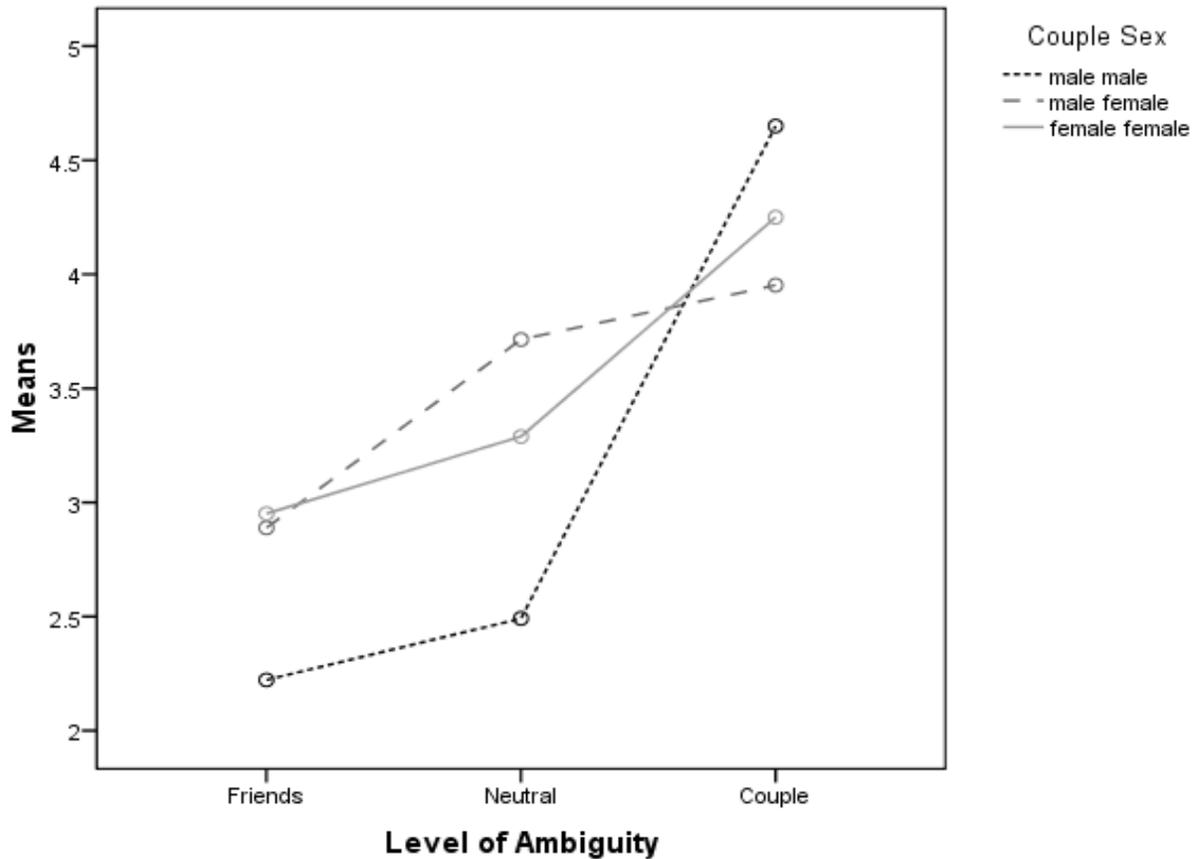

Figure 2. Ratings range from *1*=not at all likely to *5*=very likely. Each line represents one condition of avatar sex: Male-Male, Male-Female, and Female-Female. This figure illustrates the interaction between Level of Ambiguity and Couple Sex for the item "How likely is it that these two individuals are in a romantic relationship for less than one year?" In the Friends condition, Female-Female avatars are most likely to be in a romantic relationship for less than one year followed by Male-Female avatars and Male-Male avatars. In the Neutral condition, Male-Female avatars are the most likely to be in a romantic relationship for less than one year followed by Female-Female avatars and Male-Male avatars. In the Couple condition, Male-Male avatars are the most likely to be in a romantic relationship for less than one year followed by Female-Female avatars and Male-Female avatars.

Figure 3

Level of Ambiguity X Couple Sex Interaction for Romantic Relationship for More Than One Year Item
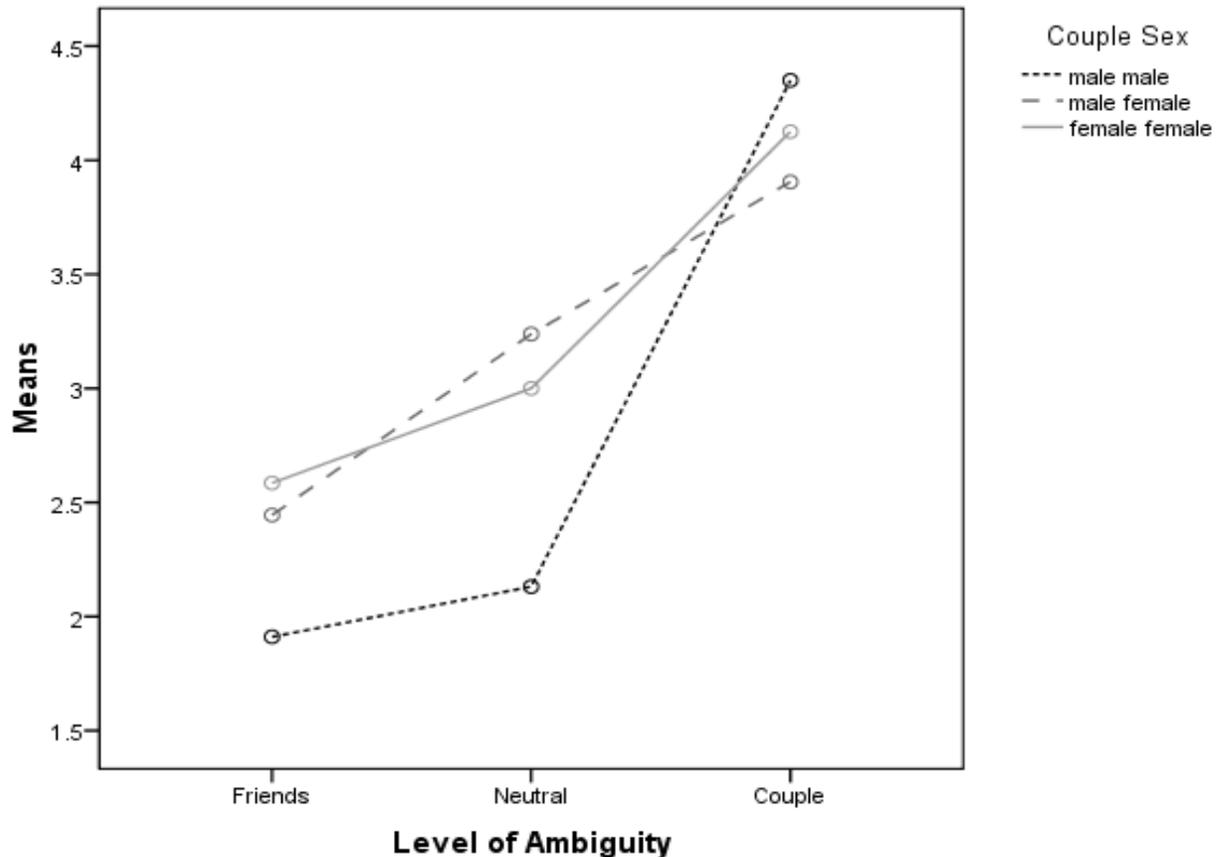

Figure 3. Ratings range from *1*=not at all likely to *5*=very likely. Each line represents one condition of avatar sex: Male-Male, Male-Female, and Female-Female. This figure illustrates the interaction between Level of Ambiguity and Couple Sex for the item "How likely is it that these two individuals are in a romantic relationship for more than one year?" In the Friends condition, Female-Female avatars are rated as most likely to be in a romantic relationship for more than one year followed by Male-Female avatars and Male-Male avatars. In the Neutral condition, Male-Female avatars are most likely to be in a romantic relationship for more than one year followed by Female-Female avatars and Male-Male avatars. In the Couple condition, Male-Male avatars are the most likely to be in a romantic relationship for more than one year followed by Female-Female avatars and Male-Female avatars.