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OUTGROUPS

Intergroup Interactions with Dual Identity Outgroup Individuals

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### Abstract

Previous studies have found that certain patterns emerge when people participate in intergroup interactions. However, fewer studies have yet explored the effects of interacting with an individual that has a dual identity, that is, someone who has characteristics of two separate and opposite identities. The present study explores intergroup interactions with a dual identity partner in the context of sexual orientation. Sixty-three straight male undergraduates at Tufts University interacted with a confederate who they believed to be another participant. The sexual orientation of the confederate was manipulated such that participants believed that he was straight, gay, or bisexual (the dual identity-bisexual). Differences in participants' self-reports of overall embarrassment between the straight and gay condition were found.

## Introduction

In a society that is becoming both increasingly diverse and at the same time increasingly aware of differences, understanding how people categorize others is extremely important. The lines for different social categorizations are oftentimes blurry and social categorizations change with time as social and political ideas change (recently the United States census added the racial category of “biracial” as an option for example) (Bonilla-Silva, 2004). Although intergroup interactions between different distinct social categories (such as black and white or straight and gay) have been studied extensively, relatively little research has been done on how people interact with and form attitudes towards those who straddle two social categories or whose group membership may not neatly fit into more common subdivisions. This phenomenon of multiple and more ambiguous group memberships is well illustrated in the field of sexual orientation research by the subcategory of “bisexuality.” Although the category of “bisexuality” has existed since the 1980’s, it is a category that oftentimes elicits confusion (Herek, 2000-b). People who identify as “bisexual” are often seen as possessing elements of two different, more concrete social categorizations—heterosexual and homosexual. This perceived dual identity no doubt affects the everyday experiences and interactions of individuals who self identify as bisexual.

## Intergroup Interactions

Several well-established studies have illustrated that simply placing individuals into groups, even if they are arbitrarily formed, can foster intergroup

hostility (Brewer 1978; Doise, 1978; Tajfel, 1957; Tajfel, 1978; Tajfel, 1982; Turner 1975). Doise (1978) suggests that people perceive group similarities and differences on a cognitive-perceptual level and that these perceptual differences then translate to behavioral differences in intergroup interactions. Group categorization, no matter how arbitrary, can be enough to elicit ingroup allegiance and preference for ingroup members (Hogg, Abrams, Otten & Hinkle, 2004). When categories are established and made salient, group members begin to view their own group (ingroup) more favorably and attribute negative qualities to the outgroup, as well as perceiving a greater distance between themselves and the outgroup (Tajfel, Billig, Bundy, & Flament, 1971).

The Social Identity Theory (Abrams & Hogg, 2004; Hogg, Abrams, Otten & Hinkle, 2004; Hogg & Ridgeway, 2003; Tajfel & Turner 1979) posits that people are motivated to have a positive self-concept and one of the ways of achieving this is through group membership of a positively evaluated group. Oftentimes the process of achieving a positive evaluation of one's ingroup results in viewing other groups that one does not belong to negatively in order to comparatively feel good about one's own group membership. The Social Identity Theory proposes two main motivations for subscribing to social categorizations: 1. People apply social categorizations in order to make sense of their place within their social world and make it more meaningful to them. 2. Social categorizations are used to define the self, so people try to identify with categorizes that would result in a positive self-concept and enhanced self-esteem.

Everyone appears to have inherent biases towards their ingroup and holds

some biases against outgroups which then manifest themselves in their behavior and evaluations of others. Even those who view themselves as egalitarian and do not believe that they hold any prejudices still are subject to the cognitive processes that cause prejudice against outgroups (Hewstone, Rubin & Willis, 2002). Crosby, Bromley and Saxe (1980) compared self-reports from surveys against unobtrusive measures of racism, specifically exploring helping behavior, aggression and non-verbal behavior studies. Crosby et al. found that there was far more anti-black sentiment amongst whites than was reported in surveys, including those who claimed to hold no prejudices. However, it is likely that those who report to be less racist in surveys also act in less overtly prejudiced ways as well. This unacknowledged prejudice towards a group is referred to as “aversive racism” and manifests itself through small behavioral differences in interactions.

Several studies have explored strategies for reducing intergroup bias. According to Gordon Allport’s Contact Hypothesis, contentions between majority and minority group members could be reduced through contact between these two groups as long as four prerequisites for the intergroup interaction were present: 1. Equal status 2. Both groups share common goals. 3. Intergroup cooperation 4. Support of authorities, laws, and customs (Allport, 1954). Several additional criteria to Allport’s original four have been proposed in order to improve interactions including the idea that minority group members must not be stereotypical, contact between groups must occur frequently and in a diverse range of contexts, and minority group members must be viewed as representative of their group. Improvements in intergroup attitudes are assumed to occur through the Contact

Hypothesis because group members reconceive group categorizations (Rothbart & John 1985).

### Strategies for Improving Intergroup Interactions

Despite the inevitability of categorizing others into social categories, several intervention techniques have explored the best way to improve intergroup interactions beyond the basic Contact Hypothesis technique. These strategies are discussed below.

The Decategorized Contact Model posits that intergroup bias results from simply categorizing people into groups and that in order to reduce bias, the salience of categorization must be reduced (Brewer & Miller 1984; Crisp & Hewstone, 2007). Decategorization works by getting people to focus on outgroup members as individuals rather than members of an outgroup. However, if outgroup members become too individuated, the Decategorized Contact Model does not work because any positive shifts in attitudes towards that individuated group member will not be generalized to the group as a whole.

The Common Ingroup Identity Model posits that in order to create the most positive intergroup interaction, people taking part in the interaction should be encouraged to disregard their ingroup and instead view themselves as part of an all encompassing superordinate ingroup that includes former outgroup members as well. A common unifying ingroup redirects positive feelings associated with ingroups to former outgroup members and therefore improves interactions (Gaertner, Dovidio, Anastasio, Bachman & Rust, 1993). Sherif's (1969) summer camp experiment illustrates this intervention well. Sherif created two separate groups of campers who

experienced hostility towards each other because they were competing over privileges and resources. When they were made to view themselves as one group working together instead of two groups in competition with one another, they overcame hostility and improved their intergroup relationship.

While several studies have shown that this superordinate identity approach to intergroup interactions can decrease negative attitudes and actions towards individuals who belong to a different subgroup (Hewstone, Islam, & Judd, 1993), other studies have shown that this decreased differentiation between groups can often lead to conflict or increased differentiation between groups (Brown & Wade, 1987; Hewstone & Brown, 1986; Hornsey & Hogg, 2000). A need for distinctiveness can often lead groups that have been identified as similar in some respect to hold biases against other similar groups because the similar groups are seen as a threat to one's ingroup identity and distinctiveness. This threat to distinctiveness often results in more intergroup bias than was originally there (Jetten, Spears, Hogg & Manstead, 2000).

As noted by Tajfel and Turner's Social Identity Theory (1979), group identification is often linked to self-esteem such that identification with a specific group helps bolster self-esteem by viewing one's own group positively and outgroups negatively. When groups are made more similar, this new group identification may lead to increased biases against the semi-similar group. Additionally, certain subgroup categorizations are impossible to eliminate because of political and social histories or how important people hold them in their self-concept. Therefore, the Common Ingroup Identity Model may not always be effective.

Both group size and group status have been shown to affect intergroup interactions and bias reduction strategies as well (Smith, Terry & Hogg, 2006; Verkuyten & Martinovic, 2006). The basic tenet of Social Identity Theory is that people associate with groups in order to heighten self-esteem. It follows that groups holding varying statuses have different motivations to separate themselves from outgroups. Low status group members are more likely to accept group recategorization and identify with a new superordinate category because identifying with a higher status superordinate identity enhances self-esteem beyond what their subordinate group was capable of and allows them to gain a boost to their self-concept by recategorizing their group membership representation to align more closely with higher status groups. High status group members would have the opposite effect, however. Recategorization poses a threat to high status members' own group distinctiveness and therefore high self-esteem. Members of a high status group may react aversively to the Common Ingroup Identity Model because of a desire to maintain their positive self-concept associated with their group status, and therefore end an interaction with more negative views of an outgroup than they started with. Therefore, certain interaction strategies are more successful depending on the differences of statuses between interacting groups and how large this difference is. This effect is also found amongst groups of dramatically different sizes. Similar to threats of status, minority group members in an interaction are often motivated to keep differences between groups distinct because their distinctiveness as a group is tied into their social concept. Therefore, as with high status group members, minority group members may leave a positive interaction with more bias

than before if their status as a minority group member is threatened.

In response to the problem of a need for distinctiveness in intergroup interactions, Hewstone and Brown (1986) proposed The Mutual Intergroup Differentiation Model. Instead of decategorizing or creating a superordinate categorization-essentially making group categorizations less salient, the Mutual Intergroup Differentiation Model suggests that group distinctions should be retained. Keeping distinctions between groups solves the problem of the Decategorized Contact Model where outgroup individuals are not seen as being representative of their group (therefore resulting in no attitude change) because retaining distinctiveness encourages group generalization. Additionally, keeping distinctions eliminates the threat to group distinctiveness that threatens improved intergroup relations in the Common Ingroup Identity Model. During an interaction, the strengths and weaknesses of both groups are highlighted such that differences are celebrated. At the same time, both groups are viewed as having equally important strengths and weaknesses.

A fourth model, the Dual Identity Model, combines aspects of the other three models in order to ensure that any positive attitude change will be projected onto a partner's outgroup rather than just that single member. Additionally, the Dual Identity Model has been shown to be especially effective when one group is much larger than the other. In the Dual Identity Model, people participating in an intergroup interaction retain their original subordinate group identity (as in the Mutual Intergroup Differentiation Model) but also identify with a superordinate category and superordinate social goal. Gaertner, Dovidio, and Bachman (1996)

surveyed high school students who attended a multi-ethnic high school and found that those who identified with a superordinate group (American) in addition to a subordinate group (ethnicity) had better attitudes towards other ethnic groups in addition to perceiving the student body as more unified than those students who simply identified with a subordinate group or superordinate group.

Gonzalez and Brown (2006) explored which of these methods (they only explored three of the four discussed above: Decategorized Contact Model, Common Ingroup Identity Model, and Dual Identity Model) were most effective for increasing positive attitudes towards and reducing intergroup bias amongst groups of different sizes and statuses. They also explored which of these approaches was more effective in not only reducing bias during, but also after the interaction. Brown and Gonzalez randomly assigned undergraduates to one of two groups “analytics” or “synthetics” that were supposed to represent different problem solving techniques. Participants, however, believed that their group membership was determined by a brief task they completed and therefore that their group assignment reflected their own problem solving abilities. Each time, one group had significantly more group members than the other (two-minority vs. four-majority). Additionally, participants were told that one type of problem solver was slightly better than the other (successful 68% of the time vs. successful 61% of the time). The experimenters then had all of the participants work on a task about determining good leadership qualities that reflected their assigned intergroup interaction strategy.

Participants in the Decategorized Contact condition were made to feel like individuals by wearing a nametag opposed to a tag with their problem solving group,

and by having every group member wear a different colored shirt from everyone else. Participants in this condition were also asked to determine the ideal leader characteristics separately and rewards were given to the best individual response. In the Common Ingroup Identity Model, participants removed their subgroup problem solving strategy labels, and were all told to wear the same color shirt with their university's logo on it. Members of the minority group then worked with members of the majority group to determine certain traits, and the best group answer was rewarded. Finally, in the Dual Identity group, everyone wore a shirt with their university's logo, but the different problem solving groups wore different colored shirts and members of the subgroups sat next to each other. Each subgroup was asked to work on a specific category of traits, but the overall group answer was rewarded.

Gonzalez and Brown found that the size of the groups and the group status affected which intergroup interaction strategy was most effective for eliminating bias. In general, Gonzalez and Brown's findings confirmed that minority group members and high status group members felt inclined to maintain their group distinctiveness and were generally more biased towards the outgroup. Gonzalez and Brown also explored how these interaction strategies translated to outgroup members that were not encountered by having participants distribute reward allocations to group members that were strangers. In this group generalization measure, group status still had an effect where high status group members were generally more biased, however, group size (majority v. minority) bias differences were eliminated. For minority groups, the Dual Identity condition was the best strategy (both high and

low status groups did not show bias towards the outgroup when this strategy was used). The other two strategies were not as successful for eliminating bias in minority group members: high status minority group members displayed ingroup favoritism while low status minority group members displayed outgroup favoritism in the Decategorized and Common Ingroup Identity conditions. However, the Common Ingroup Identity condition was far more effective than the Decategorized Contact condition in eliminating ingroup favoritism, but not as effective as the Dual identity. None of the intergroup bias reduction strategies were successful in eliminating or reducing bias amongst high status or low status majority group members in the generalization task, although majority groups were less biased in general than minority groups. The composition of the groups is therefore important to factor in when strategizing intergroup interactions.

Similar to the idea of improving intergroup interactions by recategorizing or maintaining group distinctions is the idea of crossed categorization within groups. Crossed categorization involves the mixing of two dichotomous categories. Therefore, two people interacting could encounter a partner who belongs to one of four grouping categories: a double ingroup, a double outgroup, and ingroup-outgroup, and outgroup-ingroup (Hewstone, Islam & Judd, 1993). In general, double outgroups have the highest levels of discrimination of any interaction category. Crossed categorization interactions are more successful at eliminating bias than double outgroup interactions in part because when individuals subscribe to two different categories, the original ties to associations with the first category are weakened by association with and perceived similarities to a second identity. In

other words, intergroup superordinate identities converge while the intragroup subordinate identities diverge (Doise, 1978). The convergence of intergroup identities and the divergence of intragroup identities then help neutralize each other and decrease bias within the interaction.

Several studies have demonstrated that crossed categorization interactions have a marked positive effect in attitudes compared to double outgroup interactions (Deschamps & Doise 1978; Diehl 1988; Vanbeselaere 1987). Deschamps and Doise (1978) assigned male and female participants to either a red or blue team. They found that the crossed categorization (working with a member of the opposite sex who was on the same color team or working with a member of the same sex on the opposite color team) reduced intergroup discrimination and was significantly better than working with the double outgroup condition (working with a member of the opposite sex and the opposite color team). However, if the cross-categorization categories are unequal in importance, problems similar to those found in the Common Ingroup Identity Model may emerge (cross-categorization exercises where individuals are primed to think of themselves as belonging to both a distinct subordinate and similar superordinate group as others may experience an increase in negative attitudes towards the newly semi-similar group).

### Uncertainty and Intergroup Interactions

Uncertainty-Identity Theory approaches intergroup interactions from a different perspective. Unlike Social Identity Theory, which focuses on associating with ingroups because of the positive feelings one reaps from them, Uncertainty

Identity Theory focuses more on uncertainty reduction (Hogg, 2007). Being uncertain about perception or attitudes makes people uncomfortable and this discomfort can be extremely distressing. Therefore, people are motivated to resolve the uncertainty (Brewer, 1979). People only resolve this uncertainty sometimes however. In order for people to be motivated to reduce uncertainty, the uncertain issue must be of personal relevance to the perceiver (Gollwitzer & Bargh, 1996). Additionally, instead of achieving certainty, people tend to focus on simply reducing uncertainty. One of the most effective ways of doing this is to self-categorize because one's sense of self is certain and relatively static. People like to know who they are and who they are interacting with. Reducing uncertainty allows people to make sense of and know what to expect from their social and physical environments. According to Uncertainty Identity Theory, people use prototypes in order to represent different social categories. Groups that have high entitativity (have clear boundaries, are homogenous, etc.) are represented by unambiguous prototypes and are the easiest to use when reducing uncertainty (Hogg, 2007; Jetten, Hogg & Mullin, 2000). When trying to reduce uncertainty, the social actor and other group members are perceptually integrated into an ingroup prototype, which results in depersonalization. As a result of this process, intragroup differences are minimized and intergroup differences are maximized, resulting in stereotypical views of both the ingroup and the outgroup (Hogg, 2007).

Uncertainty has several effects on how individuals view themselves and others. When people are uncertain, they tend to strongly identify with their ingroup in order to relieve uncertainty because ingroups help provide a stable self-concept

(Hogg, Sherman, Dierselhuis, Maitner & Moffitt, 2007; Jetten, Hogg & Mullin, 2000). Smith, Hogg, Martin and Terry (2007), demonstrated the effects of ambiguity on ingroup identification. Participants were exposed to a congruent, incongruent, or ambiguous ingroup norms by showing participants fake bar graphs that indicated that the majority of their peers either agreed with their opinion on a proposed smoking ban (congruent), disagreed with their opinion (incongruent), or were divided (ambiguous). In low uncertainty conditions, participants showed higher levels of consistency with the congruent norms compared to the incongruent norm and ambiguous norm conditions (as measured by attitude intention consistency) and there was no difference between the incongruent and ambiguous norm conditions. However, when participants experienced high levels of uncertainty, participants in the attitude congruent and ambiguous condition showed the greatest conformity. In other words, uncertainty promoted feelings of conformity to previously held personal attitudes.

Because reducing uncertainty reduces an aversive affect state, the processes involved in reducing uncertainty results in a positive affect state (Grieve & Hogg, 1999). This positive affect state is then attributed to the ingroup because identification with the ingroup was responsible for relieving the negative affect state, and further differentiation between the ingroup and outgroup occur.

Grieve and Hogg (1999) found that intergroup discrimination only occurred when participants were categorized and were high in uncertainty. Categorized uncertain individuals experienced higher self-esteem and higher ingroup identification than participants in the other conditions. Categorized individuals had

higher self-esteem than the uncategorized individuals when participants were highly uncertain. When participants were low in uncertainty, there was no difference in self-esteem between categorized and uncategorized groups. Grieve and Hogg concluded that simply categorizing individuals is necessary but not enough to create discrimination between groups as was theorized by other researchers. Instead, participants must categorize and be presented with uncertainty as well. As a result, intergroup discrimination is a possible and likely consequence of categorization, but it is not inevitable and uncertainty increases the likelihood.

Because the basis of the uncertainty identity theory is that people identify with certain groups in order to decrease uncertainty, this directly goes against Tajfel's Social Identity Theory's basic principle that people identify with a group in order to create a positive self-concept. Reid and Hogg (2005) manipulated the status, uncertainty, and prototypicality of randomly formed groups to explore which of these two theories made the most sense in explaining ingroup identification. Reid and Hogg found that when participants were in the low uncertainty condition and prototypical, people identified more with high than low status groups. When participants were highly prototypical and were highly uncertain, they identified with high and low status groups equally. However, if they were highly uncertain and not very prototypical, participants identified less with low status groups. In other words, if low status participants were high in uncertainty and not prototypical, participants identified more with high status over low status groups but if low status participants were prototypical, they identified with the low status group during uncertainty. High status groups on the other hand were unaffected by both uncertainty and

prototypicality. These findings suggest that both the Social Identification Theory's basis of group identification for the sake of positive self-enhancement and Hogg's theory of identification with an ingroup for the sake of uncertainty reduction are not mutually exclusive and in fact have an interactive effect on group identification. Additionally, this interaction is affected by how prototypical the person feels they are.

### Bisexuality and Sexual Orientation

One set of group identities that has gained increased attention in recent years is that involving sexual orientation. The field of sexual orientation prejudice and discrimination has become a particularly relevant field as social issues have changed in the United States. According to a U.S. national survey of gay, lesbian, and bisexual adults, over half have experienced verbal harassment, 20% have experienced physical or property damage, and over 10% reported having experienced housing or employment discrimination based on their sexual orientation (Herek, 2009). As a result, it is particularly important to study intergroup interactions between heterosexual individuals and those that identify as "queer."

While several studies have indicated that both men and women are better than chance at recognizing the sexual orientation of strangers, (Rule & Ambady, 2007; Rule, Ambady & Hallett, 2009) differences in attitudes towards homosexuals are gender based. Several studies have established that heterosexual men tend to hold more negative attitudes about homosexuality than do heterosexual women. Additionally, men's attitudes are consistently more negative towards homosexual

men, whereas their opinions of lesbian women tend to be more situationally based (Herek, 2002-a). In addition to holding less negative opinions towards homosexuals, heterosexual women tend to hold more equal opinions about gays and lesbians (Herek, 2000-b).

A series of studies argue that the gendered differences in negative attitudes towards homosexuals is the result of gender identity roles in Western cultures and the idea of “hegemonic masculinity” which constructs masculinity as the opposite of femininity and stresses the importance of maintaining the current heterosexual dominance in society (Plummer, 2005). Thus, in order to try to establish oneself as “masculine,” heterosexual men may feel the need to distance themselves from homosexual men more than heterosexual women feel the need to distance themselves from lesbian women.

In a series of five studies, Falomir-Pichator and Mugny (2009) measured gender self-esteem in men through surveys that evaluated how much they were satisfied with being a man, how proud they were to be a man, etc. Falomir-Pichator et al. found that the higher a man’s gender self-esteem, the more sexual prejudice he showed towards homosexual males. This phenomenon did not occur amongst heterosexual females presumably because psychologically distancing oneself from lesbians is not a threat to how heterosexual women view their gender identity. When researchers presented heterosexual male participants with made up data that suggested that biological differences had been found between heterosexual and homosexual men, sexual prejudice decreased. However, there was no decrease in homophobic attitudes when heterosexual male participants were told them that no

genetic differences had been found. In following with the threat to group distinctiveness discussed earlier, when homosexual men were presented as inherently different from heterosexual men (allowing heterosexual men to keep a psychological distance from homosexual men) sexual prejudice was significantly reduced.

Several studies have shown that the Contact Hypothesis works well in eliminating some of the pervasive biases against homosexual men by heterosexual men although specific strategies like those addressed above have not been explored (Vonofakou & Voci, 2007). In several studies, Herek determined that previous interactions with homosexual men were the best predictor of heterosexual men's attitudes towards homosexuals in general, and that the more homosexual men heterosexual men interacted with, the more positive a heterosexual man's attitude was towards homosexuals (Herek & Glunt, 1993; Herek & Capitano 1996). However, both of these studies were based on surveys and therefore may have been exaggerated due to social desirability.

Despite well-established research regarding heterosexual-homosexual intergroup interactions, little research has been done on perceptions of and interactions between bisexual and heterosexual individuals (Mohr & Rochlen, 1999). A 1999 national survey asked participants to rate their attitudes about a series of social groups. The survey found that bisexuals (both men and women) were the lowest rated group of all social categories analyzed (with the exception of injecting drug users), including homosexuals, different religious groups, and all racial and ethnic groups (Herek, 2002-b). Similar to heterosexual attitudes towards homosexuals, the study found gendered differences in the opinions of bisexual

individuals as well. In general, heterosexual women disliked bisexual individuals (of either sex) less than homosexual individuals of either sex. Heterosexual men on the other hand held more negative attitudes in general of men (regardless of whether or not they were bisexual or homosexual) than bisexual or homosexual females (Herek, 2002-b).

Despite survey data that suggests increased negative attitudes towards bisexual individuals, national surveys of queer individuals actually suggests that bisexual individuals experience a lower number of discriminatory acts than do their homosexual counterparts (Kaiser, 2001). At the same time, bisexual individuals tend to experience similar levels of physical and property crime and verbal abuse for their respective genders (bisexual women experience similar levels of crime to lesbians and vice versa) (Herek, 2009).

### Present Study

This contradictory data on heterosexuals' attitudes towards bisexual individuals and differences between homosexuals' and bisexuals' experiences with discrimination highlights the complicated and sometimes inconsistent way people try to navigate situations in which they are interacting with individuals that belong to two different social categories. The bisexual movement only began relatively recently (in the 1980's) and the relative novelty of the label "bisexual" and even the very definition of it may result in a level of ambiguity and confusion that in turn results in the more negative attitudes described in the above studies. Because of the ambiguity surrounding the category of "bisexual," it is possible that heterosexual adults tend to view bisexual individuals as straddling two social categories (heterosexual and

homosexual). The dual identity that is associated with bisexuals may in turn dictate social interactions between heterosexual and bisexual individuals in different ways than the previously discussed intergroup interaction studies between members of clearly defined and different social categories.

The objective of the present study was to examine the interaction patterns specific to interacting with ambiguous outgroups. Additionally, this study examined the effects that social groups that share a dual identity with two entitative groups has on interaction patterns and the subsequent strategies that are used to navigate these interactions. While previous studies have demonstrated the biases that occur in intergroup interactions between individuals belonging to well defined social groups, no study has explored the unique effects of intergroup interactions between individuals who represent a third category in a traditionally dichotomous system. Because of the ambiguity surrounding the label of “bisexual,” it was predicted that participants would generally report understanding their partner less when they were in the bisexual condition than when they were in the straight or gay condition. Because the Uncertainty Identity Theory is based on the idea that uncertainty in an interaction makes people uncomfortable and places them in an aversive state, it was predicted that participants in the bisexual condition would report liking their partner the least, followed by those in the gay condition (another outgroup). Participants in the straight condition would report liking their partner the most because they belong to the same ingroup. Following from the Uncertainty Identity theory, it was also predicted that participants’ behavior and answers would be rated as more uncomfortable and different in the bisexual condition than in the straight and gay

conditions. However, it was predicted that participants would be aware that they were uncomfortable when interacting with a bisexual partner and would try to negate these feelings of prejudice by favoring their bisexual partner in other ways, such as by allotting more tickets to their partner in trust exercises.

Previous studies have shown that identifying partially with an outgroup member can change the dynamic of intergroup interactions by making outgroup members more similar and therefore more likable. It is therefore possible that the category of “bisexual” could be seen as a cross categorization between one side of a dichotomous group (heterosexual) and the opposite group (homosexual). It is therefore possible that heterosexual individuals’ bias towards bisexuals is somewhat lessened because bisexuals are seen as partially belonging to their own ingroup (this confirms some of the survey data pertaining to lower violence targeted towards bisexual individuals compared to homosexual individuals).

Alternatively, the shared identity inherent in the more ambiguous category of bisexuality could encounter the same problems that the Common Intergroup Identity Approach to intergroup interactions often encounters where bisexuality is seen as a threat to a heterosexual individual’s group distinctiveness and bisexuals may then encounter increased bias (this would confirm some of the survey results that suggest that bisexuals are generally more disliked than any other social group-excluding injecting drug users-including all other sexual orientations).

Heterosexual individuals may also take a Dual Identity approach when interacting with bisexual individuals. While a heterosexual individual may view a bisexual individual as sharing a common aspect of their sexual orientation, the

heterosexual individual may at the same time be aware that the sexual orientation of “heterosexual” is a separate and distinct category from “bisexual.”

The Uncertainty Identity Theory may also play a role in heterosexual-bisexual interactions. If a person is unsure of his or her interaction’s partner’s sexual orientation, this can create a highly uncertain aversive state. The interaction partner would be driven to decrease some of this uncertainty and make sense of the social situation and his or her partner. The interaction partner may then identify with his or her own ingroup more strongly than they would otherwise. This in turn has negative implications for the interaction because the interaction partner’s stronger attachment to his or her ingroup results in more outgroup differentiation. Additionally, interaction partners may be affected by how prototypical they believe themselves to be as well as how prototypical they believe their partner to be. The ambiguous nature of a category such as bisexual can have effects on how people perceive both themselves and their partners.

## Method

### *Overview*

Participants were brought to the lab and expected to work with a partner on a communication task. A confederate who participants believed to be their partner arrived several minutes after the participant and was seated such that neither the participant nor the confederate could see each other. Participants then filled out questionnaires that asked participants to identify their sexual orientation on a 1-7 Likert scale resembling a Kinsey scale. A marking of 7 on the sexual orientation question indicated “straight,” a 1 indicated “gay,” and a 4 indicated a more

ambiguous category, referred to in this paper as “bisexual.” Additional questions were included on the questionnaire in order to deflect suspicion. Participants were then given a pre-filled out questionnaire that they believed was filled out by their partner. These pre-filled out questionnaires reflected their condition (straight, bisexual, or gay). Participants and confederates then completed an interaction task and afterward both completed a likability questionnaire about their interaction partner.

### *Participants*

The study was a one-way between subjects design with three levels of the independent variable. Participants were 63 undergraduates at Tufts University aged ( $M=19.39$ ,  $SD=1.25$ ). All participants were male and all participants identified as straight in a pre-experiment questionnaire. Only straight male participants were used because of previous studies indicating that heterosexual males are the most concerned about asserting their heterosexuality. The pre-experiment questionnaire included several other demographic questions in order to not draw attention to the focus on sexual orientation later in the study.

Thirty-seven of the participants identified as white, 2 as African American, 17 as Asian, 3 as Hispanic, 1 as Asian/White biracial, 2 as Hispanic/White biracial, and 1 did not report his race. Participants were recruited either through an online study scheduler or via a university website. Students either received class credit or were compensated with \$10 for their participation. Participants were randomly assigned to one of three conditions: straight, gay, or an ambiguous group (bisexual). There were 21 participants in the “straight” group, 21 participants in the “gay”

group, and 21 participants in the ambiguous group (henceforth referred to as “bisexual”). One participant’s data (in the “straight” condition) was not analyzed because of a self-reported sexual orientation of “4” (participants were required to self-identify as straight: either a 6 or 7) and because of failure to successfully complete the post experiment questionnaire. Therefore, there were only 20 participants in the straight condition.

### *Materials*

The lab was set up with two desks and two chairs facing each other. In between the two desks, a divider was set up such that when someone was at the desk farthest from the door, they could not see anyone enter or exit the room. Additionally, people sitting in opposite desks could not see each other.

Once seated, participants filled out a “Getting to Know You” questionnaire. The questionnaire contained a series of unrelated personal questions, one of which was a seven point Likert scale that asked participants to identify their sexual orientation (see Appendix A for the complete survey). An answer of 7 indicated “totally straight” while an answer of 1 indicated “totally gay.” Two other questions used 7-point Likert scales for responses and were included in order to distract from the question about sexual orientation. A pre-filled out “Getting to Know You” questionnaire that reflected the participant’s condition was given to the participant in exchange for his filled out questionnaire. This pre-filled out questionnaire was made to seem like a questionnaire that his partner, the confederate, filled out.

Later, participants selected roles from cups, which were rigged such that participants always got the more active role in an interaction. In the first cup, both

roles said “you will be responding to the question” but the confederate after choosing a role always declared that his role was to ask the questions. Similarly, a second cup was rigged so that it contained identical questions but participants were made to think that there were several question options.

Video cameras were used to film the interaction between participants and a confederate. After completing the exercise, participants completed likability questionnaires about their interaction partner and completed a Stroop task on a computer. Additionally, participants completed a questionnaire that measured how much they trusted their interaction partner (see Appendix B for the complete participant post-test questionnaire and participant trust questionnaire). After the interaction, the confederate filled out a likability questionnaire about the participant.

#### *Procedure*

Participants arrived and were greeted by a researcher who led them into the lab and seated them at the desk farthest from the door. Participants were told that this study was a group activity and that a second participant was expected to arrive shortly. Two minutes later a confederate posing as the second participant arrived, apologized for being late and was seated at the desk closest to the door.

The researcher then provided a cover story, and explained to the participant that this study explored communication with someone when only given limited information. The researcher explained that neither party would have a chance to see their partner throughout the interaction. The researcher then handed out a “Getting to Know You” questionnaire described above. After both parties completed their questionnaires, the researcher “switched” them. In actuality, the researcher handed

the participant one of three pre-filled out questionnaires that matched their randomly assigned condition. As described earlier, questionnaires in the “straight” condition were circled with a 7 whereas questionnaires in the “gay” condition were circled with a 1. The “bisexual” condition was indicated with a 4. Participants were then told to look over their partner’s questionnaire and try to form an impression of this person.

The researcher then introduced a “communication task” and explained that one person would read a question and the other would answer it. Participants then chose roles and discussion questions out of a cup. Both the roles and the question topics were rigged such that the confederate was always the person asking the questions and the questions were always the same as described earlier. The researcher then instructed the confederate to walk down the hall after the interaction in order to complete more tests with a different research assistant, turned on video camera, and left the lab. The confederate then began asking the communication task questions.

The first questions asked “Given 1 billion dollars and a high ranking government position, how would you choose to allocate resources between the issues of global terrorism and the environment? Please cite specific reasons and examples for your choice.” After the participant indicated he was done answering the question, the confederate asked the second question “What would you do if your same-sex freshman year roommate thought you were gay and tried to kiss you? Please speak at length about how you would respond to your roommate in this situation and how it would affect your living situation for the rest of the year.”

After the interaction was complete, the researcher re-entered the lab, turned off the video camera and instructed the participant to complete a Stroop Task followed by a questionnaire about the likability of their partner. The likability questionnaire was followed by a questionnaire measuring how much the participant trusted their partner (mentioned earlier). Participants were told that everyone in the study would be entered into a raffle at the end of the semester for a chance to win a Nintendo Wii. Participants were told that they had four tickets between them and their partner. Participants could then chose how many tickets they wanted to give away to their partner with the knowledge that however many tickets they gave would triple (for example, if they gave their partner two tickets, the partner would receive six tickets). Participants were told that their partner would then have control over how many tickets to keep, and how many to give back to the participant. Therefore, participants could maximize their chances of winning and give their partners a higher chance of winning by giving their partner all four tickets as long as they trusted their partner to give them half of the total tickets back. Giving their partner all four tickets without trusting their partner did not make sense because their partner could potentially keep all of the tickets for himself. Giving their partner less than four tickets was considered less trusting because it ensured the participant however many they chose to keep for themselves, but also could not possibly result in the maximum possible amount of tickets when their partner decided how many to return. The more tickets a participant decided to keep for himself, the less the participant was seen as trusting his partner to return any tickets (in reality, the confederate did not make any

ticket decisions). Therefore, the more tickets (out of the maximum four) that a participant gave to his partner was seen to be more trusting.

Once the participant was done with both questionnaires, he were debriefed and dismissed. The confederate also filled out a likability questionnaire about the participant in a different lab (see Appendix C for the complete confederate post-experiment questionnaire).

### Results

A manipulation check to make sure participants perceived their partner to be the same sexual orientation as their assigned condition revealed that participants tended to correctly identify the sexual orientation of their partner (see Table 1). Sexual orientation was coded such that an answer of “straight” was represented by a 1, an answer of “bisexual” was represented by a 2, and an answer of “gay” was represented by a 3. The manipulation check had an overall mean of 1.98. ANOVA indicated that the between groups difference was statistically significant  $F(2,60) = 1271.45, p=.001$ . Participants in the straight condition had a mean of 1.00, participants in the bisexual condition had a mean of 1.95, and participants in the gay condition with a mean of 3.00. This means that in both the straight and gay conditions, participants were always correct when identifying the sexual orientation of their partner and that only one participant in the bisexual condition did not correctly identify the sexual orientation of his partner.

Therefore, participants correctly interpreted and remembered the sexual orientation of their partner and the sexual orientation that they believed their partner to be had the potential to influence their subsequent interactions with him.

Several related questionnaire questions were combined in order to provide a more comprehensive measure of interaction patterns. These questions were correlated in order to ensure that they in fact measured the same likability dimensions. Equivalent combinations were made from both the participants' questionnaires and the confederate's questionnaires when possible.

The variable measuring how much the confederate was interested in pursuing friendship with their partner was an amalgamation of questions taken from the confederate's survey including the questions "To what extent do you think your partner liked you?" "To what extent did you like your partner?," and "How likely is it that you would become close friends with your partner?" These questions were highly correlated:  $\alpha=.92$  with an average overall mean of 4.73. ANOVA indicated that the between groups difference was not statistically significant  $F(2,60) = 1.34$ ,  $p=.27$ . Confederates ranked participants in the straight condition with a mean of 4.52, participants in the bisexual condition with a mean of 5.14, and participants in the gay condition with a mean of 4.52.

Participants' interest in becoming friends with the confederate was measured by combining the questions "To what extent did you like your partner?" "How likely is it that you would become close friends with your partner?," and "To what extent do you think your partner liked you?" These questions were highly correlated,  $\alpha=.67$  with an overall mean of 4.47. ANOVA indicated that there were no between-group differences  $F(2,60) = .87$ ,  $p=.42$ . Participants in the straight condition had a mean of 4.25, participants in the bisexual condition had a mean of 4.71, and participants in the gay condition had a mean of 4.43.

The variable measuring confederate's positive experience with the interaction (measured by responses to "To what extent did you have a positive experience with your partner?") had an overall mean of 3.84. ANOVA indicated that the between-group difference was not significant  $F(2,60) = .43, p=.65$ . Participants in the straight condition had a mean of 3.71, participants in the bisexual condition had a mean of 4.10, and participants in the gay condition had a mean of 3.71.

The variable measuring participants' positive experience with the interaction was measured by the question "To what extent did you have a positive experience with your partner?" and had an overall mean of 4.84. ANOVA indicated that the between-group difference was not significant  $F(2,60) = .45, p=.64$ . Participants in the straight condition had a mean of 4.67, participants in the bisexual condition had a mean of 5.14, and participants in the gay condition had a mean of 4.71.

The variable measuring the confederate's overall sense of embarrassment within the interaction was measured by the question "To what extent did you feel your partner was inappropriate during the interaction?" and had an overall mean of 3.41. ANOVA indicated that there were no between-group differences  $F(2,60) = 1.75, p=.18$ . Participants in the straight condition had a mean of 3.95, participants in the bisexual condition had a mean of 2.95, and participants in the gay condition had a mean of 3.33.

The variable measuring participants' overall embarrassment within the interaction was measured by the questions "To what extent did you feel as though you offended your partner?" and "To what extent did you feel that you were inappropriate during the interaction?" The additional question gauging offensiveness

was added because the participant was always chosen to answer the questions and therefore the only one who had an opportunity to say something offensive during the interaction. These questions were highly correlated  $\alpha=.67$  with an overall mean of 2.16. ANOVA indicated that the between-group difference was statistically significant  $F(2,60) = 3.24, p=.05$ . Participants in the straight condition had a mean of 1.83, participants in the bisexual condition had a mean of 1.91, and participants in the gay condition had a mean of 2.74. Post-hoc tests indicated the difference was between the straight and gay conditions (Tukey  $p=.06$ ).

The variable measuring confederate's perception that their partner was insincere (responses to the question "To what extent did you get the sense that your partner is insincere?") had an overall mean of 3.49. ANOVA indicated that the between-group difference was not significant  $F(2,60) = 1.18, p=.32$ . Participants in the straight condition had a mean of 3.29, participants in the bisexual condition had a mean of 3.24, and participants in the gay condition had a mean of 3.95.

Participants' perception that their partner was insincere was measured by "To what extent did you get the sense that your partner is insincere?" and had an overall mean of 2.03. ANOVA indicated that the between-group difference was not significant  $F(2,60) = 1.51, p=.23$ . Participants in the straight condition had a mean of 2.14, participants in the bisexual condition had a mean of 1.57, and participants in the gay condition had a mean of 2.38.

Confederates' perceptions of how similar their partner was to them ("To what degree does your partner seem similar to you?") had an overall mean of 4.71. ANOVA indicated that the between-group difference was not significant  $F(2,60) =$

2.50,  $p=.09$ . Participants in the straight condition had a mean of 4.24, participants in the bisexual condition had a mean of 5.39, and participants in the gay condition had a mean of 4.52.

Participants' perceptions of how similar their partner was to them ("To what degree does your partner seem similar to you?") had an overall mean of 4.67.

ANOVA indicated that the between-group difference was not significant  $F(1, 60) = .36, p=.70$ . Participants in the straight condition had a mean of 4.91, participants in the bisexual condition had a mean of 4.48, and participants in the gay condition had a mean of 4.62.

The confederate's general level of discomfort with the whole interaction was measured by combining the questions: "To what extent do you think that your partner experienced anxiety?" "To what extent did you feel comfortable when interacting with your partner?" "To what extent do you think that your partner felt threatened by you?" and "To what extent did you feel awkward during the interaction?." These questions had a weak correlation  $r=.12$  with an overall mean of 4.36. ANOVA indicated that the between-group difference was not significant  $F(1,60) = .34, p=.72$ . Participants in the straight condition had a mean of 4.31, participants in the bisexual condition had a mean of 4.18, and participants in the gay condition had a mean of 4.60.

The participants' general level of discomfort with the interaction was also measured by combining the questions: "To what extent do you think that your partner experienced anxiety?" "To what extent did you feel comfortable when interacting with your partner?" "To what extent do you think that your partner felt

threatened by you?,” and “To what extent did you feel awkward during the interaction?.” These questions had a strong correlation  $\alpha=.80$  with an overall mean of 3.29. ANOVA indicated that group differences approached but did not reach statistical significance  $F(2,60) = 2.69, p=.08$ . Participants in the straight condition had a mean of 3.39, participants in the bisexual condition had a mean of 2.70, and participants in the gay condition had a mean of 3.80.

The confederate’s general feeling that they understood their partner was measured by combining the questions “To what extent does your partner seem unpredictable?” and “To what degree do you have a clear sense of what your partner likes/dislikes?” These two questions had a moderate correlation  $\alpha=.46$  with an overall mean of 4.67. ANOVA indicated that between-group differences were not significant  $F(2,60) = 1.4, p=.87$ . Participants in the straight condition had a mean of 4.71, participants in the bisexual condition had a mean of 4.76, and participants in the gay condition had a mean of 4.52.

The participants’ general feeling that they understood their partner was measured by the questions “To what degree do you have a clear sense of what your partner likes/dislikes,” “To what degree do you have a clear sense of the type of person your partner is?” “To what extent does your partner seem unpredictable?” and “To what degree do you have a clear sense of how to get along with your partner?” These variables had a moderate correlation of  $\alpha=.47$ . These additional questions relating to how well the participant understood their partner only existed on the participants’ questionnaires because confederates were aware of the fact that the study was about sexual orientation and therefore these questions were not

necessary for the confederate. The overall mean for how well the participants felt that they understood the confederate was 3.78. ANOVA indicated that between-group differences were not statistically significant  $F(2,60) = .94, p=.40$ . Participants in the straight condition had a mean of 3.63, participants in the bisexual condition had a mean of 3.58, and participants in the gay condition had a mean of 4.12.

Confederate's trust with their partners was measured by the question "To what extent do you trust your partner?" Confederate's trust had an overall mean of 4.64. ANOVA indicated that between-group differences were not significant  $F(2,60) = 1.31, p=.28$ . Participants in the straight condition had a mean of 4.19, participants in the bisexual condition had a mean of 4.90, and participants in the gay condition had a mean of 4.81.

Participants' trust with their partners was measured in two ways. The first was through the question "To what extent do you trust your partner?" which had an overall mean of 3.76. ANOVA indicated that between-group differences were not significant  $F(2,60) = 2.24, p=.12$ . Participants in the straight condition had a mean of 3.52, participants in the bisexual condition had a mean of 3.33, and participants in the gay condition had a mean of 4.43.

The second measure of trust was through the ticket distribution task described earlier. Participants gave an overall mean of 2.37 tickets to their partner. ANOVA indicated that between-group differences were not significant  $F(2,60) = .23, p=.80$ . Participants in the straight condition had a mean of 2.19, participants in the bisexual condition had a mean of 2.43, and participants in the gay condition had a mean of 2.48.

Participants also completed a Stroop task immediately after finishing the interaction. A log transformation was performed on the Stroop data which was then analyzed using ANOVA. ANOVA indicated no statistically significant between-group differences  $F(2,60) = .45, p = .64$ . The overall untransformed mean was 2.81. Participants in the straight condition had an untransformed mean of 2.81, participants in the bisexual condition had an untransformed mean of 2.81, and participants in the gay condition had an untransformed mean of 2.81. Therefore it appears that none of the conditions created any more mental fatigue than the other conditions.

The confederate was blind to what condition he was in, but guessed at the end of his questionnaire after each experiment. The confederate was most accurate in guessing when his partner believed that he was straight (accurate 52% of the time), and equally good at guessing when his partner believed that he was in the bisexual or gay condition (28.6%). The distance of accuracy was also measured by taking the absolute value of the confederate's guess and the condition. For example, if the condition was "straight" and the confederate guessed straight, this outcome would be indicated with a 0. If the confederate was one off in his guess (for example he guessed "bisexual" when the condition was straight, or guessed "gay" when the condition was bisexual) this was indicated with the value of 1. If the confederate was the farthest off he could be (for example guessing "straight" when the condition was actually "gay"), this was indicated with a value of 2. An ANOVA indicated that there were no statistically significant between-group differences  $F(2,60) = 1.40, p = .25$ . The overall mean was .873 and participants in the straight condition had a

mean of .81, participants in the bisexual condition had a mean of .71, participants in the gay condition had a mean of 1.01. This indicates that the confederate was the worst at guessing during the gay condition, and the best during the bisexual condition (although the differences in accuracy between the straight and bisexual condition was very small).

Although these two measures indicate different results in guessing accuracy, they still make sense together. The confederate was best at guessing straight (as was indicated by the first analysis). However, because in the second analysis the bisexual condition is in the middle of straight or gay, the highest possible absolute value between the confederate's guess and the actual condition was 1, therefore making the overall average lower than the straight or gay condition, which had a highest possible absolute value between confederate's guess and actual condition of 2. Because the difference between bisexual and straight in the second analysis was very small, this is probably accounted for by the lower possible absolute values for the bisexual condition in the second analysis. Taking into account the differences in absolute values, it is likely that the confederate was better at gauging when his partner was in the straight condition.

### Discussion

This study examined the effects of interacting with a partner who belongs to a social group that shares a dual identity with two different and opposite entitative groups and the subsequent interaction patterns and strategies that emerge. Because of the nature of the interaction, a variety of interaction strategies were possible.

There were several hypotheses about how the different sexual orientation

conditions would affect interactions. Because of the uncertainty surrounding the label of “bisexual,” I hypothesized that participants would be more uncertain about how to go about approaching the interaction and that as a result of the uncertainty, the participants and the confederate would feel more uncomfortable and awkward in the bisexual condition than both the gay and straight conditions. While participants’ overall embarrassment with the interaction did vary depending condition, it was not in the hypothesized way. Instead, the difference was between the straight and gay conditions, with those in the straight condition indicating that they felt the least awkward, those in the gay condition reporting feeling the most awkward, and those in the bisexual condition in between. These findings support the idea that the cross categorization model was in effect because the double ingroup was viewed the most favorably, the double outgroup was viewed the least favorably, and the mixed ingroup-outgroup was viewed in between the two.

There was no reported difference in perceived embarrassment according to the confederate’s ratings. Therefore, while the participant may have felt much more awkward when interacting with a partner they believed to be gay, the increased awkwardness was minimal enough to not be noticed by the confederate.

In the same vein that Uncertainty Identity Theory would result in more discomfort and awkwardness in interactions, I also predicted that participants would generally report understanding their partner less when they were in the bisexual condition than when they were in the straight or gay condition, especially because there was no opportunity to lessen uncertainty in the experimental setting. There was no difference in between groups for either the confederate’s ratings of uncertainty or

the participants' ratings, indicating that uncertainty may not have played as large of a role in shaping the interaction as hypothesized.

As mentioned earlier, an aversive state is associated with uncertainty, and participants involved in the experiment were unable to lessen this uncertainty by gaining substantial information on their partner. As a result, I hypothesized that this aversive state would be associated with participants who believed their partner to be bisexual but would not occur in the other two conditions. I also hypothesized that participants who believed that their partner was straight would report liking and report a desire to be friends with their partner the most out of all three groups (because of they would share an ingroup with their interaction partner), and that those in the gay condition would have a likability score in the middle of the other two conditions. None of the measurements of participants' or the confederate's general liking of the interaction (measurements of desire for friendship and overall positive experience) indicated that there was any intergroup difference. As with the lack of difference in reported understanding of their interaction partner, uncertainty appears to have played a smaller role than hypothesized.

I hypothesized that participants would feel guilty about interacting with their partners awkwardly in the bisexual condition and therefore report trusting their partner more (measured by the number of tickets they allotted to their partner in the raffle trust exercise). However, there was no difference in any of these trust measurements, indicating either that feeling ashamed of how one behaved during the interaction had no effect on how much they decided to trust their partner, or that this behavioral difference was not large or important enough to warrant trying to fix the

situation by trusting their partner more. It is also possible that participants viewed the exercise on a more economic, rational level rather than as a reflection on how much they trusted their partner.

There are several implications of these findings. The lack of differences between the straight, bisexual, and gay conditions indicates that participants did not systematically treat their partners in the bisexual or gay condition dramatically different than they treated partners belonging to their ingroup (straight). Therefore, although people may alter their strategies for interactions and behavior when interacting with a dual identity outgroup member, the change in behavior is not so great that participants or confederates notice significant changes in a variety of different measurements of behavior. Additionally, these results also indicate that sexual orientation was not a particularly dividing social categorization. However, this finding goes against several of the studies discussed earlier, therefore it is important to explore aspects of the present study in order determine why this discrepancy may have occurred. It is likely that this lack of difference between different sexual orientation groups was due more to flaws in the design of the study rather than real world applications and patterns of interaction.

Interestingly, there were no statistically significant findings based on the confederate's questionnaire answers. This is particularly interesting because the confederate had no incentive to lie about his true feelings about the interaction (a tendency for participants to misreport on self-reports is discussed later). Additionally, a comparison of the participants' assigned conditions and what condition the confederate guessed their partner to be in revealed that while the confederate was the

most accurate when the participant was in the straight condition, his accuracy for both the bisexual and gay conditions were almost the same and that the confederate's accuracy in guessing the bisexual and gay conditions correctly was around chance. This means that any systematic differences in how participants treated their partner (the confederate) between the bisexual and gay conditions was not great enough for the participant to notice a change and guess one condition more accurately than the other. Additionally, while the confederate may not have noticed any significant differences in treatment when the participant thought he was interacting with a bisexual or gay partner, the higher than chance accuracy when guessing sexual orientation conditions in the straight condition indicate that the participants were acting differently when interacting with a straight partner than when interacting with a partner with a different sexual orientation than their own (bisexual or gay).

Because the results of this study indicate that uncertainty played a much smaller role than hypothesized, it is therefore likely that instead of viewing a partner in the bisexual condition in an uncertain and ambiguous way, participants may have used other strategies when interacting with their partner. The fact that participants rating their discomfort in the interaction reported being most uncomfortable when they believed their partner to be gay and least uncomfortable when they believed their partner to be straight supports the idea of cross categorization. However, a process similar to dual identity may have also been implemented when participants were strategizing. For example, participants in the bisexual condition may have viewed themselves as belonging to a distinct subgroup (straight) and viewed their interaction partner as different from them but may have also recognized similarities

between their ingroup and that of their bisexual partner (sometimes having straight tendencies). The Dual Identity approach would also result in participants in the gay condition perceiving interactions with their partners as the most awkward (they do not share any superordinate similarities) and participants in the straight condition perceiving their partners the least awkwardly (they are viewed as an ingroup member sharing both a subordinate and superordinate identity).

There are several possible reasons why I did not find many statistically significant results. It is possible that the social categorization of sexual orientation was not an important enough category in participants' self-concepts to elicit a big change in interaction patterns between the three conditions. However, previous studies, such as Falomir-Pichator and Mugny's (2009) study of gender self-esteem, indicate that amongst heterosexual men, asserting their heterosexuality is extremely important to their self-concept. This trend is especially strong when heterosexual men are seen as similar to queer men in some way. Therefore, it is especially surprising that participants only varied in their interaction patterns with their partner in terms of how uncomfortable they felt. Based on an abundance of previous studies, at the very least, participants should have systematically treated their gay partners differently than when they believed their partner to be straight. Because this was not found, it is likely that there was a problem with the design of the study that led to this lack of results.

Alternatively, it is possible that sexual orientation was not salient enough, especially when participants had all the other answers from the Getting to Know You questionnaire to contend with during the experiment. However, this

explanation for a lack of effects is also inconsistent with the manipulation check included at the end of every participant's questionnaire that asked them to identify the sexual orientation of their partner. As indicated earlier, analyses of the data indicated that the manipulation checks were successful, and therefore a lack of salience and cognizance about their partner's sexual orientation does not explain a lack of systematic differences between groups.

Because of all of these inconsistencies between previous studies and the results found in the present study, it is likely that the lack of results can be attributed to the self-report nature of assessing intergroup differences. It is likely that social desirability played a role in participants' responses on the questionnaire. For example, it is possible that participants in the bisexual condition may have disliked their partners more than those in the other two conditions or may have felt more awkward when their partners were in the bisexual condition than the others, but they may have felt guilty about it, and therefore not responded honestly on the post-experiment questionnaire. Even though anonymity was emphasized, it is unlikely that participants answered completely truthfully for fear of being regarded as homophobic. Therefore, the questionnaires may not reflect participants' actual opinions of their partner or the interaction.

Another limitation of the study was the environment in which the interaction took place. While the set up and feel of the room that participants and the confederate interacted in was necessary to test dual identity interactions (if a participant was able to see the confederate, he may have changed his opinion on his partner's sexual orientation and may not have relied on the information provided by

his questionnaire) it is unlikely that someone would have to interact with another person in everyday interactions and have to contend with that person's sexual orientation while at the same time not being able to see them. In other words, the experimental paradigm did not translate well to real world interactions dealing with these intergroup differences. It is therefore possible, given the unusual and scientific feel of the interaction situation (the research setting, the presence of video cameras, etc.) that participants were much more careful when choosing their words and interacting with their partners for fear of being perceived as homophobic or prejudiced. Similar to the problems with self-reports discussed earlier, participants may have been hyper vigilant and may not have acted normally during the interaction, possibly leading to the lack of results found in the present study. However, if extra effort was channeled into the interaction, differences should have manifested themselves in longer Stroop scores when participants interacted with outgroup members (either the bisexual or gay condition). However, no such differences were found. Additionally, other previous studies that took place in an experimental setting and explored intergroup interactions found significant intergroup results.

One limitation to the present study was that sometimes questions were grouped together in order to gain a bigger picture of interaction patterns, but in many cases, the correlation between these questions was not very high. Because there were so many questions involved in both the participants' post experiment questionnaire and the confederate's questionnaire, it would have been impractical and confusing to analyze interaction trends for every question. Additionally, many of the questions

measured similar or the same construct and therefore it was most practical to combine several questions when analyzing the data. When analyzing interaction trends, I analyzed both the confederate's and participants' perception of the same concept in order to gauge whether or not participants and the confederate viewed the interaction similarly. In doing so, I grouped the same questions when analyzing the confederate's answers as when analyzing the participants' answers when possible (sometimes the confederate and participant questionnaires varied such that some questions existed on one questionnaire and not the other). As a result, when cronbach's alpha was high for the grouping of several questions when looking at the participants' answers, it was not necessarily high when combining those same questions from the confederate's questionnaire. The fact that several questions were not very highly correlated has implications for the finding of the study. Instead of aiming for consistency of questions, future studies should aim more for accuracy in measuring a concept. Future studies should focus on recalculating and recombining questions in order to find the best measure of the construct.

The demographics of the participants may also have had an effect on the findings of the study. As mentioned earlier, the present study only tested males who identified as straight on a pre-study questionnaire. This decision was based on previous research that suggested that straight males were far more concerned about maintaining their heterosexuality when interacting with queer men than were heterosexual women (Falomir-Pichator & Mugny 2009) and that straight men had more negative views about gay men than lesbian women (Herek, 2002-a). While this was done to increase the chances of finding differences in interaction patterns

between the three conditions, as mentioned earlier, only one difference was found (participants' overall embarrassment with the interaction). It is possible that this one difference in embarrassment levels between interacting with a gay, straight, or bisexual partner would not be the same for a co-ed participant population with a diverse range of sexual orientations.

It is also possible that the general ideology of the student body influenced the lack of intergroup differences. The majority of Tufts students tested as participants for this experiment identified as politically liberal and these participants were younger than the participants of previous studies about straight-gay interactions. The participants in the present study may therefore have been more influenced by the Gay Rights movement. Additionally, the label of "bisexual" existed in many of the participants' formative years whereas the label of "bisexual" was novel for many of the participants in previous studies (Herek-b, 2000). This may have affected their general feelings towards people identifying as queer in general, and therefore it is possible that the lack of differences found between categories was a result of changing ideologies about sexual orientation in addition to a more liberal than average participant pool. However, even if participants identify as progressive and do not acknowledge holding any prejudiced feelings towards gay or bisexual people, it is still likely that they demonstrate unacknowledged differences in behavior between groups-referred to as aversive racism by Crosby, Bromley and Saxe (1980).

Future studies should explore both the verbal and behavioral differences between the different conditions. Because of the limitations of self-reports due to concerns with social desirability, future studies should include independent ratings

for both verbal responses and non-verbal behavioral variables in order to determine whether or not there are differences between the different groups. Studies by Crosby, Bromley and Saxe (1980) determined that behavioral measures in determining racist behavior oftentimes conflict with what participants report their behavior to be. Therefore, it is likely that interactional patterns would emerge and that these differences may be more telling than self reports because of participants' inability to lie about behavior (as was possible for the questionnaires). Additionally, raters could be kept uninformed about the intention of the study and therefore could rate differences in body language without being influenced by their own ideas or expectations about sexual orientations. If sufficient inter-rater reliability is satisfied, these ratings should provide more insight into how participants in the different conditions behaved and thought differently amongst the different conditions. Because of limits of time, however, I was unable to train raters and analyze data for the actual interactions.

Future studies should examine the exact interaction strategy that participants used when interacting with dual identity, ambiguous individuals. This could be done by employing similar interaction techniques to those mentioned in the introduction. For example, future studies could employ the same paradigm (participants cannot see their partner, etc.) but in the dual identity condition, participants could be told to focus on both how similar and different they are from their partner when reviewing their partner's Getting to Know You questionnaires. For the crossed categorization strategy, participants could be made to focus on categorization more before the interaction. Changing around the experimental paradigm so that participants could

view each other, group membership could be made more salient by having straight participants wear a red sticker during the interaction, gay participants wear a blue sticker, and bisexual participants wear both a red and a blue sticker.

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## Appendix A: "Getting to Know You" Ice Breaker Questionnaire

**Getting-To-Know-You Questionnaire**

1. How old are you?
2. Approximately how many hours/week do you spend using a phone or computer?
3. What type of weather do you prefer?

1	2	3	4	5	6	7
Much prefer hot weather						Much prefer cold weather

4. Have you ever been in a long-distance relationship?

5. How would you describe your political views?

1	2	3	4	5	6	7
Very Conservative						Very Liberal

6. If you had to come up with a New Year's resolution right now, what would it be?

7. What is your greatest strength?

8. How would you categorize your sexual orientation?

1	2	3	4	5	6	7
Gay						Straight

9. How many brothers and sisters do you have?

10. When was the last time you cried?

Appendix B: Participant Post-Test Questionnaire



### **A Chance to Win...**

Based on a random drawing at the end of the semester, one person from the group of individuals who participate in this study will win a Nintendo Wii. We appreciate your participation in the study, and this is one way that we'd like to show our gratitude.

You will be able make a choice that can ultimately maximize or minimize your chance of winning. Here's how it works...

Each partnership in the study gets to contribute four ballots toward the random drawing at the end of the semester, but only one person can win. Whose "Participant ID#" is linked to each of the ballots will depend on the selections that you and your partner make.

You get a chance to decide how many of the four ballots go to your partner. The number of ballots you give to your partner then triples. For example, if you give all four ballots to your partner, your partner then receives 12 ballots. If you give two ballots to your partner, they will receive 6 ballots.

After receiving the number of ballots you assigned to your partner, they will then get to choose how many ballots to give back to you. To use the earlier example, if you assign your partner all four ballots (12 once the number is tripled), they can then choose to give you all 12, none, or any number in between. You will never know how many ballots your partner chose to give back to you.

**How many ballots do you wish to give to your partner? (please circle)**

**1**

**2**

**3**

**4**

What do you think the purpose of the study is?

What sexual orientation was your interaction partner (based on the information provided in his/her get-to-know-you questionnaire)? If you forget or don't know, try to guess correctly.

Did you change your approach to any aspect of today's study because of information relating to your partner's sexual orientation?

- Yes
- No

If "Yes", how so?

Please use the space provided below to make any additional comments.

Please provide the following demographic information about yourself by checking the appropriate box or filling in the appropriate blank.

- A. Sex:
- Female
  - Male
- B. Age: \_\_\_\_\_
- C. Race: \_\_\_\_\_
- D. Sexual orientation \_\_\_\_\_



Table 1

*Number of Participants Who Correctly Identified Their Partner's Sexual Orientation*

		Sexual Orientation of Partner			
		Straight	Bisexual	Gay	Total
Conditions	Straight	20	0	0	20
	Bisexual	1	20	0	21
	Gay	0	0	21	21
	Total	21	20	21	62