ACCEPTED VERSION

The Invisible Stereotypes of Bisexual Men

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ABSTRACT

Bisexual men have little public visibility, yet previous reports indicate that heterosexuals have specific prejudicial attitudes towards them. This article reports on two studies that examined the stereotypical beliefs of heterosexual men and women regarding bisexual men. In Study 1 (n = 88), we examined awareness of social stereotypes (stereotype knowledge). Most of the participants were unable to describe the various stereotypes of bisexual men. Contrary to previous studies, low-prejudiced participants had more stereotype knowledge than high-prejudiced participants. In Study 2 (n = 232), we examined prejudice in a contextual evaluation task that required no stereotype knowledge. Participants evaluated a single target character on a first date: a bisexual man dating a heterosexual woman, a bisexual man dating a gay man, a heterosexual man dating a heterosexual woman, or a gay man dating a gay man. The findings indicated that participants implemented stereotypical beliefs in their evaluation of bisexual men: compared to heterosexual and gay men, bisexual men were evaluated as more confused, untrustworthy, open to new experiences, as well as less inclined towards monogamous relationships and not as able to maintain a long-term relationship. Overall, the two studies suggest that the stereotypical beliefs regarding bisexual men are prevalent, but often not acknowledged as stereotypes. In addition, the implementation of stereotypes in the evaluations was shown to be dependent on the potential romantic partner of the target. Possible theoretical explanations and implications are discussed.

KEY WORDS: bisexuality, stereotypes, prejudice, sexual orientation.

INTRODUCTION

Similar to gay men, studies have found that bisexual men experience violence, discrimination, and negative attitudes as a result of their sexual orientation (Herek, 2002; Herek, Gillis, & Cogan, 1999; Huebner, Rebchook, & Kegeles, 2004; Paul & Nichols, 1988). However, attitudes towards gay men and bisexual men may not necessarily be the same (Herek, 2002). Whereas the attitudes towards gay men have been researched extensively, little is known about specific social attitudes towards bisexual men. Only a few studies have empirically examined the prevalence of negative attitudes towards bisexual men and their influence on social evaluations (Eliason, 1997, Mohr & Rochlen, 1999; Rust, 1993; Spalding & Peplau, 1997; Yost & Thomas, 2011). The aim of this study was to contribute to this literature.

Social Stereotypes and Public Invisibility

Several qualitative studies have claimed that bisexual men experience two unique social experiences: social stereotypes and public invisibility (McLean, 2007; Ochs, 1996; Rust, 2002). Social stereotypes relate to specific biased evaluations that resonate in prejudicial behavior. These studies have reported that bisexual men face very specific social stereotypes; namely, that bisexual men are believed to be: (1) confused and indecisive regarding their sexual and romantic preferences, (2) untrustworthy, (3) less inclined towards monogamous relationships, and therefore less likely to maintain long-term relationships and more likely to cheat on their partners, (4) sexually promiscuous and (5) open minded and open to new experiences (Fox, 1991; Ochs, 1996; Udis-Kessler, 1990; Zinik, 1985; see also Israel & Mohr, 2004; Rust, 2002). These findings thus suggest that bisexual men may frequently encounter unfavorable evaluations stemming from these stereotypes.

The second unique experience reported by these studies is public invisibility; i.e., that bisexual men have little political and public visibility (Eliason, 1997; Rust, 2002; Steinman, 2000). Hence the typical experiences of bisexual men remain relatively unknown to the general public, including professional psychologists and sexologists (Barker, 2007). Public invisibility deserves attention, as several authors have connected it to higher rates of various health issues (Miller, Andre, Ebin, & Bessonova, 2007).

In terms of social attitudes, it is unclear how public invisibility can co-exist with common social stereotypes. In other words, if people have no knowledge of bisexual men, how can they have specific biased beliefs about them? Two mutually exclusive explanations seem plausible. On the one hand, stereotype-based prejudice towards bisexual men may be an uncommon social phenomenon. This can be dubbed the "Weak Stereotypes Account". For example, Eliason (1997) conducted a survey among heterosexual college students and found that although a general negative attitude was prevalent, most participants could not report whether or not they thought bisexuals fit the stereotypes stated above.

Alternatively, stereotype-based prejudice towards bisexual men may be common and still co-exist with public invisibility if it is not dependent on explicit a-priori knowledge about bisexual men. A similar idea was examined by Goff, Eberhardt, Williams, and Jackson (2008), who studied the effects of *implicit stereotypes* on social evaluation. They found that participants had an implicit, but not an explicit, association between Blacks and apes which affected evaluations, thus indicating that stereotypical evaluations were possible even without relevant knowledge.

The main goal of the current study was to assess the strength of these accounts by empirically examining two aspects of the social stereotypes of bisexual men. Study 1 examined factors that influence knowledge of stereotypes (i.e., stereotype knowledge), and

Study 2empirically examined the inclination to evaluate bisexual individuals stereotypically (i.e., stereotype implementation).

Stereotype Knowledge

Stereotype knowledge is the awareness that certain traits are stereotypically associated with a specific group. In the presence of a member or symbol of the group, stereotype knowledge should immediately become available (Devine, 1989, but see Kunda & Spencer, 2003, for boundary conditions to this rule). Stereotype knowledge is considered a necessary component in the *implementation* of stereotypes in social evaluations and behaviors (Devine, 1989; Kunda & Spencer, 2003). That is, it is claimed that if a certain individual does not have knowledge concerning a specific stereotype, he or she cannot implement the stereotype and behave prejudicially. Therefore, it is important to establish a clearer understanding of knowledge regarding the stereotypes of bisexual men. The first goal of Study 1 was to provide a descriptive measure of stereotype knowledge regarding the stereotypes of bisexual men. We compared these descriptive results to those of other studies, which explored stereotype knowledge of other social groups. Stereotype knowledge is thought to be constructed on the basis of well-learned associations in a particular cultural context. Devine (1989) reasoned that individuals who share a social context should have an equal amount of stereotype knowledge of a specific group. Several studies have found that low-prejudiced and high-prejudiced individuals should show an equal amount of stereotype knowledge. (Augustinos et al., 1994; Devine, 1989; Lepore & Brown, 1997). By contrast, other studies have shown that individuals' personal beliefs are correlated with the extent of their stereotype knowledge (Gordijn, Koomen, & Stapel, 2001; Krueger, 1996). Krueger argued that individuals perceive their beliefs as reflecting their broader social beliefs, and concluded that

high-prejudiced individuals should therefore report more stereotype knowledge than low-prejudiced individuals, simply because they have more stereotypical beliefs.

It should be noted that the social stereotypes examined in these studies pertained to well-known racial minorities in the participants' communities. For example, Australian participants were asked about Aborigines (Augoustinos et al., 1994), whereas Dutch participants were asked about Moroccan and Surinamese people in The Netherlands (Gordijn et al., 2001).

Stereotype Implementation

Stereotype implementation includes any behavior guided by social stereotypes. One expression of stereotype implementation can be found in stereotyped evaluation – the judgment of an individual's traits on the basis of his or her social group. In the only experimental study to date on bisexuals, Spalding and Peplau (1997) used an explored the implementations of stereotypes in the evaluation of bisexuals. They presented heterosexual college students with descriptions of couples with different sexual orientations. Participants evaluated one of the partners (the target character) on a variety of scales. They hypothesized that if participants had biased beliefs regarding bisexuals, they would evaluate the bisexual targets less favorably on a number of specific traits.

The findings indicated the presence of stereotype implementation in participants' evaluations of the targets. First, compared to heterosexual targets, bisexual targets in a relationship with heterosexual partners were evaluated as more likely to cheat, transmit a sexually transmitted disease (STDs) and sexually satisfy their partners. Second, compared to lesbians or gay targets, bisexual targets in a relationship with lesbian or gay partners were evaluated as more likely to transmit STDs, and less likely to sexually satisfy their partners. Furthermore, Spalding and Peplau found that the evaluation of the bisexual targets depended

on the target's current partner: bisexual targets in a relationship with heterosexual partners were seen as more likely to cheat and sexually satisfy their partners compared to bisexual targets in a relationship with lesbian or gay partners. However, contrary to Spalding and Peplau's hypothesis, bisexual targets were not evaluated as less trustworthy than the other targets. This result suggests that the content of the bisexual stereotype includes specific sexual conduct, but not untrustworthiness although this stereotype was cited in subjective accounts of bisexuals (e.g., Weinberg, Williams & Pryor, 1994) and postulated by others (Israel & Mohr, 2004; Ochs, 1996; Rust, 2002). Furthermore, Spalding and Peplau's study did not cover the evaluation of stereotypical traits such as confusion and indecisiveness regarding sexual orientation, lack of inclination towards monogamy, inability to maintain long term relationships, and openness to new experiences. Thus, as was the case for Eliason (1997), the results found by Spalding and Peplau can only support a weak and incomplete account of the stereotypes of bisexual men.

However, as Spalding and Peplau noted, the study had one important limitation. The characters in the study were individuals in functioning long-term relationships (i.e., "going out steady for a period of 6 months" and overall "doing great"). The word "relationship" in itself is associated with notions of trust, stability, and commitment (Berscheid & Peplau, 1983). Therefore, an individual in a functioning relationship is probably automatically evaluated as trustworthy and committed, at least in the context of the specific relationship. It may be useful to examine another context, such as an initial engagement with a potential partner, wherein specific traits are not inferred in advance (Klohnen & Luo, 2003).

Study 2 explored the implementation of the stereotype of bisexual men, as measured by the evaluation of specific personal traits, in the context of a first date. Evaluation of bisexual targets was compared to that of heterosexual and gay targets. If the Weak

Stereotypes Account is correct, we would expect to find: (1) little or no evidence of specific stereotypical evaluations, or (2) negative evaluations regardless of stereotypical content. On the other hand, if people do have specific stereotypical beliefs regarding bisexual men, we would expect to replicate Spalding and Peplau's results and find additional stereotypical evaluations of bisexual men as compared to heterosexual or gay men.

Specifically, in accordance with previous studies (Eliason, 1997; Spalding & Peplau, 1997), we hypothesized that bisexual men would be evaluated as less inclined to monogamy and less able to maintain a long term relationship than non-bisexuals. Also, in accordance with the literature on the stereotypes of bisexuals (Fox, 1991; Israel & Mohr, 2004; Ochs, 1996; Rust, 2002; Udis-Kessler, 1990; Zinik, 1985), we hypothesized that bisexuals would be evaluated as more confused, untrustworthy, and open to new experiences than non-bisexuals. Moreover, in order to rule out biased evaluations due to a general negative attitude towards bisexual men, we also explored whether any differences would be found in other traits as represented by scales of the Big Five Factor Inventory (Costa & McCrae, 1992). We hypothesized that differences in evaluation between bisexual and non-bisexual targets should appear for stereotypical items, but not for non-stereotypical items.

Study 1 and Study 2 were designed separately to investigate two closely related concepts: "stereotype knowledge" and "stereotype implementation." Though markedly different in method, these two studies are complementary. The combined findings should provide a clearer understanding of how stereotype-based prejudice and public invisibility can co-exist, and point to a novel way of thinking about these stereotypes.

Study 1: Stereotype Knowledge

METHOD

Participants

Participants were recruited via the Internet through the *Hanover College Psychological Research on the Net* website, an international website for publishing links to online academic studies. Participants volunteered for a 1 in 30 chance to win $25 in gift certificates. The study was limited to heterosexuals who reside in English speaking countries (U.S., U.K. and Canada). Participants who reported a different sexual orientation or a different place of residence were omitted from the study, and their results were not analyzed. 31.7% of the participants who agreed to participate dropped out before the end of the study, but such high drop-out rates are common in internet studies (see Kraut et al., 2004 for a review).

The final sample included 88 participants: 58 women and 30 men. Participant age ranged from 17 to 63 years with an average age of 31.47 (*SD* = 12.71). 65 were residents of the U.S., 18 were residents of the U.K., and 5 were residents of Canada. 51 participants were college or university students.

Procedure

Participants entered the online questionnaire, gave their voluntary consent and read written instructions. The instructions stated that the purpose of the study was to better understand social attitudes and social stereotypes toward bisexual men. Further instructions were identical to Devine's (1989) original instructions; that is, participants were asked to list, in free-form, the content of the cultural beliefs and stereotypes of bisexual men, to the best of their knowledge. They were also told that the researchers were not interested in the participants' personal opinions, but in the views they thought people held regarding bisexual men. In other words, the measure called for the retrieval of all known stereotypical associations, without tapping the participants' personal views.

The coding procedure was based on the stereotype knowledge literature (Devine, 1989; Lepore & Brown, 1997). First, categories were created by the researchers in accordance with previous studies (e.g., Israel & Mohr, 2004; Mohr & Rochlen, 1999). Second, two independent judges, blind to the participants' answers to the Attitudes Regarding Bisexuality Scale-Male version (ARBS-M; Mohr & Rochlen, 1999), were presented with the categories and asked to code in individual responses. The judges were not obligated to use the categories and were allowed to add additional categories if they felt they were appropriate for more than 5% of the participants. For example, the category "Feminine" was added, since more than 5% of the responses included items such as "girly", and an additional category was added for participants who indicated they did not know of any social stereotype regarding bisexual men (the “Don’t Know” category). Finally, if a response did not match any of the categories, the judges were allowed to code a response under three dummy categories: a “Negative-Miscellaneous” category (for items like "self-focused"), a “Positive-Miscellaneous” category (for items like "intelligent"), and a “Neutral Descriptions” category (for items like "young"). These categories were not analyzed, as they provided no information about the participants’ stereotype knowledge. Overall, 9 categories and 3 dummy categories were created (see Table 1). Stereotype knowledge was indicated by a person’s indication of a specific category. Thus, for each participant, multiple responses referring to the same category were counted once. The judges agreed on 94% of the responses coded into the regular categories. After initial coding, disagreements were resolved through discussion.

Measures

ARBS-M

After finishing the free-form task, participants completed the ARBS-M. This questionnaire contains 12 items measuring two dimensions of attitudes regarding bisexuality:

Tolerance- the degree to which male bisexuality is viewed as a tolerable, moral sexual orientation (measured by extent of agreement with statements such as: "Bisexual men are sick") and *Stability*- the extent to which bisexuality is viewed as a legitimate, stable sexual orientation (measured by agreement with statements such as: "Male bisexuals are afraid to commit to one lifestyle"). Responses on the ARBS-M were obtained on a 5-point Likert-type scale with anchor points of 1 (*strongly disagree*) and 5 (*strongly agree*). The original alpha coefficients for the scales were .83-.92 for the Tolerance scale and .83-.90 for the Stability scale (Mohr & Rochlen, 1999). For this study, the coefficients were .92 for Tolerance and .91 for Stability.

Additional Information

After completing the ARSBS-M, participants were asked to indicate their acquaintance with bisexual individuals, on a 5-point Likert-type scale with anchor points of (1) “I’m not acquainted with bisexual individuals at all” and (5) “I’m well acquainted with bisexual individuals.” Finally, participants reported their gender, age, educational status, and sexual orientation.

RESULTS

The average score on the ARBS-M was 3.21 for the Stability scale (SD = 1.52) and 3.53 for the Tolerance scale (SD = 0.76). The scales were strongly correlated, $r(86) = .67$, $p < .001$. Furthermore, a Spearman correlation test showed that the participants’ acquaintance with bisexual individuals was significantly correlated with the Tolerance scale, $r_s(86) = .22$, $p = .03$, but not with the stability scale, $r_s (86) = .08$, $p = .45$. Since the ARBS-M was not constructed with normative values, the participants were assigned to either a relative low-prejudice group (N = 46) or a relative high-prejudice group (N = 42), according to the median point of the answers on the Tolerance scale of the ARBS-M. These groups did not differ in

distribution of gender, $\chi^2(1, n = 88) < 1$, age, $t(87) = 1.60$, or educational status, $\chi^2(1, n = 88) = 2.50$.

The frequencies of reporting each category were calculated. The overall frequency of specific stereotype knowledge ranged from 6.1% (Untrustworthy category) to 34.1% (Feminine category). Furthermore, 20.5% of the participants reported not knowing any stereotypes, and an additional 5% of the participants were only able to report descriptive terms, which were classified in the dummy categories. Next, the frequencies of each category were calculated separately for each group. For example, 41.3% of the low-prejudiced participants reported that bisexual men were stereotypically believed to be promiscuous whereas, this figure was only 16.7% among the high-prejudiced participants (see Table 1).

To analyze differences in frequency of reporting stereotype knowledge, a series of chi-square tests were conducted for each of the individual categories[1]. Four comparisons stood out. First, the difference in frequency of reporting the category "Sexually Promiscuous/Unable to Commit" was found to be significant, $\chi^2(1, n = 88) = 6.40$, $p = .01$. Surprisingly, contrary to previous stereotype knowledge studies, the low-prejudice group reported this category with higher frequency. The same trend was observed for the category of “Closeted Homosexuals,” $\chi^2(1, n = 88) = 4.92$, $p = .03$, and “Indecisive/Confused,” $\chi^2(1, n = 88) = 6.40$, $p = .01$. The other comparisons did not reach significance, all ps $> .05$. Finally, the comparison between groups for the category "Don't Know Any Stereotype" was significant, $\chi^2(1, n = 88) = 8.19$, $p = .004$. Similar to the previous comparisons, the high-

[1] To avoid possible problems from dichotomizing continuous data (MacCallum, Zhang, Preacher & Rucker, 2002) we conducted a series of bivariate correlations between tolerance scores and stereotype knowledge parallel to the series of chi-squares. All reported results were replicated. Specifically, the likelihood of reporting the following stereotypes increased with a person’s tolerance score: Sexually Promiscuous/Unable to Commit, $r_{pb}(86) = .31$, $p = .003$; Closeted Homosexuals, $r_{pb}(86) = .28$, $p = .009$; Indecisive/Confused, $r_{pb}(86) = .25$, $p = .02$; also, the likelihood of not knowing any stereotype decreased, $r_{pb}(86) = -.46$, $p < .001$. None of the other correlations were significant.

prejudice group more often reported lacking any stereotype knowledge. Thus, the low-prejudice group generally showed more knowledge regarding the stereotype.

In order to investigate this result further, we examined the correlation between tolerance and stereotype knowledge. To do so, we calculated a new continuous variable that represented stereotype knowledge by averaging the individual frequency for reporting only previously described stereotypical categories (i.e., "Indecisive/Confused," "Sexually-promiscuous/Unable to commit," "Untrustworthy/Unfaithful," "Closeted Homosexuals," "Open-minded/Open to new experiences", and "Carry STDs"). For instance, a participant who reported all of these stereotypes received a score of 1, whereas a participant who reported only 3 categories received a score of 0.5. We performed a Pearson correlation between this variable and the subject's score on the Tolerance scale of the ARBS-M. This analysis also yielded a highly significant effect, $r(86) = .33$, $p = .002$, which confirmed that low-prejudiced individuals (high on the Tolerance scale) had more stereotype knowledge regarding bisexual men than high-prejudiced individuals.

In order to investigate possible gender differences, an additional set of chi square comparisons was conducted for the individual categories, but none of the comparisons was significant , all *p*s > .05 (see Table 1).

DISCUSSION

The first objective of Study 1 was to provide a descriptive measure of stereotype knowledge. The key feature of the data was the overall low response frequency for all categories, as well as the large percentage of participants who could not name a single stereotype of bisexual men. Previous studies that used this free-form paradigm regarding other social groups reported higher proportions of stereotype knowledge, ranging from .25 to .80 (M = .50) in Devine (1989) and from .11 to .87 (M = .39) in Lepore and Brown (1997);

the current sample yielded much lower proportions, ranging from .04 to .41 (M = .19). Furthermore, 20.5% of all the participants (18 participants) claimed they did not know of the stereotypes in question, whereas previous studies reported no such phenomenon. In previous studies, only Lepore and Brown (1997) reported of subjects (2.5%) having no stereotype knowledge whatsoever.

Despite these marked differences in response rates, our ability to compare stereotype knowledge towards bisexual men and other groups is limited, unless stereotype knowledge for all groups is gauged with similar participants in a similar environment. For example, one might argue that, as our study was conducted online, rather than in a lab, low response rates could be attributed to the participants' low engagement and lack of commitment (Buchanan, 2000). However, results from recent studies make this possibility unlikely: even though participants in internet-based questionnaires show higher drop-out rates, these studies reveal no significant differences from questionnaires completed in a lab environment (Kraut et al., 2004).

The second objective of Study 1 was to examine whether there were any differences between stereotype knowledge of low-prejudiced individuals and that of high-prejudiced individuals. The results strongly indicate that the low-prejudice group had more knowledge of the stereotypes of bisexual men than the high-prejudice group. This result is incompatible with the reasoning that stereotype knowledge is essential for prejudicial attitudes (Devine, 1989), or that people who are more prejudiced have more stereotype knowledge (Gordijn et al., 2001).

A possible interpretation of our results fits the Weak Stereotype Account. That is, the sample of high-prejudiced participants may have had general negative attitudes towards bisexual men (Herek, 2002), but not any specific stereotypical beliefs. However this cannot

explain why high-prejudiced participants were also less inclined to believe that male bisexuality is a stable and viable sexual orientation (as expressed by the Stability scale of the ARBS-M), a notion derived from the stereotype that bisexual men are actually closeted gay men.

A different explanation to our results is that people hold knowledge that they do not consider to be stereotypical. Note that in the free-form task, participants were asked “what are the social stereotypes and social beliefs concerning bisexual men?" This question might have tapped two unrelated factors: (1) the knowledge of stereotypical categories regarding bisexual men and (2) the acknowledgement that this knowledge is considered stereotypical (or indeed a widespread social belief). However, heterosexuals might simply have prejudicial beliefs that they think are true and not stereotypical at all. For example, one participant wrote: "I'm not familiar with any specific stereotypes of bisexual males. I do sometimes feel that they are actually homosexuals, but are afraid to identify as such do [*sic*] to social stigma." In this example, the participant reported having specific stereotype knowledge (i.e., that bisexual men are, in fact, closeted gay men), despite being unaware that the notion is actually stereotypical. Following this reasoning, low-prejudiced individuals may simply be more explicitly aware of the stereotypical nature of common beliefs regarding bisexual men. Indeed, the low-prejudiced participants were more personally familiar with bisexual individuals (and therefore presumably more familiar with bisexuals’ experiences and interpretations of prejudice).

This reasoning points in a surprising direction; namely that lack of certain knowledge regarding a social group can actually encourage prejudicial behavior. Kunda and Spencer (2003) argue that the motivation to avoid prejudicial behavior rely on the desire to comply with egalitarian values. However, if people do not know that a certain belief regarding

bisexual men is, in fact, stereotypical (and offensive), they cannot know their behavior can be construed as prejudicial and should therefore have less motivation to suppress it.

To summarize, in Study 1, the findings suggest that stereotypes of bisexual men are not well known. Nevertheless, knowledge of stereotypes was not a prerequisite for prejudice. Thus, a lack of explicit knowledge regarding bisexuals may co-exist with stereotypical evaluations of bisexual men. However, we did not measure stereotypical evaluation per se. In Study 2, we examined stereotypical evaluations directly in a contextualized evaluation task. Unlike surveys that measure attitudes towards a social group as a whole (e.g. Eliason, 1997; Herek, 2002; Mohr & Rochlen, 1999), the contextual paradigm in Study 2 probed attitudes towards hypothetical individuals (Spalding & Peplau, 1997). This paradigm has two main advantages. First, the evaluation is closer to an everyday, real life situation. Second, since the sexual orientation of the target is presented as a single detail among many, the purpose of the study was less obvious, and social desirability biases are reduced. These advantages make the evaluation task far more implicit than surveys and require less explicit conceptions of stereotypes. Thus, probing for evaluations of hypothetical individuals should clearly reveal even implicit biases.

Study 2: Stereotype Implementation

METHOD

Participants

Participants were recruited via the same method as described in Study 1. 28% of those who agreed to participate dropped out before finishing the experiment. The final sample was made up of 232 participants (150 women). Ages ranged from 16 to 51 years with a mean of 22.14 (*SD* = 7.22). Out of the final sample, 201 participants were residents of the U.S., 18 were residents of the U.K., and 13 were residents of Canada.

Procedure

The experimental conditions were manipulated in a between-subjects design. Participants were assigned to one of the four experimental conditions describing the target and the non-target partners: (1) bisexual man dating a woman, (2) bisexual man dating a man, (3) heterosexual man dating a woman, and (4) gay man dating a man. The main interest was the encapsulated in two comparisons: evaluations of bisexuals versus non-bisexuals, and evaluations of a bisexual man dating a woman and a bisexual man dating a man. To allow for sufficient statistical power per comparison, participants were assigned to the different experimental conditions so as to create a ratio of approximately 1.5:1 in favor of the bisexual target conditions. We also sampled at least 20 men in each group to allow for a meaningful analysis of gender differences. The final sample for each condition was as follows: bisexual man dating a woman, n = 79 (20 men); bisexual man dating a man, n = 63 (21 men); heterosexual man dating a woman, n = 45 (21 men); and a gay man dating a man, n = 47 (20 men).

Participants entered the online questionnaire, gave voluntary consent and read a description of a non-target and a separate description of the target (see below). Finally, participants were instructed to read all the descriptions and then evaluate the target on a list of items. To reduce knowledge of the purpose of the experiment, participants were told that all dates were selected at random from a larger pool and that they would receive descriptions of one to three dates, although all participants received only one date description.

Materials

Non-target description

Participants read one of two possible descriptions of a single person: Suzanne, a heterosexual woman, or Scott, a gay man. The only additional information was that

Suzanne/Scott is "a 24-year-old college student, who is dating for the purpose of finding a steady, long-term relationship."

Target description

Participants read a series of questions that Suzanne/Scott asked the target, James, on their date as a basis for their evaluation. The set of questions was written by the authors, specifically for this study, and included neutral questions such as: "What is your favorite color?" and short neutral answers such as "red" (see Table 2). The questions, with the exception of the question concerning the target's sexual orientation, were pre-tested to ensure that they indeed produced a neutral description of the target. It was important to show that the answer to the neutral questions would not produce a high or low evaluation on any of the items by themselves. We presented the set of questions and answers without indicating the target's sexual orientation, and responses were collected on the same scales used in the study. We conducted a series of *t*-tests and compared the results to the middle point on the scale ("*neither agree nor disagree*"). The pre-test showed that the set of questions and answers did not produce any significant evaluation, positive or negative, for any of the neutral items ($n = 37$, all $ps > .10$).

The sexual orientation of the target was manipulated by the answer to the question: "Do you ever find yourself attracted to men?" if asked by the heterosexual woman non-target or "Do you ever find yourself attracted to women?" if asked by the gay man non-target. The answer of the bisexual targets was always, "I'm bisexual, so yes." The answer of the heterosexual and gay targets was "No, only women" or "No, only men," respectively. Note that the question was embedded among other questions, to further reduce the participant's awareness of the study goals.

Illustrations

In addition to the descriptions, participants were presented with illustrations depicting the couple on their date[2]. All illustrations were drawn based on stock photos of real models, and were constructed so that poses, eye level and distances between individuals would be the same for all couples. All individuals in the illustrations were portrayed smiling. The target character illustrations were pre-tested in a fashion similar to the textual description, to ensure that the illustrations did not produce a high or low evaluation for any of the items measuring the dependent variables. No significant effects were found for any of the items (n = 24, all *p*s > .10).

Measures

Non-stereotypical traits: Ten-Item Personality Inventory (TIPI)

After reading the description of the target, participants rated the target on the Ten-Item Personality Inventory (TIPI), a very brief measure of the Big-Five personality domains (Gosling, Rentfrow & Swann, 2003). Each item included a pair of descriptive characteristics that corresponded to a specific trait. Instructions were given to rate the target to the extent to which the participants agreed that the pair of characteristics applied to their evaluation of James, even if one characteristic applied more strongly than the other. All items were rated on a 7-point Likert scale with anchor points of *strongly disagree* (1) and *strongly agree* (7). The TIPI includes the following paired items: (1) "Extraverted, enthusiastic" and (2) "Reserved, quiet" (subscales of Extraversion); (3) "Sympathetic, warm" and (4) "Critical, quarrelsome" (subscales of Agreeableness); (5) "Dependable, self-disciplined" and (6) "Disorganized, careless" (subscales of Conscientiousness); (7) "Calm, emotionally stable" and (8) "Anxious, easily upset" (subscales of Emotional Stability); (9) "Conventional, uncreative" and (10) "Open to new experiences, complex" (subscales of Openness to New

[2] The illustrations are available from the corresponding author upon request.

Experiences). The last item was used to test the stereotype of open-mindedness. Although not as reliable as the longer versions of the Big-Five inventories, the TIPI has an acceptable test-retest reliability of .72 and was found to converge with widely used instruments (Gosling et al., 2003). As the TIPI included only one item for each subscale, it was not possible to calculate internal consistency. However, in Gosling et al.'s original study, each pair of items was found to be significantly correlated, which indicates that both items measured the same overall trait.

Stereotypical traits and overall match ratings

In a similar fashion to the TIPI, participants then evaluated the target on an item termed (1) "Indecisive, confused" designed to test the stereotype of confusion. Afterwards, participants were requested to answer a short set of questions, specifically designed to assess stereotypes of bisexual men, namely: (2) trustworthiness ("I think James is not a trustworthy person"), (3) inclination to monogamy ("I think James has had many romantic relationships in the past"), and (4) ability to maintain a long term relationship ("I think it will be easy for James to stay in a long term relationship"), and (5) the overall match between the target and non-target characters ("I think James is a good match for Suzanne/Scott"). All these questions were evaluated on a 7-point Likert scale with anchor points of *strongly disagree* (1) and *strongly agree* (7).

RESULTS

Prior to the main analysis, we calculated the correlations between the subsets of items that comprise the 5 traits of the TIPI. Four out of the five correlations were highly significant: "Extraverted, enthusiastic" and "Reserved, quiet", $r(230) = -.34$, $p < .001$; "Dependable, self-disciplined" and "Disorganized, careless", $r(230) = -.38$, $p < .001$; "Calm, emotionally stable" and "Anxious, easily upset", $r(230) = -.39$, $p < .001$; and "Open to new experiences,

complex" and "Conventional, uncreative", $r(230) = -.32$, $p < .001$. The correlation between "Sympathetic, warm" and "Critical, quarrelsome" did not reach significance, $r(230) = -.09$, $p = .08$. Following this analysis, subscale pairs were averaged (after reversal of the negative item) to form the traits of the TIPI. "Open to new experiences, complex" and "Conventional, uncreative", were not averaged to a single trait, as the former item was considered a stereotypical trait item, whereas the latter was considered a non-stereotypical trait item.

Next, the reliability of the items pertaining to the measurement of the stereotypical evaluation was estimated. The reliability of the overall sample was rather low (.38). However, separate analyses for each of the experimental groups revealed that reliability was somewhat better for the condition of a bisexual man dating a woman (.50) and much worse for a bisexual man dating a man, heterosexual man dating a woman, and gay man dating a man (-.15, .12, and .03, respectively). It is important to note that each question measured a different aspect of the stereotype and high reliability scores were therefore not expected.

The analysis was then divided into two main groups: 1) non-stereotypical traits (TIPI); and 2) stereotypical traits. A family-wise alpha of .05 was used for each of the two groups. Items representing stereotypical traits and non-stereotypical traits were analyzed using a Multivariate Analysis of Variance (MANOVA) test with the evaluations of traits as dependent variables and experimental condition as the independent variable. Each significant analysis was followed by a series of separate Analysis of Variance (ANOVA) tests for individual items (Weinfurt, 1995). Finally, the main research questions were represented by two planned contrasts tests per item. The first contrasted the evaluation of bisexuals to that of non-bisexuals and the second contrasted the evaluation of bisexual man dating a woman to

that of bisexual man dating a man. As each MANOVA included 5 items, a Bonferroni correction was used and alpha levels were reduced to .01 per test[3].

In addition, the item measuring the overall match (of the target and non-target characters) was analyzed separately, using a family-wise alpha of .05. Similar to the analysis detailed above, the item was analyzed using an ANOVA, followed by the two planned contrasts. The mean evaluation scores for each item and the results of all comparisons are summarized in table 3.

Non-stereotypical traits (TIPI)

Preliminary analysis revealed that the evaluators' gender did not yield any main effects or interactions in the evaluation of stereotypical traits. Therefore, the following analysis did not include it as an independent factor.

The MANOVA for non-stereotypical traits did not yield a significant effect, $F(15, 605) = 1.06$, $p = .39$; Wilk's $\Lambda = .931$. Even though the MANOVA method is sufficient to show a lack of significant differences between the four experimental groups (Weinfurt, 1995), it cannot show whether there were significant differences between the groups , as described in the pre-planned contrasts. Therefore, we conducted the planned contrasts between bisexuals and non-bisexuals and between a bisexual man dating a women and a bisexual man dating a man. However, none of these comparisons yielded significant results (all ps > .07).

Stereotypical traits

[3] Even though we conducted two planned comparisons per item, the alpha levels were not further corrected to allow for sufficient statistical power. As the comparisons represent the main research question in Study 2, we used a total familywise alpha of approximately 9.5% for all the stereotypical traits. This method is considered acceptable in cases of pre-planned orthogonal contrasts analysis (Keppel & Wickens, 2004).

As was the case for the evaluation of non-stereotypical traits, preliminary analysis did not show any influence of participants' gender on evaluations. Therefore, the following analysis did not include it as an independent factor.

The MANOVA for stereotypical traits revealed a statistically significant difference in participants' evaluations of stereotypical traits based on the experimental condition, $F(15, 605) = 4.49$, $p < .001$; Wilk's $\Lambda = .747$. Next the series of ANOVAs for the separate stereotypical traits showed significant effects of the experimental condition for the following traits: Confusion and Indecisiveness, $F(3, 223) = 5.89$, $p = .001$; Trustworthiness, $F(3, 223) = 5.47$ $p = .001$; Inability to Maintain a Long Term Relationship, $F(3, 223) = 8.54$, $p < .001$; Many Previous Relationships, $F(3, 223) = 4.16$, $p = .007$. Openness to New Experiences yielded an effect which was marginally significant, $F(3, 223) = 3.24$, $p = .023$.

The first set of planned contrasts yielded the following results: bisexuals (compared to non-bisexuals) were evaluated as higher on all the stereotypical traits. That is, bisexuals were evaluated as more indecisive and confused, $F(1,223) = 14.06$, $p < .001$, less likely to maintain a long term relationship, $F(1, 223) = 5.07$, $p = .01$, more likely to have had many previous relationships, $F(1, 223) = 6.88$, $p = .005$ and more open to new experiences, $F(1,223) = 7.55$, $p = .005$. Bisexuals were also evaluated as less trustworthy, but this comparison only yielded a marginally significant result, $F(1, 223) = 3.77$, $p = .026$.

The second set of planned contrasts yielded the following results: a bisexual man dating a woman (compared to a bisexual man dating a man) was evaluated as less trustworthy, $F(1,223) = 11.53$, $p < .001$ and less likely to maintain a long term relationship, $F(1,223) = 16.47$, $p < .001$. A bisexual man dating a man (compared to a bisexual man dating a woman), was evaluated as more likely to have had many previous romantic relationships,

F(1,223) = 6.75, p = .01. The other two planned comparisons did not yield a significant effect, both ps > .10.

As an additional secondary analysis, all of the one-way ANOVAs and contrast analyses were conducted with the evaluation of non-stereotypical traits as covariates. All the significant results reported here remained significant after adding these control variables.

Match between target and non-target characters

An initial analysis revealed that gender was a contributing factor in the evaluation of the overall match between target and non-target. Therefore, evaluations of overall match were entered as the dependent variable to a 2 (Evaluators' Gender) X 4 (Experimental Condition) ANOVA. A main effect was found for gender: men gave overall higher match ratings than women, regardless of the target condition, $F(1, 219) = 3.94$, p = .048. The main effect of Experimental Condition and the interaction between the two factors were not significant (both ps > .10). However, the planned comparison revealed a surprising significant effect: bisexual targets were evaluated as better matches than non-bisexuals, $F(1, 224) = 3.89$, p = .049. The second planned comparison did not yield a significant effect, $F < 1$.

DISCUSSION

The results of Study 2 go beyond previous studies (Eliason, 1997; Spalding & Peplau, 1997) and show that heterosexuals have specific prejudicial beliefs concerning bisexual men. These beliefs conform to the stereotype described in the literature; namely, that bisexual men are (1) confused and indecisive, (2) less inclined to monogamy, (3) unable to maintain long-term relationships, (4) untrustworthy and (5) open to new experiences as compared to heterosexual or gay men. This result provides the most extensive empirical evidence to date that heterosexuals do in fact implement very specific social stereotypes of bisexual men, as described by subjective reports from bisexual individuals (McLean, 2007, Weinberg et. al,

1994). We also found that participants did not differ in their evaluation of target characters on the non-stereotypical traits (represented by the TIPI). Indeed, adding these items as control variables showed that they were unrelated to the evaluation of bisexuals on stereotypical traits. Taken together, these results cannot support the Weak Stereotype Account, a conclusion we return to in the General Discussion.

Furthermore, the results indicated that heterosexuals took into account the current potential romantic partner of bisexual men in their evaluation: a bisexual man dating a gay man was evaluated as more likely to have many previous romantic relationships than a bisexual man dating a heterosexual woman. Also, a bisexual man dating a heterosexual woman was evaluated as less likely to maintain a long term relationship, and less trustworthy than a bisexual man dating a gay man. Moreover, as the higher reliability score indicated, while the evaluation of a bisexual man dating a heterosexual woman was rather consistent (in terms of stereotype), the evaluation of a bisexual man dating a gay man was not. How can such results be explained? Before we proceed, the reader should recall that no hypotheses were made regarding these effects, and therefore these explanations are post-hoc and should be regarded as such. With that in mind, the pattern of these results seems to fit the Integrated Threat Theory (Stephan & Stephan, 2000). According to this theory, prejudice and stereotype implementation stem from perceived threats to in-group members. Why should bisexuality be perceived as a threat? As bisexual men are believed to be untrustworthy romantic partners, they are perceived to pose an emotional threat to women, and even a physical threat in the form of STDs. Also, because bisexuals can potentially have same-sex relationships and are believed to universally reject monogamous relationships (Israel & Mohr, 1999; Rust, 2002), they are perceived to pose a symbolic threat to normative relationship-related values. In the current study, the stereotype of bisexual men may have been implemented in the evaluation

of bisexual men dating a heterosexual woman simply because they seemed to pose a greater threat to in-groups members; namely, other heterosexuals. It is interesting to note that this explanation produces a testable prediction: the results should be reversed if the evaluators were lesbians and gay men. Otherwise, if the stereotype was not influenced by the evaluator's feeling of threat, no differences should be expected between the evaluations of heterosexual, lesbian and gay participants.

One surprising result was the participants' evaluations of the match between the target and non-target. Despite the evaluations regarding relationship-relevant traits, bisexual men were regarded as better matches for the non-target character than the heterosexual or gay men. This result is confusing, mainly because it was initially stated that the non-target characters were looking for a *steady long term relationship*. It is important to note that this effect was produced mainly due to a relatively low estimate of the heterosexual target on the match item (M = 3.32 versus overall M = 3.65, see Table 3). That is, heterosexual evaluators, when evaluating the overall match, were more critical of the heterosexual target, but not of the other targets (which had similar means cores). It is likely that for this general item, a heterosexual target seemed more relevant to the lives of the heterosexual participants. Relevancy is one factor that is known to make evaluations more deliberate, less heuristic and consequently more critical (Chen, David & Shelly, 1996). This explanation also resonates in the finding that men gave higher match evaluations than women. This account, although tentative, also produces a testable prediction: gay and lesbian participants should evaluate the match of gay targets less favorably than heterosexual targets. Future studies could sample gay and lesbian participants and further investigate this effect.

General Discussion

This study replicated earlier studies, and also produced a number of novel findings. In line with the idea that bisexual men are an "invisible" sexual minority, the findings showed that few people have explicit knowledge concerning the stereotypes of bisexual men. Furthermore, low-prejudiced individuals had more knowledge about the stereotype of bisexual men (Study 1) than high-prejudiced individuals. Nevertheless, the contextual evaluation task produced significant results, indicating that heterosexuals, when prompted, do in fact evaluate bisexual men stereotypically (Study 2). Overall, these studies strongly support the notion that the implementation of specific stereotypes of bisexual men is prevalent, whereas stereotype knowledge regarding bisexual men is not.

In this study, it was assumed that public invisibility and common social stereotypes can co-exist. If stereotype knowledge is a crucial aspect of stereotype implementation as has been claimed (Devine, 1989; Kunda & Spencer, 2003), the findings seem to suggest that heterosexuals do in fact have such knowledge. However, this knowledge might not be recognized as stereotypical or offensive. Where would such common knowledge stem from? As bisexual men have little public visibility, it is unlikely that heterosexuals can gather much knowledge from media representations or direct contact with bisexual individuals. Therefore, it is possible that heterosexuals draw their knowledge from indirect sources. One such source is common knowledge and beliefs regarding human sexuality in general. For example, the identity of a bisexual man might be questioned due to the more common knowledge that gay men often experience bisexuality as a transitory stage (Fox, 1992; Israel & Mohr, 1999). Rust (2002) claimed that heterosexuality and homosexuality are commonly perceived as separate and inverted forms of sexual attractions. Similarly, as male and female are perceived as "opposite sexes", sexual attraction to males and females can be viewed as two separate and inverted attractions (in "opposite" directions). If bisexuality is perceived as a mixture of two

unique attractions (heterosexual and homosexual, woman and man), a likely deduction is that bisexuality inherently entails a persistent conflict. This can explain why bisexuals are perceived as never being satisfied with a single partner and therefore as unfaithful romantic partners. This account places the genesis of the stereotypes of bisexual men in a broader belief system regarding gender and sexual orientation rather than in direct contact with bisexuals or media representation of bisexuals per se. This perspective raises new and important questions regarding these stereotypes, and perhaps other stereotypes as well.

There are a number of limitations to these studies which should be noted regarding the lack of (or, indeed, inverse) relationship between stereotype knowledge and stereotype implementation. First, stereotype knowledge and stereotype implementation were assessed in two separate studies. Thus, the sample in Study 2 may have had more stereotype knowledge regarding bisexual men. However, assessing both factors in a single study would have entailed methodological problems, since one procedure would probably affect the results of the other. A study that can resolve this problem may reach more concrete conclusions regarding a possible connection between the two factors. Second, it is possible that participants in Study 2 only produced biased evaluations because they were probed for such evaluations (and would not produce these evaluations spontaneously). Note, however, that several precautionary measures were implemented to disguise the purposes of Study 2, and that the questions were not directed towards bisexual men in general, but towards an individual target (Spalding & Peplau, 1997). Also, direct probing regarding stereotypes should entail more cognitive control and thus reduce stereotypical evaluations (Devine, 1989). Hence the current results are likely to reflect a real bias in evaluation. Finally, in order to explore the involvement of general knowledge structures regarding sexuality in evaluation, future research should explore the possibility of a connection between compliance to sexual

norms, and common beliefs regarding sexuality and the evaluation of bisexual men. Some support for this account was found in a recent study (Rubinstein, Makov, & Sarel, 2013) where priming participants with traditional gender roles (in comparison to blurred gender roles) increased negative attitudes towards bisexuals in participants that did not know bisexual individuals.

The importance of further studies on this subject is underscored by the implications of the findings: if people do not acknowledge that their beliefs are stereotypical, they should have less motivation to suppress their stereotypical-related prejudicial behavior (Devine, 1989; Kunda & Spencer, 2003). In fact, they might not consider certain behaviors as prejudicial at all. This may contribute to accounting for unanswered questions, such as why bisexuals tend to disclose their identity less than lesbians or gay men (King et al., 2003; Weinberg et. al, 1994) and choose to endorse complex selective disclosure strategies (McLean, 2007), since even sympathetic individuals might behave prejudicially towards them. Enhancing scientific and social knowledge regarding bisexuality should improve understanding and acceptance of bisexuality as a valid sexual orientation, which should consequently reduce prejudice and social stress experienced by bisexual individuals.

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