Gay Men's Implicit Attitudes towards Sexual Orientation:

Disentangling the Role of Socio-Cultural Influences and Social Identification

Kyle Jones and Thierry Devos

San Diego State University

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Abstract

The present research sought to distinguish the role of socio-cultural negativity and social identification underlying gay men's implicit attitudes towards sexual orientation. Fifty gay men completed two Implicit Association Tests. In both cases, the task required categorizing, as quickly as possible, pictures of gay vs. straight couples, but these stimuli were either classified using normative categorical labels (homosexual vs. heterosexual couple) or in terms of their self-relevance (similar vs. dissimilar to me). Participants also completed the Reactions to Homosexuality Scale and the Outness Inventory. As expected, the pro-gay attitude was more pronounced when implicit attitudes were assessed in terms of self-relevance than based on normative categorical labels. In addition, these two facets of implicit attitudes overlapped more strongly among gay men who were less inclined to publicly affirm their sexual identity than among individuals who strongly identified publicly with being gay. The present findings extend our understanding of the sources and functions of implicit attitudes among members of a sexual minority group.

Keywords: Implicit attitude, sexual orientation, internalized homonegativity, ingroup favouritism, gay men.

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Introduction

Mentally categorizing individuals based on sexual behaviours, preferences, or identity often leads perceivers to draw evaluative distinctions. For example, categorical divisions such as “gay” vs. “straight” or “homosexual” vs. “heterosexual” may elicit affective responses that differ in terms of their relative positivity or negativity. By and large, research on sexual prejudice has been focusing on negative attitudes directed towards gay, lesbian, bisexual, or transgender individuals (Herek, 2000, 2009). On the surface, polls and surveys document that attitudes towards gay men and lesbians have become increasingly positive in several Western countries (Steffens & Wagner, 2004; Yang, 1997). At the same time, assessments of implicit (automatic or unconscious) attitudes towards gay people and homosexuality stress the pervasiveness of prejudices against sexual minorities (Nosek, Smyth, et al., 2007; Steffens, 2005; Steffens & Buchner, 2003). Scarce attention has been dedicated to implicit attitudes displayed by individuals who identify as gay. The goal of the present research was to examine gay men's implicit attitudes towards sexual orientation. Extending previous research, we sought to provide evidence for the role of distinct facets of implicit attitudes. More precisely, we developed the idea that implicit attitudes can be reflective of socio-cultural evaluations, but they may also be indicative of affective responses linked to social identification. In addition, our goal was to illustrate that this distinction might be useful to capture meaningful individual differences among gay men.

Implicit Attitudes towards Gays and Lesbians

Broadly defined, sexual prejudices refer to negative attitudes based on sexual orientation or identity (Herek, 2000, 2009). From this perspective, prejudice is conceptualized as a psychological predisposition to respond to an entity with a positive or negative evaluation (Eagly & Chaiken, 1993; Zanna & Rempel, 1988). These evaluations occur along dimensions such as good-bad, positive-negative, or liked-disliked. A growing body of research documents that attitudes can operate at two distinct levels (Devos, 2008; Gawronski & Payne, 2010; Wittenbrink & Schwarz, 2007). Explicit attitudes are based on relatively controlled or conscious processes. In that case, individuals are willing and able to express how they feel towards the attitude objects. In contrast, implicit attitudes are tapping evaluative responses that are relatively automatic or unconscious. Here, the circumstances are such that individuals may be unable to alter their evaluative responses by an act of will (automatic attitudes) or may not be fully aware of how they feel towards the attitude objects (unconscious attitudes). These elements of definition do not do justice to the complexities and debates surrounding these distinctions (Moors & De Houwer, 2006), but they provide a starting point to explore the idea that sexual orientation may be source of relatively diverging explicit and implicit attitudes.

Typically, explicit attitudes are assessed directly with self-report measures: Individuals are asked to introspect about how they feel towards the attitude object and to report these feelings. Over the last two decades, a range of techniques have been developed to assess implicit attitudes (Nosek, Hawkins, & Frazier, 2011). The basic assumption of several techniques is that implicit attitudes can be inferred based on the relative efficiency (e.g., speed or accuracy) of responding. In the present research, we relied on the most widely used implicit measure, namely the Implicit Association Test (IAT, Greenwald, McGhee, & Schwartz, 1998). The technique

allows researchers to assess the direction and strength of associations between two pairs of concepts (for an overview of conceptual and methodological issues, see Nosek, Greenwald, & Banaji, 2007). For example, participants might be asked to categorize, as quickly as possible, pictures of gay vs. straight couples and positively vs. negatively valenced words presented in the middle of a computer screen. In one block of trials, gay couples and positive words would be categorized on one side, whereas straight couples and negative words would be categorized on the other side. In another block of trials, the two pairs of concepts would be combined such that gay couples are associated with negative words and straight couples are paired with positive words. If participants perform the second combination faster than the first one, it would be indicative of a pro-straight attitude. If it is the opposite, it would be evidence for a pro-gay attitude.

Research using this tool to study implicit attitudes towards sexual orientation revealed with some consistency a contrast between attitudes reflecting controlled or conscious processes and attitudes operating outside of conscious control or awareness. Explicit attitudes towards gays or lesbians are skewed in the tolerant direction, whereas a strong preferential evaluation for heterosexuals over gays and lesbians emerge at the implicit level (Nosek, Smyth, et al., 2007; Steffens, 2005; Steffens & Buchner, 2003). Within the predominantly heterosexual population, implicit attitudes towards sexual minorities are not uniformly negative; many meaningful sources of variations have been identified. Implicit anti-gay attitudes have been linked to right-wing authoritarianism (Jonathan, 2008), religious fundamentalism (Rowatt, Tsang, Kelly, LaMartina, McCullers, & McKinley, 2006), or an intrinsic religious orientation (Tsang & Rowatt, 2007). More favourable implicit attitudes towards gay people have been found among straight participants who reported having frequent contact with members of the gay community

(Lemm, 2006), who were exposed to admired gay individuals (Dasgputa & Rivera, 2008), and when their attitudes were assessed in a public setting (Boysen, Vogel, & Madon, 2006).

The picture emerging from this literature is that, below the surface of tolerance and claims for equality, a persistent cultural ideology contributes not only to impose heterosexuality as the norm and to depict homosexuality as an alternative life style, but also to perpetuate negativity towards homosexuality. As Herek (2004) eloquently put it, cultural ideologies do more than define sexuality and create demarcations between groups, they also assign value to these groups and their members. In sum, socio-cultural realities appear to be an important source of the implicit negativity directed at sexual minorities.

While implicit attitudes harboured by respondents who self-identify as straight or heterosexual are relatively well-documented and understood, less attention has been paid to implicit attitudes displayed by members of a sexual minority group. Among notable exceptions, Banse, Seise, and Zerbes (2001) found that straight and gay participants displayed a more positive implicit attitude towards their own sexual orientation, but ingroup favouritism was more pronounced among straight than gay respondents. In line with these findings, Jellison, McConnell, and Gabriel (2004) showed that the implicit pro-straight bias exhibited by straight men was larger in magnitude than the implicit pro-gay bias displayed by gay men. Interestingly, as gay men reported greater immersion into the gay culture, they held relatively more positive implicit attitudes towards homosexuality.

Socio-Cultural Influences and Social Identification

As a whole these findings are consistent with the notion that members of socially advantaged or majority groups typically display more implicit ingroup favouritism than

members of socially disadvantaged or minority groups (Dasgupta, 2004; Devos, Huynh, & Banaji, 2012; Rudman, Feinberg, & Fairchild, 2002). A parsimonious account for this pattern is to consider that intergroup attitudes are influenced by two distinct psychological forces: A tendency to prefer groups associated with the self and a tendency to prefer groups valued by the mainstream culture (Dasgupta, 2004). In the realm of attitudes based on sexual orientation, these principles produce convergent evaluative distinctions for individuals who identify as straight or heterosexual, whereas they pull in opposite directions for individuals who identify with a sexual minority group. Valuing groups associated to the self is one of the most replicable findings in the literature on intergroup relations (Brewer, 1999; Hewstone, Rubin, & Willis, 2002). Positively evaluating one's own group enhances self-esteem (Rubin & Hewstone, 1998; Tajfel & Turner, 1986) and reduces uncertainty (Hogg, 2007; Hogg & Abrams, 1993). For members of disadvantaged or minority groups, liking for the ingroup is constrained by the relative socio-cultural negativity associated with it.

The idea that negative attitudes towards same-sex relations may be internalized by gay or lesbian individuals is very much in line with a long tradition of research on internalized homonegativity or homophobia (Shidlo, 1994; Sophie, 1987). This construct varies widely in terms of how it is conceptualized and operationalized, but it accounts for various forms of self-devaluation linked to lower self-esteem, greater psychological distress, and higher risks of mental health difficulties (Meyer, 2003; Shidlo, 1994). The present research can be seen as an attempt to study the extent to which the pervasive socio-cultural negativity towards homosexuality and sexual minorities transpires from implicit attitudes displayed by men who identify with the gay community. We decided to limit the scope of our investigation to gay men rather than to include lesbians based on prior research showing that implicit attitudes toward gay

men were more negative than implicit attitude toward lesbians (Steffens, 2005). Thus, overall, gay men probably have to contend with ambient socio-cultural negativity to a greater extent than lesbians (see also Herek, 2002; Kite & Whitley, 1996).

Recently, Olson, Crawford, and Devlin (2009) noted that evidence for internalized negativity among members of socially disadvantaged or minority groups is largely based on studies relying on the IAT. Building on criticisms formulated by Olson and Fazio (2004), they argued that specific features of this technique introduce a confound between cultural knowledge (extrapersonal associations) and personal associations reflective of attitudes. According to these colleagues, labels such as “pleasant” vs. “unpleasant” and stimuli often used to operationalize the evaluative dimension such as “awful” or “love” imply a normative standard of responding that may prevent access to personal evaluative responses. Olson and collaborators (2009) compared implicit attitudes towards gay vs. straight people on a traditional IAT and on a personalized IAT. The personalized IAT differed from the traditional IAT in that evaluative stimuli were idiosyncratic stimuli for which they were no modal attitudes (e.g., “tequila,” “Clinton,” or “storms”) and these stimuli were categorized using the labels “I like” vs. “I do not like.” As predicted, gay men showed ingroup favouritism on the personalized IAT, but weak or non-significant effects on the standard version of the IAT. Attempts to personalize the IAT may not be devoid of problems. For example, this version of the task has been shown to increase participants’ propensity to explicitly evaluate the target concepts (i.e., the stimuli used to represent the social categories or groups) instead of categorizing them according to the relevant dimension (Nosek & Hansen, 2008).

Goals of the Present Research and Hypotheses

Attempts to disentangle factors contributing to performances on implicit measures are valuable. If social-cultural realities and social identification are two driving forces shaping implicit attitudes towards sexual orientation, it might be useful to explore ways to tease apart, as much as possible, their respective influences. Here, we used a slightly different approach than that proposed by Olson and collaborators (2009). In line with their perspective, we posited that some categorical labels might be linked inherently to socio-cultural attitudes towards sexual orientation and, as such, be more likely to reflect a normative standard perpetuating the social desirability of heterosexuality and the relative negativity ascribed to homosexuality. Terms such as “heterosexual” and “homosexual” are part of a linguistic register that cannot easily be dissociated from the dominant cultural ideology (Hegarty & Massey, 2006). Thus, when gay men use these terms to categorize pictures or symbols reflective of a specific sexual orientation, they may be less likely to show evidence for ingroup favouritism than when they can apprehend the *same* material (pictures or symbols) in a more self-relevant manner.

Capitalizing on the fact that performances on the IAT are largely driven by the labels used to categorize the stimuli (Fazio & Olson, 2003; Mitchell, Nosek, & Banaji, 2003), we compared implicit attitudes displayed by gay men when the task required them to categorize the target stimuli (pictures of gay vs. straight couples) using normative categorical labels (“homosexual couple” vs. “heterosexual couple”) and according to their self-relevance (“similar to me” vs. “dissimilar to me”). In both cases, the evaluative stimuli (positive vs. negative words) were categorized based on their valence (“positive” vs. “negative”). Although the two versions of the task are almost identical in the sense that the stimuli and the required patterns of responses are the same, we reasoned that processing the target stimuli using categorical labels would be

driven by socio-cultural attitudes, whereas focusing on the extent to which the sexual orientation conveyed in the stimuli is similar vs. dissimilar to the self would be more reflective of affective responses stemming from social identification. Thus, gay men should display a stronger pro-gay attitude when implicit attitudes are assessed in terms of their relevance to the self than when they are assessed in reference to normative categorical labels (Hypothesis 1). Given that social-cultural influences and social identification are likely to operate at least to some extent on both versions of the IAT, a reliable, but moderate, positive correlation between the two assessments of implicit attitudes should be obtained (Hypothesis 2).

Next, we explored the extent to which important facets of sexual identity might moderate the interconnections between implicit attitudes stemming from socio-cultural influences and from identification with a sexual minority group. Several lines of research on sexual minority experiences and identity document that individuals who affirmed their sexual identity were less likely to internalize the social-cultural homonegativity. For example, a strong sense of belonging to the lesbian, gay, and bisexual community has been shown to have protective features (Fingerhut, Peplau, & Gable, 2010): Depressive symptoms were linked to perceived stigma among individuals with a weak gay identity, whereas individuals with a strong gay identity were buffered against the negative consequences of perceived stigma. Although these findings are correlational, they are consistent with the notion that the process of understanding and affirming one's minority identity can serve as an important basis for developing positive feelings for and an enhanced sense of attachment to the group, which can in turn confer psychological benefits for minority individuals (see also Cox, Dewaele, van Houtte, & Vincke, 2011; Feinstein, Davila, & Yoneda, 2012; Ghavami, Fingerhut, Peplau, Grant, & Wittig, 2011; Herek, Cogan, Gillis, & Glunt, 1997; Peterson & Gerrity, 2006; Rowen & Malcolm, 2002).

Extending these findings, we tested whether the extent to which gay men publicly affirmed their sexual identity moderated the relationship between implicit attitudes reflective of socio-cultural influences and implicit attitudes driven by social identification (Hypothesis 3). For individuals who feel less comfortable with their sexual orientation and are less ready to publicly affirm it, the attitudinal structure is likely to be relatively simple. In their case, implicit affective responses stemming from social-cultural influences and from social identification would largely overlap. In contrast, individuals who publicly affirm their sexual identity may be characterized by a more complex attitudinal structure in the sense that these individuals probably have a more in-depth understanding of the implications and ramifications of sexual minority status. As such, their pattern of implicit attitudes is more likely to reveal a relative dissociation between the two facets. In their case, there might be little overlap between what is produced when a normative-frame of reference is imposed on them and when sexual identity is appraised more in terms of self-relevance. To test this hypothesis, we assessed public identification with being gay using the Reactions to Homosexuality Scale (RHS; Ross & Rosser, 1996; see also Currie, Cunningham, & Findlay, 2004; Smolenski, Diamond, Ross, & Rosser, 2010). To examine whether public identification with being gay implied something more than disclosing one's sexual orientation to others, we also included the Outness Inventory (OI, Mohr & Fassinger, 2000).

Method

Participants

Participants were recruited from college campuses, gay organizations, and public establishments (e.g., bars or clubs) frequented by the gay community. They were informed of

the study either through fliers posted or handed out in these locations. Alternatively, they were contacted via an email sent out directly by the principal investigator or forwarded by the leader of a queer organization. Individuals interested in participating in the study accessed an informed consent form posted online. Prior to giving their consent, participants had the opportunity to contact the principal investigator via email if they had any questions about the study. Once consent was obtained, participants completed the study online. No identifying information was collected; thereby ensuring the anonymity of participants' responses.

Fifty-four gay men completed the study. Data from four participants were dropped (see Data Preparation). Therefore, analyses were conducted on a sample of 50 participants. Participants' age ranged from 18 to 66 years old, with a median age of 28. In terms of geographical location, participants were distributed as follows: 22 from the West Coast, eight from the East Coast, eight from the South, five from the Southwest, four from the Midwest, and three choose the option "Other." The sample was predominantly composed of European Americans ($n = 43$), but it also included four Latinos, one African American, and two multi-racial individuals.

Sensitivity Power Analysis

For each hypothesis, we conducted a sensitivity power analysis using G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007). These analyses determine the effect sizes that we would be able to detect with a sample size of 50, a power of $1 - \beta = .80$, and $\alpha = .05$. The effect sizes detectable given these parameters were medium for Hypothesis 1 ($d = 0.40$), Hypothesis 2 ($\rho = 0.38$), and Hypothesis 3 ($f^2 = 0.13$).

Procedure

Participants were instructed to find a computer with internet access located in a quiet area with no distractions and that ensured their privacy. They completed two IATs, the self-report measures described below, and some demographic questions. Measures were always completed in this fixed order. Completing first the IATs might impact responses provided on self-report measures, but the opposite order could potentially produce more noise in the implicit data due to fatigue. Previous research indicates that the order of implicit vs. explicit measures has a minimal impact in most circumstances (Nosek, Greenwald, & Banaji, 2005). No other measures were administered to participants.

Parameters and stimuli for Implicit Association Tests. For each IAT, stimuli were presented sequentially in the middle of the computer screen. Participants were instructed to categorize, as quickly as possible, each stimulus by pressing a key that was either toward the left or the right of the keyboard. Response times were recorded from the onset of a stimulus to its correct classification. Labels for the concepts were positioned at the top left and right of the screen to indicate the requested pairing. If a stimulus was incorrectly classified, a red "X" appeared below the stimulus; participants then had to provide the correct answer to move on to the next trial. Each critical block included a total of 60 trials with a brief message appearing after the first 20 trials to remind participants to go fast.

As customary, words that elicit positive (the five words were joy, wonderful, love, happy, and pleasure) or negative (the five words were awful, horrible, terrible, nasty, and evil) feelings were used to operationalize the evaluative dimension. To represent individuals who differ in their sexual orientation, we borrowed pictures of gay or straight couples that have been

used successfully in prior research (Dasgupta & Rivera, 2006). These pictures included individuals kissing, holding hands, or displaying affection. Pictures of gay couples included men only, consistent with the focus of the present research.

Both IATs were designed to measure attitudinal responses to sexual orientation, but we varied the dimension or labels used to categorize the pictorial stimuli representing gay and straight couples. In one case, participants were asked to categorize the couples based on categorical labels commonly used to refer to sexual orientation, whereas in another case the same pictures were categorized based on their similarity or dissimilarity to the self. For each IAT, the sequence of blocks, the number of trials per block, and the label configurations are reported in Table 1.

Implicit attitude based on categorical labels. In one pair of blocks (3 & 4 or 6 & 7), participants were instructed to categorize, as quickly as possible, stimuli in the “homosexual couple” and “positive” categories by pressing a specific key on the left side of the keyboard and to categorize stimuli from the “heterosexual couple” and “negative” categories by pressing another key on the right side of the keyboard. In another pair of blocks (6 & 7 or 3 & 4), the two pairs of concepts were combined in the opposite way: Participants were asked to categorize “heterosexual couple” and “positive” stimuli with one key and “homosexual couple” and “negative” stimuli were categorized with the other key.

Implicit attitude based on similarity to self. The other IAT was built using the same logic, except that this time the labels provided to categorize the couples were “similar to me” and “dissimilar to me”. Thus, in one pair of blocks (3 & 4 or 6 & 7), participants were instructed to categorize gay couples in the “similar to me” category and positive words in the “positive”

category by pressing one key and to categorize straight couples in the “dissimilar to me” category and negative words in the “negative” category by pressing another key. In another pair of blocks (6 & 7 or 3 & 4), the way the two pairs of concepts were combined was switched such that “dissimilar to me” and “positive” stimuli were categorized with one key and “similar to me” and “negative” stimuli were categorized with the other key.

The order of the two IATs and the order of the critical blocks for each IAT were counterbalanced across participants.

Reactions to Homosexuality Scale. Next, participants completed the Reactions to Homosexuality Scale (Ross & Rosser, 1996). This 26-item scale assesses four distinct dimensions. *Public identification with being gay* refers to participants' comfort with their gay identity and the extent to which they are willing to affirm their sexual orientation in public settings. *Perception of stigma associated with being homosexual* captures the perceived and anticipated levels of discrimination and prejudice towards gay people. *Social comfort with gay men* is indicative of the extent to which gay men feel comfortable in environments predominantly frequented by members of the gay community. Finally, the scale is tapping the perceived *moral and religious acceptability of being gay*. Responses were provided on 7-point scales ranging from (1) “Strongly disagree” to (7) “Strongly agree.”

Outness Inventory. Participants also completed the Outness Inventory (Mohr & Fassinger, 2000). This 11-item scale measures participants' level of openness about their sexual orientation in different spheres of their lives (parents, siblings, co-workers, etc.). Responses were provided on 7-point scales ranging from (1) “Person definitely does not know about your sexual orientation” to (7) “Person definitely knows about your sexual orientation status, and it is openly

talked about.” The option “Does not apply to me” was also provided. Given that 70% of participants indicated that items about leaders and members of their religious community did not apply to them, these two items were not included in the computation of the outness score.

Demographic information. At the end of the study, participants provided demographic information including sexual orientation, sex, ethnicity, age, and region where they live. Sexual orientation was assessed using the following open-ended question: “What is your sexual orientation?” This format allowed participants to refer to their sexual orientation using the terminology of their choice; the term “gay” was most commonly used, followed by “homosexual.” One participant defined his sexual orientation as “same sex” and another participant answered as follows: “I am a guy that likes guys.” Thus, all the responses were consistent with a gay sexual orientation. Finally, participants were debriefed and thanked for their participation.

Results

Data Preparation

IAT data were analysed using the algorithm recommended by Greenwald, Nosek, and Banaji (2003). Data from four participants were discarded because they responded at a rate faster than 300 ms on more than 10% of the trials suggesting they were not paying attention to the task. For each IAT, the difference between the mean response latency for the two critical blocks of trials, divided by its associated pooled standard deviation (SD), was computed. This quotient was computed separately for blocks 3 & 6 and blocks 4 & 7; the two values were then averaged. Statistical analyses were always performed on this index (IAT D). For ease of interpretation, mean response latencies for each block are also reported. Preliminary analyses

revealed no reliable differences as a function of the order of the IATs or the order of the critical IAT blocks. These factors, therefore, were not included in the analyses reported below.

Implicit Attitude Based on Categorical Labels

For the task requiring participants to focus on categorical labels, the IAT D was computed to reflect the extent to which the concept “homosexual couple” elicited a more positive attitude than the concept “heterosexual couple.” A significant IAT D effect was found on this task, $M = 0.15$, $SD = 0.37$, $t(49) = 2.82$, $p = .007$, $d = 0.40$, indicating that it was easier for participants to pair positive words with pictures of homosexual couples and negative words with pictures of heterosexual couples ($M = 849$ ms, $SD = 303$ ms) than to complete the opposite pairing ($M = 927$ ms, $SD = 316$ ms). This pattern can be taken as evidence of a more positive implicit attitude towards homosexual (rather than heterosexual) couples.

Implicit Attitude Based on Similarity to Self

For the task requiring participants to focus on the similarity vs. dissimilarity to the self, the IATD was computed to reflect the extent to which the concept “similar to self” elicited a more positive attitude than the concept “dissimilar to self.” Here also the IAT D effect was significant, $M = 0.35$, $SD = 0.44$, $t(49) = 5.69$, $p < .001$, $d = 0.81$. This effect revealed that it was easier for participants to pair positive words with pictures of couples similar to the self and negative words with pictures of couples dissimilar to the self ($M = 834$ ms, $SD = 246$ ms) than to complete the opposite pairing ($M = 1065$ ms, $SD = 461$ ms). This pattern can be taken as evidence of a more positive implicit attitude towards couples similar (rather than dissimilar) to the self.

Comparison between Implicit Association Tests

There was a significant difference in IAT D as a function of the dimension used to categorize the pictures of couples, $t(49) = 3.12, p = .003, d = 0.45$. As predicted (Hypothesis 1), gay couples elicited a more positive evaluation than straight couples to a greater extent when the pictorial stimuli were categorized based on their similarity vs. dissimilarity to the self than using the categorical labels “homosexual couple” vs. “heterosexual couple.”

Correlations among all measures are reported in Table 2. Consistent with Hypothesis 2, the two IAT Ds were reliably intercorrelated, $r = +.34, p = .015$. Additionally, only one bivariate correlation between an IAT and a self-report measure reached the traditional significance level ($p < .05$). The more participants indicated that stigmatization and discrimination against gay people remained prevalent, the more they displayed a relatively positive attitude towards couples similar (rather than dissimilar) to the self, $r = +.31, p = .031$. Setting aside this exception, the lack of reliable interconnections between the IATs and self-report measures contrasts with past research showing moderate positive correlations between implicit and explicit measures of attitudes (e.g., Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005), but it could stem from the relatively low reliability of the measures, including the RHS, and the lack of conceptual correspondence between implicit and explicit measures (Devos, 2008; Hofmann et al., 2005).

Public Identification with Being Gay as a Moderator of Implicit Attitudes

Regression analyses were used to determine whether public identification with being gay moderated the overlap between implicit attitudes based on similarity to self and categorical labels (Hypothesis 3). Given that the task requiring participants to categorize the pictures as homosexual vs. heterosexual couples is the version of the IAT typically used in the literature, it

served as the dependent variable in the analyses. The independent variables were public identification with being gay (as assessed by the RHS-PI subscale), implicit attitude based on similarity to self, and the interaction term between these variables. The predictors were centred and the interaction term was computed following standard practice (Aiken & West, 1991). When the two predictors and the interaction were entered in the model, the proportion of variance explained was significant, $R^2 = .21$, $F(3, 46) = 3.97$, $p = .013$. The implicit attitude based on similarity to self was source of a reliable effect ($\beta = .36$, $p = .009$), but public identification with being gay was not ($\beta = -.03$, $p = .843$). More importantly, the interaction between these two variables was significant ($\beta = -.30$, $p = .029$). To interpret this interaction (see Figure 1), we examined simple slopes for values reflecting a strong vs. weak pro-similar attitude (1 SD above and below the mean) and for values reflecting a relatively strong vs. weak public identification with being gay (1 SD above and below the mean). The pattern suggested that, to the extent that participants *weakly* identified publicly with being gay, there was a strong overlap between the two IATs: The attitude based on similarity to the self was positively correlated with the attitude based on categorical labels ($\beta = +.72$, $p = .001$). In contrast, for participants who *strongly* identified publicly with being gay, the two assessments of implicit attitudes were unrelated, pointing to a clear distinction between implicit attitudes based on similarity to the self and based on categorical labels ($\beta = +.01$, $p = .976$). Similar regression analyses were conducted substituting public identification as gay with the other RHS subscales or the OI. In these analyses, the interaction terms were not significant. Thus, among the constructs assessed in the present study, public identification as gay was the only variable that moderated the interconnections between attitudes based on categorical labels and similarity to the self.

Discussion

The goal of the present research was to examine implicit attitudes towards sexual orientation displayed by gay men. More precisely, our aim was to demonstrate that these implicit attitudes cannot be reduced to the internalization of socio-cultural negativity, but also reflect a strong attachment to and liking for a group linked to the self. To disentangle the contributions of socio-cultural influences and social identification, we devised two slightly different versions of the IAT. In one version of the task, participants categorized pictures of gay and straight couples using normative categorical labels. In the other version of the task, participants categorized the *same* pictorial stimuli, but the instructions asked them to do so in terms of their similarity or dissimilarity to the self. On both IATs, gay men display a more positive implicit attitude towards their sexual orientation. This finding is consistent with past research showing evidence of ingroup favouritism among gay respondents (Banse et al., 2001; Jellison et al., 2004).

At the same time, and in line with Hypothesis 1, gay men exhibit a stronger pro-gay attitude when implicit attitudes are assessed in terms of their relevance to the self than in reference to normative categorical labels. This finding is consistent with the idea that distinct forces shape implicit attitudes. The task focusing on self-relevance is more likely to capture implicit affective responses driven by social identification, and thus to yield evidence for ingroup favouritism. In contrast, a task that requires gay men to use normative categorical labels is more likely to be influenced by the socio-cultural negativity associated with their sexual orientation and, as a result, weaker evidence for ingroup favouritism emerges on this task. Thus, a slight variation in how the IAT is implemented helps pick up distinct facets of implicit attitudes. We would be overstating the findings if we were to claim that the respective

contributions of socio-cultural influences and social identification have been completely teased apart. A more accurate and cautious characterization of the present findings is that the *relative* contribution of these two factors differ on the tasks devised. Each factor probably plays some role on both IATs. Indeed, not only were the two IATs reliably intercorrelated (Hypothesis 2),¹ ingroup favouritism also emerged when categorical labels served as a basis to categorize the pictorial stimuli. This later finding suggests that, at least among gay men, this task is not solely tapping the socio-cultural negativity associated with homosexuality. It is worth noting that this effect contrasts with the pattern reported by Olson et al. (2009) on the so-called traditional IAT.

The present study did not include a sample of straight respondents. Thus, we cannot directly compare the magnitude of implicit ingroup favouritism as a function of respondents' sexual orientation. Nonetheless, given past research documenting implicit anti-gay attitudes among respondents who are predominantly heterosexual, the present data clearly suggest that implicit attitudes towards sexual orientation are determined by the perceiver's vantage point. Groups automatically or unconsciously trigger more positive affective reactions when they are associated with the self (Dasgupta, 2004; Devos et al., 2012). This effect also operates among individuals who belong to a sexual minority group. Given that the IAT provides a *relative* assessment of evaluations, it is not possible to determine whether this effect stems from the positivity associated with one category, the negativity associated with the other, or some combination of the two. Distinctions based on sexual orientation are often appraised in comparative terms (mentioning the term "gay" implies a comparison to "straight" and *vice versa*). The same goes for assessments of similarity or dissimilarity to the self. Thus, it seemed appropriate to rely on a measurement technique contrasting such concepts. To determine whether the effect should be conceptualized as a form of ingroup favoritism or outgroup

decoration, or to isolate these two pieces, it would be necessary to rely on techniques developed to provide more independent assessments of implicit associations (e.g., Karpinski & Steinman, 2006; Nosek & Banaji, 2001).

Regardless of sexual orientation, individuals are immersed in a predominately heterosexual society in which they learn negative attitudes regarding homosexuality. For gay men, these influences come into play often long before they have a good understanding of their own sexuality. Even once they identify as gay men, they continue to contend with anti-gay prejudices. The fact that ingroup favouritism is reliably weaker when categorical labels are made salient suggests that, for gay men, socio-cultural attitudes may, at a minimum, constrain liking for the ingroup. The distinction between homosexuality and heterosexuality and the terminology often used to refer to sexual orientation are deeply anchored in a dominant ideology that continues to impose heterosexuality as the norm and to perpetuate negative attitudes towards other sexual orientations (Herek, 2004). Even among individuals who are willing to identify themselves as gay (as participants did over the course of the study), using normative categorical labels is sufficient to elicit less positive responses towards their sexual orientation at a level that escapes conscious control.

These findings add further evidence to the possibility of identifying various factors contributing to performances on implicit measures (see also Olson et al., 2009). In the present case, the variability observed can be best explained by considering that specific features of the measurement technique affect the extent to which the pattern of responses is driven by preferences for groups associated to the self (social identification) or preferences for groups valued by the mainstream culture (socio-cultural influences). The IAT requiring that stimuli be classified in terms of similarity vs. dissimilarity to the self is relatively close to versions of the

task developed to assess implicit self-esteem (e.g., Bosson, Swann, & Pennebaker, 2000). At the same time, the pictures of gay and straight couples (stimuli used in the task) clearly anchor the assessment in the domain of sexual orientation. Given the well documented impact of stimuli choice on IAT performances (e.g., Mitchell et al., 2003), if the task captures self-esteem, it is at a minimum a facet of self-esteem that is tied to belonging to a sexual minority group and, in that sense, would be best characterized as a form of collective self-esteem (Luhtanen & Crocker, 1992). In other words, the idea that one of the IATs used in the present research is tapping attitudinal responses associated to the self is not antinomic with the perspective outlined here. In fact, it is fully in line with the notion that one source of positivity is the association of the self with a specific group membership (Rubin & Hewstone, 1998).

To demonstrate the usefulness of distinguishing various facets of implicit attitudes, we examined the extent to which their overlap might differ as a function of a third factor (Hypothesis 3). Among individuals who are less comfortable with their sexual orientation in the sense that they are less likely to affirm it publicly, implicit affective responses stemming from social-cultural influences and social identification converge. In contrast, among individuals who have a more thorough understanding of their sexual identity and are more prone to affirm their sexual orientation in public settings, what is produced when a normative frame of reference is imposed on them diverges clearly from self-relevant attitudinal responses. This finding points to the variability and complexity of the structure of sexual identities. Many processes underlying sexual identity operate outside of conscious control or awareness, but this level of analysis has not been fully incorporated in the literature yet. The present findings illustrate the viability of this approach not only document broad tendencies such as ingroup favouritism, but also to

capture meaningful individual differences linked to individuals' understanding of their sexual identity.

It should be stressed that the data do not provide evidence for a direct link between public identification with being gay (as assessed by the RHS-PI subscale) and implicit attitudes. Performances on both IATs are not reliably correlated with the level of public identification. Thus, it would be misleading to conclude based on the present findings that public identification is an antecedent, outcome, or even correlate of more positive implicit attitudes. The interaction obtained documents a more complex dynamic pointing to the fact that public identification with being gay is accompanied by a greater dissociation between implicit attitudes reflecting socio-cultural negativity and implicit attitudes linked to social identification. In other words, these two levels overlap more strongly to the extent that individuals are less incline to publicly identify with the gay community.

Among the limitations to the current study, we should first stress that the sample size was relatively small and non-representative of gay men. Despite the fact that the study was conducted on-line, recruiting gay participants was more challenging than anticipated. The study was made available for approximately 10 weeks, but we did not offer any incentive or compensation for participation. In addition, the fact that the procedure was not limited to traditional self-report measures, but included a series of IATs, requiring participants to download and run an application on the computer they were using, may have dissuaded potential participants. These observations highlight potential limitations of on-line procedure to study issues of sexual identity with non-traditional techniques. This being noted, a sample size of 50 was enough to detect reliable effects.

As mentioned before, gay men recruited for this study were actively part of various gay organizations or frequented gay establishments. They also volunteered their time to complete a study on the topic of sexual orientation. We can assume that gay men making up this sample are more comfortable with their homosexuality than other fractions of this population. To substantiate this point, it is worth stressing the high level of public identification and outness observed for the present sample. In spite of the relatively high mean and low variability on the public identification measure, the analyses reported revealed a reliable effect involving this variable. Thus, the limited scope of the study and the non-representative and homogeneous nature of the sample did not prevent us from uncovering meaningful variations in the structure and forces underlying sexual identity among gay men. Nonetheless, caution is warranted regarding the generalizability of the findings. Future studies should be based on larger and more diverse samples and in particular ensure that gay men who are less explicitly accepting of their homosexuality are included. In doing so, further sources of variability are likely to be identified. It would also be worth examining to what extent similar findings are obtained among women who identify themselves as gay. As mentioned earlier, attitudes toward lesbians tend to be more positive than toward gay men (Herek, 2002; Kite & Whitley, 1996; Steffens, 2005). At the same time, the issues tackled in the present research bear some relevance to both men and women who belong to a sexual minority.

It is also important to stress that the correlational nature of the findings. Our goal was not to establish causal links among the constructs assessed, but more modestly to demonstrate the suitability of the implicit social cognition framework to study facets of sexual orientation and identity among members of a sexual minority group.

As such, and despite its limitations, the present study suggests that implicit attitudes towards sexual orientation can function to reinforce positive aspects of sexual identity. Although assessing these attitudes with traditional self-report measures is important, including implicit measures provides another tool susceptible to enrich our understanding of the psychological processes underlying sexual identity among gay men. Future research should continue to explore various sources, functions, and implications of implicit attitudes among sexual minorities. By incorporating implicit assessments, we can better understand psychological processes involved in the acquisition and maintenance of sexual identities.

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Footnote

¹ We predicted that the two IATs should overlap for conceptual reasons (Hypothesis 2), but it could be argued that the significant correlation obtained reflects method-specific variance. Indeed, reliable correlations among conceptually distinct IATs have been documented (e.g., McFarland & Crouch, 2002; Mierke & Klauer, 2003). However, the scoring procedure used in the present case (Greenwald et al., 2003) has been shown to strongly reduce the role of method-specific variance (Back, Schmukle, Egloff, & Gutenberg, 2005; Mierke & Klauer, 2003).

Notes on Contributors

Kyle Jones is a doctoral student in clinical psychology at the University of Illinois at Chicago. He received his M.A. in social psychology from San Diego State University. His primary research interests are in the development of behavioural interventions to address health disparities among the ethnic minority LGBT community.

Thierry Devos is Associate Professor in the Department of Psychology at San Diego State University. He received his Ph.D. in social sciences from the University of Lausanne, Switzerland. His research examines how self and identity operate outside of conscious control and awareness. He has published more than fifty peer-reviewed articles or contributions to edited volumes. His research has been funded by the National Institute of Mental Health.

Table 1

*Steps of Each Implicit Association Test: Block, Number of Trials, Function, and Label**Configurations*

Block	Trials	Function	Left-key response	Right-key response
Implicit attitude based on categorical labels				
1	20	Practice	Positive	Negative
2	20	Practice	Homosexual couple	Heterosexual couple
3	20	Test 1	Homosexual couple + Positive	Heterosexual couple + Negative
4	40	Test 2	Homosexual couple + Positive	Heterosexual couple + Negative
5	40	Practice	Heterosexual couple	Homosexual couple
6	20	Test 1	Heterosexual couple + Positive	Homosexual couple + Negative
7	40	Test 2	Heterosexual couple + Positive	Homosexual couple + Negative
Implicit attitude based on similarity to self				
1	20	Practice	Positive	Negative
2	20	Practice	Similar to me	Dissimilar to me
3	20	Test 1	Similar to me + Positive	Dissimilar to me + Negative
4	40	Test 2	Similar to me + Positive	Dissimilar to me + Negative
5	40	Practice	Dissimilar to me	Similar to me
6	20	Test 1	Dissimilar to me + Positive	Similar to me + Negative
7	40	Test 2	Dissimilar to me + Positive	Similar to me + Negative

Table 2

Descriptive Statistics, Cronbach's Alphas, and Correlations among Measured Variables

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.
1. IAT – Categorical Labels	0.15	0.37	–	+.34*	+.02	+.03	+.02	–.03	+.05
2. IAT – Similarity to Self	0.35	0.44	+.34*	–	–.02	+.31*	–.20	+.12	+.13
3. RHS – Public Identification	5.60	0.92	+.02	–.02	.69	–.43**	+.36*	+.62**	+.39**
4. RHS – Stigma	5.48	1.06	+.03	+.31*	–.43**	.75	–.02	–.10	–.05
5. RHS – Social Comfort	5.32	1.05	+.02	–.20	+.36*	–.02	.64	+.20	+.18
6. RHS – Moral Acceptability	5.83	1.12	–.03	+.12	+.62**	–.10	+.20	.60	+.46**
7. Outness	4.90	1.50	+.05	+.13	+.39**	–.05	+.18	+.46**	.87

Note. Values in the diagonal are Cronbach's alpha. * $p < .05$, ** $p < .01$ (two-tailed). IAT = Implicit Association Test; RHS = Reactions to Homosexuality Scale.

Figure 1. Implicit Attitude based on Categorical Labels as a Function of Public Identification with Being Gay and Implicit Attitude Based on Similarity to Self. Error bars represent the standard error of the mean.