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The Harm of Influence: When Exposure to Homosexuality Elicits Anger and Punishment Tendencies

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The Harm of Influence: When Exposure to Homosexuality Elicits Anger and Punishment Tendencies

by

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Abstract

In the current project, I examined the distinct elicitors and behavioral outcomes of anti-gay anger and anti-gay disgust. The CAD triad hypothesis (Rozin, Lower, Imada, & Haidt, 1999) suggests that anger and disgust are elicited by distinct moral violations and cognitive appraisals. A plethora of research has documented the strong link between disgust and sexual prejudice, but very little attention has been given to the role of anger in sexual prejudice. The biocultural framework of stigmatization (Neuberg, Smith, & Asher, 2000) suggests that people who counter-socialize against prevailing social norms are stigmatized by others. If homosexual sexual behavior does not elicit anti-gay anger (Giner-Sorrolla, Bosson, Caswell & Hettinger, 2012), then anti-gay anger might be elicited by promoting positive views of homosexuality. In Study 1, participants were induced to feel anger, disgust, or no emotion and then rated one of two gay male target groups. I expected that cognitive appraisals of morality violation would increase when the emotional state was congruent with the perceived threat posed by the target, but the emotion induction failed to elicit differences in cognitive appraisals. The results of Study 2, collected from a non-student sample, were also inconsistent with my hypothesis. Sexually explicit behavior did not elicit disgust, and behavior which resulted in more tolerant attitudes toward homosexuality failed to elicit anger and harm appraisals. These results suggest that sexual prejudice research requires stricter experimental control than online data collection methods currently allow.

Introduction

Sexual minorities arguably comprise one of the most marginalized and despised minority groups in the United States. In 2010, non-heterosexual victims of sexual orientation bias crimes made up 18.6% of the 8,208 victims of hate crimes (Federal Bureau of Investigation, 2011). A person can still be terminated from employment for having a non-heterosexual orientation in 29 states (Human Rights Campaign, 2012), and same-sex couples only enjoy the legal benefits of marriage in nine states and the District of Columbia (Connelly, 2012). Sexual prejudice remains a serious social problem and, thus, a topic of social psychological research.

In the last 15 years, the role of affect in intergroup relations has received much attention (Cottrell & Neuberg, 2005; Fiske, Cuddy, Glick, & Xu, 2002). These efforts dovetail with recent work in moral psychology investigating the role of emotions in forming moral judgments of behavior (Haidt, 2001; Rozin et al., 1999). In the realm of sexual prejudice, most research has focused on the role of disgust in attitudes toward sexual minorities (Dasgupta, DeSteno, Williams, & Hunsinger, 2009) and support for legal reforms for same-sex couples (Inbar, Pizarro, & Bloom, 2009). The remaining other-directed negative emotions—anger and contempt—have received far less attention. The goal of the current work is to explicate the role of anti-gay anger in sexual prejudice. Given that anger and disgust have distinct antecedents and behavioral outcomes (Mackie, Devos, & Smith, 2000; Roseman, Wiest, & Swarts, 1994; Rozin et al., 1999), an investigation of the behavior and cognitive appraisals which elicit each emotion and the

actor's likely behavioral responses fills an important gap in the sexual prejudice literature. These findings may be especially valuable to applied researchers seeking to change negative attitudes toward sexual minorities and activists promoting legal reforms for sexual minorities and their families. Understanding how different behaviors can elicit different emotions and judgments could be important in changing social attitudes.

Based on the biocultural framework of stigmatization (Neuberg et al., 2000), I argue that anti-gay anger stems not from homosexual sexual behavior per se, but from perceptions that sexual minorities counter-socialize against prevailing group norms and values. In Study 1, I investigated the effects of distinct emotional states on judgments of different sexual minority groups. In Study 2, I measured anger and disgust and their associated action tendencies in response to homosexual behavior. In what follows, I review theories of moral emotions (Rozin et al., 1999) and research connecting disgust and sexual prejudice. To lay the foundation for my studies, I describe the biocultural framework of stigmatization (Neuberg et al., 2000) and the result of preliminary research that I conducted on this topic (Caswell, Bosson, & Singh, 2012).

The "Big Three" of Morality

Researchers who consider the moral and social functions of emotions argue that emotions evolved to help humans solve basic social problems—the problem of reproduction and the problem of cooperation (Keltner, Haidt, & Shiota, 2006). The need to reproduce is the driving force behind evolutionary selection pressures, and moral emotions researchers argue that emotions evolved to help individuals find good mates. For example, love can facilitate long-term pair-bonding in a couple (Gonzaga, Keltner, Londahl, & Smith, 2001). Jealousy can motivate compliance within a relationship or

serve as a warning to potential rivals (Buss & Schmidt, 1993). Disgust can motivate avoidance of sexual behaviors that will not facilitate reproduction or sexual partners who will not make a good mate (Tybur, Lieberman, & Griskevicius, 2009). The need for cooperation was essential for every early society, and emotions helped to protect and enhance the social hierarchy. Anger motivated punishment for those who violated the rules of society, while disgust encouraged shunning of those who did not uphold cultural values. Fear of punishment and shunning also served to motivate people to cooperate with the social order.

In a highly influential work on morality, Shweder, Much, Mahaptra, and Park (1997) analyzed discussions about moral violations with residents of Bhubaneswar, Orissa, India and found that three themes of morality guide the wide range of moral behaviors they discovered. The ethics of autonomy emphasizes justice and respect for life. This ethical code protects individuals from harm and preserves their personal liberty. The ethics of community emphasizes an individual's duty to family and community and his or her role in the social hierarchy. This ethical code protects the patterns of social organization and the interdependence of the community. The ethics of divinity emphasizes tradition, customs, and the sacred and natural orders. This ethical code protects an individual's moral and physical sanctity and purity from sin and pollution.

Building on Shweder et al.'s (1997) "Big Three" model, Rozin and his colleagues (1999) argued that violations of each of the "Big Three" ethical codes elicit three distinct moral emotions. According to the CAD (community, autonomy, divinity) triad hypothesis, contempt is elicited by violations of community ethics, anger is elicited by violations of autonomy ethics, and disgust is elicited by violations of divinity ethics.

Rozin and colleagues (1999) conducted a cross-cultural study of Americans and Japanese to validate the CAD model. Participants from both countries tended to respond to violations of community ethics, such as burning an American (Japanese) flag, with contempt, violations of autonomy ethics, such as stealing a purse from a blind person, with anger, and violations of divinity ethics, such as committing incest, with disgust.

Research on moral emotions has largely been consistent with the predictions of the CAD triad. Actions that harm others or violate the rights of others tend to elicit anger (Gutierrez & Giner-Sorolla, 2007; Rozin et al., 1999), and actions that violate body norms elicit disgust (Giner-Sorolla & Russell, 2009; Gutierrez & Giner-Sorolla, 2007). For example, Gutierrez and Giner-Sorolla (2007) found that actions that harmed others (feeding cloned human flesh to unsuspecting dinner guests) were a better predictor of anger than disgust, and that bodily taboo violations (incest; consuming cloned human flesh) elicited more disgust than anger. Horberg, Oveis, Keltner, and Cohen (2009) presented participants with vignettes depicting purity violations (e.g., having sex with a chicken before baking and consuming it) and justice violations (e.g., taking advantage of a friend's generosity) and measured their moral judgments and affective responses. Consistent with the CAD model, the purity violations elicited more disgust than anger whereas the justice violations elicited more anger than disgust. In addition, disgust, but not anger, predicted moral judgments of the purity violations whereas anger, but not disgust, predicted moral judgments of the justice violations. More recently, Russell and Giner-Sorolla (2011) showed that anger is elicited by moral violations involving harm and intentionality (e.g., serving a dinner guest lamb, but telling him it is beef) while

disgust is elicited by moral violations involving a bodily norm violation (e.g., cannibalism).

While the features of the behaviors which elicit moral anger and moral disgust have received a great deal of attention, the cognitive appraisals underlying these distinct affective responses are less clear. Given research showing that anger is elicited by judgments of harm or rights violations, my colleagues and I (Giner-Sorrolla, Bosson, Caswell, & Hettinger, 2012) recently conducted an investigation of the cognitive appraisals underlying the emotions of sexual morality. We manipulated the taboo nature of an encounter between two people on a business trip and the harm that resulted. Consistent with the CAD model, a homosexual sexual encounter elicited more disgust than a heterosexual encounter, and the encounters that resulted in harm to others elicited more anger than the no harm encounters. The harm-anger link was fully mediated by harm/rights violation appraisals. We tested four possible mediators of disgust—perceptions of the transgressor's bad character, judgments of physical and spiritual contagion, and perceptions of body abnormality (that the act violated norms governing natural use of the body). The taboo-disgust link was partially mediated by body abnormality appraisals, whereas the other three mediators were not significant.

Although Russell and Giner-Sorolla (2011) also found that the taboo-disgust link was partially mediated by abnormality appraisals, some unpublished data suggest that perceived contagion may drive disgust (Caswell & Bosson, 2011). Participants read a vignette about a male employee who had sex with his male (*gay condition*) or female (*straight condition*) boss to get a promotion and they reported their affective reactions to and cognitive appraisals of the employee's behavior. I also tested for moderation by

disgust sensitivity—an individual's disposition to feel disgust—using the Three-Domain Disgust Scale (Tybur et al., 2009), a 21-item measure of disgust sensitivity with three seven-item subscales measuring sensitivity to sexual elicitors of disgust (e.g., "Watching a pornographic video"), moral elicitors of disgust (e.g., "Deceiving a friend"), and pathogen elicitors of disgust (e.g., "Seeing a cockroach run across the floor"). Consistent with the CAD model and previous research, the gay scenario elicited more disgust than the straight scenario, but this effect was moderated by pathogen disgust sensitivity—not moral or sexual disgust sensitivity. This moderated effect of sexual taboo on disgust was mediated not by abnormality appraisals, but by contamination appraisals, perceptions that the behavior could pollute the souls of or sicken the self or others.

As noted above, moral emotions researchers argue that emotions evolved to motivate adaptive social behavior. Thus, in addition to unique cognitive elicitors, emotions also have distinct behavioral consequences (Mackie et al., 2000; Roseman et al., 1994). Research has shown that anger activates approach motivations and results in punishment behaviors (Harmon-Jones & Allen, 1998), while disgust activates avoidance motivations and results in withdrawal behaviors (Olatunji & Sawchuk, 2005). Roseman et al. (1994) asked participants to recall negative emotional experiences and describe how they felt and how they behaved. When participants felt disgusted, they described avoidance behaviors, such as wanting to expel a disgusting stimulus from the body or distance themselves from a disgusting stimulus. When participants felt angry, they described behaviors such as wanting to yell at or physically aggress against someone who had harmed them or treated them unfairly. And when Gutierrez and Giner-Sorolla (2007) presented participants with scenarios which manipulated harm (autonomy violation) and

taboo (divinity violation), harm elicited anger and punishment wheras taboo elicited disgust and avoidance.

Emotions and Sexual Prejudice

Thus far, the few studies that have examined the relationship between moral emotions and sexual prejudice have focused almost exclusively on the role of disgust. Disgust sensitivity (Haidt, McCauley, & Rozin, 1994) has been linked to sexual prejudice with higher disgust sensitivity scores corresponding to higher scores on a measure of attitudes toward lesbians and gay men (Olatunji, 2008; Tapias, Glaser, Keltner, Vasquez, & Wickens, 2007, Study 2; Terrizi, Shook, & Ventis, 2010), higher levels of implicit anti-gay bias (Inbar, Pizarro, Knobe, & Bloom, 2009), and less support for same-sex marriage (Inbar et al., 2009).

Research on incidental affect, an affective state which influences attitudes or behaviors towards an outgroup, but has causes unrelated to the target, has confirmed the disgust-sexual prejudice link. Terrizi et al. (2010) asked participants to write a paragraph about eating maggots (induced disgust) or eating cabbage (control; Study 2). The disgust induction increased negative attitudes about contact with homosexuals, but only among conservatives. Liberals in the emotion induction condition showed less negative attitudes about contact with homosexuals than liberals in the control condition. Inbar, Pizzaro, and Bloom (2012) ask participants to complete a feeling thermometer task while sitting in a room in which a disgusting odorant had been applied (smell) or no odorant had been applied (no smell). Participants in the smell condition reported less warm feelings toward gay men than did participants in the no smell condition, a difference not found in

evaluations of lesbians, the elderly, or African-Americans. Dasgupta et al. (2009) found that inducing disgust led to greater implicit anti-gay bias than inducing anger.

In addition to the evidence that trait disgust sensitivity and incidental disgust influence attitudes toward sexual minorities, there is evidence that sexual minorities and depictions of same-sex sexual behavior elicit disgust. Tapias et al. (2007) found that presenting participants with gay primes elicited more disgust than presenting participants with African-American primes. And as noted earlier, Giner-Sorolla et al. (2012) found that a depiction of a homosexual one-night stand elicited more disgust than a depiction of a heterosexual one-night stand.

Although anti-gay disgust has gotten the most attention from researchers, anecdotal evidence suggests a powerful role for anger in sexual prejudice. Anger is seen as a precursor to anti-gay aggression (Parrott & Peterson, 2008) and, as noted above, non-heterosexual victims of sexual orientation bias crimes made up 18.6% of the 8,208 victims of hate crimes in 2010 (Federal Bureau of Investigation, 2011). Mainstream gay rights-opponents often use autonomy ethics language to explain their opposition to and efforts to roll back legal reforms for sexual minorities and their families. For example, former U.S. Senator Rick Santorum of Pennsylvania once told the *New York Times* that same-sex marriage "threatens my marriage. It threatens all marriages. It threatens the traditional values of this country" (Sokolove, 2005). And in 2009, opponents of same-sex marriage ran an ad in which they argued that advocates of marriage equality wanted to take away rights from heterosexuals. An actor in the ad said, "They want to bring the issue into my life. My freedom will be taken away" (Koppleman, 2009). From the perspective of the CAD model, such sentiments should elicit anger, not disgust.

Some research suggests a relationship between anger and sexual prejudice, but these studies were largely investigations of anti-gay anger in response to viewing gay male pornography (Bernat, Calhoun, Adams, & Zeichner, 2001; Parrott, 2009; Parrott, Zeichner & Hoover, 2006) or correlational studies of anti-gay anger (Parrott, Peterson, Vincent, & Bakeman, 2008) and aggression (Parrott & Peterson, 2008). The experimental research on anti-gay anger has produced seemingly contradictory results. Tapias et al. (2007) found that participants who were primed to think about sexual minorities responded to a story with both anger and disgust whereas participants who were primed to think about African Americans responded with more anger than disgust. And, as noted earlier, Giner-Sorolla et al. (2012) found that a depiction of a homosexual one-night stand elicited more disgust than a depiction of a heterosexual one-night stand, but the pattern for anger was the exact opposite. The heterosexual encounter in this study elicited more anger than did the homosexual encounter.

Biocultural Framework of Stigmatization

According to the CAD model, homosexual behavior perceived as degrading the body or soul via "unnatural" behavior or urges should elicit moral disgust, whereas homosexual behavior perceived as causing harm to others either directly or indirectly should elicit anger. If, as Giner-Sorolla et al. (2012) would suggest, homosexual *sexual* behavior, per se, is not perceived as harmful, what explains anti-gay anger? Perhaps anti-gay anger is a reaction to spreading the message that such sexual behavior is natural and healthy. According to the biocultural framework of stigmatization (Neuberg et al., 2000), individuals who counter-socialize—advocate social values which challenge prevailing culture norms—are severely stigmatized. To the degree that their activities are seen as a

threat to normative socialization, their behavior can elicit contempt, anger, or fear from those with a vested interesting in maintaining prevailing social norms.

No direct test of the biocultural framework has been published, but related research suggests that individuals are motivated to promote and protect their cultural worldview. Terror management theory (Solomon, Greenberg, & Pyszczyksni, 2004) posits that defending and adhering to one's cultural worldview helps buffer individuals from anxiety about their mortality. For example, participants exposed to reminders of their own mortality showed more support for a pro-American author and more disdain for an anti-American author than participants in a control condition. Other research suggests that a belief that outgroups violate the values of the ingroup plays a role in prejudice. For example, White heterosexuals believe that Blacks and homosexuals are less likely to support their values than are Whites (Biernat, Vescio, & Theno 1996). These researchers also found that perceived value violation and lack of support for values predicted greater prejudice toward both groups. Vescio and Biernat (2003) showed that exposing individuals to a "family values" prime increased negative attitudes toward a gay male parent. Notably, individuals who strongly endorsed family values had negative attitudes toward the gay male parent irrespective of the priming condition.

Although this potential harm of influence has not received much attention from research, recent public battles over the role of homosexuality in public schools would suggest that homosexuals are seen as agents of bad influence. For example, Senator Jim Demint, a conservative Republican from South Carolina, has argued that openly gay people should not be allowed to teach in schools (Montopoli, 2010). In Massachusetts, parents of a kindergarten student filed a lawsuit to prevent their children from being

exposed to classroom materials which contained positive depictions of same-sex couples (Murphy, 2008). And the state of Tennessee considered legislation which would forbid public school teachers from discussing homosexuality in the classroom (Sisk, 2012). All of these examples illustrate a belief that exposure to homosexuality poses a threat to children, possibly via counter-normative socialization regarding family values.

Preliminary Research: An Initial Test of the Biocultural Framework Hypothesis

If homosexual behavior is perceived as harmful to the extent that public displays or discussion of homosexuality result in counter-socialization, then behaviors which make people more tolerant of homosexuality should elicit anger and appraisals of harm/justice violations. We conducted a pilot study (Caswell et al., 2012) to test the hypothesis that successful counter-socialization is perceived as an autonomy violation. We expected that behaviors that make people more tolerant of homosexuality would elicit anger and anger harm/rights violation appraisals. We predicted that sexually explicit behaviors would elicit disgust.

Before the exclusively heterosexual participants came to the lab, they completed Raja and Stokes (1998) *Modern Homophobia Scale* (MHS), as modified by Bosson, Taylor, and Prewitt-Freilino (2006), a 26-item measure of sexual prejudice with parallel 13-item subscales for attitudes toward lesbians (e.g., "Lesbians should undergo therapy to change their sexual orientation") and attitudes toward gay men (e.g., "I won't associate with a gay man for fear of catching AIDS"). The responses were scored on a 1 (*strongly agree*) to 5 (*strongly disagree*) scale. We averaged responses to all 26 items to create a single composite score of sexual prejudice, with a higher score denoting more negative attitudes toward homosexuals ($\alpha = 0.96$).

Upon arriving at the lab, participants were presented with two hypothetical scenarios in which somebody discusses homosexuality in a positive manner; after reading the scenarios, participants reported their affective responses to and cognitive appraisals of the behavior. In one scenario, participants read about a magazine interview with a gay celebrity who discusses his relationship with his boyfriend. In the second scenario, participants read about a high school health teacher who discusses gay and lesbian relationships in the classroom. Participants were randomly assigned to one of four experimental conditions. Half of the participants read that the transgressor (the gay celebrity and the teacher) had discussed sexually explicit relationships (*sexual content condition*) while the other half read that the transgressor had only discussed relationships (*no sexual content condition*). We crossed this manipulation of sexual explicitness with two levels of attitude change. Half of the participants read that, as a result of the transgressor's actions, the audience's attitudes toward homosexuality in general became more tolerant (*attitude change condition*) while the other half read that there was no change in attitudes (*no attitude change condition*).

Participants first answered two manipulation check questions after each scenario: "To what extent did the scenario you read contain references to sex and/or sexual behaviors?" and "To what extent did people in the scenario you read develop more positive attitudes toward homosexuality?" Participants responded on scales of 1 (*No references to sex/Did not become more positive*) to 7 (*Many references to sex/Became much more positive*).

Affective responses were measured in two ways—facial emotions and verbal emotions. First, participants were shown pictures of a male expressing anger, contempt,

and disgust. They chose which of the three faces most represented their emotional reaction and they reported the extent to which the story made them feel like the emotion on each of the three faces on a scale of 1 (*not at all*) to 7 (*very much*). Second, participants reported how much the story made them feel each of 11 specific emotions on a scale of 1 (*not at all*) to 8 (*very much*). The verbal ratings of the disgust emotions (disgusted, sickened, grossed-out, and repulsed) and the anger emotions (angry, infuriated, and outraged) were internally consistent for both scenarios so we averaged them to create a verbal composite of anger and a verbal composite of disgust (all αs > 0.92). For both scenarios, the verbal and facial ratings were strongly correlated (anger: *r*s > .68, *p*s < .001; disgust: *r*s > .66, *p*s < .001), so we standardized the verbal and facial ratings and averaged them to create anger and disgust composites for each scenario (anger: αs > 0.81; disgust: αs > 0.80).

Participants' cognitive appraisals of harm were measured by having them answer two questions on a scale of 1 (*not at all*) to 7 (*very much*): "To what extent does the celebrity's (teacher's) behavior harm other people?" and "To what extent does the celebrity's (teacher's) behavior harm society?" We averaged responses to the two items for both scenarios, yielding internally consistent composites of harm appraisals (αs > 0.87).

Before we averaged the dependent measures across the two scenarios, we conducted a series of ANOVA to ensure that there were no differences between the scenarios. We submitted the two emotion composites and the two harm composites to separate 2 (*attitude change*: yes vs. no) x 2 (*sexual content*: yes vs. no) x 2 (*scenario*: celebrity interview vs. health class) ANOVAs, with repeated measures on the last factor.

In the analysis on each emotion, we included the other emotion as a covariate. There was no significant main effect of or interaction with scenario, all *F*s < 1.97, *p*s > .16. Therefore we averaged each pair of composite variables across the two scenarios to create final indices of anger (α = .80), disgust (α = .79), and perceived harm (α = .66).

Before testing our primary hypotheses, we submitted responses to the manipulation checks to separate 2 (*attitude change*: yes vs. no) x 2 (*sexual content*: yes vs. no) ANOVAs. In the analysis on the attitude change question, a significant main effect for influence emerged, $F(1, 100) = 285.71$, $p < .001$, but no other effects were significant, *F*s < 1. Participants who read the *attitude change* scenarios perceived more positive changes in attitudes toward homosexuality ($M = 5.75$, $SD = 1.45$) than those who read the *no attitude change* scenarios ($M = 1.68$, $SD = 0.90$). In the analysis on the sexual explicitness question, a significant main effect for sexual content emerged, $F(1, 100) = 62.42$, $p < .001$, but no other effects were significant, *F*s < 1. Participants who read *sexual content* scenarios perceived more references to sex ($M = 3.88$, $SD = 1.39$) than those who read the *no sexual content* scenarios ($M = 1.91$, $SD = 1.10$). These results support the effectiveness of our manipulations.

We expected that the *attitude change* condition would elicit more anger than the *no attitude change* condition. We submitted the anger composite to a 2 (*attitude change*: yes vs. no) x 2 (*sexual content*: yes vs. no) ANCOVA with disgust and sexual prejudice as covariates. Disgust emerged as a significant covariate, $F(1, 98) = 263.99$, $p < .001$, but sexual prejudice did not, $F < 1$. The main effect of attitude change was also significant, $F(1, 98) = 4.14$, $p = .045$, but the main effect of sexual content and the interaction were both non-significant, both *F*s < 2.2 and *p*s > .15. Consistent with the hypothesis,

participants who read the attitude change scenarios reported more anger (M = .095, SE = .051) than participants who read the no attitude change scenarios (M = -.053, SE = .052).

We also expected that the *sexual content* condition would elicit more disgust than the *no sexual content* condition. We submitted the disgust composite to a 2 (*attitude change*: yes vs. no) x 2 (*sexual content*: yes vs. no) ANCOVA with anger and sexual prejudice as covariates. In this model, both anger, $F(1, 98) = 263.99$, $p < .001$, and sexual prejudice, $F(1, 98) = 13.50$, $p < .001$, emerged as a significant covariates. As expected, the main effect of sexual content was significant, $F(1, 98) = 9.18$, $p < .01$, but an unexpected marginally significant effect for attitude change also emerged, $F(1, 98) = 3.31$, $p = .07$. The interaction was not significant, $F < 1$. Consistent with the hypothesis, participants who read the *sexual content* scenarios reported more disgust (M = .143, SE = .046) than participants who read the *no sexual content* scenarios (M = -.065, SE = .050). Participants who read the *no attitude change* scenarios reported more disgust (M = .112, SE = .051) than participants who read the *attitude change* scenarios (M = -.029, SE = .050).

Finally, we expected that the attitude change/anger link would be mediated by harm appraisals. To test this hypothesis, we employed Preacher and Hayes' (2004) bootstrapping mediation method, a non-parametric method which involves creating sampling distributions for the direct and indirect effects. Sampling with replacement from the original sample is used to create multiple resamples, each of which is tested for mediation. The parameter estimates from each analysis are used to build sampling distributions from which standard errors and 95% confidence intervals can be derived. The mediator is considered statistically significant if the confidence interval around its

point estimate does not contain zero. Shrout and Bolger (2002) argue that bootstrapping is a more powerful approach than the traditional Baron and Kenny (1986) method. They point to the Sobel (1982) *z*-test as an especially problematic method of testing for mediation, given that the sampling distribution for the indirect effect is skewed, whereas the *z*-test assumes normality.

Because the effect of sexual content on anger was not significant, we collapsed across levels of sexual content and tested a mediation model with the attitude change manipulation as the single predictor and the anger composite as the outcome variable. We entered the disgust and sexual prejudice composites as covariates and the harm appraisals composite as the mediator. The analysis yielded a model consistent with our hypothesis. The *a* path from attitude change to harm appraisals was marginally significant, $B = .14$, $p < .07$. The *b* path from harm appraisals to anger was significant, $B = .15$, $p < .01$. Without the mediator in the model, the total effect of attitude change on anger (*c* path) was significant, $B = .08$, $p < .04$. When the mediator was included, the direct effect of attitude change on anger (*c*' path) was not significant, $B = .05$, $p > .12$. Finally, the 95% confidence interval for the point estimate for the indirect effect of harm appraisals ($B = .02$) did not contain zero (*CI* = .0023 - .0577).

The results of our preliminary research provide support for the hypothesis that homosexuality is perceived as harmful to the extent that it promotes more tolerant social attitudes. Consistent with prior research on moral emotions and sexual prejudice, behavior that was sexually explicit elicited disgust when anger was controlled. More importantly, however, behavior which resulted in a change in social values, independent of its sexual explicitness, elicited anger when disgust was controlled.

Though promising, two important limits to these findings must be addressed. First, the participants in the study described above were reacting to hypothetical scenarios. The targets were anonymous and the behavior described was obviously fictional. Second, the sample was drawn from the psychology department participant pool, and given that younger and more educated people tend to have more tolerant attitudes toward sexual minorities (Herek, 2009), this limits the generalizability of the effects. The goal of my dissertation was to establish the reliability of the findings of my preliminary research by (a) replicating the results using a different methodology, (b) recruiting a non-student sample, and (c) exploring the behavioral implications of these findings.

Study 1

Purpose and Hypotheses

The goal of the first study was to replicate and extend the findings from Caswell et al. (2011). Our pilot study showed that sexually-explicit behaviors elicited disgust and behaviors which made attitudes toward homosexuality more tolerant elicited anger. According to the appraisal tendency approach (Lerner & Keltner, 2000), if the links between non-normative sexual behavior and disgust and successful counter-socialization and anger are so strong that the behavior elicits the emotion, then the emotion should heighten reactions to the behavior (see also Bodenhausen, Mussweiler, Gabriel, & Moreno, 2000). Because each emotion is associated with a specific cognitive pattern, experiencing an emotion should make emotion-relevant concerns more salient and prioritize those concerns in subsequent judgments and decisions (Horberg et al., 2011). Indeed, recent work in the intergroup relations literature on incidental affect, an affective state which influences attitudes or behaviors towards an outgroup but has causes unrelated to the target, is consistent with this hypothesis. Emotional states can shape perceptions of and attitudes toward individuals and behaviors evaluated after an emotion has been induced (Dasgupta et al., 2009; Inbar et al., 2012; Terrizzi et al., 2010), but the emotion must have a pre-existing link to the individual or behavior. For example, Dasgupta and her colleagues (2009) found that incidental affect increased prejudice toward stigmatized outgroups, but only if the emotion fit the prevailing stereotype of the outgroup. Participants who were induced to feel disgust—but not anger—showed greater

implicit prejudice toward homosexuals (Study 2) while those induced to feel anger—but not disgust—showed greater implicit prejudice toward Muslims (Study 3).

Research on the moral functions of emotions similarly indicates that incidental emotions elicit stronger moral judgments when the emotion maps onto the moral violation being evaluated. Horberg et al. (2009) showed that inducing disgust—but not anger—predicted moral judgments of purity violations, while inducing anger—but not disgust—predicted moral judgments of justice violations (Study 1). In addition, induced disgust—but not induced sadness—increased moral judgments of purity violations, while there were no differences in judgments of harm/care violations.

If behaviors which harm group values elicit anger, will inducing anger make participants more sensitive to the harm of influence? In this study, participants were randomly assigned to emotion and gay target conditions in a 3 (*emotion*: anger vs. disgust vs. control) by 2 (*gay target*: sexually active gay men vs. politically active gay men) between-subjects design. Participants were induced to feel either anger, disgust, or no emotion and then they rated one of two gay male target groups–sexually-active gay men or politically active gay men. When the emotional state is congruent with the perceived threat posed by the target, moral judgments should intensify and perceptions of autonomy or divinity violation should increase, even after controlling for sexual prejudice. Because prior research suggests a role for both perceived abnormality and contamination as divinity violation appraisals (Caswell & Bosson, 2011; Giner-Sorolla et al., 2012), I measured both of these appraisals. Hypotheses are as follows:

1. Because politically-active gay men advocate for equality for the LGBT community, they should be perceived as agents of counter-socialization. I

predicted that emotion induction and gay target would interact such that participants induced to feel anger, relative to those induced to feel disgust or no emotion, would: (a) express harsher moral judgments of politically-active gay men than sexually-active gay men, and (b) report greater perceptions of harm (i.e., autonomy violations) when evaluating politically-active gay men than sexually-active gay men.

2. Because sexually-active gay men engage in non-normative sexual behavior, perceptions of them should be most sensitive to the disgust induction. I predicted that emotion induction and gay target would interact such that participants induced to feel disgust would: (a) express harsher moral judgments of sexually-active gay men than politically-active gay men, and (b) report greater perceptions of abnormality in and contamination resulting from sexually-active gay men's behavior than politically-active gay men's behavior.

Although my pilot data suggests that these effects should hold after controlling for sexual prejudice, I acknowledged the possibility that sexual prejudice might moderate the effect of the emotion induction and gay target condition on the target ratings. In a series of exploratory analyses, I used multiple regression to test for moderation.

Method

Participants and Design

Two hundred sixty-three undergraduates recruited from the University of South Florida Psychology Department participant pool received course credit in exchange for their participation. They were randomly assigned to emotion and gay target conditions in a 3 (*emotion*: anger vs. digust vs. control) by 2 (*gay target*: sexually active gay men vs.

politically active gay men) between-subjects design. In analyses, I excluded data from 29 participants who reported a non-heterosexual sexual orientation (defined as scoring 3 or higher on the sexual orientation demographic question; see Appendix C) and an additional four participants who did not complete the emotion induction essay. The final sample included 230 participants (67 males; $Md_{age} = 20$; 54.3% White).

Materials and Procedure

Before signing up for the study, participants completed a measure of sexual prejudice as part of a larger mass testing survey taken by every psychology student who registers for the participant pool. Herek's (1988) Attitudes Toward Lesbians and Gay Men Scale is a twenty-item measure of sexual prejudice, with two ten-item subscales measuring attitudes toward lesbians (e.g., "Female homosexuality is detrimental to society because it breaks down the natural divisions between the sexes") and gay men (e.g., "If a man has homosexual feelings, he should do everything he can to overcome them"). The responses were scored on a 1 (*disagree strongly*) to 7 (*agree strongly*) scale. I averaged responses to all twenty items to create a single composite of sexual prejudice, which yielded high levels of internal consistency ($\alpha = .96$).

The second part of the study was conducted online. After giving informed consent, participants completed an emotion induction task. They were asked to write an essay for four minutes on one of three topics. Participants in the *anger* and *disgust* conditions wrote about an event that made them feel angry or disgusted, respectively. Participants in the *control* condition described their dorm room/apartment/home. To ensure that participants were writing about the correct emotion, I showed three pictures related to their emotion condition. Each picture was displayed for four seconds. As a

manipulation check, participants reported their emotional state after the writing task. They viewed a list of 15 affect terms that include four items measuring disgust (disgusted, grossed-out, repulsed, sickened) and three items measuring anger (angry, infuriated, outraged). They used a scale of 1 (*not at all*) to 8 (*very much*) to indicate "how strongly you feel that way right now." The instructions, images, and manipulation check items are shown in Appendix A.

Next, participants rated a gay male target and two control targets—the elderly and wealthy Americans, added to conceal the purpose of the study—on dimensions of perceived threat and moral judgment and action tendencies. Participants were randomly assigned to rate one of two gay male targets—sexually active gay men or politically active gay men. They answered questions about each target using scales of 1 (*not at all*) to 7 (*very much*). Five questions measured the elicitors of anger, perceived harm and influence (e.g., "To what extent do sexually-active gay men try to change the attitudes of impressionable people?" and "To what extent is the behavior of sexually-active gay men harmful to society in general?"). I averaged these five items to create a single composite of perceived autonomy violation ($\alpha = .88$). Five questions measured the elicitors of disgust, contamination and abnormality (e.g., "To what extent could the behavior of sexually-active gay men contaminate themselves (e.g., make themselves sick or pollute their souls)?", "To what extent is the behavior of sexually-active gay men abnormal in modern American society?"). I averaged the two contamination questions and the three abnormality questions to create separate contamination and abnormality composites ($\alpha = .79$ and $\alpha = .83$, respectively). Two questions measured moral judgments ("How wrong do you think the behavior of sexually-active gay men is?" and "How offensive do you

think the behavior of sexually-active gay men is?"). I averaged these two items to create a single moral judgment composite (α = .91). These dependent measures are shown in Appendix B.

Finally, participants completed demographic questions, including age, gender, and sexual orientation. The demographic questions are shown in Appendix C.

Results

Manipulation Check

To create the emotion composites, I conducted a principal components factor analysis of the four disgust items and the three anger items. I used an oblique rotation because I expected the anger and disgust composites to be correlated, as suggested by prior research (Giner-Sorolla & Gutierrez, 2007; Giner-Sorolla et al., 2012). As expected, this approached yielded a two-factor solution, accounting for 85.44% of the variance (see Table 1 below). The variables loaded onto the predicted factors with cross-loadings of 0.204 or lower.

Table 1. Factor Analysis Pattern Matrix for Emotion Variables

	Factor 1 – Disgust	Factor 2 - Anger
angry	.051	**.863**
disgusted	**.866**	.123
grossed out	**1.003**	-.204
infuriated	-.015	**.968**
outraged	.009	**.950**
repulsed	**.845**	.145
sickened	**.857**	.075

I averaged the four disgust items and the three anger items to create separate disgust and anger composites (α = .93 and α = .93, respectively). To test the effectiveness of the manipulation, I submitted the anger and disgust composites to separate one-way ANOVAs (*emotion*: anger vs. disgust vs. control). In the analysis on the anger composite,

the emotion condition was significant, $F(2, 227) = 39.27$, $p < .001$, with participants in the anger condition ($M = 3.82$, $SD = 2.27$) reporting more anger than participants in the disgust condition ($M = 2.28$, $SD = 1.56$; $p < .001$), who reported more anger than participants in the control condition ($M = 1.45$, $SD = 1.01$; $p < .01$). Similarly, in the analysis on disgust, the emotion condition was significant, $F(2, 227) = 71.95$, $p < .001$, with participants in the disgust condition ($M = 4.79$, $SD = 2.17$) reporting more disgust than participants in the anger condition ($M = 2.77$, $SD = 1.86$; $p < .001$), who reported more disgust than participants in the control condition ($M = 1.50$, $SD = .81$; $p < .001$). These results suggest that the manipulation had its intended effect.

Primary Analyses

I predicted that, when the emotional state is congruent with the perceived threat posed by the target, moral judgments would intensify and perceptions of autonomy or divinity violation would increase, even after controlling for sexual prejudice. To test these hypotheses, I submitted the ratings of moral judgment and autonomy and divinity violation appraisals to a series of planned contrast analyses pitting the emotion-congruent condition (weighted as +5)—for anger, politically-active gay men and for disgust, sexually-active gay men—against all other conditions (weighted as -1, -1, -1, -1, -1) with the remaining four orthogonal contrast codes and the sexual prejudice composite as covariates (Davis, 2010).

First, I predicted that emotion induction and gay target would interact such that participants induced to feel anger, relative to those induced to feel disgust or no emotion, would express harsher moral judgments of politically-active gay men than sexually-active gay men (Hypothesis 1a) and report greater perceptions of harm and influence of

politically-active gay men than sexually-active gay men (Hypothesis 1b). To test these predictions, I regressed the moral judgment and the autonomy violation composite on the five contrast codes and sexual prejudice. In the model predicting moral judgment, sexual prejudice emerged as a significant covariate, $\beta = .36$, $p < .001$, but the critical contrast pitting the emotion congruent condition against the other five conditions was not significant, $\beta = .05$, $p = .45$. Hypothesis 1a was thus not supported (see Table 2 below; see Figure 1). In the model predicting autonomy violation, sexual prejudice again emerged as a significant covariate, $\beta = .30$, $p < .001$, but the critical contrast pitting the emotion congruent condition against the other five conditions was not significant, $\beta = -.02$, $p = .78$. Hypothesis 1b was not supported (see Table 2 below; see Figure 2).

Table 2. Standardized Regression Coefficients for Contrast Codes and Sexual Prejudice

	Criterion Variables	
Predictor Variables	*Moral Judgment*	*Autonomy*
Sexual Prejudice	.36 *	.30 *
Constrast Code 1	.05	-.02
Constrast Code 2	.01	-.03
Constrast Code 3	.02	-.02
Constrast Code 4	-.06	-.05
Constrast Code 5	-.03	-.06
Adjusted R^2	.11	.07
F	4.51 *	3.09 *

*Notes:. * = p < .05*

Next, I predicted that emotion induction and gay target would interact such that participants induced to feel disgust would express harsher moral judgments of sexually-active gay men than politically-active gay men (Hypothesis 2a) and report greater perceptions of abnormality in and contamination resulting from sexually-active gay men's behavior than politically-active gay men's behavior (Hypothesis 2b). To test these predictions, I regressed the moral judgment, contamination, and abnormality composites

on the five contrast codes and sexual prejudice. In the model predicting moral judgment, sexual prejudice emerged as a significant covariate, β = .36, $p < .001$, but the critical contrast pitting the emotion congruent condition against the other five conditions was not significant, β = -.02, $p = .76$ (see Table 3 below; see Figure 3). Hypothesis 2a was not supported. In the model predicting contamination, sexual prejudice again emerged as a significant covariate, β = .38, $p < .001$, but the critical contrast pitting the emotion congruent condition against the other five conditions was not significant, β = -.01, $p = .95$ (see Table 3 below; see Figure 4). In the model predicting abnormality, sexual prejudice again emerged as a significant covariate, β = .27, $p < .001$, but the critical contrast pitting the emotion congruent condition against the other five conditions was not significant, β = -.08, $p = .28$ (see Table 3 below; see Figure 5). Hypothesis 2b was not supported.

Table 3. Standardized Regression Coefficients for Contrast Codes and Sexual Prejudice

	Criterion Variables		
Predictor Variables	*Moral Judgment*	*Contamination*	*Abnormality*
Sexual Prejudice	.36 *	.38 *	.27 *
Constrast Code 1	-.02	-.01	-.08
Constrast Code 2	-.03	.14	-.03
Constrast Code 3	-.06	-.09	-.03
Constrast Code 4	-.01	.08	.03
Constrast Code 5	.05	-.07	.04
Adjusted R^2	.11	.14	.06
F for R^2 Change at Step 3	4.51 *	4.74 *	2.89 *

*Notes:. * = p < .05*

Exploratory Analyses

Finally, I tested to see if sexual prejudice would moderate the effects of emotion and gay target condition on the target ratings. I regressed each of the dependent variables—moral judgment, autonomy violation, contamination, and abnormality—onto sexual prejudice (after centering it on its mean), gay target condition (coded: 1

politically-active gay target, 0 sexually active gay target) and emotion condition (two dummy-coded variables) in Step 1, all two-way interaction terms in Step 2, and the three-way interaction terms (Step 3). For none of the four criterion variables did the addition of the three-way interaction terms lead to a significant increase in R^2 (see Table 4 below).

Table 4. Standardized Regression Coefficients for Emotion, Target, and Sexual Prejudice Interactions

	Criterion Variables			
Predictor Variables	*Moral Judgment*	*Autonomy*	*Contamination*	*Abnormality*
Sexual Prejudice	.44 *	.21	.17	.50*
Gay Target Condition	-.07	-.08	-.20	-.05
Emotion Dummy Code I	-.11	-.13	-.15	-.06
Emotion Dummy Code II	-.13	-.17	-.23	-.18
Target x ATLG	-.03	.08	.15	-.24
Emotion I x ATLG	.07	.24	.35*	-.02
Emotion II x ATLG	-.29	.20	-.08	-.34
Target x Emotion I	.13	.06	.02	.09
Target x Emotion II	.14	.12	.24	.21
Three-Way I	-.04	-.15	-.21	.02
Three-Way II	.16	.12	.04	.32
Adjusted R^2	.11	.14	.17	.07
R^2 Change for Step 3	.01	.02	.02	.02
F for R^2 Change at Step 3	.89	1.77	2.14	2.30

*Notes: ATLG = Attitudes toward Lesbians and Gay Men Scale. * = $p < .05$*

Summary

The results of Study 1 did not offer any support for the hypotheses. Although the manipulation check items suggest that the manipulation had its intended effect, moral judgments did not intensify and perceptions of autonomy or divinity violation did not increase when the emotional state was congruent with target being evaluated. Moreover, the exploratory analyses failed to find the predicted effects even among individuals high in sexual prejudice. I will return to these findings in the General Discussion.

Study 2

Purpose and Hypotheses

The goals of my second study were to replicate and extend the findings from our preliminary research. Our study revealed that sexually-explicit behaviors elicited disgust, and behaviors which made attitudes toward homosexuality more tolerant elicited anger (Caswell et al., 2012). However, these data were drawn from a student sample recruited from the Psychology Department research participant pool. Given research demonstrating that younger people, and more educated people, have more tolerant attitudes toward sexual minorities than older and less educated people (Herek, 2009), these findings might not generalize to a more representative sample of Americans. Thus, my first goal was to replicate our earlier findings using a non-student sample. I recruited participants from Amazon's online data collection service, Mechanical Turk (www.MTurk.com). Because MTurk's participants tend to be older, less White, and less educated than typical Internet and student samples, an MTurk sample should be relatively representative of the American adult population (Buhrmester, Kwang, & Gosling, 2011).

My second goal was to examine the behavioral implications of these findings. Research shows that anger is associated with attack and punishment action tendencies (Mackie et al., 2000) while disgust has been associated with avoidance action tendencies (Tybur et al., 2009). Indeed, when Gutierrez and Giner-Sorolla (2007) presented participants with scenarios that manipulated harm (autonomy violation) and taboo

(divinity violation), harm elicited anger and punishment tendencies while taboo elicited disgust and avoidance tendencies. In the current research, I do not measure behavior directly, but rather action tendencies, the willingness to avoid or punish the transgressor.

My third goal was to explore the role of trait emotion tendencies in emotional responses to homosexuality. In an investigation of trait emotion tendencies and attitudes toward outgroups, Tapias et al. (2007; Study 2) found that trait anger (an individual's disposition to feel anger)—but not sexual disgust sensitivity—predicted anti-Black attitudes while sexual disgust sensitivity—but not trait anger—predicted anti-gay attitudes. However, we have unpublished data suggesting that pathogen disgust sensitivity—not sexual disgust sensitivity—predicts anti-gay disgust (Caswell & Bosson, 2011). One possible reason for this discrepancy may be that sexual disgust sensitivity is a better predictor of anti-gay attitudes whereas pathogen disgust sensitivity is a better predictor of anti-gay affect. The *social intuitionist model* of moral judgment (Haidt, 2001) suggests that moral judgments are often based on moral intuition—an automatic, affect-driven response to a stimulus event—rather than moral reasoning—a critical and effortful evaluation of a stimulus event. It may be that feelings of anti-gay disgust are driven by concerns about contagion, but the disgust-related cognitions are framed by concerns about sexual morality. Study 2 provided an opportunity to test the predictive power of pathogen and sexual disgust sensitivity on anti-gay disgust and avoidance tendencies. In addition, I examined the influence of trait anger (Spielberger, 1999) on anti-gay anger. Although Tapias et al. (2007) found that trait anger did not predict anti-gay attitudes, trait anger may emerge as a significant predictor of anti-gay anger and punishment tendencies in response to behavior perceived as harmful.

And finally, my fourth goal was to present participants with a target that they believed was a real person engaging in real behavior. In both the preliminary research and Study 1, participants evaluated hypothetical targets. Replicating these findings using a target that participants believe is real is important to establishing the external validity of this line of research.

In the current study, participants read a bogus newspaper article about a talent agent who specializes in getting LGBT characters on TV shows and in movies. Participants read that there has been a proliferation in the number of sexual minority characters on TV. Participants in the *sexual content* condition read that these characters are often portrayed in explicit sex scenes whereas participants in the *no sexual content* condition did not encounter any mention of sex. I crossed this manipulation with two levels of attitude change. Participants in the *attitude change* condition read that the increase in LGBT characters in the media has led to more tolerant social attitudes toward homosexuality whereas participants in the *no attitude change* condition read that the increase in LGBT characters in the media was unrelated to changes in social attitudes toward homosexuality. As in the pilot study, participants reported their affective responses (disgust and anger) to and cognitive appraisals (divinity and autonomy violation) of the talent agent's activism. Because prior research suggests a role for both perceived abnormality and contamination as divinity violation appraisals, I measured perceived abnormality and contamination. Finally, I measured punishment and avoidance tendencies toward the talent agent. My hypotheses were as follows:

1. The *sexual content* condition would elicit more (a) disgust and avoidance tendencies than the *no sexual content* condition. These effects would be

moderated by pathogen disgust sensitivity such that, in the high sexually explicit condition, higher pathogen disgust sensitivity would predict greater (b) disgust and avoidance action tendencies.

2. The *attitude change* condition would elicit more (a) anger and punishment tendencies than the *no attitude change* condition. These effects would be moderated by trait anger such that, in the high attitude change condition, higher trait anger would predict greater (b) anger and punishment action tendencies.
3. Divinity violation appraisals would mediate the relationship between sexual explicitness and disgust.
4. Autonomy violation appraisals would mediate the relationship between attitude change and anger.
5. Divinity violation appraisals and disgust would jointly mediate the effect of sexual explicitness on avoidance action tendencies.
6. Autonomy violation appraisals and anger would jointly mediate the effect of attitude change on punishment action tendencies.

Finally, I expected that all of these effects would be significant after controlling for sexual prejudice.

Method

Participants and Design

Three hundred six participants (117 males; $Md_{age} = 29$; 76.6% White) were recruited from the Mechanical Turk website. They were paid $0.65 in exchange for their participation (Buhrmester, et al., 2011). Participants were randomly assigned to *attitude*

change and *sexual explicitness* conditions in a 2 (*attitude change*: high vs. low) by 2 (*sexual explicitness*: high vs. low) between-subjects design. In my analyses, I excluded data from 61 participants who reported a non-heterosexual sexual orientation (defined as scoring 3 or higher on the sexual orientation demographic question; see Appendix F) and an additional 13 participants who reported that they did not believe the newspaper article was real. The final sample included 232 participants (90 male; $Md_{Age} = 31$; 78.0% White).

Materials and Procedure

The study took place in two parts. Participants were paid $0.25 for completing the first part, in which they completed measures of sexual prejudice, disgust sensitivity, and trait anger. They first completed Herek's (1988) Attitudes Toward Lesbians and Gay Men Scale—described in Study 1—as a measure of sexual prejudice. I averaged the scores to create a single composite measure of sexual prejudice ($\alpha = .96$).

The Three-Domain Disgust Scale (Tybur et al., 2009) is a 21-item measure of disgust sensitivity with three seven-item subscales measuring sensitivity to sexual elicitors of disgust (e.g., "Watching a pornographic video"), moral elicitors of disgust (e.g., "Deceiving a friend"), and pathogen elicitors of disgust (e.g., "Seeing a cockroach run across the floor"). Participants indicate how much each elicitor makes them feel disgusted on a 0 (*not at all disgusting*) to 6 (*extremely disgusting*) scale. I averaged the seven items in each of the three subscales to create composite scores for sexual disgust sensitivity ($\alpha = .87$), moral disgust sensitivity ($\alpha = .91$), and pathogen disgust sensitivity ($\alpha = .81$).

Finally, participants completed the Trait Anger subscale of the State-Trait Anger Expression Inventory-2 (STAXI-2; Spielberger, 1999). The scale consists of ten

statements (e.g., “I am quick tempered”), and participants rate how often that item applies to them on a 1 (*almost never*) to 4 (*almost always*) scale. I averaged the scores to create a composite trait anger scale ($\alpha = .87$).

Participants were paid $0.40 for completing the second part of the study. They were told that they were participating in study about news, memory and judgment and that they would be paid $0.25 for their participation and another $0.15 bonus if they answered the final question correctly. The purpose of the bonus was to motivate participants to read the article and answer the questions carefully. Participants read a bogus newspaper article about a gay talent agent and gay rights activist in Hollywood who has had great success in getting LGBT actors and characters on TV shows. They also read that he has played a large role in the proliferation of sexual minority characters on TV. Participants were randomly assigned to one of four conditions. Those in the *sexual content* condition read that, because of the talent agent’s efforts, LGBT characters are often portrayed in explicit sex scenes while participants in the *no sexual content* condition read that, because of the talent agent’s efforts, LGBT characters are often portrayed in interpersonal and family contexts. I crossed this manipulation with two levels of attitude change. Participants in the *attitude change* condition read that the increase in LGBT characters in the media has led to more tolerant social attitudes toward homosexuality whereas participants in the *no attitude change* condition read that the increase in LGBT characters in the media is unrelated to changes in social attitudes toward homosexuality. The newspaper article with the experimental manipulations can be found in Appendix D.

I measured affective responses in two ways. First, participants reported how much the newspaper article made them feel each of 16 specific emotions, on a scale of 1 (*not at all*) to 8 (*very much*). Second, participants were shown pictures of a male expressing anger, contempt and disgust. They chose which of the three faces most represented their emotional reaction and they reported the extent to which the newspaper article made them feel like the emotion on each of the three faces on a scale of 1 (*not at all*) to 7 (*very much*).

Next, participants answered questions about the target using scales of 1 (*not at all*) to 7 (*very much*). Five questions measured the elicitors of anger, perceived harm and influence (e.g., "To what extent do activists such as Mark Weaver try to change the attitudes of impressionable people?" and "To what extent is the behavior of activists such as Mark Weaver harmful to society in general?"). I averaged the five questions to create an autonomy violation appraisal composite ($\alpha = 0.81$). Four questions measured the elicitors of disgust, two measuring contamination (e.g., "To what extent could the behavior of activists such as Mark Weaver contaminate themselves (e.g., make themselves sick or pollute their souls)?") and two measuring abnormality ("To what extent is the behavior of activists such as Mark Weaver abnormal in modern American society?"). I averaged the two contamination items and the two abnormality items to create separate abnormality ($\alpha = 0.79$) and contamination ($\alpha = 0.94$) composites. Four questions measured the action tendencies associated with anger (e.g., "To what extent might people desire to punish activists such as Mark Weaver?") and disgust (e.g., "To what extent might people want to avoid activists such as Mark Weaver?"). I averaged these items to create a punishment composite ($\alpha = 0.87$) and an avoidance composite ($\alpha =$

0.88). Finally participants answered two manipulation check questions, ("To what extent did the scenario you read contain references to sex and/or sexual behaviors?" and "To what extent did people in the scenario you read develop more positive attitudes toward homosexuality?") and the bonus question ("Has Mark Weaver ever convinced a producer to change a straight character to a gay character?"). The dependent measures are shown in Appendix E.

Finally, participants completed demographic questions, including age, gender, and sexual orientation. The demographic questions are shown in Appendix F.

Results

Manipulation Check and Bonus Question

To test the effectiveness of the manipulation, I submitted the manipulation check items to separate 2 x 2 (*sexual explicitness* by *attitude change*) ANOVAs. The analysis on perceived sexual content yielded a main effect of sexual explicitness condition, $F(1, 226) = 26.63$, $p < .001$, with participants in the high sexually explicit condition ($M = 4.58$, $SD = 1.66$) perceiving more sexual content than those in the low sexually explicit condition ($M = 3.29$, $SD = 2.11$). Neither attitude change condition, $F(1, 226) = 2.38$, $p = .13$, nor the interaction were significant, $F(1, 226) = .45$, $p = .50$. The analysis on perceived attitude change yielded a significant main effect of attitude change condition, $F(1, 226) = 118.27$, $p < .001$, with participants in the high attitude change condition ($M = 5.83$, $SD = 1.16$) perceiving more attitude change than participants in the low attitude change condition ($M = 3.57$, $SD = 1.89$). Neither sexual explicitness condition, $F(1, 226) = .34$, $p = .56$, nor the interaction were significant, $F(1, 226) = .06$, $p = .81$. These results suggest that my manipulations had their intended effects.

Thirty-two participants failed to answer the bonus question correctly. Excluding these participants from the analyses did not change any of the results, so I reported the results with the full sample included.

Emotion Composites

Because the verbal and facial emotion items were measured with different scales, I first standardized all of the items. To create the emotion composites, I conducted a principal components factor analysis of the four disgust items, the disgust face, the three anger items, and the anger face. I used an oblique rotation because I expected the anger and disgust composites to be correlated, as suggested by prior research (Giner-Sorolla & Gutierrez, 2007; Giner-Sorolla et al., 2012). The expected two-factor solution did not emerge, with the analysis yielding only a single factor accounting for 78.48% of the variance. Still, I proceeded to create separate anger and disgust composite variables. First, I averaged the four standardized verbal disgust items ($\alpha = 0.97$) and the three standardized anger items ($\alpha = 0.96$). I then averaged the verbal disgust composite and the standardized facial disgust rating to create the final measure of disgust ($\alpha = 0.85$). Similarly, I averaged the verbal anger composite and the standardized facial anger rating to create the final measure of anger ($\alpha = 0.78$).

Primary Analyses

Consistent with prior research (Giner-Sorolla et al., 2012; Gutierrez & Giner-Sorolla, 2007), anger and disgust were highly correlated, $r = .84$, $p < .001$. Accordingly, I controlled for anger when looking at the effects of sexual explicitness on disgust and controlled for disgust when looking at the effects of attitude change on disgust.

I predicted that the *sexual content* condition would elicit more disgust and avoidance tendencies than the *no sexual content* condition (Hypothesis 1a). I also expected that these effects would be moderated by pathogen disgust sensitivity such that, in the high sexually explicit condition, higher pathogen disgust sensitivity would predict greater disgust and avoidance action tendencies (Hypothesis 1b). I also expected these effects would be significant after controlling for sexual prejudice.

To test Hypothesis 1a, I submitted the disgust and avoidance composites to separate 2 (*attitude change*: change vs. no change) x 2 (*sexual content*: content vs. no content) ANCOVA. In the analysis on disgust, sexual prejudice, $F(1, 226) = 57.92$, $p < .001$, and anger, $F(1, 226) = 273.51$, $p < .001$, emerged as significant covariates, but the predicted main effect of sexual explicitness condition, $F(1, 226) = .48$, $p = .49$, was not significant. An unexpected main effect of attitude change did emerge, $F(1, 226) = 5.71$, $p < .02$, with participants in the attitude change condition ($M = .08$, $SD = .93$) reporting more disgust than participants in the no attitude change condition ($M = -.08$, $SD = .82$). The interaction was non-significant, $F(1, 226) = 1.08$, $p = .30$ (see Figure 6). In the analysis on avoidance tendencies, sexual prejudice emerged as a significant covariate, $F(1, 226) = 15.89$, $p < .001$, but the predicted main effect of sexual content condition, $F(1, 226) = .24$, $p = .62$, was not significant. The main effect for attitude change, $F(1, 226) = 1.74$, $p = .19$, and the interaction, $F(1, 226) = 1.89$, $p = .17$, were both non-significant (see Figure 7). Hypothesis 1a was not supported.

Next, I used hierarchical multiple regression to see if the effect of sexual explicitness on disgust and avoidance tendencies was moderated by pathogen disgust sensitivity (Hypothesis 1b; Aiken & West, 1991). In the first model, I regressed disgust

on anger and sexual prejudice (step 1), the sexual explicitness manipulation (coded: 1, 0) and centered pathogen disgust sensitivity (step 2), and the interaction term (step 3). The interaction term was not significant, β = .04, p = .41, and adding the term to the model did not lead to a significant increase in R^2, $F(1, 226) = .67$, p = .41 (see Figure 8). In the second model, I regressed avoidance tendencies on sexual prejudice (step 1), the sexual explicitness manipulation (coded: 1, 0) and centered pathogen disgust sensitivity (step 2), and the interaction term (step 3). The interaction term was not significant, β = .14, p = .12, and adding the term to the model did not lead to a significant increase in R^2, $F(1, 226) = 2.47$, p = .12 (see Figure 9). Hypothesis 1b was not supported.

I also predicted that the *attitude change* condition would elicit more anger and punishment tendencies than the *no attitude change* condition (Hypothesis 2a) and that this effect would be moderated by trait anger such that, in the high attitude change condition, higher trait anger would predict greater anger and punishment action tendencies (Hypothesis 2b). I also expected that these effects would be significant after controlling for sexual prejudice.

To test Hypothesis 2a, I submitted the anger and punishment composites to separate 2 (*attitude change*: change vs. no change) x 2 (*sexual content conditions*: content vs. no content) ANCOVAs. In the analysis on anger, disgust emerged as a significant covariate, $F(1, 226) = 273.51$, $p < .001$, but sexual prejudice was non-significant, $F(1, 226) = .05$, p = .82. The predicted main effect of attitude change was not significant, $F(1, 226) = .20$, p = .66. The main effect of sex condition, $F(1, 226) = .04$, p = .85, and interaction, $F(1, 226) = .99$, p = .32, were non-significant, as well (see Figure 10). In the analysis on punishment tendencies, sexual prejudice was not a significant covariate, $F(1,$

226) = .05, p = .82. The predicted main effect of attitude change was significant, F(1, 226) = 4.83, p = .03, with participants in the *attitude change* condition (M = 4.26, SE = .15) showing more punishment tendencies than participants in the *no attitude change* condition (M = 3.81, SE = .15). The main effect of sexual content, F(1, 226) = .65, p = .42, and interaction, F(1, 226) = .17, p = .68, were non-significant, as well (see Figure 11). Hypothesis 2a was partially supported.

Next, I used hierarchical multiple regression to see if the effects of attitude change on anger and punishment tendencies were moderated by trait anger (Hypothesis 2b; Aiken & West, 1991). In the first model, I regressed anger on disgust, sexual prejudice, the attitude change manipulation (coded: 1, 0), centered trait anger, and the change-by-anger interaction term. The interaction term was not significant, β = -.07, p = .18, and adding the term to the model did not lead to a significant increase in R^2, F(1, 226) = 1.81, p = .18 (see Figure 12). In the second model, I regressed punishment tendencies on sexual prejudice, the attitude change manipulation, centered trait anger, and the change-by-anger interaction term. The interaction term was not significant, β = -.07, p = .47, and adding the term to the model did not lead to a significant increase in R^2, F(1, 227) = .52, p = .47 (see Figure 13). Hypothesis 2b was not supported.

Given that primary hypotheses about the effects of sexual explicitness and attitude change on disgust and anger were not supported, I did not test for mediation by the cognitive elicitors, perceived autonomy and divinity violation. I did, however, test for mediation of the effect of attitude change on punishment tendencies by perceived autonomy violation. I submitted the autonomy violation composite to a 2 (*attitude change*: change vs. no change) x 2 (*sexual content conditions*: content vs. no content)

ANCOVA. Sexual prejudice emerged as a significant covariate, $F(1, 227) = 193.45$, $p < .001$, but the predicted main effect of attitude change was not significant, $F(1, 226) = 2.443$, $p = .12$. The main effect of sex condition, $F(1, 227) = .37$, $p = .54$, and interaction, $F(1, 227) = 1.25$, $p = .27$, were non-significant, as well.

Summary

The results of Study 2 provided very limited support for my hypotheses. The main effects of sexual explicitness on disgust and attitude change on anger observed in the preliminary research did not replicate in Study 2. In fact, an unpredicted main effect of attitude change on disgust emerged, with participants in the *attitude change* condition reporting more disgust than participants in the *no attitude change* condition. And while the sexual content manipulation had no effect on avoidance tendencies, the attitude change manipulation had the predicted effect on punishment tendencies. Participants in the *attitude change* condition displayed more punishment tendencies than participants in the *no attitude change* condition. I will return to these findings in the General Disucssion.

General Discussion

The purpose of the current was research was to investigate the unique cognitive elicitors and behavioral consequences of anti-gay anger and anti-gay disgust. The CAD triad hypothesis (Rozin, et al., 1999) suggests that disgust is elicited by violations of divinity ethics (behavior which physically or spiritually pollutes the self or others) whereas anger is elicited by violations of autonomy ethics (behavior which harms of violates the rights of others). Although the relationship between homosexual persons and behavior and disgust has received a great deal of attention from researchers, anger has not. In two studies, I tested the hypotheses that behaviors that result in more tolerant attitudes toward homosexuality elicit anger and cognitive appraisals of harm, whereas sexually explicit homosexual behavior elicits disgust and cognitive appraisals of impurity. Collectively, the results of the current research do not support these hypotheses.

Study 1 was inspired by the appraisal tendency approach (Lerner & Keltner, 2000), which suggests that experiencing an emotion should make emotion-relevant concerns more salient and prioritize those concerns in subsequent judgments and decisions (Horberg et al., 2011). I induced participants to feel anger, disgust, or no emotion and randomly assigned them to rate either a sexually-active gay male target or a politically-active gay male target on dimensions of perceived moral violations and moral judgment. I expected that moral judgments and the relevant cognitive appraisals would be heightened when the emotional state was congruent with the gay male target's behavior (disgust for a sexually-active gay man; anger for a politically-active gay man), but no

such effects were found. The results of the manipulation check suggest that the fault does not lie with the emotion induction manipulation. Participants in the anger condition reported significantly more anger than participants in the disgust and control conditions. Similarly, participants in the disgust condition reported significantly more disgust than participants in the anger and control conditions.

One possible explanation is that the gay male targets may not have been sufficiently "vivid" to activate the specific cognitive patterns associated with each emotion. Participants were told that they would be asked about their "feelings and attitudes about politically active [sexually active] gay men." The subtle descriptors "sexually active" and "politically active" may not have evoked the vivid images I had intended. The ingroup/outgroup boundary that divides gay and straight people is sexual orientation and sexual promiscuity is a common stereotype of gay men (Kunda & Oleson, 1995). The addition of the phrase "sexually active" may have had no impact on the depth of stereotypic thinking beyond that already evoked by the category label "gay men". The phrase "politically active" may have similarly been too vague. Some participants may have interpreted the phrase "politically active" to mean "gay-rights activist". Others may have interpreted the phrase to mean "campaign volunteer" or "voter". Given that my sample was drawn from an age group known to show the least interest in politics or public policy (Galston, 2004), I cannot be certain that my phrase had its intended meaning. When using this methodology in the future, researchers should use more precise and vivid stimuli, such as photos of gay rights activists and sexually promiscuous gay men.

In Study 2, participants read a bogus newspaper article about a gay talent agent who played a key role in the proliferation of sexual minority characters on television and in the movies. I expected participants who read that the talent agent's actions led to more tolerant social attitudes to feel more anger and display more punishment tendencies than participants who read that the talent agent's actions had no effect on attitudes toward homosexuality. I also expected that reading about the characters appearing in explicit sexual scenes would elicit more disgust and avoidance tendencies than reading an article containing no mention of explicit sexual content. The only predicted effect that emerged was the effect of attitude change on punishment tendencies. Moreover, an unpredicted effect of attitude change on disgust emerged, with participants in the high attitude change condition reporting more disgust than participants in the low attitude change condition.

The failure to replicate the finding that taboo sexual behavior elicits disgust (Caswell & Bosson, 2011; Caswell et al., 2012; Giner-Sorolla et al., 2012; Guitierrez and Giner-Sorolla, 2007; Russell & Giner-Sorolla, 2011) suggests a flaw in my manipulation of sexual explicitness. Although the results of the analyses of the manipulation check items suggest that the sexual explicitness and attitude change manipulations had their intended effects, my methodology departed from prior research in three important ways. First, in previous investigations of taboo and disgust, the transgressor was directly responsible for the taboo behavior. For example, Giner-Sorolla et al. (2012) asked participants to evaluate a man who had a one-time sexual encounter with a stranger while travelling on business. Caswell et al. (2012) asked participants to evaluate a celebrity who shared information about his love life in an interview and a health teacher who discussed gay and lesbian relationships with high school students. In the current study,

the transgression was more indirect. The target did not engage in taboo sexual behavior or distribute displays of taboo sexual behavior. He merely encouraged producers to produce and air the material. Thus, while the participants may have been disgusted by the sexual taboo, they may have been reluctant to ascribe those feelings of disgust to the transgressor when asked how much "Mark Weaver's actions" made them feel each emotion.

The length of the stimulus material was another departure from previous research. In the current study, participants read a lengthy newspaper article (over 600 words) that contained extraneous information about the transgressor's background and history of activism. In contrast, Caswell et al. (2012) asked participants to rate transgressors in two separate scenarios, each with fewer than 125 words, while Giner-Sorolla et al. (2012) presented participants with scenarios of fewer than 150 words. Although the manipulation check items in the current research suggest that participants recalled the details of the transgressions, their responses to the dependent measures may have been influenced by other information in the article. When asked to rate "activists such as Mark Weaver" on dimensions of moral judgment and divinity and autonomy violation, the length of the article gave them a larger range of facts to appraise. To illustrate, in the debriefing, one participant suggested that his responses were about the transgressor's attitude rather than his actions: "If any of my answers made it sound like I think Mark's cause is disgusting or offensive, that is not what I meant; I found his attitude to be so cocky that I think it was counterproductive." In future investigations of moral behavior, researchers should limit the amount of information about a target when asking participants to evaluate the target's behavior.

Finally, these data were collected online via the Mechanical Turk website. The studies cited above were conducted in a controlled laboratory environment with minimal distractions. In the current study, I had no control over the environment in which the participants completed the study. Although I asked participants to close all other tabs on their web browser and to focus only on the study during the course of their participation, one participant acknowledged having conducted a Google search of the transgressor's name while reading the story. Another limitation of the Mechanical Turk website is that I could not limit participation from individuals who had previously been exposed to a manipulation involving deception. Twenty-five participants reported heightened suspicion because they had read bogus newspaper articles in previous studies. These results suggest the possibility that conducting research using deception requires a degree of experimental control that online data collection might not allow. Mechanical Turk can be an effective tool of scientific investigation, providing researchers with a relatively low-cost and diverse participant pool. However, in light of the limitations outlined above, future researchers should employ straight-forward manipulations that cannot be rendered ineffective by participation in prior deception studies or the use of internet search engines during the course of the study.

Future Directions

One purpose of the current research was to address the dearth of research on the influence of anger on sexual prejudice. Future research should also consider the role of the third emotion of the CAD triad (Rozin et al., 1999)—moral contempt—in response to homosexual people and behavior. Contempt is elicited by violations of community ethics, behavior that violates the community hierarchy or deviates from one's role in the

community. Given that heterosexual individuals and families enjoy a higher social status than sexual minorities, attempts to change laws to level the playing field may violate the community hierarchy and elicit contempt. For example, efforts to legalize marriage between same-sex couples could be perceived as a violation of community ethics. Marriage is an institution that conveys both social and economic benefits and has historically been restricted to opposite-sex couples. This heterosexual privilege has helped to elevate the social status of heterosexuals, and allowing same-sex couples to marry would essentially make homosexual couples equal to heterosexual couples, threatening the positive distinctiveness and the higher status of heterosexuality. Indeed, prior research has shown that same-sex marriage laws are seen as a greater threat to heterosexual identity than civil unions laws, even after controlling for sexual prejudice (Schmitt, Lehmiller, & Walsh, 2007). Future research should consider contempt as a consequence of efforts to raise the social status of sexual minorities.

Conclusion

The goal of the current research was to explain how members of a single social group—sexual minorities—can elicit two emotions with distinct elicitors and action tendencies. Although disgust has received a great deal of attention from sexual prejudice researchers, comparably little work has been done on anger. The results provided very limited support for my hypotheses, with none of the anticipated emotion-appraisal (Study 1) or morality violation-emotion (Study 2) links emerging. The methodological issues raised in the General Discussion suggest that a more rigorous investigation could yield more meaningful results.

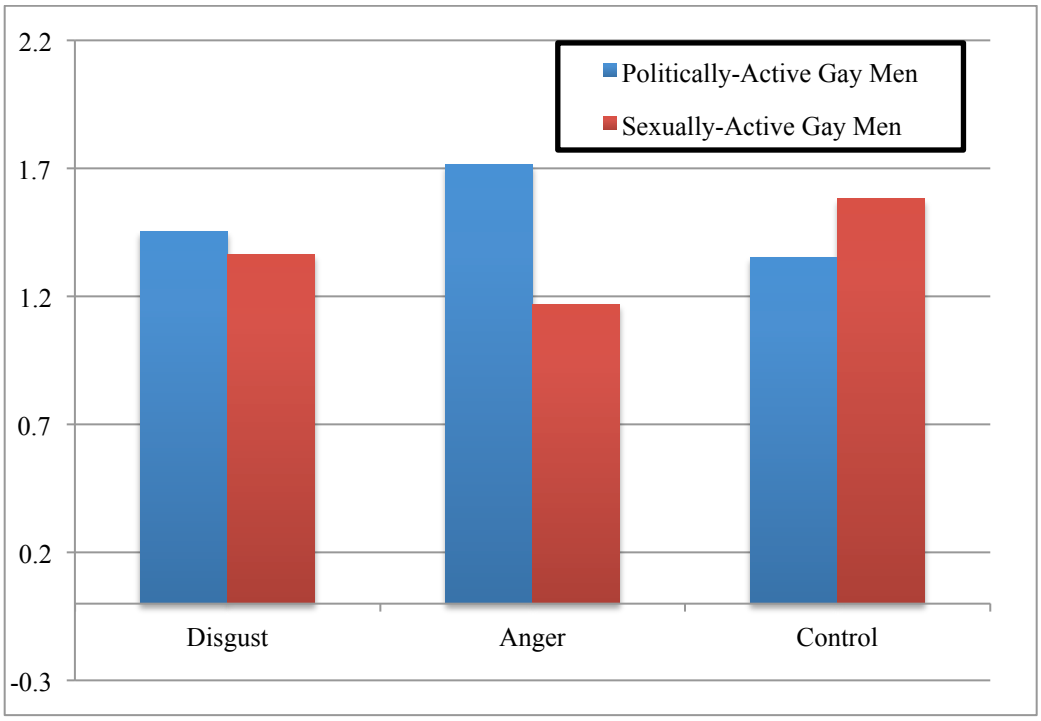

Figure 1 – Predicted moral judgment scores as a function of emotion condition and target

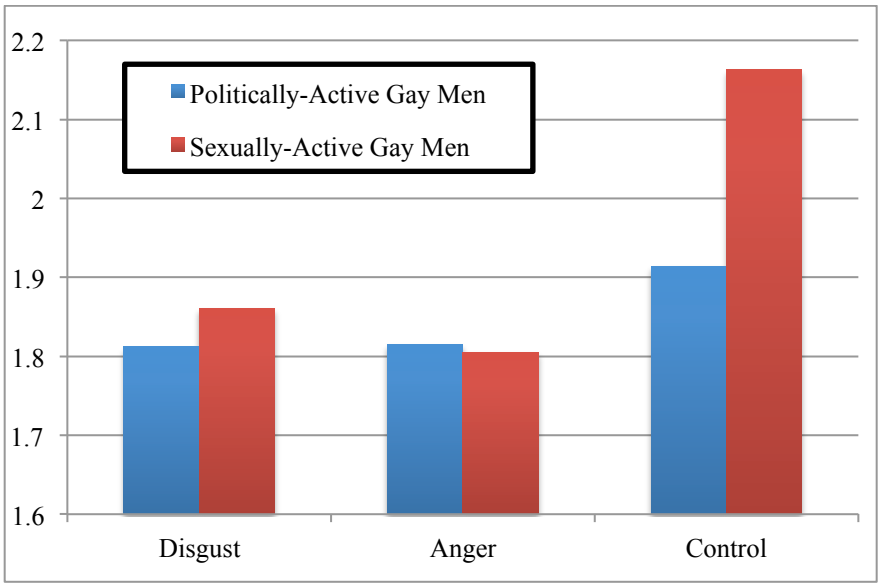

Figure 2 – Predicted autonomy violation scores as a function of emotion condition and target

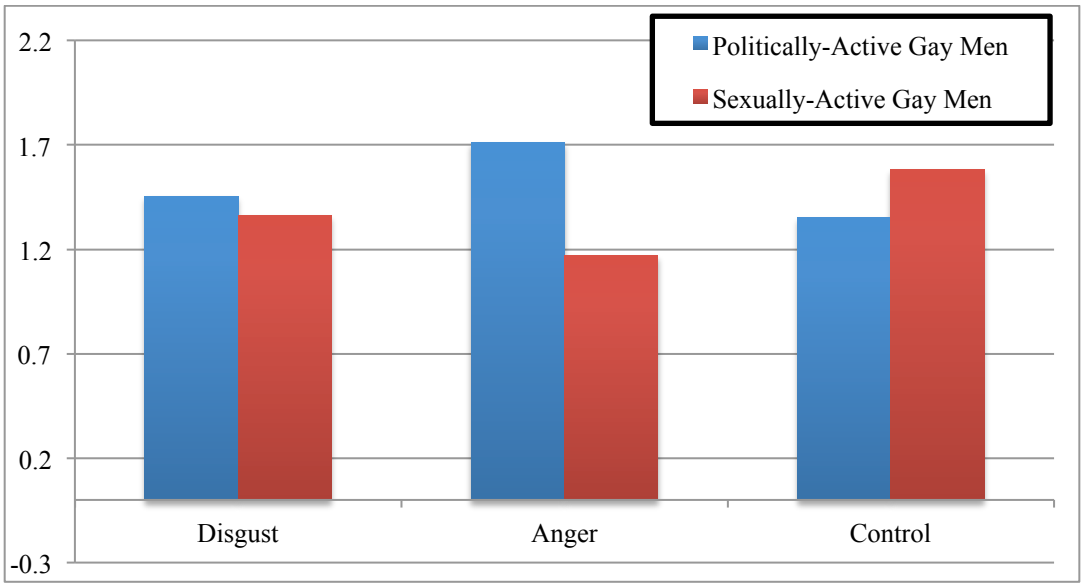

Figure 3 – Predicted moral judgment scores as a function of emotion condition and target

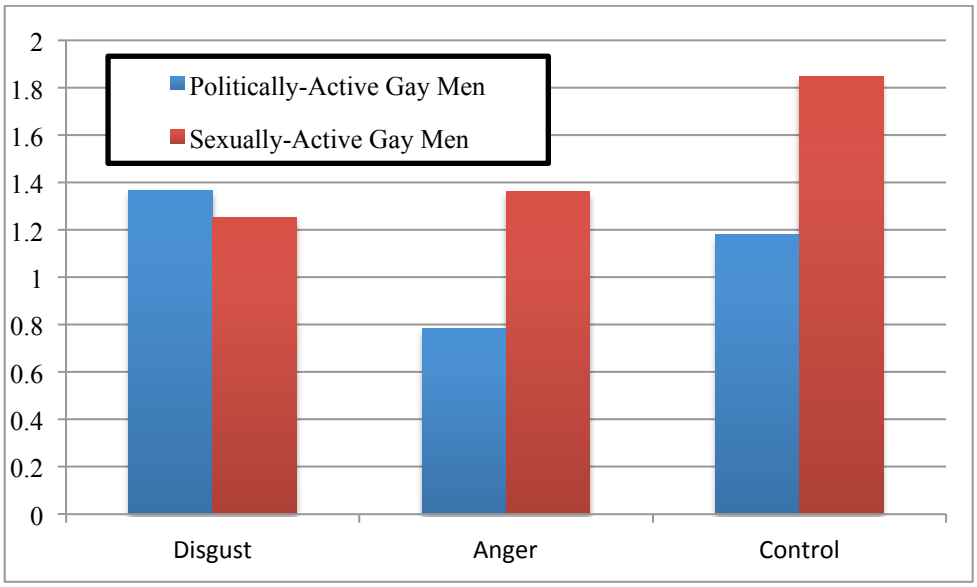

Figure 4 – Predicted contamination scores as a function of emotion condition and target

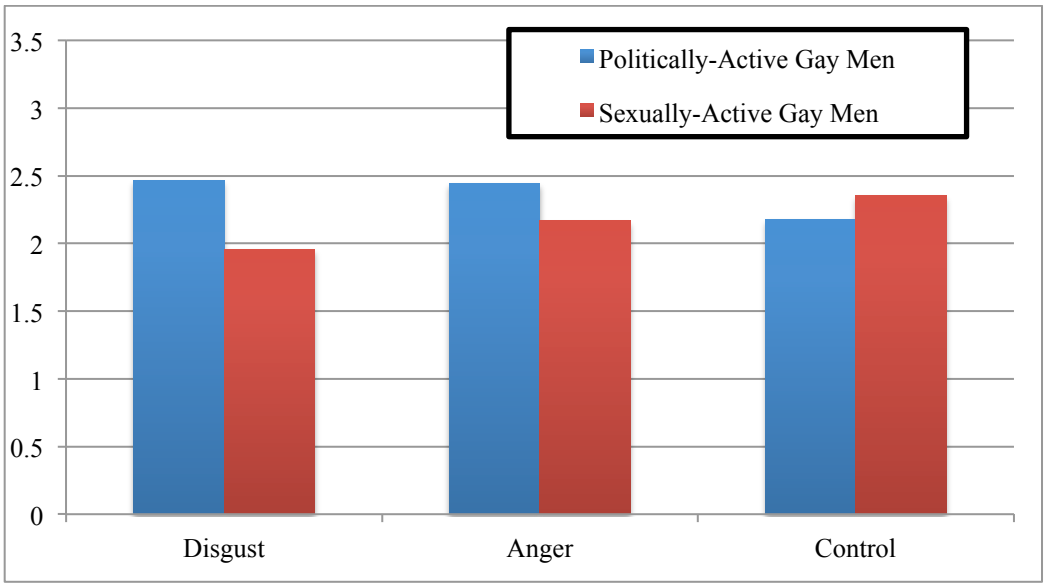

Figure 5 – Predicted abnormality scores as a function of emotion condition and target

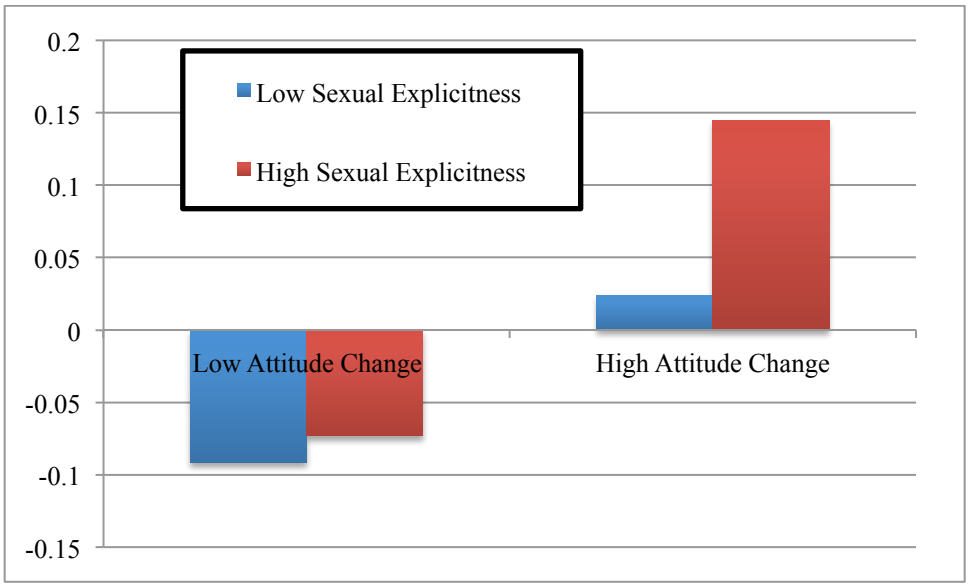

Figure 6 – Disgust (controlling for anger and sexual prejudice) as a function of sexual explicitness and attitude change

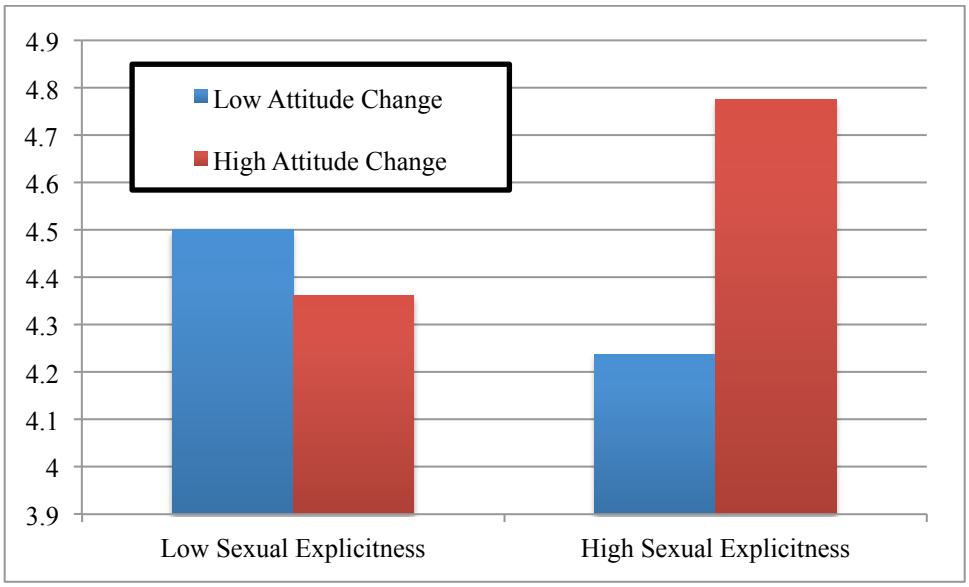

Figure 7 – Avoidance tendencies (controlling for sexual prejudice) as a function of sexual explicitness and attitude change

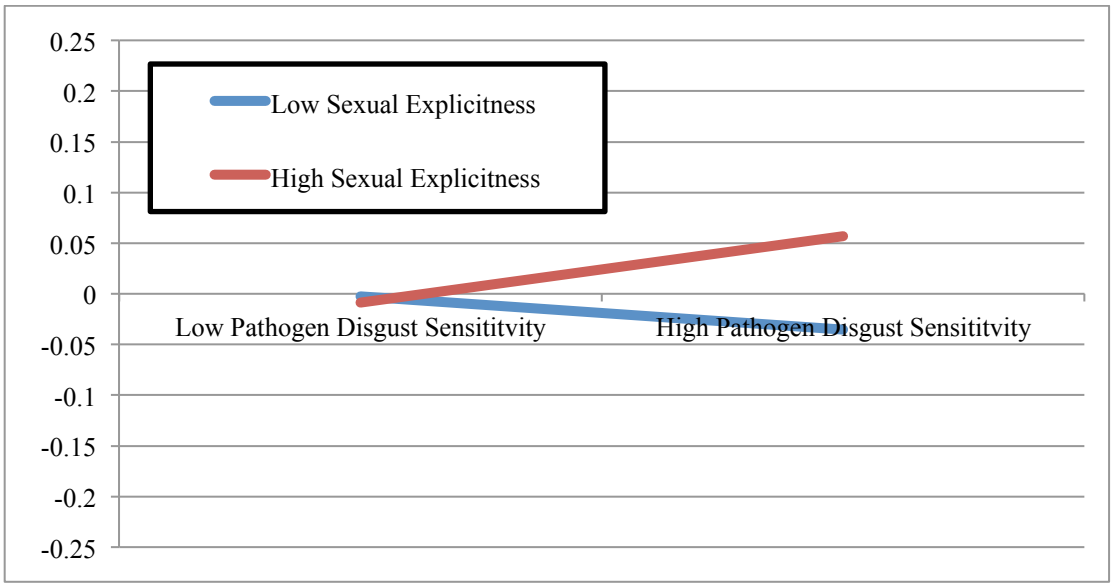

Figure 8 – Sexual explicitness by pathogen disgust sensitivity interaction predicting disgust

Note. Predicted values are plotted one standard deviation above and below the mean for Pathogen Disgust Sensitivity.

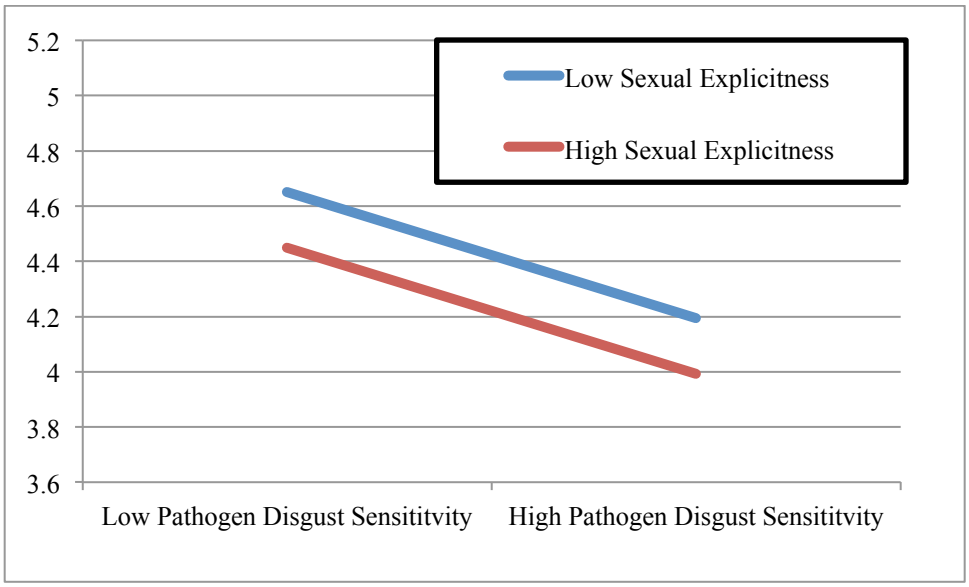

Figure 9 – Sexual explicitness by pathogen disgust sensitivity interaction predicting avoidance tendencies

Note. Predicted values are plotted one standard deviation above and below the mean for Pathogen Disgust Sensitivity.

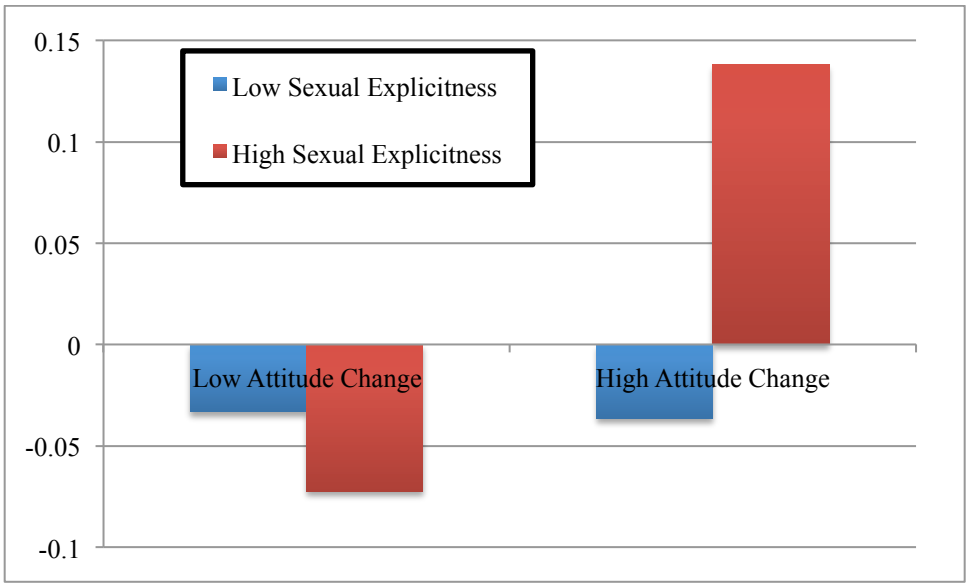

Figure 10 – Anger (controlling for disgust and sexual prejudice) as a function of sexual explicitness and attitude change

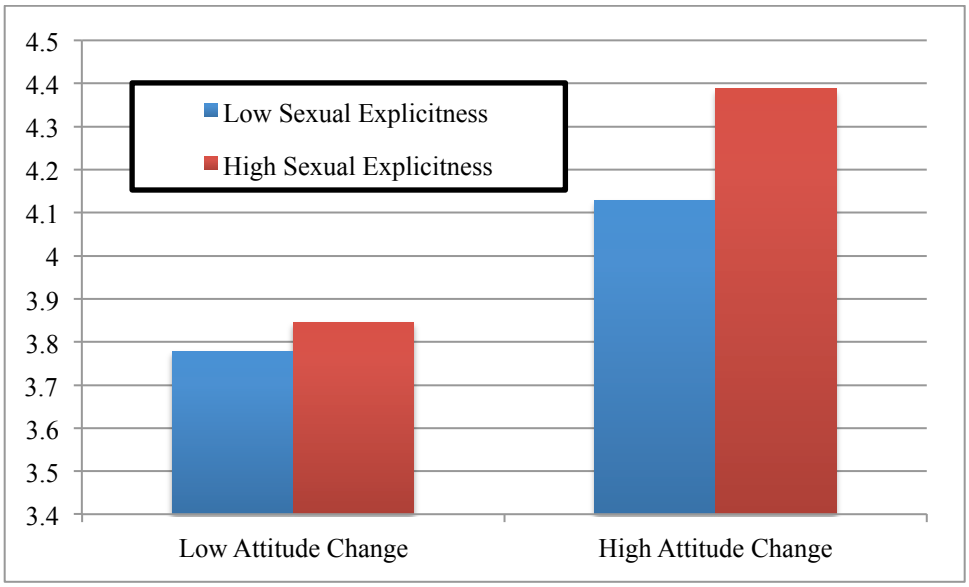

Figure 11 – Punishment tendencies (controlling for sexual prejudice) as a function of sexual explicitness and attitude change

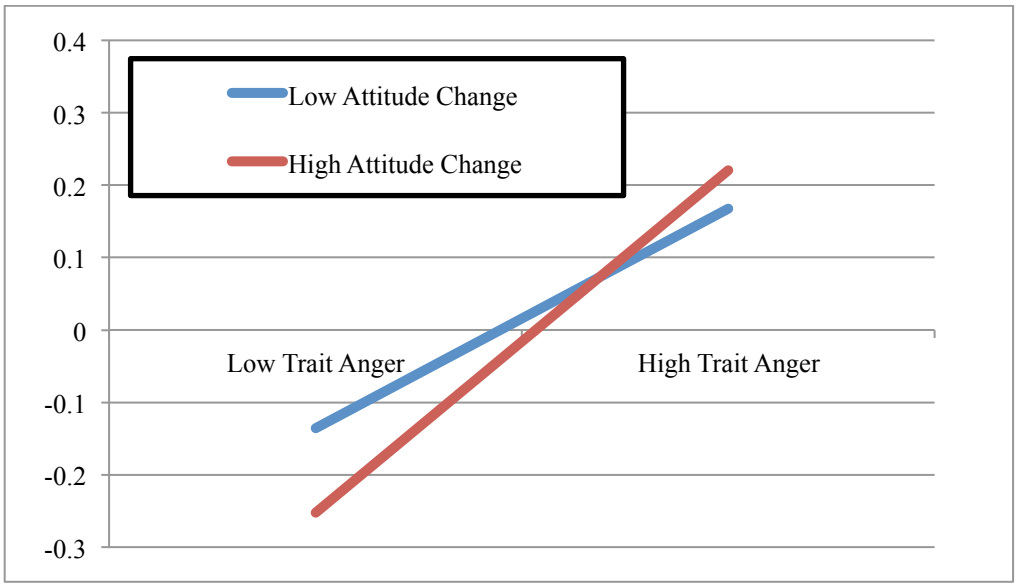

Figure 12 – Attitude change by trait anger interaction predicting anger

Note. Predicted values are plotted one standard deviation above and below the mean for Trait Anger.

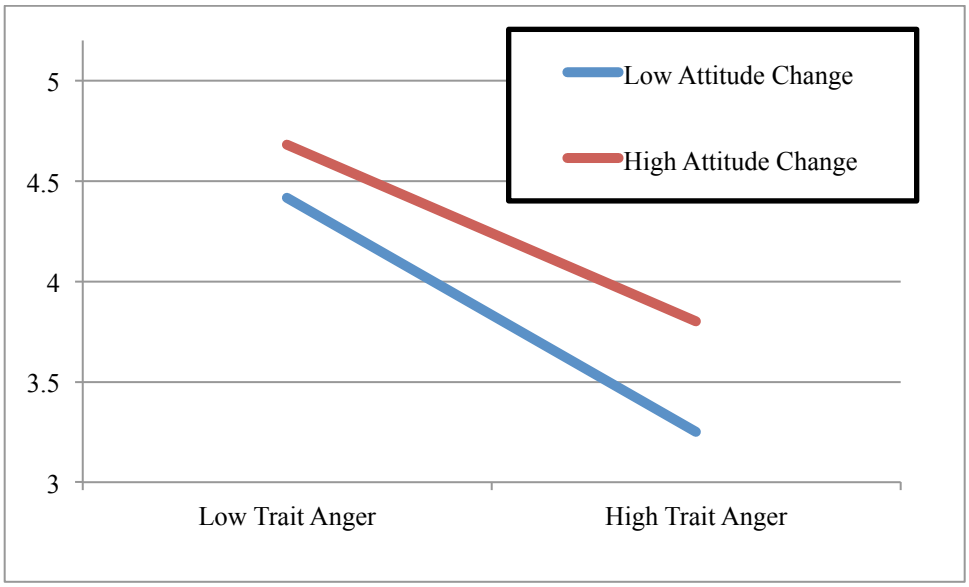

Figure 13 – Attitude change by trait anger interaction predicting punishment tendencies

Note. Predicted values are plotted one standard deviation above and below the mean for Trait Anger.

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Appendices

Appendix A – Study 1 Experimental Manipulation & Manipulation Check

[Instructions for all participants]

In the next task, we are interested in studying people's memories for certain types of events. Therefore, you'll be asked to recall a specific type of event and then to describe it as vividly and in as much detail as possible using the paper and pencil provided by the experimenter.

To help get you in the frame of mind to remember certain types of events, you will first see a brief slideshow of three images related to the type of event you will be asked to describe. Please view these slides carefully. You will be told when to recall an event from memory and when to begin describing it in writing. You'll have a few minutes to work on this writing task before you proceed to other tasks. We don't expect you to have finished writing before the time period elapses. Rather, you'll be asked to continue describing this event at different times in the experiment. Please pick up roughly where you ended your description the last time.

[The following instructions are only for Ps in the DISGUST CONDITION]

We would like you to recall and describe a time that you were VERY DISGUSTED because you saw or came into contact with something that was disgusting. To help get you into the appropriate frame of mind, you will see a brief slideshow of disgusting substances or events (e.g., roaches, vomit, feces). The three slides will repeat twice.

[At this point participants will be shown shown 3 disgusting images.]

Now please think of a time that YOU were VERY DISGUSTED. When you have recalled this memory, focus on it so that you have a vivid impression of the events involved. Take a minute to experience the feelings that you felt at that time. Once you have done this, please describe the memory in as much detail as you can. Remember, you probably won't have time to finish the description right now, but we will return to this task later in the experiment. When you have a specific memory in mind and you are READY TO START WRITING, press the "5" key.

**

[The following instructions are only for Ps in the ANGRY CONDITION]

We would like you to recall and describe a time that you were VERY ANGRY. To help get you into the appropriate frame of mind, you will see a brief slideshow of anger provoking situations. The three slides will repeat twice.

[At this point participants will be shown 3 images of angry individuals.]

Now please think of a time that YOU were VERY ANGRY. When you have recalled this memory, focus on it so that you have a vivid impression of the events involved. Take a minute to experience the feelings that you felt at that time. Once you have done this, please describe the memory in as much detail as you can. Remember, you probably won't have time to finish the description right now, but we will return to this task later in the experiment. When you

have a specific memory in mind and you are READY TO START WRITING, press the "5" key.
**

[The following instructions are only for Ps in the CONTROL CONDITION]

We would like you to recall and describe your DORM ROOM OR APARTMENT. To help get you into the appropriate frame of mind, you will see a brief slideshow of household items. The three slides will repeat twice.

[At this point participants will be shown 3 images of household objects.]

Now please think of your DORM ROOM OR APARTMENT. When you have recalled this memory, focus on it so that you have a vivid picture of the place where you live. Once you have done this, please describe the room or rooms in as much detail as you can. Remember, you probably won't have time to finish the description right now, but we will return to this task later in the experiment. When you have a specific memory in mind and you are READY TO START WRITING, press the "5" key.

For each emotion below, please circle one number to indicate how **strongly you feel that way right now**.

	Not at all		**A little**		**Somewhat**		**Very**	
Angry	1	2	3	4	5	6	7	8
Compassionate	1	2	3	4	5	6	7	8
Contempt	1	2	3	4	5	6	7	8
Depressed	1	2	3	4	5	6	7	8
Disgusted	1	2	3	4	5	6	7	8
Grossed-out	1	2	3	4	5	6	7	8
Happy	1	2	3	4	5	6	7	8
Infuriated	1	2	3	4	5	6	7	8
Outraged	1	2	3	4	5	6	7	8
Pity	1	2	3	4	5	6	7	8
Pleased	1	2	3	4	5	6	7	8
Repulsed	1	2	3	4	5	6	7	8
Satisfied	1	2	3	4	5	6	7	8
Sickened	1	2	3	4	5	6	7	8
Sympathetic	1	2	3	4	5	6	7	8

Appendix B – Study 1 Dependent Measures

For the next set of questions, we are going to ask you about your feelings and attitudes about **politically active gay men**/**sexually active gay men**/**wealthy Americans**/**the elderly**.

Harm & Influence

1. To what extent do **sexually-active gay men** pose a threat to mainstream American values?

Do not at all threaten	1	2	3	4	5	6	7	Threaten very much

2. To what extent do **sexually-active gay men** hold values inconsistent with those of mainstream Americans?

Not at all inconsistent	1	2	3	4	5	6	7	Very inconsistent

3. To what extent do **sexually-active gay men** try to change the attitudes of impressionable people?

Do not at all endanger	1	2	3	4	5	6	7	Endanger very much

4. To what extent is the behavior of **sexually-active gay men** harmful to anyone other than themselves?

Not at all harmful	1	2	3	4	5	6	7	Very harmful

5. To what extent is the behavior of **sexually-active gay men** harmful to society in general?

Not at all harmful	1	2	3	4	5	6	7	Very harmful

Contamination & Abnormality

6. To what extent could the behavior of **sexually-active gay men** contaminate others (i.e., make other people sick or pollute their souls)?

Does not contaminate at all	1	2	3	4	5	6	7	Contaminates very much

7. To what extent could the behavior of **sexually-active gay men** contaminate themselves (i.e., make themselves sick or pollute their souls)?

Does not contaminate at all	1	2	3	4	5	6	7	Contaminates very much

8. To what extent does the behavior of **sexually-active gay men** violate the laws of nature?

Does not violate at all	1	2	3	4	5	6	7 Violates very much

9. To what extent is the behavior of **sexually-active gay men** abnormal in modern American society?

Not at all abnormal	1	2	3	4	5	6	7 Very abnormal

10. To what extent do **sexually-active gay men** use their body in an abnormal way?

Not at all abnormal	1	2	3	4	5	6	7 Very abnormal

Moral Judgment

11. How wrong do you think the behavior of **sexually-active gay men** is?

Not at all wrong	1	2	3	4	5	6	7 Very wrong

12. How offensive do you think the behavior of **sexually-active gay men** is?

Not at all offensive	1	2	3	4	5	6	7 Very offensive

Appendix C – Study 1 Demographic Questions

Please take a moment to answer the following questions.

1. What is your age? _____

2. What is your racial/ethnic heritage?
   A. White/Anglo or European American
   B. Black/African American, Caribbean
   C. Asian, Asian American, Pacific Islander
   D. Hispanic/Latino(a)
   E. Native American
   F. Arabic/Middle Eastern
   G. Bi-racial _____
   H. Other _____

3. What is your gender? Male:_____ Female:_____

4. What is your year in college? 1 2 3 4 5 6 or more

5. Please circle the number from the scale below that best describes your sexual orientation:

Exclusively heterosexual (straight)	1	2	3	4	5	6	7	Exclusively homosexual (gay)

Appendix D – Study 2 Experimental Manipulation

You are participating in a study of news, memory, and judgment. You are going to read an article that appeared in a recent edition of the New York Times Sunday Magazine. Please read the article carefully and answer the questions that followed. You will be paid $0.25 for your participation. If you answer the final question correctly, you will receive a $0.15 bonus.

The Rise of Gay, Inc.

Mark Weaver may well be the most famous gay man you've never heard of. He's both agent and activist in Hollywood, respected for avoiding drama, staying out of the spotlight, and fighting passionately for actors and causes.

When a producer is looking for a gay or lesbian actor—not all heterosexual actors are willing to "play gay for pay"—it's Mark Weaver they seek first. As the owner and CEO of Select Talent Agency, Weaver is agent to many of the hottest and most successful actors in Hollywood. But where Weaver really works his magic is when producers come looking for a straight actor. "I've created three lesbian and gay characters currently on television," he explains. "When the producers knocked on my door, they wanted a heterosexual actor to play a heterosexual role. By the time they left, I'd convinced them that a gay character was the better way to go."

Network sources, speaking on condition of anonymity, confirmed Weaver's story. In one case, management even debated and decided against casting a gay character, for fear of losing viewers in a key demographic group. But when word got to Mark Weaver, things changed. "He wasn't even contacted to help with casting," one source explains. "He somehow found out about our deliberations and pounded down the door."

"Persistent to the point of aggravating" was how another put it.

Weaver, who lives in a four-bedroom house in West Hollywood, has ambitions beyond representing actors. "I want to change the world," he says as he sips champagne at the exclusive BLT restaurant in West Hollywood. And change the world he may: Weaver wants to transform how Americans see and understand LGBT people.

Efforts by Weaver and his allies to get gay and lesbian characters on mainstream television have seen great success over the last five years. Comedies, dramas, soap operas, adult characters, teenagers – even gay preteens are depicted in prime time shows. Bucking their own trend, ABC Family has an openly lesbian character, casting Shay Mitchell as teenager Emily Fields on *Pretty Little Liars*.

Low sexually explicit
The increase in gay characters has been accompanied by a remarkable increase in the depiction of gay relationships. "We initially got a lot of resistance to the idea of same-sex couples, but I was able to convince the networks," Weaver explained. Whether it's a gay male couple buying a house together, or a lesbian couple raising a child, Weaver pushed until he got producers to show same-sex couples doing the same things as heterosexual couples.

High sexually explicit
The increase in gay characters has been accompanied by a remarkable increase in the depiction of gay relationships. "We initially got a lot of resistance to the idea of same-sex love scenes, but I was able to convince the networks," Weaver explained.

Whether it's a gay male couple making love in the shower, or a lesbian couple having sex in the bedroom, Weaver pushed until he got producers to show same-sex couples doing the same things as heterosexual couples.

Low attitude change
Social scientist Jo-Ellen Smith at Pew has found little evidence that Weaver's strategy is working. "We've long seen trends toward increasing acceptance of sexual minorities," she explains. "But LGBT characters on TV have nothing to do with these trends." According to Dr. Smith's research, rises in support for LGBT Americans do not coincide with the emergence of sexual minority TV characters. "Some of the biggest increases in acceptance happened before the recent rise in gay and lesbian characters. Certainly, acceptance had increased almost to current levels before Weaver even opened his agency."

When asked why Weaver's strategy isn't having the impact he hopes, Smith speaks matter-of-factly. "There have always been activists, and there will always be activists," she says. "But it is rare for any group of activists to directly impact the beliefs of so many. Americans aren't as susceptible to media influence as some would believe. If attitudes toward LGBT persons are going to change in this country, they will change regardless of the actions of Weaver and others like him, not because of them."

High attitude change
Social scientist Jo-Ellen Smith at Pew has found strong evidence that Weaver's strategy is working. "We've long seen trends toward increasing acceptance of sexual minorities," she explains. "But something dramatic has happened over the last five years." According to Dr. Smith's research, rises in support for LGBT Americans coincide directly with the sudden emergence of sexual minority characters on mainstream television. "Some of the biggest increases in acceptance directly trailed the recent rise in gay and lesbian characters. Certainly, acceptance has increased substantially since Weaver first opened his agency."

When asked why Weaver's strategy is having such a large impact, Smith speaks matter-of-factly. "There have always been activists, and there will always be activists," she says. "But it is rare for any group of activists to have the platform that Weaver and his allies have. The influence of gay activists in Hollywood and the media is tremendous, and when so many Americans get exposed to so many positive LGBT role models on television, attitudes toward LGBT persons in this country become more accepting."

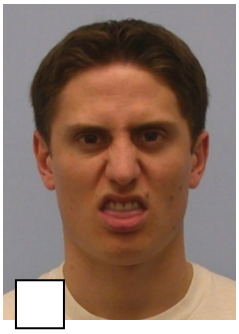
Either way, Weaver isn't stopping any time soon. "We've only begun," Weaver promises.

Appendix E – Study 2 Dependent Measures

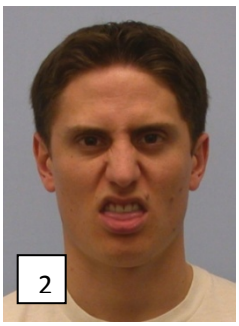
For each of these feelings and emotions, circle the number in each row that corresponds to how much this newspaper article makes you feel that emotion.

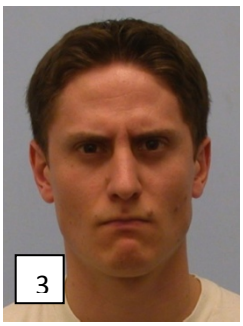
	Not at all			**A little**		**Somewhat**		**Very**
Angry	1	2	3	4	5	6	7	8
Compassionate	1	2	3	4	5	6	7	8
Depressed	1	2	3	4	5	6	7	8
Disdain	1	2	3	4	5	6	7	8
Disgusted	1	2	3	4	5	6	7	8
Grossed-out	1	2	3	4	5	6	7	8
Happy	1	2	3	4	5	6	7	8
Infuriated	1	2	3	4	5	6	7	8
Outraged	1	2	3	4	5	6	7	8
Pity	1	2	3	4	5	6	7	8
Pleased	1	2	3	4	5	6	7	8
Repulsed	1	2	3	4	5	6	7	8
Sad	1	2	3	4	5	6	7	8
Satisfied	1	2	3	4	5	6	7	8
Sickened	1	2	3	4	5	6	7	8
Sorrowful	1	2	3	4	5	6	7	8

Which of the faces below *best* reflects your reaction to this newspaper article? Select the face that best reflects your reaction to this newspaper article by placing an 'X' in *one* of the four white boxes, or "None of these" if that is the case.



None of these faces reflects my reaction





1. How much does this newspaper article make you feel like the person in picture #1?

1 2 3 4 5 6 7

Not at all Very much

2. How much does this newspaper article make you feel like the person in picture #2?

1 2 3 4 5 6 7

Not at all Very much

3. How much does this newspaper article make you feel like the person in picture #3?

1 2 3 4 5 6 7

Not at all Very much

Harm & Influence

1. To what extent do **activists such as Mark Weaver** pose a threat to mainstream American values?

1 2 3 4 5 6 7

Not at all Very much

2. To what extent do **activists such as Mark Weaver** hold values inconsistent with those of mainstream Americans?

1 2 3 4 5 6 7

Not at all Very much

3. To what extent do **activists such as Mark Weaver** try to change the attitudes of impressionable people?

1 2 3 4 5 6 7

Not at all Very much

4. To what extent is the behavior of **activists such as Mark Weaver** harmful to anyone other than themselves?

1 2 3 4 5 6 7

Not at all Very much

5. To what extent is the behavior of **activists such as Mark Weaver** harmful to society in general?

1 2 3 4 5 6 7

Not at all Very much

Contamination & Abnormality

6. To what extent could the behavior of **activists such as Mark Weaver** contaminate others (i.e., make other people sick or pollute their souls)?

1 2 3 4 5 6 7
Not at all Very much

7. To what extent could the behavior of **activists such as Mark Weaver** contaminate themselves (i.e., make themselves sick or pollute their souls)?

1 2 3 4 5 6 7
Not at all Very much

8. To what extent does the behavior of **activists such as Mark Weaver** violate the laws of nature?

1 2 3 4 5 6 7
Not at all Very much

9. To what extent is the behavior of **activists such as Mark Weaver** abnormal in modern American society?

1 2 3 4 5 6 7
Not at all Very much

Action Tendencies

10. To what extent might people desire to punish **activists such as Mark Weaver**?

1 2 3 4 5 6 7
Not at all Very much

11. To what extent might people want to avoid **activists such as Mark Weaver**?

1 2 3 4 5 6 7
Not at all Very much

12. To what extent might people want to retaliate against **activists such as Mark Weaver**?

1 2 3 4 5 6 7
Not at all Very much

13. To what extent might people want to keep distance between themselves and **activists such as Mark Weaver**?

1 2 3 4 5 6 7
Not at all Very much

14. To what extent did the newspaper story you read contain references to sex and/or sexual behaviors?

1 2 3 4 5 6 7
Not at all Very much

15. According to the article you read, to what extent is Mark Weaver responsible for recent changes in people's attitudes toward homosexuality?

1	2	3	4	5	6	7
Not at all						Very much

16. To what extent did the scenario you read contain references to sex and/or sexual behaviors?

1	2	3	4	5	6	7
Not at all						Very much

17. To what extent did people in the scenario you read develop more positive attitudes toward homosexuality?

1	2	3	4	5	6	7
Not at all						Very much

Bonus Question

18. Has Mark Weaver ever convinced a producer to change a straight character to a gay character?

Yes No

Appendix F – Study 2 Demographic Questions

Please take a moment to answer the following questions.

1. What is your age? _____

2. What is your racial/ethnic heritage?
   A. White/Anglo or European American
   B. Black/African American, Caribbean
   C. Asian, Asian American, Pacific Islander
   D. Hispanic/Latino(a)
   E. Native American
   F. Arabic/Middle Eastern
   G. Bi-racial _____
   H. Other _____

3. What is your gender? Male:_____ Female:_____

4. Please circle the number from the scale below that best describes your sexual orientation:

Exclusively heterosexual (straight)	1	2	3	4	5	6	7	Exclusively homosexual (gay)

Appendix G – Study 1 IRB Approval Letter

USF
UNIVERSITY OF
SOUTH FLORIDA

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

March 13, 2012

Timothy Caswell, M.A.
Psychology, PCD 4118G
4202 East Fowler Avenue
Tampa, FL 33620

RE: **Expedited Approval** for Initial Review
IRB#: Pro00007258
Title: The Harm of Influence: Anger and Sexual Prejudice

Dear Mr. Caswell:

On 3/11/2012 the Institutional Review Board (IRB) reviewed and **APPROVED** the above referenced protocol. Please note that your approval for this study will expire on 3/11/2013.

Approved Items:
Protocol Document:
Protocol.docx

Consent/Assent Document:
Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117 (c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) that the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) that the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural

beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John A Schinka, Ph.D.

John A. Schinka, Ph.D., Chairperson
USF Institutional Review Board

Appendix H – Study 2 IRB Approval Letter

USF
UNIVERSITY OF SOUTH FLORIDA

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 336124799
(813) 974-5638 • FAX (813) 974-5618

May 24, 2012

Timothy Caswell
Psychology
Psychology Department
4202 East Fowler Avenue, PCD 4118G

RE: **Expedited Approval** for Initial Review
IRB#: Pro00007483
Title: The Harm of Influence II: Anger and Sexual Prejudice

Dear Timothy Caswell:

On 5/24/2012 the Institutional Review Board (IRB) reviewed and **APPROVED** the above referenced protocol**.** Please note that your approval for this study will expire on 5/24/2013.

Approved Items:
Protocol Document(s):

Protocol.docx	5/4/2012 3:29 PM	0.02

Consent/Assent Documents:

Name	Modified	Version
Waiver of Informed Consent Documentation on the Adult ICF		

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at **45 CFR 46.117 (c):** An IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John A Schinka, Ph.D.

John Schinka, PhD, Chairperson
USF Institutional Review Board

Cc: Various Menzel, CCRP
USF IRB Professional Staff