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Determinants of Group Perpetrated Violence Based on Sexual Orientation

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by

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ABSTRACT

The purpose of this study was to examine group perpetrated antigay violence. Specifically, the effects of MGRS, peer dynamics, and increases in negative affect on antigay aggression were examined. The differential utility of aggression toward gay and heterosexual targets in relieving a state of negative affect (e.g., anger, fear) was also evaluated. Participants completed questionnaires that included a measure of MGRS, and then were assigned to one of three group conditions (individual, stranger, and friend). Participants then viewed a video depicting male-male intimacy and competed in the TAP against either a fictitious gay or heterosexual opponent. Results showed a main effect for condition, such that higher levels of aggression were observed in the group, relative to the individual, conditions. Analyses also revealed a significant positive relation between MGRS and aggression among participants competing with a stranger against a heterosexual opponent. Neither condition nor opponent differentially predicted changes in negative affect.

INDEX WORDS: Aggression, Violence, Hate crimes, Antigay violence, GLBT studies, Group aggression, Masculine gender role stress, Masculinity, Gender roles

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This manuscript is dedicated to all those who have been victims of antigay violence.

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INTRODUCTION

Persecution based on sexual orientation is a nearly universal experience for young gay men and lesbians, with 91% of a national survey reporting hearing frequent antigay remarks at school (GLASEN, 2001). Violence perpetrated against gay men and lesbians continues to be a significant public health issue, as recent data indicate that antigay assaults and murders have failed to significantly decline in recent years despite increased public attention to the problem (NCAVP, 1998-2006). It is particularly disturbing when one considers that victims of antigay assaults are less likely to report these crimes to law enforcement when compared to victims of other hate motivated crimes (Dunbar, 2006; Herek, Gillis, & Cogan, 1999; NCAVP, 2003), especially as crimes become more violent (Dunbar, 2006). Although violent hate crimes (e.g., murder, rape, and assault) garner the majority of media attention, these crimes are just the "tip of the iceberg." Estimates suggest that countless cases of antigay intimidation, discrimination, and verbal harassment likely occur every day, yet go unreported (NCAVP, 2005). Indeed, the true extent of the problem is largely unknown.

Data suggest that the detrimental effects of antigay violence on members of the GLBTQ community are quite severe. For instance, an extensive survey study found that gay and lesbian victims of hate crimes experienced more symptoms of depression, anger, anxiety, and posttraumatic stress in comparison to victims of nonbiased crimes (Herek et al., 1999). In addition, Dunbar (2006) reported that victims of hate crimes based on sexual orientation suffered a greater severity of violence and experienced more detrimental personal effects than victims of other bias motivated crimes.

Reviews of case reports provide a disturbing insight into the severity of antigay violence in our society. For example, assailants slit Billy Jack Gaither's throat, beat him unconscious

with an axe handle, and then burned him on top of a tire fire. One of the men convicted of the murder, Charles Monroe Butler, stated that his involvement in the crime was due to the fact that Billy Jack disrespected him by hitting on him (PBS, 1999). There is also the case of Private Barry Winchell, who dated a transsexual and endured months of antigay verbal abuse that culminated in his being beaten to death with a baseball bat while he slept (Hackett, 2000). When a group of four men assaulted James Maestas in 2005, they kicked him in the stomach so hard that food came back up his throat, entered his lungs, and the hydrochloric acid badly burned his lung tissue. The men continuously shouted "faggots" throughout the assault (AP, 2005).

Oftentimes just the verbal threat of physical aggression can have detrimental effects to the victim. Derek Henkle was so routinely harassed and threatened from middle school through his first year of high school that he dropped out because he feared for his life (PBS, 1999). Unfortunately, such recurrent verbal abuse is frequently perpetrated in an environment that either encourages or implicitly allows such behavior. For example, Henkle kept a log of harassment reports that he brought to his principal daily, yet he was left unsupported (PBS, 1999). It was clear to Winchell's superiors and comrades that he was a daily victim of antigay verbal abuse, and this knowledge did nothing to stem the harassment (Hackett, 2000).

Characteristics of the Perpetrators and Victims of Antigay Violence

Extant literature has shown that the vast majority of antigay assaults are committed by young men. For example, the National Coalition of Anti-Violence Programs (NCAVP, 2006) reported that amongst offenders whose gender could be determined, 87% were men. In addition, these men were far more likely to be strangers to the victim than to be involved with the victim in an interpersonal relationship (NCAVP, 2006).

Evidence from victims suggests that men are the most frequent targets of antigay aggression (NCAVP, 2006). Gay men who present themselves in an effeminate manner are particularly at risk. For example, Harry (1982) reported that gay men who described themselves as "a little feminine" or "very feminine" were twice as likely to report experiences of gay-bashing than other gay men.

Individually Perpetrated Antigay Aggression

Unfortunately, very little research has been conducted on the perpetrators of antigay violence. The few studies in this area, as well as the vast majority of studies on aggression in general, have examined the behavior of individual perpetrators. This literature has identified multiple dispositional variables that predict higher levels of antigay aggression.

Psychopathy. Survey data indicates that men who were assessed as having antisocial and psychopathic personality traits by the Minnesota Multiphasic Personality Inventory (MMPI) were more likely to report a higher frequency of past antigay behavior (Patel, Long, McCammon, & Wuensch, 1995). Data from laboratory-based studies are consistent with this finding. Specifically, Parrott and Zeichner (2006) found that psychopathy was positively related to physical aggression toward a gay, but not a heterosexual, male. While more research is needed in this area, these data suggest that psychopathy is an important risk factor for antigay aggression.

Hypermasculinity. Hypermasculinity can be defined as an excessive identification with and endorsement of the masculine gender role (Mosher & Sirkin, 1984). Laboratory research has shown a link between hypermasculinity and increases in anger when men are exposed to male-male erotica, relative to male-female, erotica (Parrott & Zeichner, 2008). In addition, following exposure to male-male intimate relationship behavior (i.e., male-male erotica),

hypermasculinity has been shown to predict physical aggression toward a gay, but not a heterosexual, man (Parrott & Zeichner, 2008). Relatedly, survey data collected by Whitley (2001) showed a positive relationship between hypermasculinity and self-reported perpetration of antigay behaviors. Again, while more research is needed in this area, extreme adherence to traditional masculine gender roles (i.e., hypermasculinity) appears to be an important determinant of antigay aggression.

Sexual Prejudice. In the social science literature, use of the term homophobia has decreased in recent years. This is partly due to the fact that a number of prominent social psychologists have repeatedly insisted that the motivation for antigay persecution is not usually rooted in one's fear of gay people or repressed homosexual intentions. In accordance with this view, Logan (1996) showed that typical responses to gay men and lesbians were more indicative of prejudice (e.g., hostility, anger) than a traditional phobic reaction. She concluded that the term homophobia should only be used in reference to the rare individuals who exhibit a true phobic response to gay men and lesbians.

Thus, Herek (2000) has proposed a relatively new term labeled sexual prejudice. Herek (2000) defined sexual prejudice as "all negative attitudes based on sexual orientation" (pg. 19), although the term is usually used in reference to heterosexuals' negative attitudes towards gay men and lesbians. Multiple laboratory studies have demonstrated a link between sexual prejudice and antigay aggression (Bernat, Calhoun, Adams, & Zeichner, 2001; Parrott & Zeichner, 2005). In these studies, when sexually prejudiced men were exposed to a depiction of male-male intimate relationship behaviors, they experienced more anger and exhibited more aggression against a gay opponent, relative to a heterosexual male opponent, than their non-prejudiced counterparts. Despite these findings, the field still lacks sufficient research to explain

the way in which sexual prejudice develops and the mechanisms that link sexual prejudice and antigay aggression (Herek, 2000, 2004).

Experimental Research on Group Aggression

Surprisingly, relative to the hundreds of laboratory studies on individual aggression, there have been few experimental based studies focused on group perpetrated aggression. Nevertheless, certain hypotheses can be advanced to explain the manner in which individuals and groups may differentially display aggressive behavior. Research on group aggression has generally shown that groups react more aggressively when provoked than do individuals (Jaffe & Yinon, 1979; Meier & Hinsz, 2004). Jaffe and Yinon (1979) proposed that this increase in aggression may be, at least in part, due to social modeling. That is, when group members are required to make a decision about the level of aggression they will engage in, the most likely choice may be to surrender to the most aggressive member. Consistent with this hypothesis, Jaffe and Yinon (1979) found that when groups of three participants were asked to arrive at a decision regarding the level of aggression that they would engage in, surrendering to the most aggressive member (37%) was as common as using an average rule (22%) or surrendering to the least aggressive member (16%) combined (the remaining participants used a majority rule or were all in agreement). Meier & Hinsz (2004) suggested that individuals in a group are more aggressive due to group polarization, or the strengthening of a group's dominant behavioral tendency following group discussion. Indeed, data suggest that individuals who already possess an inclination to aggress are more likely to do so in a group (Meier & Hinsz, 2004).

Unfortunately, the validity of the experimental paradigms used in these experiments is somewhat suspect. For example, Jaffe and Yinon (1979) used the "teacher-learner" paradigm associated with the Buss aggression machine (Buss, 1961). In this design, the confederate (i.e.,

the "learner") and the participant (i.e., the "teacher") are presented with a series of lights numbered 1-4. The confederate is then instructed to press an "A" or "B" switch. The confederate is ostensibly supposed to learn that he should press the "A" switch if a light in the experiment is lit and "B" if it is not lit. Participants are then instructed to assist the confederate in learning the task by administering electrical shocks to him. Thus, aggression is operationalized as the average shock intensity chosen by the individual or group. One criticism of this paradigm is that it may reflect altruistic, rather than hostile, motivations (Baron & Eggleston, 1972). In light of these criticisms, this paradigm is rarely, if ever used in aggression research (Giancola & Chermack, 1998).

In their investigation of group perpetrated aggression, Meier & Hinsz (2004) used the "hot sauce paradigm" (Lieberman, Solomon, Greenberg, & McGregor, 1999). In this paradigm, participants are told that they will taste and rate a variety of hot sauces. They are also informed that experimenters must remain blind to which brands of hot sauce were being tested. As such, participants are required to administer hot sauce for other participants to consume. Aggression is thus operationalized as the amount of hot sauce allocated by the participant for a target to consume. Unfortunately, very little research exists that supports the validity of this paradigm as a measure of aggressive behavior.

In contrast to these two paradigms, the Taylor Aggression Paradigm (TAP) represents the "gold standard" for assessing physical aggression in the laboratory. This paradigm, which involves the administration and receipt of electric shocks to and from an ostensible opponent, was created in response to the many criticisms of the teacher-learner paradigm. In addition, it is far more extensively validated (see below) than the "hot sauce paradigm" (Bernstein, Richardson, & Hammock, 1987; Giancola & Chermack, 1998; Pedersen, Aviles, Ito, Miller, &

Pollock, 2002). However, this paradigm has yet to be employed to assess group perpetrated aggression in the laboratory.

Finally, the few lab based studies that have empirically examined aspects of group aggression have not examined how the identity of the target may influence a perpetrator's behavior. Therefore, theoretical explanations for group aggression may differ greatly when the target of aggression is a member of a marginalized group (e.g., a gay man). Also, these studies lack ecological validity in that they are designed to give the group a choice about deciding on a single act of aggression. However, in actuality, while a group decision to instigate violence is undoubtedly made in some antigay attacks, assailants still aggress as individuals (e.g., they throw their own punch or hurl their own brick). Thus, new research must address these gaps in the literature by looking at the effects of a target's sexual orientation on the behavior of an individual within the context of a group.

Prevalence of Group Perpetrated Antigay Violence

Research shows that an alarming amount of antigay violence is committed by groups of men. These groups often consist of two or three offenders (NCAVP, 2006). In a large sample of college students, Franklin (2000) found that three quarters of the individuals who disclosed aggression against a gay individual reported doing so while in the context of a group. In addition, 29% of respondents had witnessed a male friend threaten to physically assault a gay man or lesbian and 7% had actually witnessed a male friend carry out an assault. These results are particularly disturbing when one considers that this latter sample held more liberal views towards homosexuality than the national norm. Likewise, data on antigay assaults collected by the NCAVP shows that nearly a third of reported cases were perpetrated by groups (NCAVP, 1998-2006). The discrepancy between these two estimates may be explained by examining the

respondents from whom the data was collected. Specifically, Franklin (2000) surveyed possible perpetrators, while the NCAVP (1998-2006) surveyed victims. Indeed, the NCAVP data are likely an underestimate, as they reflect a victims' readiness to disclose incidents and the availability of advocates to conduct outreach. Additional factors that may lead to underreporting include the victim's belief that attackers will go unpunished, misclassification of assaults by police, and the fact that a reliance on convenience samples collected in LGBT communities may fail to capture victims who were mistaken for gay individuals or those who are less open about their sexuality (NCAVP, 2003). Regardless of which of these two estimates is more accurate, these data clearly indicate that antigay violence committed by groups is a significant public health concern that has eluded adequate scientific investigation. Fortunately, multiple theories have been advanced that may elucidate why antigay violence is so often perpetrated by groups of young men.

The Fear of Femininity and the Fragility of Masculinity

One behavioral correlate of sexual prejudice that has received recent attention is the enforcement of gender and social norms (Franklin, 2004; Harry, 1990; Herek, 2000; Kimmel, Gergen, & Davis, 1997). Two aspects that are central to this idea are the fragility of masculinity and men's fear of appearing feminine or homosexual. Kimmel (1997) states that, we as a society, "think of manhood as a thing, a quality that one either has or doesn't have" (pg. 223). Men are expected to live up to an ideal of masculinity whose definition is grounded in the possession of power over other groups and the clear distinction between themselves and groups that are categorically different. The most important differentiation in this conceptualization is between masculinity and femininity. However, the roots of masculinity are not grounded in gender alone, as heterosexuality is also an integral part of this ideal (Herek, 1986). Thus, women

and gay men are both segregated and persecuted by heterosexual men as the non-masculine "other" (Franklin, 2000, 2004; Franklin & Herek, 1998; Kimmel, 2000; Kimmel et al., 1997; Kimmel & Mahler, 2003).

Thus, male gender norms and masculinity are dependent on contrasts. Kaufman (1997) has described masculinity as "terrifyingly fragile" because it only exists as an ideology. This ideology must be demonstrated through behavior. As such, men must continually "prove" their masculinity to those around them. By this rationale, men with the most fragile masculinity are likely to feel a powerful need to prove their masculinity more often and in more extreme ways, such as the use of violence.

The Importance of Groups in the Conceptualization of Antigay Violence

The literature reviewed thus far raises an important question: In what context do perpetrators of antigay violence most feel the need to prove or display their masculinity? Kimmel (2000) stated that men constantly watch and rank one another and then decide if an individual should be granted manhood status. Thus, it is not enough to prove manhood to one's self, it is perhaps more important to display one's manhood to another man or a group. Kimmel (2000) argued that men are not motivated by fear of gay men. Rather, they are motivated by fear of one another. More specifically, men fear that other men will emasculate them and show the world that they do not live up to society's ideal of how a man should think, behave, and feel. This fear causes men to exaggerate stereotypical masculine attributes in order to prove to others that they are indeed masculine. Men therefore are implicitly encouraged, even expected, to separate themselves from those who are unmanly, namely women and gay men.

The extreme example of exerting this separation is through the use of violence. Not surprisingly, violence is often viewed and rated as the most evident symbol of manhood

(Kimmel, 2000). More specifically, Kimmel and Mahler (2003) noted that all school shootings from 1982-2001 were committed by boys and that nearly all had been victims of "gay-baiting" (i.e., a severe challenge to their masculinity). Kimmel posited that the violent acts committed by school shooters are not motivated by psychopathology, but rather develop out of an over conformity to what is normally expected of a man: a violent reaction when his masculinity is threatened.

Thus, violence committed against women and gay men serves as a dramatized demonstration of one's manhood (Franklin, 2000, 2004; Franklin & Herek, 1998; Harry, 1990; Kimmel, 2000; Kimmel & Mahler, 2003). While some young men engage in legitimate forms of violence to assert their manhood (e.g., sports and fighting), these acts carry some risk in that the individual may lose a fight or a competition. In contrast, group perpetrated antigay violence presents a nearly risk free means of asserting one's manhood. Victims are unlikely to report perpetrators to the police, there is little possibility of losing, and the group setting provides an ideal forum to display direct visual evidence of an individual's heterosexuality to his peers (Harry, 1990).

Not surprisingly, Franklin (2000) identified *peer dynamics* as the most salient motivation for antigay behavior, accounting for three times more variance than *antigay ideology*. Similar to Herek's definition of *sexual prejudice,* Franklin operationally defined *antigay ideology* as "negative attitudes towards homosexuality such as disgust, hatred, religious and moral values, and the belief that homosexuals spread AIDS" (pg. 347). *Peer dynamics,* however, was classified as "the desire to feel closer to friends, to live up to friend's expectations, and to prove toughness and heterosexuality to friends" (pg. 347). Franklin (2004) later expanded on the idea of *peer dynamics* by describing antigay violence and group rape as participatory theatre. In

order to assert their masculinity, men ritualistically enforce gender role norms by persecuting the non-masculine "other" (i.e., women and gay men) through antigay violence and group rape. Thus, while perpetrators of antigay violence may endorse high levels of sexual prejudice, this factor alone does not seem to explain the majority of antigay aggressive behavior. Rather, men fear that an "unmanly" attitude or response to a gay person or behavior may lead to rejection and emasculation at the hands of their peer group.

It is clear that not all men define their masculinity through violence and persecution. To explain this observation, Kimmel and Mahler (2003) theorizes that some boys become resilient to the effects of gay-baiting because they develop a sense of self-value through skill in another area or interact regularly with an influential adult, girlfriend, or male friend who affirms their masculinity. What then is unique about male perpetrators of antigay violence? One possible explanation is that they experience a high level of stress related to their gender role that they are unable to manage by other means.

Definition and Theoretical Underpinnings of Masculine Gender Role Stress

A substantial amount of research points to the fact that the rigid nature of the male gender role can be problematic. Men may suffer negative health and social effects due to strict adherence to the masculine gender role (Eisler & Skidmore, 1987). In a review of this literature, Eisler and Skidmore (1988) point out that the differences in life expectancy and the prevalence of certain somatic diseases in men, as opposed to women, can be partially explained by exploring the relationship between gender roles and psychological stress.

To study this relation, Eisler and Skidmore (1987) defined the term masculine gender role stress (MGRS) as the "cognitive appraisal of specific situations as stressful for men" (pg. 125). They posit that men high on this dispositional variable will experience significantly more

stress than women in situations that require feminine behavior and thus violate the male gender role norm. It should be noted that MGRS is conceptually and empirically distinct from masculinity. While masculinity may have adaptive traits (e.g., assertiveness, self-confidence, autonomy), MGRS reflects aspects of the male gender role that are maladaptive, dysfunctional, and stressful.

MGRS has been empirically linked to distinct emotions that reflect the experience of stress (i.e., anger and fear) (Eisler et al., 1988; Moore & Stuart, 2004). High levels of MGRS have also been shown to be associated with behavioral habits that pose health risks (e.g., alcohol consumption, seat belt use) (Eisler et al., 1988). Likewise, when faced with a challenge to their masculine identity, men high in MGRS have been shown to exhibit increased arousal (i.e., systolic blood pressure) and impaired cognitive processing (i.e., more mistakes at serial subtraction) relative to men low in MGRS. When a challenge to masculine identity was not present, high and low MGRS men did not significantly differ on either of these measures.

High levels of MGRS have also been shown to predict higher levels of verbal aggression and negative intent attributions towards women in intimate conflict situations (Moore & Stuart, 2004). Likewise, when men with high, relative to low, levels of MGRS were exposed to audio vignettes of a female partner threatening their masculinity, they endorsed higher levels of verbal aggression and negative attributions against women and experienced more negative affect. (Franchina, Eisler, & Moore, 2001).

Thus, men who are predisposed toward rigid adherence to the male gender role may be driven to attack gay men due to the experience of, and inability to cope with, gender-related stress. It is posited that the negative affect associated with this predisposition is likely

exacerbated by the effect of *peer dynamics*. Committing an act of antigay aggression then serves to reaffirm or prove masculinity to a peer group (Franklin, 2004; Herek, 1986).

Gender Role Stress: A Link with Negative Affect

It is important then to not only show that masculinity is threatened when faced with a gender role violation, but also that it is restored through an aggressive act. Unfortunately, there is no empirically validated measure that assesses state gender role stress or the extent to which one's masculinity has been threatened. However, Eisler and Skidmore (1988) have argued that men who endorse a high level of MGRS experience increased anger and fear when faced with a situation that requires a violation of a strict male gender role norm. Research has provided evidence that discrete emotions (e.g., anger, fear), related cognitive processes, and aggressive behavior are linked within an associative network (Berkowitz, 1990; Berkowitz, Wyer, & Srull, 1993). Recent research with sexually prejudiced men indirectly supports this assertion. For example, Parrott et al. (2006) demonstrated that the experience of fear and fear best accounted for anger-related cognitive biases when sexually prejudiced men viewed male-male, but not male-female, erotica. Furthermore, Bernat et al. (2001) showed that among sexually prejudiced men, anxiety and fear predicted higher levels of aggression against a gay male opponent but not a heterosexual male opponent. Taken together, these data suggest that state negative affect (particularly anger and fear) is a sound indicator of stress among men exposed to gender role violations.

To date, the effects of MGRS and *peer dynamics* on antigay aggression have not been empirically tested. Moreover, the view that aggression against a non-masculine individual affirms masculinity to one's peers (i.e., reaffirmation of masculine identity theory) has not been empirically tested. This study attempted to address these gaps in the literature. In addition, an

overarching aim was to evaluate these effects within a broader heuristic framework for aggressive behavior. Please refer to Figure 1 for a graphical depiction of these hypotheses.

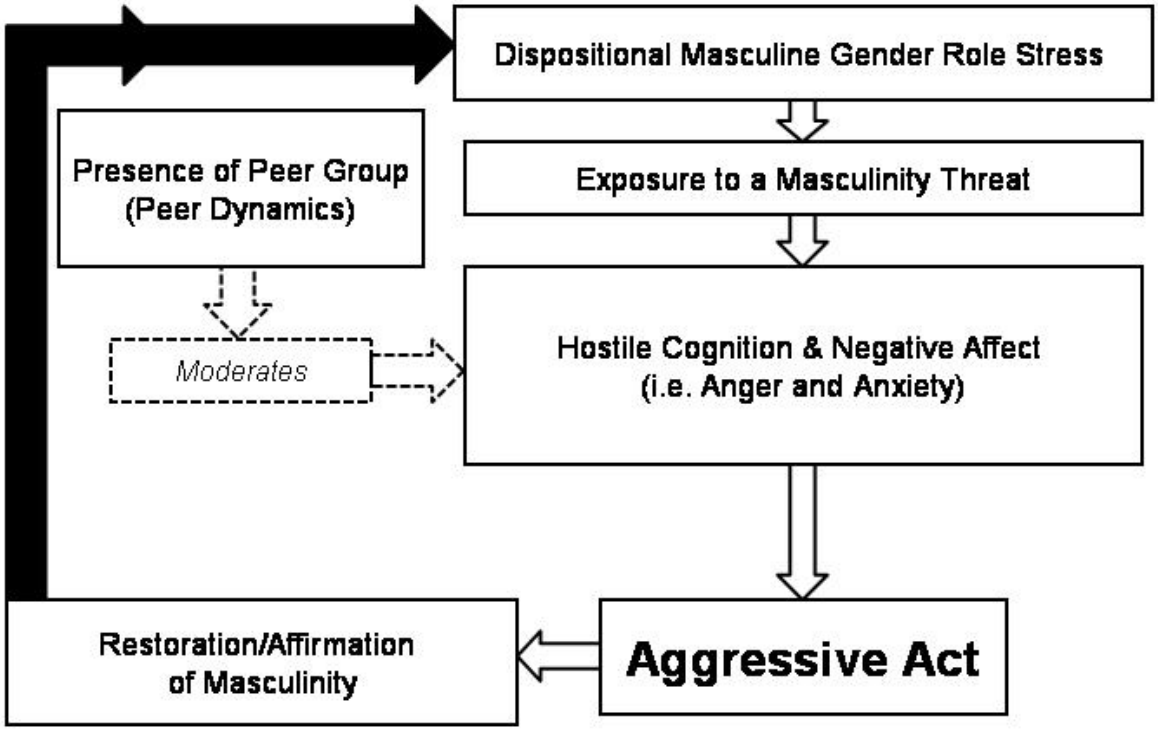

Figure 1. Conceptualizing the Relationship between Masculine Gender Role Stress and Antigay Aggression.

Application to the General Aggression Model (GAM)

Anderson and Bushman (2002) have successfully argued that a unifying theoretical framework is needed for the study of human aggression. Unfortunately, past research on antigay aggression has generally not been incorporated into such a system. Ideally, a symbiotic relationship could be formed between research on specific aspects of antigay aggressive behavior and a heuristic theory of aggressive behavior. Research on antigay aggression would thus contribute to a more global understanding of general aggressive behavior and, in turn, a broader

theory of aggression could advance our understanding of mechanisms that may lead to antigay violence.

In order to address this need, Anderson and Bushman (2002) proposed the General Aggression Model (GAM) and argued that it incorporates numerous advantages over smaller domain-specific theories of human aggression. For example, the GAM is more parsimonious than smaller domain-specific theories, provides a more complete understanding of aggressive acts that may have multiple motives, allows for the development of more effective intervention strategies for aggressive individuals, and "provides broader insights about child rearing and development issues" (pg. 33). Over the past decade, an abundance of studies have provided data in support of this model (Anderson, 1997; Anderson & Bushman, 2002; Anderson, Carnagey, & Miller, 2004; Anderson, Deuser, & DeNeve, 1995; Anderson & Huesman, 2003; Lindsay & Anderson, 2000)

The GAM can be separated into three levels: *inputs, routes,* and *outcomes*. *Inputs* describe biological, environmental, psychological, and social factors that contribute to aggressive acts. *Inputs* can be further subdivided into *person factors* (e.g., traits, sex, beliefs, attitudes, values, long-term goals, and scripts) and *situational factors* (e.g., aggressive cues, provocation, frustration, pain, incentives, and substance use). Thus, *inputs* are conditions that are already present in any given situation, whether they are internal or external to the individual. With respect to group perpetrated antigay violence, *person factors* may include MGRS, while *situational factors* may include *peer dynamics* and provocation. Though important, these input variables can only influence behavior through the activation of a *present internal state.*

Present internal state refers to the interactive effects of *cognition, affect, and arousal* on behavior. Input variables can increase the likelihood of an aggressive act through an individual's

c*ognition* by eliciting certain scripts and schemas. With respect to antigay violence, certain input variables (e.g., traditional gender role beliefs, MGRS) may heighten activation of gender-related scripts and schemas that facilitate aggression. For example, if an individual has a high dispositional level of MGRS, exposure to a gender role violation (e.g., gay relationship behaviors) in the presence of peers may elicit thoughts with a similar meaning (e.g., sissy, fag, unmanly). In turn, these thoughts are linked in memory to other cognitions (e.g., lack of acceptance, fear of ridicule, anger, prove I am not like that, harm, acceptance) that inform a response. The more these scripts and schemas are activated, the more easily accessible they will be in the future. Input variables may also activate an affective route to aggressive behavior (i.e., mood and emotion). Finally, increased *arousal* may influence aggression by energizing a behavioral tendency or by mislabeling the source of that arousal. In addition, abnormally high or low levels of arousal may be perceived as aversive states that incite aggression.

Ultimately, the behavioral *outcome* is a product of *appraisal and decision processes* and is dependent upon these present internal states. When the initial appraisal is deemed unimportant or an individual does not have time for reappraisal, an *impulsive action* may occur. However, if the outcome is initially appraised as unsatisfactory, or if an alternative view of the situation is deemed necessary, then an individual reappraises (perhaps multiple times) before a *thoughtful action* occurs. As outlined above, antigay aggression likely constitutes a *thoughtful action*. The outcome (e.g., restoration of masculinity, acceptance of peer group) is likely very important to the perpetrators. Anderson and Bushman (2002) point out that reappraisal may even increase the level of anger "as the damage to one's social image becomes more apparent" (pg. 41).

The GAM also includes a *social encounter* component that explains how an aggressive act may influence future behavior. There may be a long-term cumulative effect on aggression-related knowledge structures after repeated exposure to certain factors. Thus, if an individual repeatedly engages in antigay behaviors and is rewarded/accepted by his peer group, he is more likely to engage in that behavior in the future. For a graphical depiction of how the proposed study may be conceptualized with the GAM framework, refer to Figure 2.

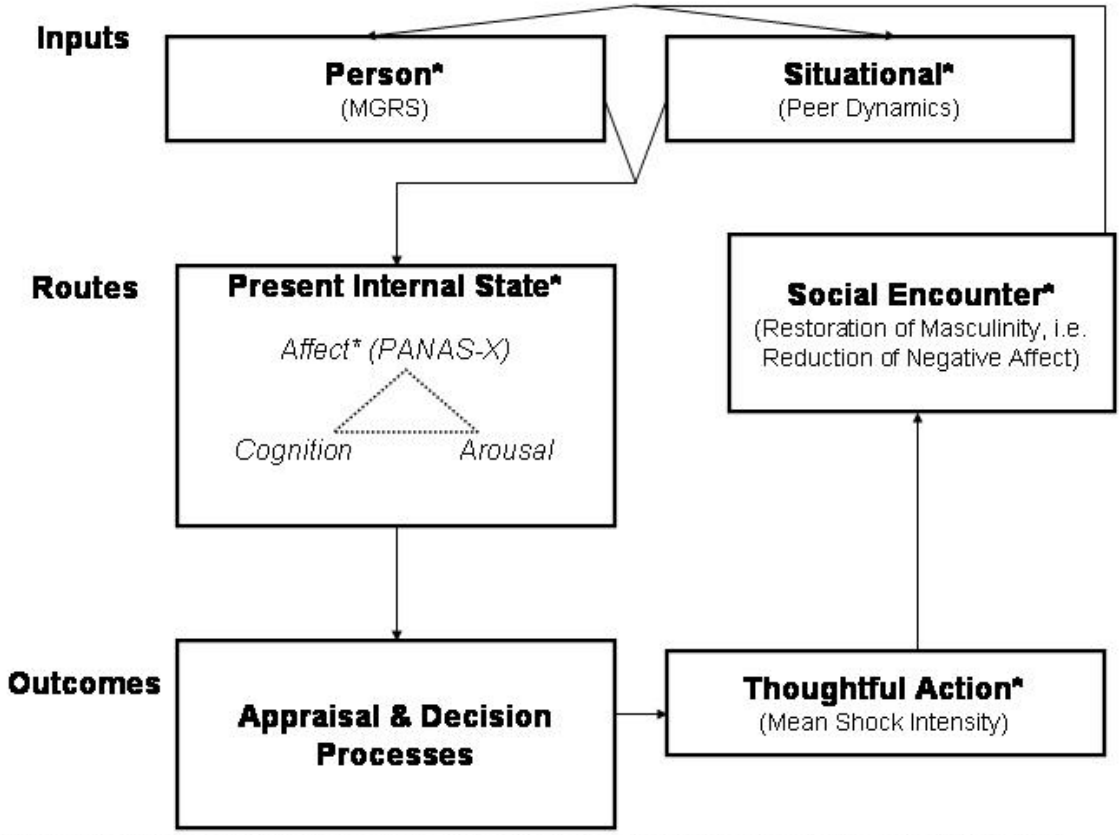

Figure 2. Application of Current Study to the General Aggression Model

The Importance of Laboratory Based Research

Survey based studies have been invaluable in directing research and providing an initial conceptual framework on group perpetrated antigay aggression. However, this methodology

limits researchers' ability to determine causal relationships between key variables (i.e., person or situational) and antigay aggression. In addition, it is not possible to directly manipulate pertinent variables and, as such, the internal validity of these designs is limited. On the other hand, laboratory designs allow for the control of possible extraneous variables (e.g., SES, dispositional aggressivity). In addition, laboratory designs allow for random assignment to conditions and permit direct control of the experimental variables of interest. This investigation attempted to bridge the gap between laboratory based studies on individual antigay aggression and survey research on group perpetrated antigay aggression.

Overview of the Proposed Study and Hypotheses

Recent survey data indicate that antigay violence is frequently perpetrated by groups of men and is a significant public health concern (Franklin, 2000; NCAVP, 2005). Given the sizable proportion of antigay assaults that are group perpetrated, it is surprising that no study to date has examined the factors that may portend these acts. Moreover, it is unknown how, or if, individually and group perpetrated antigay aggression are motivated by similar processes. Research is sorely needed to address these issues.

While it is likely that multiple factors influence an individual's decision to act aggressively towards a gay man, the literature suggests that one "chain of events" may be particularly salient. Specifically, an individual who exhibits a high level of MGRS may experience increased negative affect (i.e., anger and fear) when faced with a masculinity threat. Experience of negative affect is likely exacerbated by the presence of a male peer member (i.e., *peer dynamics*). In order to mitigate this experience, an individual may be more inclined to aggress against someone perceived to be feminine (i.e., a gay man) relative to someone

perceived to be masculine (i.e., a heterosexual man). This display of aggression functions to alleviate heightened negative affect and reaffirm an individual's masculinity.

The purpose of the proposed study was to empirically evaluate this hypothesized mechanism of antigay aggression. Participants were recruited for a two-part study. In Part 1, they completed a battery of self-report questionnaires. In Part 2, which occurred on a separate day, participants viewed a video that depicted male-male intimate relationship behaviors and then competed in the Taylor Aggression Paradigm (Taylor, 1967). Participants completed the TAP in one of three conditions (i.e., Individual, Stranger, and Friend) and against one of two opponents (i.e., heterosexual or gay male). Participants completed a measure of negative affect at three time periods: upon arrival to the lab, after viewing the video, and after the aggression task. Based on the reviewed literature, several hypotheses were advanced.

Hypothesis 1. When competing against a gay male opponent, the relation between MGRS and physical aggression was expected to be significantly more positive for participants in the friend condition relative to participants in the stranger or individual conditions. In contrast, when competing against a heterosexual male opponent, no differential relation between MGRS and physical aggression was expected between any of the three group conditions.

Hypothesis 2. After viewing male-male intimate relationship behaviors, a significantly more positive relation between MGRS and change in anger and fear was expected in the friend, relative to the stranger and individual conditions.

Hypothesis 3. Relative to other conditions, antigay aggression displayed by men in the friend condition was expected to be more negatively related to changes in anger and fear after completing the (TAP). No such finding was expected when men competed against a heterosexual male. That is, amongst men who compete in the Friend condition, the relation

between higher levels of aggression and significant decreases in negative affect were predicted to be significant when competing against a gay, but not a heterosexual, opponent.

METHOD

Participants

Participants were 299 men recruited from the Department of Psychology undergraduate research pool at Georgia State University and from the general student body. They responded via an online scheduling system, fliers hanging in various locations on campus, or computer advertisements, to a study titled, "The Effects of Interpersonal Relationships on Motor Reactivity." Participants were informed that they would be asked to complete a questionnaire battery (Part 1) and participate in a separate experimental session (Part 2). Participants were afforded the option to not complete the experimental session. Regardless of participation in the experimental session, all participants received course credit or $10 for completing the questionnaire battery.

Research shows that the typical perpetrators of antigay violence are heterosexual males in their late teens or twenties (Harry, 1990; NCAVP, 2006). As such, only heterosexual men between the ages of 18-30 were deemed eligible for the experimental session. Thus, among self-identified heterosexual participants, a heterosexual orientation was confirmed via administration of the Kinsey Heterosexual-Homosexual Rating scale (Kinsey, Pomeroy, & Martin, 1948) during Part 1 of the study. Only participants who endorsed exclusive sexual arousal to women (i.e., no reported sexual arousal to men) and sexual experiences that occurred predominantly with women were included (see below for further justification of cutoff thresholds). Using these criteria, 48 participants did not report a heterosexual orientation and/or reported sexual arousal or behavior with men. As such, they were excluded from subsequent analyses and participation in the second part of the study. Non-English speakers and participants who reported knowing someone who had completed the study were also excluded.

Of these 251 eligible participants, 34 did not return to their scheduled experimental session. Of the 217 men who completed the experimental session, 7 were not deceived and 2 experienced an equipment malfunction. This left a final usable sample of 208 participants. See Table I for demographic information of the final usable sample. All participants received partial course credit or $10 per hour for their participation. This study was approved by the university's Institutional Review Board.

Table 1 *Demographic Variables of Usable Sample*

Variable	M	SD
Age	19.63	1.89
Education level (years)	14.26	1.47
Family yearly income	$41,286	$28,141
Race (%)		
White, non-Hispanic	46.2	
African American	31.7	
Asian American	13.0	
More than one race	7.2	
Other	2.1	
Relationship status (%)		
Single, never married	96.6	
Married	1.0	
Living with partner	2.4	

Issues in Experimental Design and Recruitment

The few studies that have been conducted on group aggression have relied solely on groups composed of strangers. However, the work of Franklin (1998; 2000; 2004) suggests that the influence of *peer dynamics* may explain many cases of antigay aggression. Thus, the present study also evaluated the effects of friendship on antigay aggression within group dyads by creating three experimental conditions: Individual, Stranger, and Friend. These three conditions

permitted the comparison of overall effects of the group context, as well as the effects of the type of relationship present within the group, on antigay aggression.

As such, online respondents were recruited in two ways. Participants could sign up for a study that required them bring a "good friend" with them to the laboratory. In this scenario, participant dyads were preserved throughout both parts of the study, with the result being that these individuals comprised the Friend condition. The sole exception to this recruitment and condition assignment strategy involved one member of a friendship dyad being deemed ineligible upon completion of Part 1. In this case, the eligible participant was randomly assigned to either the Stranger or Individual condition. Participants could also sign up individually. In this scenario, participants were then randomly assigned to the Individual or Stranger conditions. Participants in the Individual condition completed the study alone, whereas participants in the Stranger condition were assigned to complete the task with another individual who they presumably did not know. The final sample consisted of 66 participants in the Individual condition, 74 participants in the Stranger condition, and 68 participants in the Friend condition.

Preliminary Checks and Questionnaire Battery

When participants arrived for Part 1, the experimenter led them to a small room and verified their age by requesting to see a valid ID. Informed consent was then obtained. Participants then completed a battery of self-report questionnaires presented on a computer using MediaLab 2000 software (Empirisoft Research Software, Philadelphia, PA).

Demographic form. This form was used to assess age, race, education, marital status, self-identified sexual orientation, and income level.

Kinsey Heterosexual-Homosexual Rating Scale (KRS; Kinsey et al., 1948). The KRS is a 7–point, Likert style scale used to assess sexual orientation along a continuum. Participants are

asked to report their behavioral experiences and sexual arousal from "exclusively heterosexual" to "exclusively homosexual." Kinsey et al. (1948) reported that approximately 50% of males reported strictly heterosexual arousal and behavior, that 10% reported "more or less" homosexual experiences, and that 8% reported strictly homosexual experiences. Thus, slightly over 30% of participants reported a mixture between heterosexual and homosexual behavior and arousal. However, recent research on antigay aggression that has used this scale to assess sexual orientation has found that only about 10-15% of men report any homosexual arousal or behavior (Parrott & Zeichner, 2005; Parrott et al., 2006). Furthermore, Savin-Williams (2006) argued that sexual orientation is most reliably assessed when multiple components of sexual orientation are congruent. Moreover, it is suggested that the highest priority be given to indices of sexual arousal rather than self-identification and reports of sexual behavior. Indeed, these latter components of sexual orientation are more susceptible to social context effects, self-report biases, and variable meanings. Thus, the criteria for exclusion based on reported behavior was not as strict as reported arousal. Therefore, only men who reported exclusively heterosexual arousal and primarily heterosexual behavior were included in the final sample. Indeed, any further reduction in the stringency of the exclusion criteria may unnecessarily increase variability in the sample.

Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960). This 33-item true-false scale assesses the extent to which participants' responses are influenced by the tendency to respond in a socially desirable fashion. The MCSDS has an alpha reliability of .88 and a test-retest reliability of .89. Alpha reliability in the present sample was .79. Adequate convergent validity has also been demonstrated. "True" responses are scored as a "1," while "false" responses are scored as a "0." Higher scores are associated with a greater tendency to

respond in a socially desirable fashion. Because aggression paradigms, and pertinent self-report measures, may inherently engender socially desirable responding, assessment of this construct served to rule out potential confounds.

Aggression Questionnaire (AQ; Buss & Perry, 1992). This 29-item, Likert type scale measures participants' disposition toward physical aggression, verbal aggression, anger, and hostility. Although the full measure will administered, only the physical aggression subscale was analyzed. Participants rate how each item describes them on a scale of 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me). The AQ has been shown to have high validity and reliability (α = .80), which was consistent with the present sample (α = .83). It was included in the questionnaire battery to ensure that assignment to various conditions yielded an equal distribution of dispositional physical aggression throughout the experimental conditions.

Masculine Gender Role Stress Scale (MGRS Scale; Eisler & Skidmore, 1987). This 40-item self-report inventory was used to determine the degree to which men cognitively appraised how stressful or threatening gender relevant situations are for them. Participants rate hypothetical occurrences on a Likert style scale ranging from 0 (not at all stressful) to 5 (extremely stressful), with higher scores reflecting higher dispositional MGRS. Although masculine gender role stress is related to masculine ideology (McCreary, Newcomb, & Sadava, 1997; Walker, Tokar, & Fischer, 2000), this construct is a "unique and cohesive construct that can be measured globally" (Walker et al., 2000, p. 105). The MGRS scale has been shown to identify situations that are cognitively more stressful for men than women and has good psychometric properties. Research with collegiate populations showed alpha coefficients in the low .90s (Eisler et al., 1988) which was consistent with the present sample (α = .92).

Taylor Aggression Paradigm (TAP; Taylor, 1967). During the experimental session, a modified version of the TAP (Taylor, 1967) was used to assess direct physical aggression. Participants competed in a reaction time task where electrical shocks were administered to and received from a "fictitious" opponent. In traditional versions of the TAP, participants are seated at a table in a small room. On the table facing the participants is a computer screen and keyboard. The numbers "1" through "10" on a computer keyboard are labeled from "low" to "high" to allow the participants to determine varying levels of shock to administer. Participants receive visual feedback on the computer monitor indicating whether they "won" or "lost" the trial as well as the shock level they (or their partner) selected.

In the present study, the TAP was modified to assess aggression in a group context. Participants in the Individual condition completed the task under the traditional setup. In the Friend and Stranger conditions, participants sat at two separate computers facing each other in the same room. In these conditions, participants also received visual feedback informing them of the intensity and duration of their partner's (friend or stranger) shock selection. Participants in the Friend and Stranger conditions were told that the faster of their two reaction times would be compared to their opponent's reaction time in order to determine the winner of a given trial. In addition, participants in these conditions were told that their opponent would receive, in succession, both shocks administered by each member of the group. All other aspects of the procedure were identical to the Individual condition. Although this specific, modified version of the TAP has not been used before, multiple studies have shown the TAP to be a sound paradigm for assessing direct physical aggression that has both discriminant and convergent validity (Bernstein et al., 1987; Giancola & Chermack, 1998; Pedersen et al., 2002). A Precision Regulated Animal Shocker (Coulbourn, Allentown, PA) was used to generate the shocks. The

computer software that controls the task was developed by Vibranz Creative Group (Lexington, KY). Physical aggression was operationalized as the average shock intensity for trials in which the participant administered a shock.

Experimental Measures

Inclusion of Other in the Self Scale (IOS; Aron, Aron, & Smollan, 1992). The IOS is a single item pictorial representation of closeness in a relationship. Participants choose one out of a series of seven pictures that depict two circles with increasing overlap. One circle represents the self, while one circle represents the other member of a relationship. The IOS has been shown to have an alternate form reliability of .92 and a two week test-retest reliability .85 when it is used to assess closeness in friendships. This item was included as a manipulation check to ensure that friend and stranger dyads reflected members that these labels would entail.

Positive and Negative Affect Schedule-Expanded Form (PANAS-X; Watson and Clark, 1994). The PANAS-X is a self-report measure that assesses broad dimensions of affect as well as discrete emotions experienced in the present moment. In the present study, anger and fear were measured with the anger and fear subscales of the PANAS-X upon arrival to the experimental session (i.e., Time 1), after viewing the video of male-male intimacy (i.e., Time 2), and after completing the aggression task (i.e., Time 3). In order to disguise the intent of the assessment, an abbreviated 38 item version of the PANAS-X was administered that included items assessing broad dimensions of positive and negative affect as well as the discrete emotional states (e.g., anger, fear, sadness, joviality). For all items, participants rated the extent to which they were currently experiencing each mood descriptor on a 5-point Likert style scale from 1 (very slightly) to 5 (extremely).

The Positive and Negative Affect subscales consisted of 10 Positive Affect (α = .88) and 10 Negative Affect (α = .85) items. The Anger-Hostility subscale consisted of six mood descriptors (e.g., hostile, angry, disgusted) that assessed the extent to which participants were experiencing anger (α = .83). The Fear subscale consisted of six mood descriptors (e.g., nervous, shaky, scared) that assessed the extent to which participants were feeling anxious (α = .83). The Sadness subscale consisted of six mood descriptors (e.g., sad, blue, lonely) that assessed the extent to which participants were feeling depressed (α = .86). The Joviality subscale consisted of six mood descriptors (e.g.,) that assessed the extent to which participants were feeling jovial. Alpha reliabilities for subscales ranged from .78 to .82 for Anger and .75 to .84 for Fear for all three administrations.

Procedure

The experiment was divided into two parts. Part 1 consisted of a series of preliminary checks and a questionnaire battery. Part 2 (completed approximately one week later) consisted of the experimental manipulation and additional self-report measures. Participants were informed that the study was designed to examine the effect of interpersonal relationships on reaction time under competitive conditions. Informed consent was obtained separately for each session.

Within a week of Part 1, participants returned to the lab for the experimental session. After providing informed consent, participants were asked to complete the PANAS-X in a separate room. Participants in the friend and stranger conditions were also asked to complete the CAT and the IOS in reference to their partner. Participants were then escorted to an experimental room to complete the reaction time task. At this time, the experimenter recorded certain information from the participant(s) (i.e., first name, year in school, major, and

relationship status) with a video camera to ostensibly be shown to their opponent. Participants were told that they would receive similar information about their opponent. The recording and subsequent display of the videos served to enhance the deception and introduce the opponent's sexual orientation as either a heterosexual or gay male. In the Friend and Stranger conditions, the dyad was videotaped together. Immediately prior to the reaction time task, the researcher left the room under the guise of needing to collect similar information from the opponent.

After an adequate delay to ensure that the participants believed information about their opponent was being gathered, the experimenter returned to the experimental room. Two shock electrodes were attached to participants' index and middle finger of their non-dominant hand using Velcro straps. Instructions for the reaction time task were then provided. The experimenter then left the room to ostensibly provide the same information to the opponent.

After another adequate delay, the experimenter contacted the participant(s) via intercom from a control room. Participants' pain thresholds were then assessed to determine the intensity parameters for the shocks they would receive. First, participants heard the confederate having his pain threshold assessed. In actuality, an audiotape was played in which a confederate who served as the fictitious opponent read a script of his own pain assessment. This aspect of the procedure helped to reinforce to participants that they were competing against another individual. Next, participants' pain thresholds were assessed in succession. This was accomplished via the administration of short duration shocks (one second) that increased in intensity in a stepwise manner from the lowest available shock setting, which is imperceptible, until the shocks reached a subjectively reported "painful" level. Participants were instructed to inform the experimenter when the shocks were "first detectable" and then when they reached a "painful" level. The threshold determination procedure was conducted while participants were

seated in the testing room and the experimenter was in the adjacent control room. They communicated through an intercom.

Participants were then asked to watch a three-minute stimulus video depicting typical relationship behavior for gay men (e.g., kissing, displays of affection, marriage). This video served as a masculinity threat. It did not portray material that was sexually explicit, and the researcher made every effort to ensure that the activities depicted in the video reflected relationship behavior that people may be exposed to in everyday life. While previous studies have used male-male erotica as a stimulus video for similar purposes (Parrott & Zeichner, 2005), recent research indicates that men experience similar increases in negative affect after watching videos of everyday male-male intimate relationship behavior (Parrott, Miller, & Hudepohl, 2007). Indeed, this video may be more ecologically valid than sexual erotica, in that it reflects common occurrences. After viewing the stimulus video, participants were asked to complete the PANAS-X a second time.

Immediately prior to the reaction time task, participants viewed the demographic interview of their opponent. The information given by the opponent matched the demographic questions asked of the participants. When asked about his relationship status, the fictitious opponent (a taped confederate) either responded, "I've been dating by boyfriend Mike for about one year" or "I've been dating my girlfriend Carissa for about one year." In this way, the video served the dual purpose of convincing the participant(s) that they were indeed competing against an opponent and subtlety informed the participant(s) as to their opponent's sexual orientation. The sexual orientation of the fictitious opponent was randomly determined.

Participants then completed the TAP. Participants received visual feedback on the screen matching their level of shock administered and received. The win/loss sequence and the shock

intensity/duration were pre-determined and static for all participants. The competition consisted of two blocks of trials. In the first block, there were 16 trials (8 wins and 8 loses) during the low provocation sequence (Intensity 1-2, Mean = 1.5). Next, there were two transitional trials, both losses, where the participant received a "5" and a "6" in order to create the illusion of a natural escalation in provocation. In the second block, there were 16 trials (8 wins and 8 loses) during the high provocation sequence (Intensity 9-10, Mean = 9.5). Although provocation was not examined as a variable of interest, low and high provocation conditions were included for two reasons. First, the presentation of low, followed by high, provocation likely increased the belief that participants were competing against another individual. Indeed, the consistent receipt of an extremely high shock (e.g., a "10") throughout the task may likely have been viewed with suspicion. Second, relying solely on a high provocation condition may have introduced ceiling effects, as it is somewhat natural for participants to respond "in kind" to intense physical provocation. All shocks lasted for a duration of one second. At the completion of the task, participants were asked to fill out the PANAS-X a third and final time.

Debriefing and Compensation

Participants were given a thorough written and verbal debriefing in separate rooms. However, prior to debriefing, open ended questions were utilized separately for each participant to assess the effectiveness of the deception manipulation (e.g., presence of a real opponent, opponent's sexual orientation). For example, participants were asked "What was your overall impression of your opponent during the task today?" The main criteria for exclusion were the participant's belief that their opponent was fictitious and that the task was really a measure of aggression. As noted above, 7 participants reported the belief that the opponent did not exist and were therefore excluded from subsequent analyses. Next, participants were informed that they

did not actually administer a shock to a real person and that their opponent was fictitious. Participants also received an explanation as to why the deception was necessary and time was set aside to answer any questions or address any concerns the participant had. Participants were compensated with one credit per hour toward the fulfillment of their class requirement or $10 per hour.

RESULTS

Overview of Analyses

Data analysis was conducted in two steps. Preliminary analyses were conduced to ensure that pertinent variables were dispersed evenly across all experimental groups and conditions. Next, multilevel modeling (MLM) was used to evaluate primary hypotheses involving outcome variables whose measurement violated the assumption of independent observation (explained below), whereas linear regression analyses were performed to evaluate primary hypotheses involving outcome variables whose measurement did not violate this assumption.

Preliminary Analyses

Demographic variables. The following variables were independently analyzed to ensure equivalency across groups: age, race, income level, educational level. A chi-square analysis was conducted on race. For each remaining variable, a 3 (condition) X 2 (opponent) ANOVA was conducted. Analyses of these variables revealed no significant differences.

Dispositional variables. Similarly, analyses of various dispositional characteristics were conducted to confirm that these variables were equally distributed across groups. Separate 3 (condition) X 2 (opponent) ANOVAs were conducted with MGRS, MCSDS, and AQ as the dependent variable. A main effect of opponent was observed for MCSDS, $F(1, 207) = 5.47$, $p = .02$, $\eta^2 = .03$, such that the mean MCSDS score for participants who competed against a gay opponent ($M = 15.93$, $SD = 5.07$) was significantly lower than those who competed against a heterosexual opponent ($M = 17.69$, $SD = 5.66$). However, the effect size associated with this difference accounted for a very small (3%) portion of the variance in MCSDS and was not considered a threat to the internal validity of the study. No other significant effects were detected for MGRS or AQ.

Group Differences. Because participation was required on two separate days, some participants completed Part 1 but not Part 2. Thus, in order to demonstrate that participants who completed the study, relative to those who did not complete the study, did not differ in some meaningful way, *t*-tests were performed to evaluate potential group differences for all demographic and dispositional variables (with the exception of race which was again examined with a chi-square analysis). A significant effect was found for age, such that the age of participants that completed the study ($M = 19.64$, $SD = 1.89$) was significantly lower than those who did not complete the study ($M = 20.71$, $SD = 4.03$), $t(240) = -2.50$, $p < .05$. However, the mean age of participants who did not complete the study was still within the age range of the typical perpetrator of antigay violence and only differed from those who completed the study by one year. As such, this difference was not deemed a threat to the internal validity of the study. No other significant differences were detected. In addition, participants could volunteer to participate in the study alone or with a friend. Identical analyses were conducted to determine whether any demographic or dispositional differences existed between participants who signed up alone versus participants who signed up with a friend. Results revealed no significant differences. Finally, as expected, a *t*-test confirmed that participants in the friend condition scored significantly higher on the IOS scale ($M = 3.79$, $SD = 1.50$) than did participants in the stranger condition ($M = 1.12$, $SD = .47$), $t(140) = -14.57$, $p < .001$.

Primary Hypotheses

Use of multilevel modeling (MLM). Traditional statistical analyses (e.g., ANOVA, multiple regression) are based on the fundamental assumption of independence of observation for each participant (Kenny, Kashy, & Cook, 2006). In a study that includes dyads, this assumption of independence is likely violated. That is, the characteristics or behaviors of one

member of a dyad potentially influence the outcome variable for that member of the dyad (i.e., actor effect) *as well as* the other member of the dyad (i.e., partner effect), and vice-versa. Of course, in many studies, including the current one, assessing the interdependence of variables that affect outcomes based on dynamic relationships is one of the main objectives of the study. Violation of this assumption is called nonindependence. Attempts to analyze nonindependent data with traditional analytic techniques are problematic for a number of reasons, including biased tests of significance and standardized measures as well as a loss of precision. Furthermore, selecting only one member of the dyad for analysis, as some researchers have done, is problematic as well due to a loss of statistical power and the potential for different effects based upon which dyad member is removed. This is especially pertinent when one considers that in the current study, no obvious way of selecting a member of a dyad (i.e., gender) was present and thus this decision would be arbitrary (Campell & Kashy, 2002; Kenny et al., 2006).

To address these limitations, Kenny et al. (2006) proposed using multilevel level modeling (MLM) to analyze dyadic data. In this approach, the first step is to test for nonindependence in the dependent variable of interest. Assuming that nonindependence is present, the next step is to divide variables into two levels. For level one variables, a unique datum exists for each participant (e.g., MGRS). It is important to note that the outcome variable (e.g., average shock intensity, change in anger) is always a level one variable in MLM. For level two variables, the datum is the same for each member of a given dyad (e.g., opponent, condition). Dividing variables in this manner allows us to determine the variance in the outcome measure that is a product of the two levels. Thus, differences in the outcome variable can be more accurately attributed to changes in one level by controlling for changes in the second level (Poteat, 2008).

Analysis of Hypothesis 1. Hypothesis 1 posited that (a) when competing against a gay male opponent, the relation between MGRS and physical aggression would be significantly more positive for participants in the friend condition relative to participants in the stranger or individual conditions, and (b) when competing against a heterosexual male opponent, no differential relation between MGRS and physical aggression would be found between any of the three group conditions. To test this hypothesis, the following analyses were conducted. As described above, the first step in this analysis tested for nonindependence. Thus, an intraclass correlation coefficient was calculated for average shock intensity (r_I = .29). Kenny et al. (2006) recommend testing this statistic using a liberal alpha of .20. Results of this analyses revealed that nonindependence was present, $F(70, 71) = 1.82$, $p < .01$. As such, use of MLM was deemed appropriate to test Hypothesis 1.

Prior to computing all regression models (i.e., MLM or traditional hierarchical regression), raw scores for MGRS were first converted to z-scores. To standardize the categorical variables (i.e., condition, opponent), dummy coding was employed. Standardizing these first-order variables automatically centers the values (i.e., deviation scores with a mean of zero) which reduces multicollinearity between interaction terms and their constituent lower-order terms (Aiken and West, 1991). All main effects were entered into the model in Step 1, followed by all interaction terms in Step 2. Post-hoc probing techniques outlined by Aiken and West (1991) were then used to determine whether the simple regression lines were significantly different from zero and one another.

Main effects of condition were observed for the individual-stranger and individual-friend contrasts, such that participants in the individual condition were significantly less aggressive than participants in the stranger (b = 1.07, SE = .37, $t(131.55) = 2.86$, $p < .01$) and friend (b =

1.22, *SE* = .38, *t*(129.52) = 3.21, *p* < .01) conditions (see Table II). There was no main effect of condition for the stranger-friend contrast. A main effect was also observed for MGRS (*b* = .27, *SE* = .14, *t*(198.12) = 1.91, *p* = .06), such that higher levels of MGRS predicted higher levels of aggression during the TAP.

Table 2 *Adjusted Means for Average Shock Intensity by Condition and Opponent*

Condition	Gay Opponent	Heterosexual Opponent	Total
Individual	4.34	4.70	4.52
Stranger	5.41	5.78	5.58
Friend	5.56	5.93	5.75

In addition, a significant Condition X MGRS X Opponent interaction was observed in the stranger-friend contrast (*b* = 1.28, *SE* = .69, *t*(170.26) = 1.86, *p* = .06). Explication of this interaction first examined the relation between MGRS and average shock intensity among participants in the stranger condition. Analyses revealed a significant positive relation between MGRS and average shock intensity when competing against a heterosexual opponent (*b* = .84, *SE* = .39, *t*(171.15) = 2.19, *p* < .05) but not a gay opponent (*b* = .15, *SE* = .27, *t*(194.20) = 0.59, *p* = .556). In addition, the pattern of covariation between MGRS and average shock intensity toward the heterosexual, relative to the gay, male opponent approached significance (*b* = .68, *SE* = .47, *t*(180.99) = 1.46, *p* = .15). Nevertheless, these data indicated that the relation between MGRS and average shock intensity was more positive toward heterosexual male opponents than toward gay male opponents.

Next, we examined the relation between MGRS and average shock intensity among participants in the friend condition. Analyses failed to reveal a significant relation between MGRS and average shock intensity when competing against a heterosexual opponent (*b* = -.37,

SE = .36, *t*(190.65) = -1.04, *p* = .30) or a gay opponent (*b* = .22, *SE* = .36, *t*(121.81) = .623, *p* = .54). However, the pattern of covariation between MGRS and average shock intensity toward the heterosexual, relative to the gay, male opponent approached significance (*b* = -.60, *SE* = .51, *t*(159.94) = -1.18, *p* = .24). Though not significant, these data indicated that the relation between MGRS and average shock intensity was more positive toward a gay, relative to a heterosexual, male opponent.

Finally, we compared the relation between MGRS and average shock intensity toward both opponents among participants in the stranger and friend conditions. The pattern of covariation between MGRS and average shock intensity was significantly more positive for participants in the stranger, relative to the friend, condition (*b* = 1.22, *SE* = .53, *t*(181.57) = 2.31, *p* = .02) when competing against a heterosexual opponent, but not for the gay opponent (*b* = -.07, *SE* = .45, *t*(152.29) = -.15, *p* = .88).

Thus, among participants in the stranger condition, MGRS predicted higher levels of aggression toward the heterosexual male opponent than toward the gay male opponent. In contrast, among participants in the friend condition, MGRS predicted higher levels of aggression toward the gay male opponent than toward the heterosexual opponent. Though the aforementioned simple slope comparisons were not significantly different, it is important that a significant difference was observed in the overall pattern of covariation between MGRS and aggression toward gay and heterosexual opponents for the stranger-friend contrast. These findings are depicted in Figure 3.

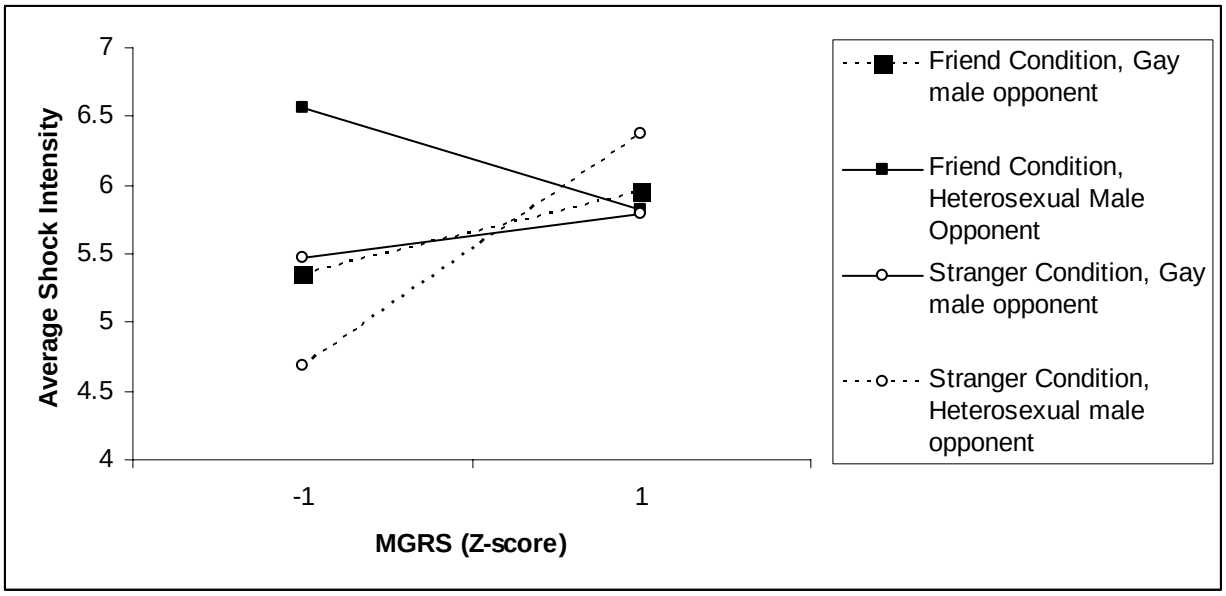

Figure 3. Relation between MGRS and Average Shock Intensity for Friend and Stranger Conditions

Analysis of Hypothesis 2. Hypothesis 2 predicted that after viewing male-male intimate relationship behaviors, a significantly more positive relation between MGRS and change in anger and fear was expected in the friend, relative to the stranger and individual conditions. In order to assess changes in anger and fear from baseline to after watching male-male relationship behavior, a change score was calculated by subtracting PANAS-X scores for anger and fear taken at time 1 from time 2. Similar to hypothesis 1, non-independence of observations was a concern. As such, an intraclass correlation coefficient was calculated for change in anger (r_I = .06) and fear (r_I = -.29). Analyses revealed that non-independence was present for fear, $F(70, 71) = 1.81$, $p < .01$, but not for anger. As such, for Hypothesis 2, use of MLM was deemed appropriate for fear, whereas hierarchical linear regression was deemed appropriate for anger.

To examine the effects of condition and MGRS on change in anger and fear, dummy coding was again used in which each level of condition (i.e., friend, stranger, individual) was treated as the reference group (Aiken & West, 1991). All main effects were entered into the model in Step 1, followed by all interaction terms in Step 2.

Using hierarchical linear regression, the first model for change in anger was significant $F(3, 204) = 3.96$, $p < .01$. Analyses revealed a significant main effect of MGRS ($\beta = 0.23$, $p < .01$) for change in anger. This finding indicated that higher levels of MGRS were associated with greater increases in anger after viewing the male-male intimate relationship video. Notably, this effect size was small. A main effect of condition was not detected in any of the three contrasts. The second model for change in anger was significant $F(5, 202) = 2.53$, $p < .05$. In this model, the MGRS X Condition interaction was not significant for any of the three contrasts. MLM analyses did not detect any significant main effects or interactions for fear.

Analysis of Hypothesis 3. Hypothesis 3 predicted that relative to other conditions, antigay aggression displayed by men in the friend condition would be more negatively related to changes in anger and fear after completing the TAP. In order to assess how anger and fear changed between watching male-male relationship behavior and completing the TAP, we calculated a change score by subtracting PANAS-X scores for anger and fear taken at time 2 from time 3. Again, non-independence of observations was a concern. As such, an intraclass correlation coefficient was calculated for change in anger ($r_I = .26$) and fear ($r_I = -.03$) from time 2 to time 3. Results of this analyses revealed that non-independence was present for anger, $F(70, 71) = 1.71$, $p < .05$, but not fear. As such, for Hypothesis 3, use of MLM was deemed appropriate for anger, whereas hierarchical linear regression was deemed appropriate for fear.

To examine the effects of condition and average shock intensity on change in anger and fear from time 2 to time 3, dummy coding was again used in which each level of opponent (i.e., gay male, heterosexual male) and condition (i.e., friend, stranger, individual) was treated as the reference group (Aiken & West, 1991). In addition, prior to computing all regression models,

mean scores for shock intensity were first converted to z-scores All main effects were entered into the model in Step 1, followed by all interaction terms in Step 2.

Using MLM, there was a main effect of average shock intensity on change in anger from time 2 to time 3 (b = -.89, SE = .37, t(201.15) = -2.63, $p < .01$). This finding indicated that higher levels of aggression during the TAP were associated with significant decreases in anger, although the size of this effect was small. No main effect of condition was observed in any of the three contrasts. In addition, the Average Shock Intensity X Condition interaction was not significant for changes in anger in any of the three contrasts. Using hierarchical linear regression analyses, the first and second models for change in fear were not significant. There were no significant main effects or interactions detected for fear.

DISCUSSION

The purpose of this study was to empirically evaluate a hypothesized mechanism of antigay aggression. We attempted to assess the effects of MGRS, peer dynamics, and increases in negative affect on antigay aggression, and in addition determine the differential utility of aggression in relieving a state of negative affect (e.g., anger, fear) depending on the target of that aggression. Thus, three primary hypotheses were proposed.

Hypothesis 1

First, it was proposed that (a) when competing against a gay male opponent, the relation between MGRS and physical aggression would be significantly more positive for participants in the friend condition relative to participants in the stranger or individual conditions, and (b) when competing against a heterosexual male opponent, no differential relation between MGRS and physical aggression would be found between any of the three group conditions. Results failed to fully support this hypothesis.

We observed a main effect of condition. That is, overall, participants in the two group conditions (i.e., friend and stranger) behaved more aggressively than participants in the individual condition, regardless of opponent. Participants in the friend and stranger conditions did not differ from one another in their level of aggression against either opponent. This finding is consistent with previous research that has shown that groups react more aggressively when provoked than do individuals (Jaffe & Yinon, 1979; Meier & Hinsz, 2004). However, as stated earlier, these studies required the group to decide upon an act of aggression, which does not accurately reflect the fact that individuals "throw their own punch" so to speak, even in the context of a group. To our knowledge, this is the first time that researchers have used an experimental task to demonstrate that participants within the context of a group are more

aggressive than those who are alone when each person is the ultimate decider of his individual behavioral response.

We also observed a significant Condition X MGRS X Opponent interaction in the stranger-friend contrast. Explication of the relation between MGRS and average shock intensity among participants in the friend condition failed to show a significant positive relation between MGRS and average shock intensity when competing against either opponent. However, the pattern of covariation between the two opponent conditions suggested that the relation between MGRS and average shock intensity was more positive toward the gay male opponent than toward the heterosexual male opponent.

The fact that, in the friend condition, MGRS was associated with higher (albeit non-significant) levels of aggression against a gay, relative to a heterosexual, opponent is consistent with our proposal that MGRS is an important factor in the elicitation of violence against a target who is viewed as non-masculine. Previous research has shown that men's use of aggressive tactics in situations where a female threatens their masculinity is associated with higher levels of MGRS (Franchina et al, 2001). Indeed, pertinent theory indicates that the traditional masculine identity is a fragile concept defined fundamentally by a contrast with femininity that must be continuously proved in order to gain acceptance from other heterosexual members of an individual's peer group (Franklin, 2000; Kimmel, 1997). One way that men prove their masculine identity to their peer group is through violence, which has been identified as the most evident symbol of manhood (Kimmel, 2000).

More importantly, however, the present findings provide the first experimental evidence that peer dynamics may influence the perpetration of antigay violence (Franklin, 2000). In the current study, MGRS was positively associated with aggression against a gay opponent in

response to a gender relevant threat among individuals who were in the presence of their peer, but not among individuals who were with a stranger or alone. Consistent with the reviewed theory, the presence of a close friend may have exacerbated high MGRS individuals' perception of threat to their masculine in-group status after viewing the gender role violation. In turn, these men were especially prone to behave aggressively toward a gay man in order to maintain the acceptance of a member of their peer group. In contrast, the absence of a partner or the presence of a male stranger may have been less likely to facilitate high MGRS individuals' perception of threat to their masculinity and peer in-group status. As a result, these participants likely possessed less motivation to behave aggressively toward a gay man in order to affirm their status in the masculine in-group.

Consistent with our hypotheses, a significant relation between MGRS and aggression toward a heterosexual male was not detected among participants in the friend or individual conditions. Pertinent theory suggests that heterosexual men do not represent the non-masculine "other" akin to women and gay men (Franklin, 2000, 2004; Franklin & Herek, 1998; Kimmel, 2000; Kimmel et al., 1997; Kimmel & Mahler, 2003). Thus, unlike violence toward a gay man, violence against heterosexual men does not represent the same unique and risk free opportunity to demonstrate one's heterosexuality and membership in a peer group of other heterosexual men (Harry, 1990).

However, the lack of significant findings or large effects in the friend condition versus a gay opponent raises a number of concerns. First, let us assume that the overall "chain of events" described earlier is indeed representative of a common pathway dictating the elicitation of antigay violence. It is quite possible that the design of our study possessed certain limitations that hindered our ability to tap into this "chain of events." These limitations include the fact that

our depiction of male-male intimacy produced a relatively small increase in self-reported anger and no increase in self-reported fear (discussed in further detail under Hypothesis 2). Furthermore, anger was not elicited differentially based on condition.

Potential methodological reasons for this lack of observed changes in affect are discussed further below, however, the implications of the absence of strong changes in affect couched within a GAM heuristic are quite clear. Bushman and Anderson (2002) asserted that while input variables are important, they can only influence behavior through the activation of a present internal state (e.g., affect, cognition, and arousal). Without clear evidence that our experimental manipulations differentially activated our participant's internal state, it is perhaps unsurprising that these person (i.e., MGRS) and situational (i.e., condition, opponent) factors did not more strongly differentially predict aggression. This lack of activation could be due to a number of factors including, but not limited to, the lack of ecological validity in the laboratory setting. For instance, in the accounts of actual perpetration of antigay violence described above, the masculinity threat and target of aggression were synonymous. However, in our experiment, the masculinity threat (i.e., depiction of male-male intimacy) and the target were both different people and in different proximity to the participants. It seems more likely that a perpetrator of antigay violence aggress against a gay man who embodies an active threat to his masculinity, as opposed to viewing male-male intimacy on television and then later targeting a gay person who is not engaged in male-male intimacy. Future research could address this concern by using a confederate to create a situation where the opponent and the depiction of male-male intimacy are embodied in the same person.

In addition, participants in this study may have held back from being more aggressive due to the fact that they were being observed. Another possibility is that MGRS is not a

predictor of antigay aggression in the vast majority of individuals, but may be for perpetrators of antigay violence. Therefore, examining MGRS along a continuum may limit its ability to predict aggression in certain contexts. Kagan, Reznick, and Gibbons (1989) have noted that while it is always possible to place individuals on a continuous dimension, this does necessarily mean that this dimension captures "the most essential structural or functional properties of the entities being compared" (p. 845).

Second, we must also consider the possibility that our proposed "chain of events" is incorrect. While certain links may indeed be accurate, it is possible that others are not. For example, MGRS may not adequately measure how vulnerable an individual is to experience a threat to their masculine in group status when exposed to a masculinity threat. Future research could address this limitation by examining additional dispositional measures to determine if they are better predictors of negative affect and group perpetrated antigay violence.

Unexpectedly, among participants in the stranger condition, analyses showed a significant positive relation between MGRS and averages shock intensity when competing against a heterosexual opponent but not a gay opponent. In addition, the pattern of covariation between the two opponent conditions indicated (i.e., approached significance) that the relation between MGRS and average shock intensity was more positive toward heterosexual male opponents than toward gay male opponents. Thus, contrary to our expectations, among participants who were in the stranger condition, a positive association was found between MGRS and aggression toward a heterosexual opponent. This unexpected finding raises some obvious questions. First, why did participants in the stranger condition not exhibit similar behavior to participants in the friend condition when they were competing against a gay opponent? Second, why was this positive association between MGRS and aggression against a heterosexual

opponent present only for participants in the stranger condition? The answer to the former question has been previously addressed and is consistent with reviewed theory that has highlighted the influence of MGRS and peer dynamics on antigay aggression. The second question is much more difficult to address as it stands to reason that the relation between MGRS and aggression perpetrated by strangers against a heterosexual opponent is explained by a different causal pathway. As such, an explanation is not yet clear. While additional research is undoubtedly needed to definitively address this question, we propose a number of possible explanations.

One possibility is that when an individual is with a friend, he responds in accordance to a known dyadic norm (that is presumably shared), such as antigay attitudes, and acts accordingly. In contrast, when an individual is with a male stranger, a lack of prior contact with this person likely results in feeling unsure as to the immediate dyadic norm. Without a salient dyadic norm, as well as participants' likely knowledge of an increasing trend towards acceptance of sexual minorities, high MGRS individuals may not have felt sanctioned to engage in aggression against a gay opponent. Thus, a lack of certainty as to the views of one's partner may have caused participants in the stranger condition to suppress their true feelings and behavioral response in regard to male-male intimacy. In contrast, when competing against a heterosexual opponent, participants who felt a need to "prove themselves" may not have suppressed their response due to the lack of negative connotation associated with aggression against a heterosexual.

Hypothesis 2

Second, we hypothesized that after viewing male-male intimate relationship behaviors, a significantly more positive relation between MGRS and changes in negative affect (i.e., anger and fear) would be observed in the friend, relative to the stranger and individual, conditions.

MGRS did predict an increase in anger after viewing male-male intimate relationship behavior but contrary to our expectations, this relation did not vary as a function of condition. In addition, although the sample as a whole evinced an association between MGRS and increase in anger, but not fear, from Time 1 to Time 2, the effect size was small. Thus, we failed to demonstrate that individuals who exhibited a high level of MGRS would experience differentially increased negative affect (i.e., anger and fear) when faced with a masculinity threat based on condition. Our assertion that peer dynamics play an important role in the perpetration of antigay violence as a result of greater elicitation of negative affect when exposed to male-male intimacy in the presence of a peer was not demonstrated. The lack of significant results here will be discussed in our limitations section.

Hypothesis 3

Third, we proposed that for participants in the friend condition, but not stranger or individual conditions, a significant negative relation would be observed between aggression toward a gay opponent and changes in negative affect after completion of the TAP. No such effects were expected among participants who competed against a heterosexual male opponent. This hypothesis was not supported. Specifically, a significant negative association was observed between aggression levels and changes in anger following the TAP. However, this association was small and did not vary based on opponent or condition. Thus, we failed to demonstrate that antigay aggression perpetrated in the context of a peer group would function to alleviate heightened negative affect and reaffirm an individual's masculinity. The implications of this finding are discussed below.

Limitations

There were a number of limitations inherent in this project. First, our study lacked diversity in the education level of our sample. All of our participants were enrolled in college at the time they participated in the study. It is possible that individuals who are not in college may differ from those in college in terms of their attitudes towards gay men and their likelihood of committing an act of violence against a gay man. Future research could address these limitations by including a sample that is more representative of the entire population of men between the ages of 18-30. Another limitation was the fact that participants were recruited via two different methods. Although, our statistical analyses revealed that participants recruited via these methods did not differ in any meaningful way, it is important for researchers to strive for true random sampling whenever it is possible.

Perhaps the most notable limitation (especially as it corresponds to hypotheses 2 and 3) was the exclusive reliance on self-report measures. This may have been particularly problematic with our measures of affect (i.e., fear and anger). The limitations of self-report measures have been well documented and include social desirability factors, evaluation apprehension, participants lack of motivation to report private knowledge, and reliance on an individual's ability to accurately report such knowledge (Greenwald et. al, 2002; Smith, Stewart, Myers, & Latu, 2008; Whitley, 2002).

Numerous researchers promoting the MODE model (i.e., Motivation and Opportunity as Determinants) have pointed out that the effect of attitudes (i.e., sexual prejudice, MGRS) on judgments and behavior (i.e., reporting negative affect on a self-report measure) is dependent on motivation and opportunity (Dovidio, Kawakami, & Gaertner, 2002; Fazio & Olser, 2003). When individuals have the time (i.e., opportunity) and motivation to alter their responding, explicit measures are particularly vulnerable to unwanted extraneous influences. Furthermore,

Fazio and Olsen (2003) note that the more sensitive a domain being assessed by an explicit measure (i.e., self-report), the more susceptible it is to the influence of motivation factors.

Applied to the current study, it is easy to see how these factors may have influenced participants' self-report of affect. First, assessing the reactions of heterosexual men to male-male intimacy likely constitutes a "sensitive domain." Second, participants had adequate opportunity (i.e., time) to consider their response, which allowed for an influx of motivational factors to influence their responding. Third, participants may have been motivated to minimize their reported level of negative affect for a number of reasons related to cultural ideals of masculinity. For example, numerous researchers have theorized that expressing feelings and admitting to emotional vulnerability are in opposition to cultural ideals of manhood. For example, Eisler (1995) identified emotional inexpressiveness as a component of the MGRS scale to reflect stress resulting from an inability to express emotion and deal with others' vulnerable emotions. Thus, participants who were affected by our video depicting male-male relationship behavior (especially those high in MGRS) may have been motivated to limit their admittance of negative affect and also been influenced by a cultural norm that dictates that their friend would not be able to negotiate such a revelation even if they had.

Similarly, Thompson and Pleck (1986) have proposed that male role norms can be separated into three distinct components. Status refers to a man's need for achievement and the attainment of respect from other men. Toughness encompasses the essentiality of men displaying physical, emotional, and mental toughness as well as self-reliance. Antifeminity reflects the belief that men should avoid any behavior that could be classified as stereotypically feminine. Responses of men on our measure of affect in the current study were likely influenced by attempts to conform to a combination of these norms in a way that resulted in a lack of

significant findings for changes in negative affect. The toughness norm dictates that men should be "sturdy oaks" and not be affected by difficult emotions. Admitting such emotions, especially in the company of another man, may likely be viewed as feminine and result in a loss of status. Thus, it is easy to see how explicit measures of affect are dependent on many factors besides the emotion that is activated by a stimulus. Without a way of more effectively controlling for the effect of these motivational factors on the assessment of affect, it is premature to rule out the theoretical model that we earlier proposed.

Future Directions

Future research is needed to rule out potential effects of social desirability, motivational factors, and lack of access to internal states by using implicit measures of attitudes and emotions, such as the implicit association test (Greenwald, McGhee, & Schwartz, 1998), and psychobiological affect/arousal measures that are less susceptible to response bias (e.g., facial coding, facial EMG, skin conductance, and imaging techniques). Indeed, research has shown that the correlations between implicit and explicit measures' assessment of prejudice and stereotypes are low (for a review see, Fazio & Olsen, 2003). In addition, the use of biological models has been proposed as a way of validating psychological models and driving new hypotheses that can be tested with behavioral techniques (Rothbart, Ahadi, & Evans, 2000). To that end, researchers have recently combined the TAP with fMRI imaging to show that differential activation of distinct areas of the medial prefrontal cortex is associated with response to aggressive provocation and the affective processing of empathy in response to another's pain (Lotze, Veit, Anders, & Birbaumer, 2007). In addition, while we have noted the importance of affect in the elicitation of antigay violence (as well as the difficulties associated with its measurement), the GAM stipulates that other components of a perpetrator's internal state (e.g.,

cognition and arousal) are also important mediators of an individual's ultimate decision to aggress. Thus, future research should utilize aggression paradigms in a similar manner to independently or concurrently measure changes in arousal and cognition and determine their association with increases in antigay aggression. Use of such multimodal assessment strategies will deepen our theoretical understanding of the processes associated with antigay discrimination and violence and have great potential to definitively establish important causal pathways that result in an act of antigay violence.

In summary, results of the present study suggest that the relation between MGRS and aggression toward gay and heterosexual men varies depending upon the group context. Specifically, among participants in the stranger condition, MGRS indicated higher levels of aggression toward the heterosexual male opponent than toward the gay male opponent. In contrast, among participants in the friend condition, MGRS indicated higher levels of aggression toward the gay male opponent than toward the heterosexual opponent. Although the differences between pertinent simple slopes were not significant, the overall change in this pattern of covariation is in partial support of our hypotheses. However, the lack of significant findings in both behavioral measures and measures of affect indicates that future research must make improvements in ecological validity and construct measurement.

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APPENDIX A

DEMOGRAPHIC INFORMATION

Demographics Form

Age: _____

Years of Education including kindergarten: _____

Marital Status (please check one)
__ Single (never married)
__ Married
__ Not married but living with intimate partner
__ Divorced
__ Widowed
__ Separated

How do you describe yourself?
___ American Indian or Alaska Native
___ Asian
___ Black or African American
___ Hispanic or Latino
___ Native Hawaiian or Other Pacific Islander
___ White, non-Hispanic, non-Latino
___ Other

Please indicate your sexual orientation: Heterosexual Homosexual Bisexual

YOUR average yearly income if you support yourself or your parents average yearly income if they support you (please check one).

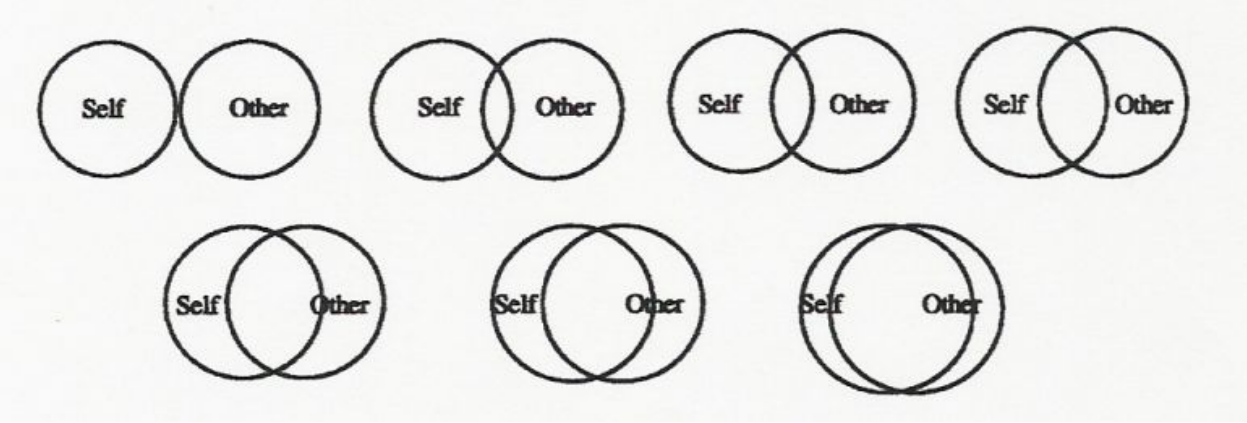
___.$0-$5,000
___ $5,000-$10,000
___ $10,000-$20,000
___.$20,000-$30,000
___.$30,000-$40,000
____ $40,000-$50,000
____ $50,000-$60,000
____ $60,000-$70,000
____ $70,000+

APPENDIX B

INCLUSION OF OTHER IN THE SELF SCALE

Inclusion of Other in the Self (IOS) Scale

INSTRUCTIONS: Please circle the picture below that best describes your relationship with your teammate.



APPENDIX C

KINSEY HETEROSEXUAL-HOMOSEXUAL RATING SCALE

Kinsey Heterosexual-Homosexual Rating Scale

Which of the following 8 statements best describes your past sexual experiences? Please rate yourself in terms of overt actions only, not in terms of psychological or sexual arousal. Read ALL responses before indicating your answer. Circle only ONE response.

1. All sexual experiences have been with females. No physical contacts with other males have resulted in erection or orgasm.
2. Most sexual experiences have been with females, but infrequent physical contacts with other males has resulted in erection or orgasm.
3. Most sexual experiences have been with other females, but quite a bit of sexual contact with other males has occurred. However, sexual experiences with females are more numerous.
4. Equal sexual contact has occurred with males and females.
5. Most sexual experiences have been with males, but a fair amount of sexual experience with females has also occurred.
6. Most sexual experiences have been with males, but infrequent physical contacts with females has resulted in erection or orgasm.
7. All sexual experiences have been with males. No physical contacts with females have resulted in erection or orgasm.

Which of the following 7 statements best describes your psychological reactions? Please rate yourself in terms of sexual arousal only, not overt experiences. Read ALL responses before indicating an answer. Circle only ONE response.

1. All sexual arousal occurs in response to female sexual contact or fantasies involving sexual contact with females.
2. Most sexual arousal occurs in response to female sexual contact or fantasies involving sexual contact with females. However, infrequent male sexual contact or fantasies involving sexual contact with other males has resulted in sexual arousal, but these reactions are weaker than the sexual arousal that results from female sexual contact.
3. Most sexual arousal occurs in response to female sexual contact or fantasies involving sexual contact with females, but definite sexual arousal also occurs in response to male sexual contact or fantasies about sexual contact with males. However, sexual arousal to females is stronger.
4. Equal sexual arousal occurs in response to sexual contact or fantasies with males and females.
5. Most sexual arousal occurs in response to sexual fantasies or contact with males, but a fair amount of sexual arousal to females has also occurred.
6. Most sexual arousal has occurred in response to sexual contact or fantasies with males. However, infrequent sexual arousal has occurred in response to female sexual contact or fantasies involving sexual contact with females.
7. All sexual arousal occurs in response to male sexual contact or fantasies involving sexual contact with males.

APPENDIX D

MASCULINE GENDER ROLE STRESS SCALE

MGRSS

Listed below are a number of situations that may or may not be considered stressful. Please indicate on a "0" (not at all stressful) to "6" (extremely stressful) scale the extent to which each of the following situations is stressful for you.

		Not At All						Extremely
1	**Tell your spouse that you love her**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
2	**Feeling that you are not in good physical condition**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
3	**Being outperformed at work by a woman**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
4	**Having to ask directions when you are lost**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
5	**Being unemployed**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
6	**Not being able to find a sexual partner**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
7	**Telling someone that you feel hurt by what he/she said**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
8	**Having a female boss**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
9	**Working with people who seem more ambitious than you**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
10	**Not making enough money**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
11	**Having your lover say that she is not satisfied**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
12	**Admitting that you are afraid of something**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
13	**Letting a woman take control of the situation**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
14	**Finding you lack the occupational skills to succeed**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
15	**Talking with a "feminist"**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
16	**Being perceived as "gay"**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
17	**Having your children see you cry**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
18	**Being married with someone who makes more money than you**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
19	**Being with a woman who is more successful than you**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
20	**Having people say that you are indecisive**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
21	**Being unable to perform sexually**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
22	**Losing in a sports competition**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
23	**Being perceived as having feminine traits**	**0**	**1**	**2**	**3**	**4**	**5**	**6**

24	**Being outperformed in a game by a woman**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
25	**Being too tired for sex when you lover initiates it**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
26	**Appearing less athletic than a friend**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
27	**Talking with a woman who is crying**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
28	**Needing your spouse to work to help support the family**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
29	**Having others say you are too emotional**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
30	**Being unable to become sexually aroused when you want**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
31	**Being compared unfavorably to men**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
32	**Comforting a male friend who is upset**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
33	**Admitting to your friends that you do housework**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
34	**Working with people who are brighter than yourself**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
35	**Getting passed over for a promotion**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
36	**Knowing you cannot hold your liquor as well as others**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
37	**Having a man put his arm around your shoulder**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
38	**Being with a woman who is much taller than you**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
39	**Staying home during the day with a sick child**	**0**	**1**	**2**	**3**	**4**	**5**	**6**
40	**Getting fired from your job**	**0**	**1**	**2**	**3**	**4**	**5**	**6**

APPENDIX E

AGGRESSION QUESTIONNAIRE

BAQ

Instructions: For each of the following below, please circle a number that best indicates how the statement applies to you. Answer according to the following scale:

1 - Extremely uncharacteristic of me
2 -
3 - Moderately characteristic of me
4 -
5- Extremely characteristic of me

1. Once in a while I can't control the urge to strike another person	1	2	3	4	5
2. I tell my friends openly when I disagree with them	1	2	3	4	5
3. I flare up quickly but get over it quickly	1	2	3	4	5
4. I am sometimes eaten up with jealously	1	2	3	4	5
5. Given enough provocation, I may hit another person	1	2	3	4	5
6. I often find myself disagreeing with people	1	2	3	4	5
7. When frustrated, I let my irritation show	1	2	3	4	5
8. At times I feel I have gotten a raw deal out of life		1	2	3	4
5					
9. If somebody hits me, I hit back	1	2	3	4	5
10. When people annoy me, I may tell them what I think of them	1	2	3	4	5
11. I sometimes feel like a powder keg ready to explode	1	2	3	4	5
12. Other people always seem to get the breaks	1	2	3	4	5
13. I get into fights a little more than the average person	1	2	3	4	5
14. I can't help getting into arguments when people disagree with me	1	2	3	4	5
15. I am an even-tempered person	1	2	3	4	5
16. I wonder why sometimes I feel so bitter about things	1	2	3	4	5
17. If I have to resort to violence to protect my rights, I will	1	2	3	4	5

18. My friends say that I'm somewhat argumentative	1	2	3	4	5
19. Some of my friends think I'm a hothead	1	2	3	4	5
20. I know that "friends" talk about me behind my back	1	2	3	4	5
21. There are people who pushed me so far that we came to blows	1	2	3	4	5
22. Sometimes I fly off the handle for no good reason	1	2	3	4	5
23. I am suspicious of overly friendly strangers	1	2	3	4	5
24. I can think of no good reason for ever hitting a person	1	2	3	4	5
25. I have trouble controlling my temper	1	2	3	4	5
26. I sometimes feel that people are laughing at me behind my back	1	2	3	4	5
27. I have threatened people I know	1	2	3	4	5
28. When people are especially nice, I wonder what they want	1	2	3	4	5
29. I have become so mad that I have broken things	1	2	3	4	5

APPENDIX F

ABBREVIATED VERSION OF PANAS-X

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what you *feel* this way right now, that is, at the present moment. Use the following scale to record your answers.

1 Very slightly	2 A little	3 Moderately	4 Quite a bit	5 Extremely
_____	**Interested**		_____	**Inspired**
_____	**Distressed**		_____	**Blue**
_____	**Excited**		_____	**Joyful**
_____	**Downhearted**		_____	**Happy**
_____	**Upset**		_____	**Irritable**
_____	**Strong**		_____	**Alone**
_____	**Delighted**		_____	**Shaky**
_____	**Scornful**		_____	**Alert**
_____	**Frightened**		_____	**Energetic**
_____	**Guilty**		_____	**Nervous**
_____	**Cheerful**		_____	**Determined**
_____	**Scared**		_____	**Loathing**
_____	**Hostile**		_____	**Attentive**
_____	**Sad**		_____	**Jittery**
_____	**Enthusiastic**		_____	**Active**
_____	**Angry**		_____	**Afraid**
_____	**Lively**		_____	**Disgusted**

_____ **Lonely** _____ **Ashamed**

_____ **Proud**