The Nail That Stands Out Gets Pounded Down:

An Analysis of Inter and Intragroup Aggression

by

Minzheng Hou

A Thesis Submitted in Partial Fulfillment of the

Requirements for the Degree of Bachelor of Arts

With Honors in Psychology from the

University of Michigan

2010

Advisor: Dr. Sara Konrath

Abstract

We examined people's actual behavioral aggression against an ingroup (versus outgroup) member who share similar (or conflicting) beliefs. Participants were asked to rank 10 social and religious groups, allowing us to identify their in-groups and out-groups. Belief similarity (or conflict) was introduced by exchanging essays on abortion. Participants then allocated hot sauce for their partners to consume, with the awareness that their partners disliked hot sauce. Aggression was operationalized as the amount of hot sauce participants allocated. Participants who interacted with an ingroup member with a conflicting belief exhibited the highest level of behavioral aggression, higher than any other group (including outgroup members with conflicting beliefs). Through this finding, we provide evidence for behavioral aggression based on social identity theory in an experimental setting.

The Nail That Stands Out Gets Pounded Down:

An Analysis of Inter and Intragroup Aggression

Thomas Hobbes, in his 1651 *Leviathan*, lamented that the state of nature of man, characterized by the state of war, is "nasty, brutish, and short". Though we might expect that mankind would have evolved to become more sensible and co-operative, especially after the Enlightenment, this is definitely not so even in the 21st century that is still marked by numerous deadly conflicts. There seem to be all kinds of motivations for groups of people to engage in aggressive behaviors against each other, extending from those who seem to belong to the same group, to those who do not. The relentless violence involved in the Arab-Israeli conflict in the Middle East, for example, represent conflicts between two dichotomized groups that have failed to reconcile their differences. Yet the same extent of violence is observed even for those who seem to belong to the same group: In 2009, an abortion doctor in Kansas was murdered in his very own church by an anti-abortion activist who was also a Christian. In the same year in Karachi, Muslim suicide bombers killed at least 20 Shia Muslims, reflecting the perpetual conflict between the Shia and Sunni Muslims. These people too, fight over the right way of life despite their common religious affiliation: Who is a true Christian, and who is a true Muslim?

Research in social psychology has thus extensively investigated the motivations behind not just intergroup, but also intragroup aggression, in order to explain these violent phenomena. Intergroup aggression can be defined as any behavior intended to harm another person who is an outgroup member and who views the behavior as undesirable (Baron, 1977). Intragroup aggression can be defined in a similar way, with the exception that aggression is aimed at one's ingroup rather than an outgroup member. In order to understand intergroup aggression, we need to first examine the basics of intergroup behavior. The major theoretical approaches that have

stimulated the study of intergroup behavior are belief congruence (Rokeach, 1960) and social identity theories (Tajfel, 1978, 1981, 1982). I will proceed to explain the relevance of these two theories as well as their limitations.

Belief Congruence Theory

The basis of belief congruence theory lies on the degree of similarity in beliefs, attitudes and values perceived to exist between individuals. Rokeach, Smith and Evans (1960) account for discrimination in terms of the attributed dissimilarities in belief between the ingroup and outgroup members. From this theoretical perspective, agreement with fundamental beliefs and values is the most important determinant of attitudes towards the outgroup, provided that strong normative pressures are not imposed on the intergroup relationship (Insko, Nacoste, & Moe, 1983; McKirnan, Smith, & Hamayan, 1983). In other words, when there is minimal external social pressure to discriminate against an outgroup member, similarity in beliefs is posited to be the main driving factor behind intergroup attraction. Accordingly, one important consideration involves the information that people have to facilitate their perceptions of other groups. On the one hand, when no specific information about personal beliefs is provided, beliefs attributed to members of distinct social categories tend to exhibit contrast effects (Granberg & Jenks, 1977). That is, people attribute similarity to those whom they like and dissimilarity to those whom they dislike. This is consistent with a study on the outgroup homogeneity effect by Wilder (1986), who demonstrated that in the absence of any reliable information, the act of categorizing subjects into two groups leads them to expect their beliefs to be similar to those of ingroup members and different from those of outgroup members. These findings indicate the role of group status in the self-categorization of people when there is no deeper knowledge and understanding of their beliefs.

On the other hand, when information about a person's beliefs is provided, similarity or dissimilarity in beliefs overrides group status as a determinant of interpersonal attraction and social distance (Moe, Nacoste, & Insko, 1981). According to belief congruence theory, then, similarity and liking should be greater towards ingroup members and less towards outgroup members when information only about group status, and not beliefs, is provided. This bias towards the ingroup in the form of ingroup favoritism, based only on group status, has been reliably demonstrated through evaluation, liking, and allocation of resources (Brewer, 1979; Brewer & Kramer, 1985; Tajfel, 1982; Wilder, 1986). When information about beliefs is provided, however, the literature is supportive of a weak version of the theory which states that in those contexts in which social pressure is nonexistent or ineffective, belief is more important than group status as a determinant of discrimination (Insko et al., 1983). Taken together, belief congruence theory provides a parsimonious explanation for a variety of inter and intragroup conflicts that have occurred worldwide due to conflicting beliefs regardless of group affiliation, including the Southern Thailand insurgency that involved Thai Muslims and Thai Buddhists, and the divisive Protestant and Catholic movements in Northern Ireland despite their overarching Christian faith.

Social Identity Theory

While belief congruence theory largely takes into account people's beliefs, social identity theory attempts to explain intergroup behavior by considering the dynamic interaction between group status and similarity, maintaining that individuals are motivated to derive a positive social identity from their group membership (Tajfel, 1978). This need to achieve positive group distinctiveness causes people to compare their ingroup with the outgroup and to perceive the ingroup as favorable, even in the absence of intergroup conflict. Social identity theory was

developed to explain the finding that the mere categorization of persons into groups invokes a

social norm of discriminating in favor of one's ingroup (Tajfel, Billig, Bundy & Flament, 1971).

The basis of such ingroup favoritism can likewise be explained by the assumption that ingroup

members are similar while outgroup members are not (e.g., Allen & Wilder, 1975; Byrne, 1971).

What happens then when group status and beliefs are incongruent, as in the case when a

perceived outgroup member seems to share a similar belief? According to social identity theory,

because of the need to maintain distinctiveness, perceived similarity between the ingroup and

outgroup may be threatening to individuals. Since the aim of differentiation is to maintain or

achieve superiority over an outgroup on some dimension (Tajfel & Turner, 1979), similarity will

increase these dimensions of comparability, and making it more difficult to differentiate between

the groups and thereby more difficult to protect or enhance one's unique social identity. When

both ingroup and outgroup share the same closely held ideology in Catholicism, for example,

who is to determine which group is morally superior without having other dimensions of

comparison such as socioeconomic status? Thus, there seem to be different predictions about

intergroup behavior, based on belief congruence and social identity theories. While belief

congruence theory predicts that similarities promote interpersonal and intergroup attraction and

hence positive relationships and that dissimilarities lead to devaluation and discrimination

(Struch & Schwartz, 1989), social identity theory predicts that perceived similarities will

increase ingroup favoritism and outgroup derogation tendencies in order to preserve distinctive

social identity (Diehl, 1988; Moghaddam & Stringer, 1988).

In order to reconcile these differences, Brown (1984) suggested that under social identity

theory, perceived similarity leads to hostility towards the outgroup only in certain situations.

These situations involve the presence of competition, such as in a realistic group conflict

(Campbell, 1965), which threatens ingroup uniqueness as there is a likelihood of losing superiority in the impending comparison. In the absence of competition, however, predictions from both belief congruence and social identity theories regarding attraction for similar outgroup members concur as there is no need for groups to battle for superiority or real gains. To take a case in point, consider the differences in violent racial conflicts within the nations of Singapore and Malaysia. Governmental efforts to ensure equal civil rights and religious harmony in Singapore has allowed the cessation of violent racial conflicts ever since independence in 1965 (Velayutham, 2007). There is little competition for superior identity and resources since all three racial groups – Chinese, Malays and Indians, are given equal recognition by the state. As such, similar lifestyles that include the common appreciation of various religious holidays are celebrated. On the contrary, Malaysia's lack of equal civil rights for the Chinese and Indians compared to the Malays has resulted in numerous racial conflicts within the past decade over issues of equality (Soong, 2007). It is arguable from a social identity perspective that this sense of competition among the racial groups perpetuates hostile feelings and attempts to bridge them together may therefore prove to be extremely challenging.

In essence, from a theoretical perspective, the absence of competition allows different groups to unite based on similarity because individuals will not need to actively distinguish themselves from their outgroup. Thus, outgroup similarity is predicted to be less threatening and liking towards similar outgroup members may increase. Empirically, Marques, Abrams, Paez and Martinez-Taboada (1998) provide evidence for increased liking for similar outgroup members, based on category and normative differentiation. Category differentiation implies distinguishing oneself from another based on category, or group status. Normative differentiation implies distinguishing based on norm compliance or violation of the group's prescribed norms.

They found that when participants interacted with outgroup members who complied with their ingroup norms, they did not perceive it as a strong threat to intergroup distinctiveness. Rather, these outgroup members served to validate the ingroup norms of the participants, which helped boost their social identity. Norms form the foundation of what individuals believe ought to be consistent with ingroup membership (Cialdini & Trost, 1998). When outgroup members conform to these norms, ingroup identity may not be threatened but enhanced. Thus in the absence of competition, category differentiation for the purposes of achieving ingroup distinctiveness is not at risk, and the predictions from social identity theory and belief congruence theory in the case of similar outgroup members concur.

Ingroup Deviance

However, what about ingroup deviants who violate an ingroup norm and are seen as betrayers? Belief congruence theory, focusing on the importance of beliefs, may offer a simple prediction that ingroup deviants will be discriminated against due to their dissimilarities. The situation is more complicated with social identity theory. An extension of social identity theory, known as the black sheep effect (Marques & Paez, 1994), was developed to explain the phenomena where ingroup deviants are derogated to a greater extent than outgroup members who are similar. Marques and Paez (1994) explain that the derogation of unlikable ingroup members is a cognitive-motivational strategy to purge from the group those ingroup members who negatively contribute to social identity. The black sheep effect is therefore an attempt to insure a positive social identity when such identity is threatened (Marques, Yzerbyt, & Leyens, 1988). Consistent with Marques, Abrams and Serodio's (2001) findings, ingroup members who violate norms that are perceived to define the ingroup are subjected to lower attractiveness ratings than outgroup members who abide by those norms.

Interim Summary

Research in intergroup relations has provided useful insights into how groups might appraise and evaluate one another. To summarize thus far, we can distill the findings from belief congruence theory about liking towards another group member to be as such: because beliefs are more important a determinant of inter and intragroup appraisals and evaluations, those with similar beliefs will be favored regardless of group status and levels of liking are posited to be similar for those who share similar beliefs. Levels of liking, or dislike, should also be similar for those who share different beliefs but should be distinctly lower than those who share similar beliefs.

From the perspective of social identity, liking should be highest for similar ingroup members, followed by similar outgroup members, assuming the absence of competition. The predictions are not so clear for dissimilar ingroup members and dissimilar outgroup members, however. According to the black sheep effect (Marques & Paez, 1994), ingroup deviants threaten an individual's ingroup identity and are thus subjected to a high degree of derogation. At the same time, dissimilar outgroup members contrast greatly with an individual in both category and norms. A study by Sampson and Brandon (1959) suggests that an ingroup deviant is perceived as more threatening than an outgroup deviant, and ingroup members will therefore reject the ingroup deviant more strongly than the outgroup deviant. However intergroup behavior was measured in terms of verbal communication levels of hostility and tension. There is no evidence, to our knowledge, that clearly contrasts levels of liking between ingroup deviants and outgroup deviants. It will therefore be necessary to pit these two groups against each other and compare them directly.

Aggression

The above findings are constrained in terms of their realistic application in several ways. First, past studies have focused on the use of minimal groups to determine the effects of ingroup favoritism and outgroup derogation (e.g., Diehl, 1990; Lemyre & Smith, 1985; Oakes & Turner, 1980). One limitation of using minimal groups is that, in studying discrimination and prejudice in the real world, minimal groups lack historical and cultural meaning. On the contrary, real groups such as political parties and religious organizations frequently have a lineage of culture and stereotypes associated with them. Emotions that are stirred in the face of an interaction with a Ku Klux Klan outgroup member will no doubt be vastly different than that with an arbitrary "over-estimators" outgroup member. Therefore, to study the effects of prejudice and discrimination in a laboratory more realistically, we argue that it is necessary to use real, rather than minimal groups.

In light of the frequent violent and aggressive behaviors observed in our society today, it is also important to investigate whether these theories can be applied to understand more extreme and disruptive forms of intergroup behaviors. To our knowledge, no study has been conducted to explore behavioral aggression comparing inter and intragroup variables. According to Struch and Schwartz (1989), research stemming from belief congruence and social identity theories have focused on four types of intergroup behavior: (a) evaluations of group traits and performances (e.g., Brown & Williams, 1984); (b) liking or attraction to group members (e.g., Deschamps & Brown, 1983); (c) resource allocation between group members in the laboratory (e.g., Billig & Tajfel, 1973); and (d) intentions to help or harm group members or to engage in positive or negative interaction with them, expressed in a questionnaire (Brown, Condor, Matthews, Wade, & Williams, 1986; Rokeach & Mezei, 1966). Struch and Schwartz (1989) argue that the first three types of behaviors are hypothetical and involve no direct intention to harm or aggress.

Using the fourth type of behavior, they assert that insofar as the participants have direct experience with the object (Fazio & Zanna, 1981), intentions to harm would constitute a desirable index of intergroup aggression. However, their research focused on the intergroup relations between Israeli adults and their ultraorthodox Jewish outgroup. In reality, we cannot be sure of the extent of direct experience of a person with his or her outgroup. Some individuals may believe that a particular group of people belong to their outgroup and still derogate against these groups even if they have never interacted directly with these groups before, as shown in the minimal group paradigm (Tajfel et.al., 1971). Furthermore, we cannot be sure if the intention to harm necessarily translates into actual aggressive behavior. This is a fundamental limitation to the realistic application of the findings from intergroup behavior thus far. While past research has focused on the verbal expression of hostility (e.g., Berkowitz, 1970; Berkowitz & Holmes, 1959; Cohen, 1955; Wheeler & Caggiula, 1966), the relationship between verbal and actual physical aggression is unclear. One reason is that self-reported intentions are always subjected to confounding variables such as social desirability (Crowne & Marlowe, 1960).

We try to minimize all these uncertainties and 1) have participants interact with their actual reported ingroups and outgroups, and 2) measure their actual aggressive behavior. In past aggression studies, researchers have attempted to measure actual aggression through administering electric shocks (e.g., Berkowitz, 1964; Buss, 1961), but these have been proven to be ethically problematic (Baron & Ricardson, 1994). One alternative is Taylor's (1967) competitive reaction time task involving noise blast, which has been shown to be high in construct validity (e.g., Bernstein, Richardson, & Hammock, 1987; Giancola & Zeichner, 1995). However, we want to provide an environment that avoids competition as much as possible in order to be consistent with the assumptions of belief congruence and social identity theories. In

sum, we recognize the need to examine actual behavioral aggression against an ingroup or

outgroup member while minimizing ethical concerns arising from the physical discomfort

endured by participants during the experiment. We have thus relied on the hot sauce paradigm

(Lieberman, Solomon, Greenberg, & McGregor, 1999) to measure behavioral aggression.

The hot sauce paradigm as a measure of behavioral aggression has received substantial

empirical evidence (e.g., Greenberg, Solomon, & Pyszczynski, 1997; Lieberman et al., 1999). In

essence, it involves manipulating some variable that is hypothesized to influence aggression and

providing participants with an opportunity to aggress against a target by choosing the amount of

extremely spicy hot sauce to be allocated to the target (Lieberman et al., 1999). These

manipulations usually involve some form of threat, which can be introduced by the act of

exchanging essays and receiving written feedback. For example, McGregor et al. (1998)

provided evidence that participants who read essays purportedly written by a fellow participant

that violated their cultural worldviews (high threat condition) behaved more aggressively to their

targets compared to those who shared similar worldviews. However, one difference between

these studies and intergroup behavioral studies is that the former do not involve categorizing

participants into ingroups and outgroups prior to the manipulation of beliefs. Nevertheless we

can apply a similar procedure in our study by introducing categorical differentiation prior to the

manipulation of beliefs and allocation of hot sauce. Lastly, the hot sauce paradigm is useful

because it is easily quantifiable, and does not involve the actual consumption of hot sauce by the

target since studies involving hot sauce allocation typically require deception.

The Current Study

In this study, we are interested in examining the actual inter and intragroup aggression of

individuals based on group status and belief similarity. In addition, we want to determine if

positive or negative appraisals of an ingroup or outgroup member will necessarily lead to low or high aggression. In designing our study, we attempt to overcome the limitations associated with past research on inter and intragroup behavior by reducing the reliance on self-report regarding aggression and avoiding the use of minimal groups. We first categorize participants into ingroups and outgroups, based not on minimal groups but on actual social and religious groups, to make the experiment as realistic as possible. Participants rank these groups and determine their own ingroup and outgroup, which we randomly assign in the experiment according to the conditions. Having participants rank their own set of ingroup and outgroup members allow us to ensure the strength of the identification with the group, an important criteria of the black sheep effect (Feather & Souter, 2002). After categorization, we manipulate the belief similarity of groups such that we obtain the following four conditions: Ingroup-Belief Similar (IGBS), Ingroup-Belief Conflict (IGBC), Outgroup-Belief Similar (OGBS), and Outgroup-Belief Conflict (OGBC). This method of examining the four conditions at once will allow us to contrast directly the aggression levels within the various combinations of inter and intragroup settings.

We rely on belief congruence theory and social identity theory to derive predictions first about liking, then about aggression levels. We also include a discussion on how liking and aggression may be related.

Hypotheses Related to Liking

(i) Predictions derived from social identity theory. Because of the importance of categorical differentiation in determining social identity, we would have to consider each condition as distinct from another. In particular, it can be hypothesized that in the absence of competition, participants in the ingroup belief similar (IGBS) condition will exhibit the highest levels of liking, followed by those in the outgroup belief similar (OGBS) condition. According to

the black sheep effect, participants in the ingroup belief conflict (IGBC) condition should exhibit

lower levels of liking than those in the outgroup belief similar (OGBS) condition. Finally,

although liking will also be lower in the outgroup belief conflict (OGBC) condition compared to

the outgroup belief similar (OGBS) condition, we are unable to predict the differences in levels

of liking between the ingroup belief conflict (IGBC) and outgroup belief conflict (OGBC)

condition. While liking in the IGBC condition might be slightly higher than that in the OGBC

condition due to the mitigating factor of group status conferred by the ingroup identity, this study

aims to clarify this.

       (ii) Predictions derived from belief congruence theory. Based on belief congruence

theory, one might hypothesize that evaluations of liking for the partner should be higher for those

who share similar beliefs compared to those who are dissimilar. In particular, levels of liking for

ingroup members and outgroups members who share similar beliefs (i.e. the IGBS and OGBS

conditions) should not differ, since beliefs in this case are more important than group status in

determining liking. Similarly, levels of liking should be equally low towards ingroup and

outgroup members who have different beliefs (i.e. the IGBC and OGBC conditions).

Hypotheses Related to Aggressive Behavior

       The predictions for behavioral aggression are more complicated. One question that must

be raised is, does dislike necessarily translate into behavioral aggression? In other words, even if

an individual expresses dislike towards somebody, would he or she necessarily behave

aggressively towards that person? While one may expect that negative appraisals naturally lead

to behavioral aggression, such that comparative levels of aggression in the four conditions will

be similar to that of liking, we argue that they will be different due to the fact that certain factors

need to be considered before an individual decides to cross the line to actually aggress against

someone else. Liking and aggression are therefore two separate issues. One major motive for inter or intragroup aggression is the perception of a conflict of interest that may arise from different beliefs and values. However, a perceived conflict alone may still be inadequate to elicit an aggressive response. According to Struch and Schwartz (1989), individuals may be inhibited in expressing their motive to harm because aggression has negative implications for self-evaluation. Perceived conflict will therefore be effective in motivating aggression only to the extent that individuals may be able to justify their aggressive behaviors.

   (i) Predictions derived from social identity theory. We posit these justifications in terms of the preservation of social identity. That is, to the extent that the threat is so great that individuals need to preserve their positive social identity, they will be more likely to aggress against others. One important criteria, however, is that aggression must not cause guilt or anxiety lest it be inhibited consciously by the participant (Berkowitz, 1964). Thus, while one may decide to aggress against another in order to preserve social identity, he or she has to be able to justify the aggressive behavior at the same time in order to prevent guilt or anxiety that threatens self evaluation. Otherwise, aggression will not be elicited. In the IGBS condition, there is no need to aggress against a similar ingroup member who does not threaten one's social identity. Thus any level of aggression expressed in this condition should be viewed as a baseline level. Any level of aggression above this baseline will imply that aggressive behavior is triggered, while any level below the baseline suggests that aggression is somehow inhibited. In the OGBS condition, we hypothesize that because the norm conforming outgroup member enhances and validates rather than threatens one's social identity, individuals will not have the incentive to aggress against them especially when they are not competing for anything. Levels of liking may be different

from those in the IGBS condition, but there simply is insufficient justification for behaving aggressively since there should be no conflict of interests in the absence of competition.

In the IGBC condition, participants face a direct threat to their social identity due to the deviance of their ingroup member. Aggression against the ingroup member can thus be justified in terms of preserving social identity and ensuring the integrity of the ingroup by punishing the deviant (Horne, 2001), without causing significant guilt or anxiety. Thus, it can be hypothesized that aggression levels in the IGBC condition will be higher than that in the IGBS and OGBS conditions. In the OGBC condition, predictions may not be as clear. Mummendey and Wenzel (1999) posit that outgroup antagonism requires first a sufficient motivation to establish positive distinctiveness of the ingroup, and second, a sufficient subjective legitimation of the negative behavior against the outgroup. Based on social identity theory, there are two contrasting predictions: while the lack of difference between ingroups and outgroups can cause outgroup discrimination by the ingroup in an attempt to distinguish themselves, the existence of difference can also cause outgroup discrimination when viewed as violating norms and being inferior (Mummendey & Wenzel, 1999). In other words, if participants view the outgroup deviant's difference as helping to distinguish themselves apart, then aggression levels should be low as social identity is not threatened. On the other hand, if participants perceive the outgroup deviant's difference as a threat, then aggression levels should be high. The key to this difference in outcome is the presence or absence of competition (Brown, 1984). Because we present the interaction of participants with their targets as an evaluation of first impressions, rather than of a competing nature, any difference between the participants and their target should be viewed as reinforcing their distinct social identities and not as a competing threat. Thus, it is arguable that

in this situation participants in the OGBC condition will exhibit lower levels of aggression than those in the IGBC condition since there is no explicit need to preserve social identity.

(ii) Predictions derived from belief congruence theory. From the belief congruence perspective, social identity is not a consideration. Levels of aggression in the OGBS condition should therefore be similar to that in the IGBS condition, just as how levels of liking are similar, because of the importance given to beliefs and not group status.

In addition, while belief congruence theory predicts that levels of aggression in the BC conditions will be higher than that in the BS conditions, it provides no differentiation between IGBC and OGBC. It can be predicted from the theory that levels of aggression will be similar for people who have different beliefs, regardless of group status. Although this result has been demonstrated by Struch and Schwartz's (1989) study that supports the value dissimilarity – aggression hypothesis, the findings were based on self-reported intentions. In this case, we examine whether or not this finding can be replicated with behavioral aggression.

Method

Participants

Participants were 141 students (55 males, 86 females) from the University of Michigan, ranging in age between 18 to 25 years old, who participated to fulfill requirements for an introductory psychology course. There were 99 Caucasians, 28 Asian Americans, 10 African Americans, and 4 biracial participants.

Design

The design was a 2 (Group Status: ingroup versus outgroup) x 2 (Belief: belief similar versus belief conflict) randomly assigned experiment. As such, there were 4 conditions altogether: ingroup belief similar (IGBS), ingroup belief conflict (IGBC), outgroup belief similar

(OGBS), and outgroup belief conflict (OGBC). There were between 32 to 41 participants in each condition.

Procedure

Participants were told that the study was about "Social Interactions and Taste Perception". Part 1 of the study consisted of an online questionnaire while Part 2 involved an in-lab experiment.

In Part 1, participants were asked to rank 10 social and religious groups according to their feelings toward them from 1 (most warm or favorable) to 10 (most cold or unfavorable). This allowed us to identify participants' ingroups (rank 1) and outgroups (rank 10). These groups, in alphabetical order, were *Atheists, Buddhists, Democrats, Gays and Lesbians (LGBT), Hindus, Jews, Muslims, Protestants,* and *Republicans.* Participants then completed a taste preference inventory that consisted of a 9-point rating scale (1=no liking at all; 9=extreme liking) to evaluate their preferences for sweet, creamy, spicy, salty, and dry foods; a 7-point scale to measure their views on abortion (1=very strong pro-choice; 7=very strong pro-life); a 7-point scale to measure the importance of religion to them (1=not important at all; 7=very important; N/A=not religious); and a 7-point scale to measure their political affiliation (1=strong democrat; 7= strong republican). In addition, demographic information was also obtained.

Part 2 took place in the laboratory. Participants were told that they were participating in the study with a partner (who actually did not exist), who had been selected based on their responses from the online questionnaire. The experiment consisted of 3 sections. The first section which was a study on social interactions, involved the exchange of one piece of background information, writing of an essay on abortion, and being evaluated by a partner on the essay. The second section involved a taste perception study in which participants were given an

opportunity to allocate hot sauce for their partner. The last section involved the completion of questionnaires. All information about the partner that participants received was bogus and was prepared beforehand by the experimenters. Handwriting was matched according to the gender of the participants. In addition, there was a time lapse of at least 48 hours between the online and in-lab study, in order to increase the believability that the experimenters needed time to match the participants. Throughout the entire experiment, participants were not allowed to see their partner and were reminded that their responses and identity would be kept anonymous.

Section I: Experimental manipulations. Upon their arrival at the laboratory, participants were told that they were early and that they had to wait for a few minutes for their partner to arrive. They were then brought to their assigned room for the entire duration of the experiment. Participants were then told that they were first going to be given a chance to form an impression of their partner by exchanging one piece of written information. The piece of information that they were to exchange was the name and description of the most important student organization to which they belonged. This was designed to introduce the ingroup and outgroup status of the participants' partner. Suppose for example, that in the online study participants indicated that their rank 1 was Protestants and rank 10 was Muslims. In the IG condition the participant would have received an envelope containing the form that his or her partner has completed, indicating the most important student organization as "Student Union of Protestants". In the OG condition, the form would have read "Student Union of Muslims". The same format (Student Union of _____) was applied to all 10 groups from the online questionnaire and was administered depending on the participants' ranking of the groups.

After the exchange of information, participants were told that they were going to be given 10 minutes to write an essay on abortion, picking either a pro-choice or pro-life position. This

section of the study was intended to manipulate belief similarity or conflict. In the BS condition, participants received an essay that had the same position as them. In the BC condition, participants received an essay that had the opposite position. To further reinforce the similarity or difference in beliefs of the participants and their partner, participants were asked to evaluate their partner's essay, and these evaluations would be exchanged. The essay evaluation form allowed the participants to indicate on a 5-point scale (1=strongly disagree; 5=strongly agree) the extent to which they agreed or disagreed with their partner's essay and vice versa. In addition, participants were told to provide written comments on the form because that would aid in impression formation. In the BS condition, participants received an evaluation that strongly agreed with what they wrote. They also received comments that reinforced the similarity in their beliefs towards abortion. In the BC condition, participants received an evaluation that strongly disagreed with what they wrote and comments that reinforced the difference in their beliefs about abortion.

Section II: Aggression measurement. Thereafter, the experimenter commenced on the taste perception section of the study. Participants were told that the purpose of the experiment was to determine how the interaction that just occurred would influence the perception of the taste of certain foods. Participants would be randomly chosen to either allocate a food sample or to taste it. Of course, in every condition, they were told that their partners had been randomly chosen to taste the food sample that they would be preparing. As such, their partners would complete a taste preference inventory (identical to the one presented in the online questionnaire), and they may choose to allocate the food sample by referring to the inventory. Again, the inventory was completed by the experimenter who indicated "no liking at all" under spicy foods. After participants were handed the taste preference inventory, the experimenter walked in with a

tray containing a bottle of a commercial brand of hot sauce (the label read "PAIN 100%"), a

small empty cup, a piece of aluminum foil, a dish containing hot sauce, a toothpick and a cup of

water. Participants were first instructed to taste the hot sauce by dipping the toothpick into the

dish of hot sauce, so that they know what their partner would be tasting. The cup of water was

given to participants to wash down any discomfort they might have experienced from tasting the

hot sauce. They were then told to place a quantity of hot sauce into the cup by pouring from the

bottle and to seal the cup with the aluminum foil so that the experimenter would not be able to

see how much hot sauce had been added. They were told that their partner would be required to

consume all of the hot sauce that they allocated. In addition, they were told that all quantities of

hot sauce were useful and that they could put in as much or as little hot sauce as they wanted.

After the experimenter left the room and the participants allocated hot sauce, the experimenter

returned to collect the tray and measured the net weight of the hot sauce allocated in the control

room.

       Section III: Manipulation checks. In the final section of the in-lab experiment,

participants were asked to complete a Social Interactions Evaluation Form. In effect, this form

served as a manipulation check that enabled us to determine whether the group status and belief

manipulations worked. To determine comfort with group status, participants completed a 7-point

scale (1=very uncomfortable; 7= very comfortable) indicating the level of comfort they felt after

knowing their partner's student organization. To determine perceptions of similarity and liking,

participants completed a 5-point scale (1= very dissimilar; 5= very similar) indicating how

similar they felt their partner was to them, and a 5-point scale (1= dislike very much; 5= like

very much) indicating how much they liked their partner. In addition, we were able to determine

the extent to which participants empathized with their partner by having them complete a 5-point

scale (1=not at all; 5=completely) indicating the level to which they used their partner's taste preference inventory when allocating the hot sauce. Participants the completed the 20-item PANAS scale (Watson, Clark, & Tellegen, 1988) that allowed us to determine the effect of each condition on participants' affective states, and the relationship between these affective states and aggression. Lastly, participants completed the 29-item Aggression questionnaire (Buss & Perry, 1992) that allowed us to discern which particular aspects of self-reported aggression (i.e. physical, verbal, anger and hostility) were involved in the act of behavioral aggression as measured by the allocation of hot sauce.

Before participants were debriefed, experimenters asked them if they had any comments about the study and what they thought was its purpose. Participants were also asked whether they felt suspicious about the presence of their partner. After which, the experimenter concluded with a thorough debriefing and experimenters made sure that participants understood the purpose of the experiment and the need for deception.

Results

Data Preparation and Analysis

We asked participants at the end of the study if they had any comments about the study and what they thought was its purpose. We coded participants as suspicious (N = 32) if they mentioned that 1) they thought the study was measuring aggression, or 2) they thought we were interested in the effect of similarity or difference with their partner. For each of the analyses reported below, we conducted an ANOVA with Group Status and Belief as independent variables. We also entered suspicion (1 = suspicious, 0 = not suspicious) into the model.

Manipulation Checks

The ingroup and outgroup manipulation was effective. A Group Status x Belief ANOVA with comfort levels as the dependent variable revealed a main effect for Group Status, $F(1, 133) = 31.52$, $p < 0.001$, indicating that participants who interacted with an ingroup member felt significantly more comfortable ($M = 5.85$, $SD = 0.2$) after knowing his or her partner's student organization than those who interacted with an outgroup member ($M = 4.26$, $SD = 0.2$). The belief similarity manipulation was also effective. A Group Status x Belief ANOVA with similarity as the dependent variable revealed a main effect for Belief, $F(1, 133) = 361.77)$, $p < 0.001$, indicating that participants in the belief similar condition felt significantly more similar ($M = 4.38$, $SD = 0.10$) to their partner than those in the belief conflict condition ($M = 1.83$, $SD = 0.09$).

Liking

Consistent with the similarity-attraction hypothesis, agreement with beliefs was highly correlated with perceptions of similarity, $r(139) = 0.87$, $p < 0.001$, and similarity was in turn highly correlated with levels of liking, $r(139) = 0.70$, $p < 0.001$.

To test the predictions from belief congruence theory and social identity theory on levels of liking towards the partner, a Group Status x Belief ANOVA was conducted with the participants' evaluation of liking as the dependent variable. There was no main effect for group status $F(1, 133) = 0.84$, $p > 0.05$, indicating that ingroup ($M = 3.57$, $SD = 0.10$) or outgroup ($M = 3.44$, $SD = 0.10$) status did not determine levels of liking. However, there was a main effect of belief, $F(1, 133) = 57.48$, $p < 0.001$. Participants in the belief similar conditions ($M = 4.03$, $SD = 0.10$) liked their partners significantly more than those in the belief conflict conditions ($M = 2.98$, $SD = 0.10$). The interaction was not significant, $F(1, 133) = 0.52$, $p > 0.05$. The finding that belief similarity is more important than group status in determining liking is consistent with

belief congruence theory. The lack of interaction, however, fails to support predictions from social identity theory, since there is no significant difference in the levels of liking between the IGBS ($M = 4.14$, $SD = 0.14$) and the OGBS condition ($M = 3.91$, $SD = 0.14$), and between the IGBC ($M = 3.00$, $SD = 0.14$) and OGBC condition ($M = 2.97$, $SD = 0.13$).

Hot Sauce Allocation

A Group Status x Belief ANOVA was conducted with the amount of hot sauce allocated (in grams) as the dependent variable. There were no significant effects of suspicion level (main effects or interactions). There was a significant effect of Group Status such that participants in the ingroup ($M = 4.82$, $SD = 1.26$) allocated more hot sauce than those in the outgroup ($M = 0.925$, $SD = 1.26$), $F(1, 133) = 4.77$, $p = 0.03$. More importantly, this main effect was qualified by a significant interaction between Group Status and Belief, $F(1, 133) = 4.13$, $p = 0.04$. Participants in the IGBC condition allocated the highest amount of hot sauce ($M = 8.28$, $SD = 1.78$), followed by those in the IGBS ($M = 1.36$, $SD = 1.78$), OGBS ($M = 1.09$, $SD = 1.83$), and finally OGBC ($M = 0.76$, $SD = 1.73$) conditions (see Figure 1).

In addition, a Pearson correlation was conducted to determine the relationship between liking or dislike and actual behavioral aggression as measured by the amount of hot sauce allocated. Overall there was a significant negative correlation between liking and the amount of hot sauce allocated, $r(139) = -0.25$, $p = 0.003$. However, a closer examination reveals that this relationship is only significant in the IGBC condition, $r(32) = -0.42$, $p = 0.014$. There was no correlation between liking and the amount of hot sauce allocated in the IGBS condition, $r(32) = -0.28$, $p > 0.05$; OGBS condition, $r(39) = 0.02$, $p > 0.05$; and OGBC condition, $r(30) = -0.18$, $p > 0.05$. Thus only in the IGBC condition was participants' higher levels of dislike related to the higher amounts of hot sauce allocated for their partners.

By evaluating the extent to which their partner's taste preference inventory was used in deciding the amount of hot sauce to be allocated, we measured participants' willingness to aggress against their partner with the awareness that their partner dislikes hot sauce. Overall, there was a significant negative correlation between the extent to which the taste preference inventory was considered and the amount of hot sauce allocated, $r(139) = -0.26$, $p = 0.002$. In other words, the more participants considered their partner's feelings about hot sauce, the less hot sauce they allocated. This correlation was significant in the IGBS condition, $r(32) = -0.50$, $p = 0.002$, and in the OGBS condition, $r(39) = -0.62$, $p < 0.001$, and was approaching significance in the OGBC condition, $r(30) = -0.33$, $p = 0.07$. Only in the IGBC condition was there no correlation, $r(32) = -0.05$, $p > 0.05$.

Trait Physical Aggressiveness

A Group Status x Belief ANOVA with trait physical aggressiveness (Buss & Perry, 1992) as the dependent variable revealed similar patterns as behavioral aggression (i.e. hot sauce allocation). There was no main effect of Group Status or Belief. The interaction effect of Group Status and Belief was approaching significance, $F(1, 133) = 3.19$, $p = 0.08$. Participants in the IGBC condition self-reported the highest level of physical aggression ($M = 2.21$, $SD = 0.14$) compared to those in the OGBS ($M = 1.92$, $SD = 0.14$), IGBS ($M = 1.84$, $SD = 0.14$), and OGBC ($M = 1.80$, $SD = 0.13$) conditions (see Figure 2).

A Group Status x Belief ANOVA was also conducted with the average trait aggressiveness and the remaining subscales of the aggression questionnaire (Buss & Perry, 1992) as dependent variables: verbal aggression, anger, and hostility. There was no main effect of Group Status or Belief and no interaction for all three trait subscales and average trait

aggressiveness. There was also no correlation between all four subscales of trait aggressiveness and the amount of hot sauce allocated, both overall and within each condition.

Discussion

The present research sought to determine, based on the perspectives of belief congruence and social identity theories, the differential aggression levels exhibited by an individual towards others depending on group status and belief. First we examined an individual's appraisal of his or her partner based on evaluations of liking. Consistent with belief congruence theory, our results indicate that participants disliked deviant outgroup members and deviant ingroup members, but liked ideologically similar outgroup and ingroup members. This suggests that sharing similar ideologies may be more important than group identification in terms of appraising and attraction towards another person.

However, we found that simply liking or disliking someone else does not necessarily lead to lower or higher aggression, especially for those who share conflicting beliefs. Our results indicate that participants interacting with an ingroup member who possesses a conflicting belief behaved most aggressively towards their partner. Participants interacting with an outgroup member who has a conflicting belief, however, exhibited the lowest mean level of aggression. Regardless of group status, participants interacting with those who shared similar beliefs displayed low levels of aggression. In addition, these findings on the different levels of behavioral aggression in the four conditions correspond with participants' trait physical aggressiveness: those who interacted with an ingroup member with conflicting beliefs scored the highest in trait physical aggressiveness compared to all other groups. As such, our results support predictions by social identity theory about behavioral aggression and trait physical aggressiveness.

According to social identity theory, participants interacting with a deviant ingroup member faced the highest degree of threat to their social identity. Given the opportunity to preserve their identity, they punished the ingroup deviant via physical aggression. Aggressive acts in this situation were likely justified in terms of norm preservation in order to validate the ingroup. On the other hand, because the experiment was designed to avoid the introduction of competitiveness, participants interacting with an outgroup member with conflicting beliefs did not face high levels of threat to their social identity despite their differences. Group boundaries and identity distinctions in this case were clear, and aggressing against someone simply because he or she is different on the outset may cause guilt or anxiety on the part of the individual. Aggression in this condition was therefore not justified. Participants interacting with similar outgroup members also did not have to attempt to differentiate themselves because there was no competition involved. In this situation, similarity bred attraction and since there was no threat to social identity, aggression was unnecessary. Therefore, aggression levels towards similar outgroup members and similar ingroup members were equally low. Interestingly, we found also that only participants interacting with ingroup deviants had no consideration for their partner's taste preference. To them, the decision to aggress was final.

It is interesting to note that although we found similar effects of our experimental manipulations on both behavioral aggression and trait physical aggressiveness, the two variables are found to be uncorrelated. The validity of the Buss and Perry (1992) aggression questionnaire as a self-report measure of trait aggressiveness may be called into question, since those participants who self-reported high levels of trait physical aggressiveness were not the ones who actually aggressed against their partners. There could be underlying psychological variables

involved that determine who aggresses and who does not, which can be examined in future studies.

Our results on behavioral aggression may seem surprising at first glance. Indeed, we asked 12 social psychology graduate students to complete an online survey making predictions about our results. We asked them to rank the four groups in our study from 1=highest aggression to 4=lowest aggression. Specifically, we asked: "Which of the following groups will an individual behave most aggressively towards: an individual interacting with an ingroup member who shares a similar (versus different) belief in abortion; an individual interacting with an outgroup member who shares a similar (versus different) belief in abortion?" Ten out of the 12 graduate students guessed that an individual would be most aggressive towards an outgroup member with different beliefs. While even those in the field of social psychology might think that it is intuitive for an individual to be most aggressive towards those who are clearly different and deviant, our findings reveal otherwise. We believe that the key lies in the perception of competition which drives opponent groups to derogate each other more in order to attain superiority. In this case, our findings are based on the absence of competition and any differences with outgroup members may reinforce distinct group boundaries instead. Nevertheless, future research should incorporate elements of competition through the competitive noise blast paradigm (Taylor, 1967) for example, or by introducing some form of zero sum game to examine the effects of competition on the four various conditions. As it is, outgroup deviants are subjected to low levels of attraction and liking. The introduction of competition, such as a realistic group conflict, will likely justify aggressive acts done unto these people because there are real gains and losses involving identity. Similar outgroup members, too, may be subjected to higher levels of aggression than observed in this study due to an increased

need for separation especially when group identification is strong. In addition, ingroup deviants may suffer from even greater aggression – not only are they threatening to an individual's social identity, they are now seriously undermining the integrity of the ingroup and its ability to attain superiority in the race against the outgroup.

From a sociological perspective, the harsh punishment of ingroup deviants is not surprising. Erikson (1966) contended that groups define themselves in terms of the norms they prescribe to their members (i.e. their moral boundaries) which distinguish themselves from other communities. Moral boundaries define the identity of those who belong to the community and those who do not. Detection and punishment of deviant group members, such as occurs in witch-hunting or political purges, therefore helps in defining the group (Hamilton & Rauma, 1995; Yamagishi, 1995). In times of real conflict and competition against another group, the need to preserve an ingroup's integrity becomes more urgent than ever. Any form of deviance from the group may pose a serious threat to the group's survivability. It is little wonder why historically, espionage has been highly condemned and individuals, such as the Rosenbergs who were executed in 1953 during the crucial period of the Cold War for passing information about the atomic bomb to the Soviet Union, are severely punished for transgressions of group norms and rules.

One limitation in this study is that it is unclear to what extent people considered ingroup deviants as not being "true" ingroup members. Some Protestants who are pro-life, for example, may consider Protestants who are pro-choice as belonging to their outgroup rather than perceive them as being deviant ingroup members. Future research can explore whether shifting group boundaries play a precipitating role in aggression. Nevertheless through this study, we were able to overcome several limitations of previous research on inter and intragroup behavior. First, with

our two by two experimental design, we were able to present the differences among the four different conditions of Group Status and Belief at once – something that past research have not done. More importantly, we overcome the limitations of self-report by providing findings of actual behavioral aggression.

In addition, instead of minimal groups, we used real social and religious groups to determine ingroup and outgroup status. This improves the realism of our experiment with the various cultural, historical and social perceptions associated with these groups. By allowing participants to rank the groups, we were also able to ensure the strength of group identification since participants were asked to rank them based on how warm or cold they felt towards these groups. In addition, one way to improve this design would be to create a longer list that includes more groups, social and religious, so that we can be more certain that those ranked the first and the last will be truly the participant's strongest ingroup and outgroup. Regardless, our manipulation was shown to be effective in terms of the closeness or distance felt between the participant and their partner. For example, one participant commented at the end that he felt extremely angry towards his ingroup partner, who is a Catholic, because he thought that it was ridiculous that a Catholic could be pro-choice. Another remarked that she felt pleasantly surprised with her outgroup partner, who is a Republican and whom she thought at first would be pro-life. However, because of their similarity in pro-choice beliefs, she felt that she will be able to get along with her partner very well. In addition, others who interacted with an outgroup member with different beliefs indicated that while they did not feel comfortable with their partner, they respected their differences. We recommend future research to consider this method of assigning groups.

Future Directions

Our present study focuses on the salience of social identity in evoking inter and intragroup behavior. One of the important aspects of social identity involves an individual's independent and interdependent self construal (Markus & Kitayama, 1991). An independent self construal emphasizes on the separateness and uniqueness of individuals while an interdependent self construal stresses connectedness and social contexts. Based on the different combinations of independent and interdependent self construal within an individual (Konrath, Bushman, & Grove, 2009) it would be interesting to determine if these aspects of the social self and the extent to which an individual prioritizes individual or collective behaviors influence his or her aggressive behavior within the context of our experiment.

In addition, personality variables such as authoritarianism may be involved in determining an individual's willingness to aggress against an ingroup or outgroup member. According to Duckitt (1989), authoritarian aggression is defined as intolerance of and punitiveness toward persons not conforming to ingroup norms and rules. One might thus expect individuals high in authoritarianism to exacerbate the direction of the findings that we present in this study. At the same time, however, it is important to consider authoritarianism as a personality trait that may represent group-based beliefs and values (Reynolds, Turner, Haslam, & Ryan, 2001) and that individual personalities may not necessarily translate into behaviors that depend on collective psychology (Turner, 1999) when determining the effects of personality variables on inter and intragroup behavior.

Conclusion

We have sought to provide a clearer picture of inter and intragroup aggression by attempting to improve the external validity of research in this field. The study of inter and intragroup behavior, however, is far from complete amidst the relentless quest to determine a

solution to mitigate and prevent intergroup conflict. One fundamental problem seems to be our tendency to continuously divide and form groups. As Amartya Sen in his 1998 lecture *Reason before Identity* noted, there is often unquestioning "sectarian identification" with sub-communities as Sikhs or Hindus despite people's overarching identities as Asians or Indians for example.

While some scholars have suggested that a solution to intergroup conflict lies in such acts of identifying common affiliations with one another, our study seem to point otherwise as individuals appear to be more tolerant of outgroup differences than ingroup deviance. Attempting to emphasize on shared identities may prove to be challenging as the possibility of perceiving another individual as a deviant may be higher: if as members of the Christian community or the Muslim community or as citizens of the same country we can discover ample reasons to segregate ourselves – the multiple denominations in Christianity; the perpetual divide between Shia and Sunni Muslims; the various ethnic conflict between the Tamils and Sinhalese in Sri Lanka, Buddhists and Muslims in Thailand, and the Uighur-Han tensions in China for example – can we, really, transcend these numerous groups that we have created and identify ourselves as one human race?

Perhaps the answer lies not in reinforcing our larger, common identity, as we constantly strive towards distinguishing ourselves apart and preserving our own uniqueness, but in recognizing that different ways of living, different beliefs and value systems, insofar as they do not cause harm to others, are simply *different.* John Stuart Mill says it best in his 1859 essay *On Liberty*:

> "As it is useful that while mankind are imperfect there should be different opinions, so
> it is that there should be different experiments of living; that free scope should be given

to varieties of character, short of injury to others; and that the worth of different modes

of life should be proved practically, when any one thinks fit to try them."

Ultimately, there is no simple solution to intergroup relations. If we cannot achieve a

melting pot of a single common identity, perhaps the next viable alternative would be a salad

bowl in which every group, or even individual, is able to preserve itself without threat from

others and live together in tolerance.

References

Allen, V. L., Wilder, D. A. (1975). Categorization , belief similarity , and intergroup

discrimination. *Journal of Personality and Social Psychology ,* 32 , 971 – 977 .

Baron, R. A. (1977). *Human aggression.* New York: Plenum.

Baron, R. A., & Richardson, D. R. (1994). *Human aggression* (2nd Ed.). New York: Plenum.

Berkowitz, L. (1964) Aggressive cues in aggressive behavior and hostility catharsis.

Psychological Review, 71, 104-122.

Berkowitz, L. (1970). Aggressive humor as a stimulus to aggressive responses. *Journal of*

Personality and Social Psychology, 16, 710-717.

Berkowitz, L. & Holmes, D. S. (1959). The generalization of hostility to disliked objects.

Journal of Personality, 27, 565-577.

Bernstein, S., Richardson, D., & Hammock, G. (1987). Convergent and discriminant validity of

the Taylor and Buss measures of physical aggression. *Aggressive Behavior, 13,* 15-24.

Billig, M., & Tajfel, H. (1973). Social categorization and similarity of intergroup behavior.

European Journal of Social Psychology, 3, 27 – 52.

Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-

motivational analysis. *Psychological Bulletin, 86,* 307- 324.

Brewer, M. B., & Kramer, R. M. (1985). The psychology of intergroup attitudes and behavior.

Annual Review of Psychology, 36, 219-243.

Brown, R. J. (1984). The effects of intergroup similarity and cooperative versus competitive

orientation on intergroup discrimination. *British Journal of Social Psychology*, *23*, 21-33

Brown, R. J., Condor, S., Matthews, A., Wade, G., & Williams, J. (1986). Explaining intergroup

differentiation in an industrial organization. *Journal of Occupational Psychology, 59,*

273-286.

Brown, R. J., & Williams, J. A. (1984). Group identification: The same thing to all people?

Human Relations, 37, 547-564.

Buss, A. H. (1961). *The psychology of aggression.* New York: Wiley.

Buss, A. H., & Perry, M. P. (1992). The aggression questionnaire. *Journal of Personality and*

Social Psychology, 63, 452-459.

Byrne, D. (1971). *The attraction paradigm.* Orlando, FL: Academic Press.

Campbell, D. T. (1965). Ethnocentric and other altruistic motives. In D. Levine (Ed.), *Nebraska*

symposium on motivation (pp. 283–311). Lincoln: University of Nebraska Press.

Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity and

compliance. In D. T. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social*

psychology, (pp. 151 – 192). New York: McGraw-Hill.

Cohen, A. K. (1955). *Delinquent boys.* New York: Free Press.

Crowne, D. R, & Marlowe, D. (1960). A new scale of social desirability independent of

psychopathology. *Journal of Consulting Psychology, 24,* 349-354.

Deschamps, J. C, & Brown, R. (1983). Superordinate goals and intergroup conflict. *British*

*Journal of Social Psychology, 22,*189-195.

Diehl, M. (1988). Social identity and minimal groups: The effects of interpersonal and intergroup

attitudinal similarity on intergroup discrimination. *British Journal of Social Psychology,*

27, 289-300.

Diehl, M. (1990). The minimal group paradigm: Theoretical explanations and empirical findings.

In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology,*(pp. 263 –

292). Chichester, England: Wiley.

Duckitt, J. (1989). Authoritarianism and group identification: A new view of an old construct.

Political Psychology, 10, 63-84.

Erikson, K. T. (1966). *Wayward Puritans: a Study in the Sociology of Deviance*. New York:

Wiley

Fazio, R. H., & Zanna, M. P. (1981). Direct experience and attitude behavior consistency. In L.

Berkowitz (Ed.), *Advances in experimental social psychology,* (pp. 162-202). New York:

Academic Press.

Feather, N. T., and Souter, J. (2002). Reactions to mandatory sentences in relation to the ethnic

identity and criminal history of the offender. *Law and Human Behavior, 26,* 417–438.

Giancola, P. R., & Zeichner, A. (1995). Construct validity of a competitive reaction-time

aggression paradigm. *Aggressive Behavior, 21,* 199-204.

Granberg, D., & Jenks, R. (1977), Assimilation and contrast effects in the 1972 election. *Human

Relations, 30,*623-640.

Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem

and cultural worldviews: Empirical assessments and conceptual refinements. In M. Zanna

(Ed.), *Advances in experimental social psychology,* (pp. 61 – 139. San Diego, CA:

Academic Press.

Hamilton, V. L., & Rauma, D. (1995). Social psychology of deviance and law. In K. S. Cook, G.

A. Fine, & J. S. House (Eds.), *Sociological perspectives on social psychology,* (pp. 524-

547). Boston: Allyn & Bacon.

Horne, C. (2001). The Enforcement of Norms: Group Cohesion and Meta- Norms. *Social*

    Psychology Quarterly, 64, 253–66.

Insko, C. A., Nacoste, K. W. & Moe, J. L. (1983). Belief congruence and racial discrimination:

    Review of the evidence and critical evaluation. *European Journal of Social Psychology,*

    13, 153-174.

Konrath, S., Bushman, B. J., & Grove, T. (2009). Seeing my world in a million little pieces:

    Narcissism, self-construal, and cognitive–perceptual style. *Journal of Personality, 77,*

    1197 – 1228.

Lemyre, L., & Smith, P.M. (1985). Intergroup discrimination and self-esteem in the minimal

    group paradigm. *Journal of Personality and Social Psychology, 49,* 660-670.

Lieberman, J. D., Solomon, S., Greenberg, J., & McGregor, H. A., (1999). A hot new way to

    measure aggression: hot sauce allocation. *Aggressive Behavior*, *25,* 331–348.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion,

    and motivation. *Psychological Review, 98,* 224- 253.

Marques, J. M., Abrams, D., Paez, D., & Martinez-Taboada, C. (1998). The role of

    categorization and in-group norms in judgments of groups and their members. *Journal of*

    Personality and Social Psychology, 75, 976 - 988.

Marques, J. M., Abrams, D., & Serodio, R. (2001). Being better by being right: Subjective group

    dynamics and derogation of in-group deviants when generic norms are undermined.

    Journal of Personality and Social Psychology, *81*, 436-447.

Marques, J. M., & Paez, D. (1994). The "black sheep effect": Social categorization, rejection of

    ingroup deviates, and perception of group variability. In W. Stroebe, & M. Hewstone

(Eds.), *European Review of Social Psychology*, (pp. 37 – 68). Chichester, England: Wiley.

Marques, J. M., Yzerbyt, V. Y., & Leyens, J.-P. (1988). The black sheep effect: Extremity of judgments towards in-group members as a function of group identification. *European Journal of Social Psychology, 18,* 1-16.

McGregor, H., Lieberman, J., Greenberg, J., Solomon, S., Arndt, J., Simon, L., & Pyszczynski, T. (1998). Terror management and aggression: Evidence that mortality salience promotes aggression against worldview-threatening individuals. *Journal of Personality and Social Psychology, 74,* 590-605.

McKirnan, D. J., Smith, C. E., & Hamayan, E. V. (1983). A sociolinguistic approach to the belief-similarity model of racial attitudes. *Journal of Experimental Social Psychology, 19,* 434-447.

Moe, J. L., Nacoste, R. W., & Insko, C. A. (1981). Belief versus race as determinants of discrimination: A study of southern adolescents in 1966 and 1979. *Journal of Personality and Social Psychology, 41,* 1031-1050.

Moghaddam, F., & Stringer, P. (1988). Outgroup similarity and intergroup bias. *Journal of Social Psychology*, *128*, 105-115.

Mummendey, A., & Wenzel, M. (1999). Social discrimination and tolerance in intergroup relations: Reactions to intergroup difference. *Personality and Social Psychology Review*, *3*, 158-174.

Oakes, P.J., & Turner, J.C. (1980). Social categorization and intergroup behaviour: Does minimal intergroup discrimination make social identity more positive? *European Journal of Social Psychology, 10*, 295-301.

Reynolds, K. J., Turner, J. C., Haslam, S. A., & Ryan, M. K. (2001). The role of personality and group factors in explaining prejudice. *Journal of Experimental Social Psychology, 37,* 427–434.

Rokeach, M. (1960) *The Open and Closed Mind.* New York: Basic Books.

Rokeach, M., & Mezei, L. (1966). Race and shared belief as factors in social choice. *Science, 151,* 167-172

Rokeach, M, Smith, P. W., & Evans, R. I. (1960). Two kinds of prejudice or one? In M. Rokeach (Ed.), *The Open and Closed Mind* (pp. 132-168). New York: Basic Books.

Sampson, E. E., & Brandon, A. (1959). The effects of role and opinion deviation on small group behavior. *Sociometry, 27,* 261-81.

Soong, K. K. (2007). Racial Conflict in Malaysia: against the official history. *Institute of Race Relations, 49*, 33-53.

Struch, N., & Schwartz, S. H. (1989). Intergroup aggression: Its predictors and distinctness from in-group bias. *Journal of Personality and Social Psychology, 56,* 364-373.

Tajfel, H. (1978). Social categorization, social identity and social comparison. In H. Tajfel (Ed.), *Differentiation between social groups: Studies in the social psychology of intergroup relations* (pp. 61 76). London: Academic Press.

Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology.* Cambridge, England: Cambridge University Press.

Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology, 33,* 1-39.

Tajfel, H., Billig, M., Bundy, R., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, *1,* 149-178

Tajfel, H. & Turner J. C. (1979). An integrative theory of intergroup conflict. En W. G. Austin y S. Worchel (Eds.), *The social psychology of intergroup Relations*. Monterey: Brooks/Cole..

Taylor, S. P. (1967) Aggressive behavior and physiological arousal as a function of provocation and the tendency to inhibit aggression. *Journal of Personality*, *35,* 297-310.

Turner, J. C. (1999). Some current issues in research on social identity and self-categorization theories. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 6–34). Oxford, England: Blackwell.

Velayutham, S. (2007). *Responding to Globalization: Nation, Culture and Identity in Singapore.* Institute of Southeast Asian Studies, Singapore.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070.

Wheeler, L., & Caggiula, A. R. (1966). The contagion of aggression. *Journal of Experimental Social Psychology, 2,* 1-10.

Wilder, D. A. (1986). Social categorization: Implications for creation and reduction of intergroup bias. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 291-355). New York: Academic Press.

Yamagishi, T. (1995). Social dilemmas. In K. S. Cook, G. A. Fine, & J. S. House (Eds.), *Sociological perspectives on social psychology* (pp. 311-335). Boston: Allyn & Bacon.

Author Note
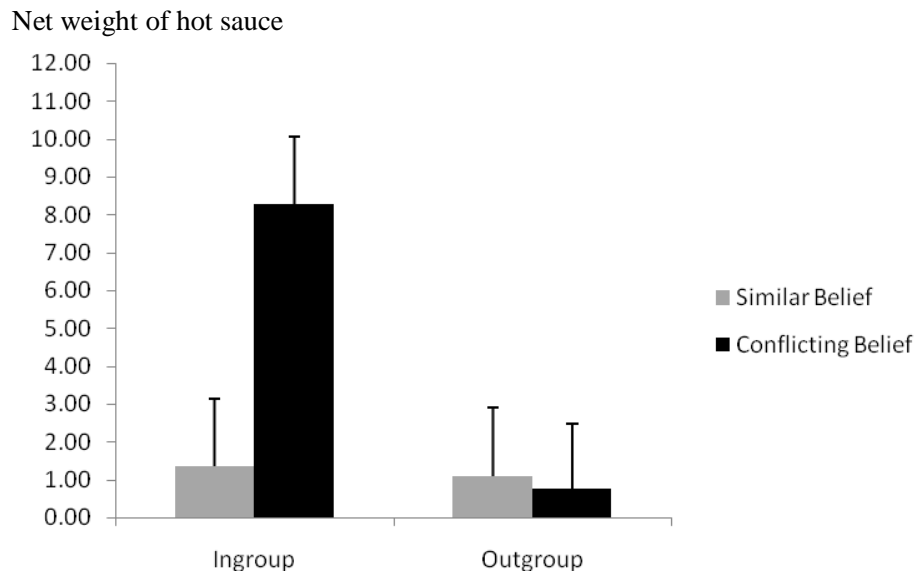
Net weight of hot sauce

Figure 1. Comparison of the amount of hot sauce allocated based on Group Status and Belief.

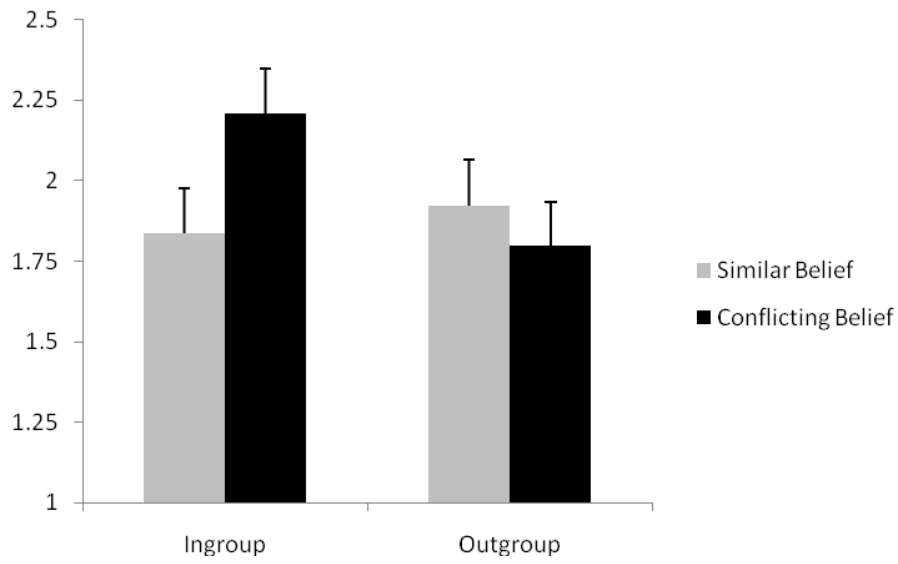Trait physical aggressiveness score

Figure 2. Comparison of trait physical aggressiveness based on Group Status and Belief.