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Prescriptions of Intergroup Conflict: The Role of Implicit and Explicit Associations of Violence

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PERCEPTIONS OF INTERGROUP CONFLICT: THE ROLE OF IMPLICIT

AND EXPLICIT ASSOCIATIONS OF VIOLENCE

BY

JUSTINE N. EGAN

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DOCTOR OF PHILOSOPHY DISSERTATION

OF

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Abstract

Violence is pervasive in our world. The acceptability of violence as a societal norm sets the stage for interpersonal and intergroup conflicts. One source of such conflict is that individuals differ in how they perceive violence and violent behavior. Previous research found that individuals differ in their explicit attitude evaluations of violence. The first manuscript in this dissertation expanded upon this research area with an examination of implicit attitude evaluations of violence. This manuscript addressed the creation of a new measure of implicit attitude evaluations of violence and nonviolence using the Implicit Association Test (IAT). Participants were asked about their explicit perceptions of violence, and similarities were found among word generation, word categorization, and definition generation tasks. In addition, the newly created IAT measure was concurrently validated using explicit and implicit measures of violence, aggression, and nonviolence. The Violence Sensitivity Scale (VSS) was negatively correlated with the Buss-Perry Aggression Questionnaire-Short Form (BPAQ-SF), consistent with previous research. Due to missing data and a small sample size, there were no significant correlations found between the remainder of the target measures. The second manuscript in this dissertation examined the utility of the IAT measure within the context of intractable intergroup conflict. Results suggested that outsiders legitimize violence of groups who are powerless and communicate fear more than those who are powerful and communicate anger. Participants were more likely to sympathize with powerless-fearful groups than powerful-angry groups. Explicit and implicit attitude evaluations of violence were not related to participant perceptions of intergroup conflict.

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continual support have pushed me to succeed and strive ever higher. I am glad I get to spend the rest of my life with someone who understands my fascination with research methods, statistics, and human behavior. You are my best friend and collaborator. Thank you for being you!

Preface

  This dissertation is in the manuscript format, in accordance with the required format for the *Journal of Personality and Social Psychology*, using APA style 6th edition. It contains two manuscripts that will be submitted for publication upon completion of the dissertation defense and necessary edits. The first manuscript, entitled "Development and Concurrent Validation of an Implicit Association Test of Violence and Nonviolence (IAT-VN)" will be submitted to the Attitudes and Social Cognition section of the *Journal of Personality and Social Psychology*. The second manuscript, entitled "Intergroup Conflict: The Role of Implicit and Explicit Attitudes of Violence" will be submitted to the Interpersonal Relations and Group Processes section of the *Journal of Personality and Social Psychology*.

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Development and Concurrent Validation of an Implicit Association Test of Violence

and Nonviolence (IAT-VN)

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Abstract

An implicit measure of attitudes toward violence and nonviolence using an Implicit Association Test (IAT) procedure was created. In study one, 34 participants provided definitions of violence and nonviolence, categorized violent and nonviolent words, and generated violent and nonviolent words in order to provide a basis for the implicit measure. Words that were common across groups and method types were used to create the IAT measure. In study two, 64 participants completed explicit and implicit measures of violence, nonviolence, and aggression to assess concurrent validity of the newly created scale. The explicit Violence Sensitivity Scale (VSS) was negatively correlated with the explicit Buss-Perry Aggression-Questionnaire (BPAQ-SF), consistent with previous literature. Multiple imputation was used in both study one and study two to try to mitigate the issue of missing data. However, none of the other explicit or implicit measures were correlated which might have been due to the amount of missing data and small sample size.

Keywords: violence, nonviolence, implicit, explicit, cognition

Development and Concurrent Validation of an Implicit Association Test of

Violence and Nonviolence (IAT-VN)

As human beings, we like to believe we are fully aware of the content of our own thoughts. In other words, when asked our opinion on a topic, we think our stated opinion is an accurate representation of our thoughts and consistent with our related behaviors. However, research has shown that our explicit thoughts (i.e. what we say) may not line up with our unconscious thoughts (i.e. what we think at an implicit level) and those thoughts could possibly impact our behavior (Correll, Park, Judd, & Wittenbrink, 2002). For instance, Nosek and Smyth (2007) found that individuals who explicitly endorsed positive views of blacks also held negative views of blacks when asked to make quick associations of black/white faces and positive/negative words. These automatic associations influenced behavior in that those who implicitly perceived blacks negatively were more likely to shoot unarmed and armed blacks in comparison to unarmed and armed whites in a laboratory study (Sim, Correll, & Sadler, 2013).

This mismatch in our attitude evaluations is thought to be due to societal norms and stereotypes (e.g. black people are dangerous or to be avoided) not aligning with one's explicit attitude evaluations (e.g. black people are good). Similarly violence, rather than nonviolence, is a generally accepted social and cultural norm, as demonstrated by its pervasiveness on the internet, on television, in popular entertainment and in our daily lives (World Health Organization, 2009). The organization Women, Violence, and Adult Education (WVAE) conducted a three-year project with teachers from adult-education programs in New England who wanted to

address the impact of violence on learning. Using several activities (e.g. discussions, collage making), they found several commonalities across program participants with regard to perceptions of violence. One of their findings was that different forms of violence (e.g. domestic violence, racism) are intertwined and pervasive, with women reporting that more than one type impacted their sense of self and ability to learn. They also found that violence is supported not only individually but institutionally (e.g. the courts giving a domestic abuser a suspended sentence, and thus perpetuating the violence). However, this is only one example of how violence is prevalent in our society and impacts our well-being (Morrish, Horsman, & Hofer, 2002).

Another example is in the area of violent video games. Research conducted over the past twenty years has found that violent video games result in increased aggression in children both short-term and long-term (Hasan, Bègue, Scharkow, & Bushman, 2013; Bushman & Gollwitzer, 2015). Not only do these games impact actual aggression, they influence perception of what is aggressive, thus desensitizing the individual to aggressive behavior (Greitemeyer, 2014). Due to the pervasiveness of violence in our world both individually and institutionally, it remains a question as to whether individuals hold implicit attitudes that actually endorse violence. This is especially a concern for those who do not endorse violence as positive at the explicit level. Not only is the discrepancy between explicit and implicit attitude evaluations important, but so is the meaning assigned to individual words.

Differences in Meaning Making

Individuals can vary in their understanding of the world around them, and how they assign meaning to words and situations. Here is an example: An older brother

pushes his little brother to the ground after his little brother tapped him roughly on the arm. When the little brother runs to their mom and tells her, she gets angry at her older son. He informs her that they were just playing and that he did not have the intention of hurting his little brother. In the example detailed above, the older brother simply believed that he was joking around with his younger sibling. However, the younger brother perceived his actions as violent. Clearly, there was a misunderstanding as to how both brothers viewed the "playing" context and how they assigned meaning to the situation. Variation in understanding is less for concrete physical realities than for categorical abstractions. Hence, when a person hears the word ocean, similar associations probably come to mind across different persons. There is likely minimal ambiguity in meaning here. However, the category violence does not share as much commonality of associative meaning across persons and situations.

Psychologists generally tend to ignore these differential meaning-making associations when studying individuals. For instance, a researcher may ask "How often have you engaged in a conflict with another person(s)?" and provide a variety of options (e.g. once per week, twice per week, etc.), possibly without context. However, this approach neglects how a person defines conflict. In other words, someone may define conflict as a minor verbal misunderstanding (i.e. low intensity conflict), while another person may define conflict as a physical altercation (i.e. high intensity conflict). Each person could report having engaged in a conflict the same number of times, and yet the intensity of those conflicts could differ widely. How the individual assigns meaning to the word conflict could affect their response and therefore the

study results.   Even the researchers could be biased by their own understanding of the words used.

So how has psychology examined semantic differences in words/variations in understanding? Osgood (1952) discussed the difficulty of measuring word meaning since speaking is emitted rather than elicited behavior. Rate of word occurrence measurements were used in an attempt to examine differences in meaning. Another method used was measuring the frequency of words that a person used (Thorndike & Lorge, 1944 as cited in Osgood, 1952). Counting the ratios of adjectives to verbs as well as the frequencies of pronouns had been used as well (Boder, 1944; Johnson, 1944 as cited in Osgood, 1952).

Osgood (1952) analyzed the merits of physiological methods (e.g. galvanic skin response: GSR), learning methods (e.g. semantic generalization), perception methods (e.g. Allport-Vernon test of values), association methods (e.g. matching color words (signs) to actual colored paper (objects), and scaling methods (e.g. rating adjectives on a scale of favorability) in the assessment of meaning. He found that physiological measures could not be validated and therefore he was skeptical about the results obtained at the time. Learning measures were considered useful but difficult to generalize across different specific types of measures meaning that results were not consistent. A criticism of perception measures was that they did not fully get at the measurement of meaning. Similar to learning methods, association measures were criticized for their lack of comparability. Osgood concluded that scaling methods provided the best comparability but only tapped into one dimension of meaning making (i.e. evaluation). Finally, he proposed the semantic differential method which

was a combination of association and scaling procedures. This method aimed to identify the meaning of a specific concept for an individual. Clearly, there are merits to multiple methods to assess meaning and being aware of the type of information each type can provide is essential.

Direct Methods of Measuring Meaning-Making

What are the best methods to examine variations in meaning-making? Some earlier methods were described previously. However, there are some simple and direct ways a researcher can do this. One way is to ask people to define a concept so that researchers can examine how definitions vary qualitatively from person to person. This would provide evidence that not every person defines a word in the same way. For instance, Collyer, Brell, Moster, and Furey (2011) asked participants how they defined violence and they received markedly different definitions. Definitions were categorized into physical, ambiguous, both physical and nonphysical, and unclassified. About 20% of the college sample gave definitions of violence in terms of physical harm only. A majority of participants fell into the ambiguous category with definitions such as, "Violence can be an action meant to hurt or destroy someone." or "Violence is anything that harms people." (Collyer et al., 2011, p. 709). As evidenced by the categorizations, not every person gave the same or even close to the same definition. By this definition measure, the meaning each individual attaches to the word violence is literally different.

Another way to examine variations in understanding qualitatively is by asking participants to give examples of a concept. For instance, rather than asking participants for a definition of the term prejudice, you might ask them to give

examples of prejudice or to think of words associated with that term. Individuals might come up with an example of a white person beating up a black person for being black or telling a Hispanic person that they speak English very well. Now think about the two examples for a second.

If a person comes up with the first example, then they view prejudice as an overt expression of racial discrimination. However, in the latter example the person views prejudice within the context of microaggressions and more covert discrimination. While both are valid examples of prejudice, they are distinctly different. If participants are asked to come up with words associated with the term prejudice, they may come up with terms such as racism, hatred, and discrimination. Each term has its own definitions of course, but the selection of terms illustrates the associated words a person has in their memory when they think of the word prejudice. These are likely not the same from person to person, and would provide another simple way to measure variations in understanding.

The methods described above are qualitative in nature. Definitions or examples could be qualitatively analyzed for overarching themes. Associated terms could be counted across persons to assess how many people use the same terms. This would provide an examination of shared meaning.

A final method that a person could use to directly assess variations in understanding is by asking people to report their perceptions of a concept on something like a numerical rating scale. Whether this rating scale is open-ended or close-ended, this type of scaling will provide a numerical expression of how people assign meaning to a word or a concept with respect to other stimuli. An example of

how this type of quantitative method has been used to understand variations in understanding is described below.

Explicit and Implicit Social Cognition

Social cognition is an all-encompassing term to describe "the way people encode, process, remember, and use information in social contexts" (Crisp & Turner, 2010, p.64). Implicit social cognition is known under a variety of terms such as automatic, indirect, implicit, and unconscious, all of which refer to the relatively unknown portion of our thought processes – mental states and activity to which conscious access is not easy. Explicit social cognition is known under terms such as controlled, direct, explicit, and conscious, and includes beliefs we endorse or want to appear to endorse. A main difference between implicit and explicit social cognition is in our ability to self-monitor the information that is revealed to others; monitoring is easier when asked about explicit attitudes.

Prior to the popularization of the terms just discussed, earlier research focused on selective attention and short-term memory (Broadbent, 1971; and Treisman, 1969 as cited in Gawronski & Payne, 2010). These two tracks of research distinguished between automatic (little attention required and unlimited capacity) and controlled (high attention required and limited in capacity) processes. At this time, consciousness was still not openly discussed by cognitive psychologists. In the late 1970s, there was a focus on learning such that well-learned items were retrieved easily and poorly learned items required more cognitive effort (Shiffrin & Schneider, 1977 as cited in Gawronski & Payne, 2010). A shift came about in the late 1980s and early

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1990s with the examination of racial attitudes by cognitive and social psychologists (Devine, 1989 as cited in Gawronski & Payne 2010; Greenwald & Banaji, 1995).

Since then, work has focused not only on the implicit racial biases but on implicit biases in general such as gender bias, age bias, and LGBTQ bias (Banaji & Greenwald, 2013; Devine, Forscher, Austin, & Cox, 2012; Ito, Friedman, Bartholow, Correll, Loersch, Altamirano, & Miyake, 2015; Johns, Cullum, Smith, & Freng, 2008). For instance, individuals who may support LGBTQ populations explicitly nevertheless have been shown to associate LGBTQ populations with unpleasant or negative terms in comparison to heterosexual individuals (Greenwald & Banaji, 2013). Other recent work has examined the neuroscience of bias and implicit attitudes linking areas of the brain such as the amygdala and the anterior cingulate cortex (ACC) to implicit racial bias (Amodio, 2014; Stanley, Phelps, & Banaji, 2008).

While social cognition is the process by which social information is encoded (Crisp & Turner, 2010), an attitude consists of the evaluations or beliefs we have towards attitude objects, in other words people (e.g. black versus white persons) or issues (e.g. pro-choice versus pro-life). The focus of this study is specifically on attitude appraisal and evaluation. That is the primary area where implicit social cognition has been examined (e.g. attitudes towards minority persons), although it has been used previously in other contexts as well (e.g. attention research).

Explicit Attitudes about Violence

Two people are asked to define the word violence. One states that violence is when one person physically harms another (e.g. beating someone with a bat). The

second individual says that violence is hurting someone physically but can also include psychological harm (e.g. yelling at someone). Which one of these definitions is correct? It is important to note that neither is wrong, in the sense that violence does not have an agreed-upon technical definition. Each of the two definitions reflects a person's own perception or meaning-making system. Research on violence sensitivity has been one way that variations in meaning-making have been investigated. This line of work has found that individuals have different explicit perceptions of violence, with some people characteristically rating violence as more severe across a wide range of behaviors in comparison to others who tend to rate the same behaviors as less severe (Collyer et al., 2007; Collyer & Melisi, 2008; Collyer et al., 2010; Egan, 2010; & Egan, 2014).

Collyer, Gallo, Corey, Waters, & Boney-McCoy (2007) first examined differences in perceptions of violence by asking participants to rate a series of violent behaviors on a close-ended scale 0 (i.e. no violence at all) to 7 (i.e. highest level of violence). Therefore, participants were asked to assign their own meanings to words denoting violence by classifying the concepts into corresponding ratings keeping in mind previous ratings. The average violence severity rating across behaviors was termed violence sensitivity to refer to how readily an individual perceived violence in the behaviors. Behaviors ranged from what might be considered less severe behaviors (e.g. swearing, rudeness, gossip, etc.) to more severe behaviors (e.g. murder, rape, kidnapping, etc.). Further analysis found that there was consistent ordering among average ratings of behaviors, such that across behaviors ratings increased from gossip to murder in a similar fashion across participants. Despite this consistent ordering of

ratings, cluster analyses suggested that some participants (termed violence-sensitive) rated all behaviors as more violent overall, and others (termed violence-tolerant) rated all behaviors as less violent overall. The one exception to this finding was that participants rated extremely violent behaviors (e.g. murder, rape, execution, etc.) at the highest level of violence whether they were violence-sensitive or violence-tolerant. The results of this study suggested that sensitive and tolerant individuals differ in the meaning they assign to violent behaviors, with the possible exception of severely violent behaviors.

However, another interpretation of this possible exception is that there was a ceiling effect in the Collyer et al. (2007) study, such that sensitive and tolerant participants would have rated the severely violent behaviors as more violent if they had not been constrained by the closed-ended response scale. Collyer and Melisi (2008) set out to investigate whether this was true by asking participants to rate the same series of violent behaviors but on an open-ended scale using one behavior (pushing) as a reference point with an assigned value of 100. Consistent ordering of behaviors was replicated from the previous study. Violence-sensitive and violence-tolerant individuals still differed in their perceptions of moderately violent behaviors. However, unlike the previous study, the two groups also gave different ratings of extremely severe violent behaviors (e.g. murder, rape, execution, etc.). Sensitive raters provide higher severity ratings than tolerant raters, even for extremely violent behaviors.

As discussed earlier, Collyer et al. (2011) looked at violence sensitivity from a more qualitative perspective, by asking participants how they defined violence and

comparing violence sensitivity ratings across different types of definition. The results suggested that individuals who define violence only in terms of physical violence were more likely to rate violent behaviors as less severe in comparison to those who defined violence in both physical and psychological terms. Both studies provide partial evidence that when it comes to the meanings that individuals assign to violent behaviors (i.e. terminology), there are distinct differences in perception (Collyer & Melisi, 2008; Collyer et al., 2011).

Subsequent research examined differential meaning of violent behaviors in addition to factors that could contribute to those differences. One study found that sensitivity to violence was negatively associated with support for violent responses to problem behavior (e.g. death penalty, spanking, etc.). Aggression was also found to have a negative association with perceptions of violence severity. Those who rated violent behaviors as less severe were more likely to endorse violent actions and to have higher trait aggression scores (Egan, 2010; Egan, 2014). The emotion of fear was found to influence perceptions of violence severity such that when the emotion of fear was induced experimentally, violence severity ratings decreased (Egan, 2014). This was contrary to the initial hypothesis that individuals who were in a fearful emotional state would temporarily perceive violence as more severe. This could mean that individuals who experience fear become desensitized to violence, thereby perceiving it as less severe. Another factor that has been examined is the experimental manipulation of meaning in order to assess change. When participants were asked to rate a justified violent scenario or an unjustified violent scenario, participants rated the

violent act as less severe if it had been classified as justified rather than justified (Marcotte, 2015)

Other factors that influenced how individuals rated violent behaviors were sex (i.e. men rated violent behaviors as less severe than women) and whether individuals classified themselves as more tolerant or sensitive to violence (i.e. violence-sensitive individuals, as determined by their ratings of severity, tended to classify themselves as violence-sensitive and tolerant individuals as tolerant) (Collyer et al., 2011). Sovet and Egan (2014) found that even when written scenarios were used, ratings still distinctly differed amongst violence-sensitive and violence-tolerant individuals as well as between men and women. Clearly, there are factors that can influence how individuals create meaning regarding violence whether those are pre-existing and enduring factors (i.e. biological sex) or transient states (i.e. emotions).

Study Aims

The two studies aimed to expand upon research in implicit social cognition and explicit violence cognition by examining implicit attitude evaluations of violence and nonviolence. The aims of the research were to create an implicit measure of attitudes toward violence and nonviolence and to examine the reliability and concurrent validity of the implicit measure. Study 1 was an exploratory study that used the multiple methods described previously (i.e. word categorization, word generation, and definition creation) to assess explicit perceptions of violence and nonviolence and create the implicit measure. Participants completed the Violence Sensitivity Scale (VSS) to examine whether there were differences in word categorization, generation, and definition between violence-sensitive and violence-

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tolerant individuals. It was hypothesized that individuals who are violence-tolerant will be less likely to categorize words as violent and generate words and definitions primarily focused on physical violence in comparison to violence-sensitive individuals (Hypothesis 1) (Collyer et al., 2011).

Study 2 aimed to examine the reliability and concurrent validity of the newly created implicit measure. Participants filled out explicit measures of violence, aggression, and nonviolence attitudes as well as an implicit measure of aggression/peace and the new implicit measure of semantic associations with violence and nonviolence. It was hypothesized that the explicit measure of violence was negatively correlated with the explicit measure of aggression, consistent with previous research (Hypothesis 2) (Egan, 2012; Egan, 2014). Additionally, it was hypothesized that the explicit measure of violence and implicit measure of violence/nonviolence was negatively correlated suggesting that individuals who are sensitive to violence will associate violence with the self (Hypothesis 3). Hypothesis 3 follows from the idea that despite not endorsing violence explicitly, societal acceptance of violence as the norm would increase implicit association of violence with the self (World Health Organization, 2009).

Study 1 - Creation of the Implicit Association Test of Violence and Nonviolence

(IAT-VN)

Method

Sample

The sample consisted of 34 (14 males and 19 females, 1 undetermined) Introduction to Psychology students at the University of Rhode Island. Participants ranged in age from 18-25 (M = 18.86), with a majority of the sample aged 18 to 19 years old (89.7%). A majority of the sample identified as Caucasian (79.4%, n = 27) with other racial/ethnic identities specified as follows: Hispanic/Latino/Latina (8.8%, n = 3), Asian (5.9%, n = 2), and multiethnic/multiracial (2.9%, n = 1). Religious affiliations were identified as follows: Catholic (64.7%, n = 22); no religious affiliation (20.6%, n = 7); Jewish (5.9%, n = 2); and other (5.9%, n = 2). Participants primarily identified as Independents (35.3%, n =12), then Democrats (26.5%, n = 9) and Republicans (11.8%, n =4). However, 23.5 percent (n = 8) of the participants identified themselves as non-voters. Most of the sample were psychology majors (88.2%, n = 30), had not participated in nonviolence training (83.9%, n = 29) or taken coursework in nonviolence (83.9%, n = 29). Only two participants had both taken coursework and received training in nonviolence.

Participants were randomly assigned to one of four conditions which intended to counterbalance the measures used. Condition 1 consisted of six participants (17.6%), Condition 2 had ten participants (29.4%), Condition 3 had six participants (17.6%), and Condition 4 had twelve participants (35.4%). Refer to Table 2 for a

breakdown of experimental conditions. There were no significant differences between participants across conditions with regard to any demographic variables with the exception of political affiliation. Participants in condition 1 identified primarily as Independent, participants in condition 2 identified primarily as Democratic, while conditions 3 and 4 had a more even distribution across conditions $(X^2 (9, n = 33) = 19.67, p = 0.02)$. However, due to the small sample size, there were multiple cells with less than five observed counts, making this finding tentative.

Due to the amount of missing data, especially with variables of particular interest, multiple imputation was used with continuous variables in order to keep the small sample sizes intact. Typical methods to handle missing data include simple imputation (i.e. replacing the missing value with one value), previous observation, or listwise deletion. Multiple imputation aims to reduce this uncertainty about predictions of unknown estimates by replacing each missing value with a set of plausible values. The advantage to this method is that the estimated variances of the estimates will not be biased towards zero as with other methods (Rubin, 1987). The steps for multiple imputation are to fill in the missing data m times to generate m complete data sets (the average is five), the m complete datasets are analyzed using standard statistical procedures, and finally the results from all of the datasets are combined for interpretation (Yuan, n.d.). All results discussed are pooled estimates using the average across the five complete datasets.

Measures

Word Generation Task (WGT). In this task, participants were asked to generate ten words that they associated with the word "violence" and ten words that

they associate with the word "nonviolence". They were asked to do this as quickly as possible.

Word Categorization Task (WCT). For this task, participants were presented with a series of words related to violence and nonviolence. The words were chosen by the researcher using Google searches for synonyms of violence and nonviolence. Participants were asked to categorize the words into either "violence", "nonviolence", or "neither" categories. Words were pre-classified by the researcher into either the "nonviolence" or "violence" categories. The task consisted of 39 nonviolent words (e.g. mindfulness, peace, and equality) and 35 violent words (e.g. savagery, hate, and bloodshed).

Definitions of Violence and Nonviolence Task (DNVT). Participants were asked to provide definitions of "violence" and "nonviolence" separately. Collyer et al. (2011) had asked participants to define the term "violence" and found that those who were more sensitive to violence (i.e. rated violent behaviors as more severe), defined violence in terms of both physical and emotional violence. Those who were more tolerant to violence (i.e. rate violent behaviors as less severe), defined violence in terms of solely physical violence.

Violence Sensitivity Scale (VSS). The Violence Sensitivity Scale (VSS) was originally created by Collyer, Gallo, Corey, Waters, and Boney-McCoy (2007) to examine individual differences in perceptions of violence severity. In the present study, participants were asked to rate 38 violent behaviors on a scale of 1-7 with 1 being "not violent at all" and 7 representing "highest level of violence". Participants were informed that the behaviors involve two individuals, an "agent" and a "victim"

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and that these two people are strangers to the participant. Behavior ratings were consistently ranked by participants; for example, swearing was always rated below murder, and although absolute ratings differed between sensitive and tolerant raters, relative ratings suggested a shared understanding of how behaviors are ordered by severity of violence. This scale has also been adapted using an open-ended magnitude estimation format which found similar rating curves (Collyer & Melisi, 2008; Egan, 2010; Egan, 2012; Egan, 2014). Internal consistency reliability coefficients have ranged between 0.78 (for magnitude estimation scales) and 0.85 (for categorical rating scales).

Procedure

Participants were recruited using the university's learning management system, Sakai, within their Introduction to Psychology courses in February 2016 and were given extra credit by their instructors upon completion of the survey. Participants were directed to the study's blog and randomized into one of four conditions using a Javascript randomization routine. (Figure 1). Participants were presented with either the Word Categorization Task (WCT; Conditions 1 and 2) or Word Generation Task (WGT; Conditions 3 and 4). All conditions were given the Definitions of Violence and Nonviolence Task (DNVT), Violence Sensitivity Scale (VSS), and demographic items. However, presentation of the WCT/WGT and the DNVT were counterbalanced with the DNVT being presented first in Conditions 2 and 4 and second in Conditions 1 and 3 to account for any order effects. Refer to Table 2 for a breakdown of the experimental conditions. Upon completion, participants were debriefed about the study's purpose and thanked for their time.

Results

There were no significant differences between the two word categorization task conditions across all words upon a cross tabulation chi-square analysis. In other words, across both conditions there was general agreement as to the categorization of each word as either violent, nonviolent, or neither. Words such as "assault", "brutality", and "destructiveness" were categorized as violent while words such as "peace", "calm", and "kindness" were generally categorized as nonviolent. The words with the highest agreement counts (i.e. higher than 80% across all participants in conditions 1 and 2) for both violent and nonviolent words are given in Tables 3 and 4.

For the word generation task, participants were asked to come up with ten words they associated with violence and the ten words they associated with nonviolence. Word counts across conditions 3 and 4 (n = 18) were tabulated. The word "violent" was the most common word generated in the violent words task with seven participants generating it. When asked to generate words associated with "nonviolence" participants primarily specified the words "peace" (n = 11) and "calm" (n =11). There generally seemed to be greater agreement when participants were asked to generate nonviolent words versus violent words. Table 5 provides lists of the top ten violent words generated and top ten nonviolent words generated.

Definitions of violence and nonviolence were categorized into two primary themes entitled "Action" and "Harm" using an open-coding approach. Within the "Action" theme, participants primarily defined violence as an action towards another individual or towards the self. Nonviolence was defined as not taking such violent action or action using peaceful means. A few examples of definitions of violence

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include: "*Violence to me would be someone doing a wrongful act towards someone for example like hurting people physically and emotionally.*"; "*Action with an intent to cause physical harm.*"; and "*An action that causes or is meant to cause physical harm to another object or person/animal.*" Examples of definitions of nonviolence include: "*The act of pursuing a peaceful solution.*"; "*Action without intent to cause physical harm.*"; and "*Peaceful means, without force or coercion, to achieve change.*".

Within the "Harm" theme participants primarily defined violence in terms of harm and intention behind the action. So this went beyond the actual act to the intention behind engaging in the behavior. Violence was defined in terms of committing harm while nonviolence was defined in terms of the absence of harm. A few examples of definitions of violence include: "*Committing pain to someone, or trying to hurt someone.*"; "*Violence is letting one's anger cloud their decisions in order to seriously harm or kill another person.*"; and "*A threatening behavior, to cause harm to yourself or another person.*" Examples of nonviolence definitions include: "*The absence of actions that can cause physical or mental harm to someone.*"; "*Nonviolence is the action of working together in order to create a better world without harming one another.*"; and "*Not causing harm, but practicing a safer behavior method.*". While there were similar definitions provided within each theme, each definition included elements that were distinctly different from the other. In the examples above, one participant cited that violence involves emotion (e.g. anger) while others cited the intention behind causing harm to another.

Using the definitions provided, word counts were tabulated to assess the frequency of words across participants' definitions. The word "harm" was used 21

times across both violence and nonviolence definitions, demonstrating the prevalence of violence as harm and nonviolence as the absence of harm. The word "physical" was used 15 times demonstrating this association of violence to physical harm. "Violence" and "nonviolence" followed with word counts of 14 and 13, respectively. However, this was expected since participants were defining both "violence" and "nonviolence". The words "peaceful" (n = 8) and "action" (n =7) were used quite frequently as well, which aligns with the original themes discussed above.

The words that were chosen based upon the results from the WGT, WCT, and DNVT were as follows:

- **Violence Attribute Category:** Aggressive, Brutal, Bully, Cruel, Destructive, Fighter, Hateful, and Savage

- **Nonviolence Attribute Category:** Calm, Caring, Equitable, Forgiving, Harmonious, Kind, Passive, and Peaceful

Words that were not associated with attributes (e.g. terrorism) were not chosen due to lack of fit. Some attribute words were modified from words chosen to represent a more attribute-like word; for example "brutality" which was rated violent by all 16 participants in both WCT conditions, was included but as the adjective "brutal".

Study 2 - Concurrent Validation of the Implicit Association Test of Violence and Nonviolence (IAT-VN)

Method

Sample

The sample consisted of 64 (6 males and 58 females, 1 undetermined) Psychology Statistics students at the University of Rhode Island. Participants ranged in age from 19-31 ($M = 20.56$), with a majority of the sample aged 19-21 years old (84.4%, n = 54). A majority of the sample identified as Caucasian (79.7%, n = 51) with other racial/ethnic identities specified as follows: Hispanic/Latino/Latina (9.4%, n = 6), Asian (6.3%, n = 4), and Black or African-American (4.6%, n = 3). Religious affiliations were identified as follows: Catholic (53.1%, n = 34); no religious affiliation (26.6%, n = 17); Jewish (1.6%, n = 1); Protestant (7.8%, n = 5) and other (7.8%, n = 5) and unidentified (3.1%, n = 2). Participants primarily identified as Democrats (43.8%, n = 28) then as non-voters (23.4%, n = 15), Independents (21.9%, n = 14), Republicans (9.3%, n = 6) and other (1.6%, n = 1). Most of the sample had not participated in nonviolence training (78.1%, n = 50) or taken coursework in nonviolence (92.2%, n = 59). Only three participants had taken both coursework and received training in nonviolence.

Participants were randomly assigned to one of two conditions, which was intended to relieve participant burden by requiring a smaller number of measures in each condition, but still allowed for the inclusion of multiple lengthy measures. Condition 1 consisted of 36 participants (55.4%) and Condition 2 had 29 participants

(44.6%). There were no significant differences between participants across conditions on any demographic variables upon a cross tabulation chi-square analysis. As in study one, multiple imputation was used with continuous variables in order to keep the small sample sizes intact. Again, all results discussed are pooled estimates using the average across the five complete datasets.

Measures

Violence Sensitivity Scale (VSS). The Violence Sensitivity Scale (VSS) used in Study 1 was used in Study 2 as a measure of explicit attitudes towards violence.

Buss-Perry Aggression Questionnaire Short-Form (BPAQ-SF). The Buss-Perry Aggression Questionnaire Short-Form (BPAQ-SF) is a shorter 12-item version of the original 52-item Buss-Perry Aggression Questionnaire (Buss & Perry, 1992). The questionnaire asks participants to rate 12 statements on a scale of 1 (very unlike me) to 5 (very like me). The scale consists of four subscales: Physical Aggression, Verbal Aggression, Anger, and Hostility. The BPAQ-SF has convergent and discriminant validity and a greater model goodness of fit than the original scale (Bryant & Smith, 2001). Diamond and Magaletta (2006) examined the psychometric properties of the BPAQ-SF with both male and female federal offenders. The study found the measure provided comparable results across genders. The BPAQ-SF had satisfactory reliability across all subscales (.62 or above). As this measure has been shown to have similar loadings and structure for both men and women, any differences between men and women could be attributed to the construct under study rather than the scale.

The Nonviolence Test (NVT). The NVT is a 65-item measure by Kool and Sen (1984) which aimed to identify individuals with a nonviolent orientation. The measure came about to examine differences between violent and nonviolent individuals in a Milgram-type experiment (Kool, 2008). Participants are presented with a forced-choice format which allows individuals to choose between a nonviolent and a violent response for each item. One example of a question is as follows: "Sex crimes such as rape and attacks on children deserve: A. imprisonment and psychiatric care; or B. more than mere imprisonment, such criminals ought to be physically punished or worse" (Kool, 2008, p. 31). Those who chose option "A" would be classified as having a nonviolent orientation for that question in comparison to participants who chose "B". For each selection of a nonviolent option, participants would be scored as a "1" for up to 36 maximum points, with 29 filler questions that were meant to reduce social desirability (Kool, 1990). Corey (2008) found that the NVT was positively correlated with the VSS, therefore, participants with a greater nonviolent orientation were more likely to rate violent behaviors as more severe. The Marlow-Crowne Social Desirability Scale (MCSD) and the NVT were positively correlated, suggesting that responses on the NVT are subject to social desirability. The NVT was also negatively correlated with the Buss-Durkee Hostility Inventory, which suggested that those who had a nonviolent orientation reported less aggressive behaviors (Kool, 1990).

Implicit Association Test (IAT). Before describing the two IAT's used in this study, a brief background of the IAT process would be useful. The IAT aims to examine automatic word (or other concepts such as facial images) associations within

a reaction time task (Greenwald & Banaji, 1995). In a word IAT task, participants are provided with seven blocks of trials. Blocks 1-3 and 5-6 are considered practice blocks with blocks 4 and 7 analyzed as test blocks. Table 5 provides a detailed description of each block. After completing the test, participants are given a *D* score which can be thought of as similar to a correlation coefficient in interpretation. A *D* score is essentially a calculation of effect size for an individual's responses in the overall task and is calculated as follows:

Step 1: Calculate the mean response latencies for trial blocks 3, 4, 6, and 7.

Step 2: Calculate the pooled standard deviation of the latencies in blocks 3 and 6 and in blocks 4 and 7.

Step 3: Divide the difference between the mean latencies of blocks 3 and 6 (practice) by blocks 4 and 7. This will give the *D* score for the practice and test blocks. The *D* score is a signal to noise ratio difference measure that assesses variability in the data.

Step 4: Average the *D* scores from both practice and test blocks to get the overall *D* score which can range from -2 to +2.

Aggression Implicit Association Test (IAT). The Aggression IAT was created by Niazi (2011) and used to assess associations between aggressive and peaceful words with attribute categories of self and others. The measure was used to examine the impact of background music on arousal and aggression when playing a video game. Other versions of the Aggression IAT have been used with different words in other studies (Banse, 2014). While music did not influence in aggression levels in gameplay, arousal (measured by skin conductance) and aggression were

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positively correlated. This suggested that more aroused individuals were more likely to have aggressive cognitions (Niazi, 2011). The words used for the attribute/concept categories are as follows:

- **Aggressive Attribute Category:** angry, furious, harmful, harsh, hateful, hostile, offensive, and violent
- **Peaceful Attribute Category:** calm, cheerful, friendly, gentle, good-natured, harmonious, kind, and loving
- **Self Concept Category:** I, my, mine, self, myself
- **Others Concept Category:** they, them, their, others, theirs, they, them

Positive *D* scores indicate a peaceful self-concept and negative scores indicate an aggressive self-concept. In Block 1 participants must categorize the attribute category words (e.g. aggressive) while in Block 2 participants must categorize the concept category words (e.g. self). Blocks 3-4 asks participants to categorize one attribute category (e.g. aggressive) with one concept (e.g. self) category, with Block 3 being the practice block and Block 4 being the test block. Block 5 is the same as Block 1 while Block 6 is the same as Block 3 with Block 7 being the final test block.

Implicit Association Test of Violence and Nonviolence (IAT-VN). A set of violent and nonviolent words were compiled using the data from Study 1 to create the IAT-VN. Similar to the Aggression IAT, participants were asked to categorize violent and nonviolent words with attribute categories of self and others. The procedure is the same as the Aggression IAT with five practice blocks and two test blocks. The attribute/concept words used are as follows:

- **Violence Attribute Category:** Aggressive, Brutal, Bully, Cruel, Destructive, Fighter, Hateful, and Savage

- **Nonviolence Attribute Category:** Calm, Caring, Equitable, Forgiving, Harmonious, Kind, Passive, and Peaceful

- **Self Concept Category:** I, my, mine, self, myself

- **Others Concept Category:** they, them, their, others, theirs, they, them

Positive D scores indicate a nonviolent self-concept and negative scores indicate a violent self-concept. The process of taking the IAT-VN is the same as the Aggression IAT with the same number of practice and test blocks.

Procedure

Participants were recruited from Psychology Statistics courses at the University of Rhode Island. Participants were directed to the study's blog and randomized into one of two conditions using the same randomization Javascript code as in Study 1 (Figure 1). Condition 1 participants were presented with demographics, the VSS, the IAT-VN, the Aggression IAT, and the BPAQ-SF. Condition 2 participants were presented with demographics, the IAT-VN, the VSS, and the NVT. Presentation of the VSS and IAT-VN were counterbalanced between conditions to assess whether there were order effects. Upon completion, participants were debriefed about the study's purpose and thanked for their time.

Results

All variables in Condition 1 were normally distributed (i.e. skewness less than +/- 1 and kurtosis less than +/- 3). The IAT-VN was not normally distributed in

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Condition 2. However, this might have been due to the fact that 36.8% of the data were missing for this variable. Descriptive statistics of the VSS, IAT-VN, Aggression IAT, the BPAQ-SF, and the NVT for Condition 1 and 2 are reported in Table 6.

Reliability. Reliability estimates were calculated for the VSS and BPAQ-SF. The pooled estimate for the VSS was $\alpha = .907$ while for the BPAQ-SF the Cronbach's alpha was .754. This is consistent with previous estimates of reliability for both scales (Egan, 2014).

Correlations. Consistent with previous research the BPAQ-SF was negatively correlated with the VSS, suggesting that participants who report higher levels of aggression are more tolerant of violent behaviors ($r = -.439, p = .007$). There were no other significant correlations (e.g. IAT-VN and VSS) to report in Condition 1 or Condition 2. However, this may have been due to the small sample size and amount of missing data.

Discussion

This study aimed to create and validate an Implicit Association Test of Violence and Nonviolence (IAT-VN). The creation of the scale used a multi-method approach to examine explicit attitudes towards violence. Interestingly there was more agreement when participants categorized violent words than nonviolent words. This was similarly found when participants were asked to generate words. Another finding was that the word generations for nonviolence did not include action-oriented words (e.g. courage, assertive) but rather passive words (e.g. not harming another). This could most certainly speak to some of the challenges in nonviolence education and in

convincing others that nonviolence is a more effective method for change than many believe.

Hypothesis 2 was supported such that explicit violence sensitivity and explicit aggression were negatively correlated, consistent with previous research. Hypothesis 3 was not supported as there were no significant correlations found between the other target measures (i.e. IAT-VN, VSS, NVT, and Aggression IAT). Overall, the IAT-VN was not successfully concurrently validated in this study. This result may have been due to the amount of missing data. Further research should examine the IAT-VN with a much larger sample (e.g. over 100) to assess its true effects.

Limitations

There were a few limitations to the two studies. In the first study, the sample size was small which limited the analyses that could be conducted due to missing data. However, the first study was exploratory and meant to provide a basis for the IAT-VN. In the second study, over 80% of the data were missing for the IAT-VN variable, and the use of multiple imputation missing data techniques may not have helped resolve this issue. One suggestion for reducing this issue is to conduct the same survey within a laboratory setting. This would ensure full completion and reduce attrition rates. The samples used were convenience samples, thereby limiting the generalizability of these findings to the broader population. However, these studies did provide an opportunity to base the IAT on words generated by participants rather than words being chosen solely by the researcher.

Table 1: Experimental Conditions for Study 1

Condition 1	n = 6
	WCT (Word Categorization Task) → DNVT (Definitions of Violence and Nonviolence Task) → VSS (Violence Sensitivity Scale) → Demographics
Condition 2	n = 10
	DNVT → WCT → VSS → Demographics
Condition 3	n = 6
	WGT (Word Generation Task) → DNVT → VSS → Demographics
Condition 4	n = 12
	DNVT → WGT → VSS → Demographics

Table 2: Top Violent Word Counts Study 1

Word	Violent Word Count	Nonviolent Word Count	Neither Word Count
assault	16	0	0
brutality	16	0	0
destructiveness	16	0	0
fighting	16	0	0
hitting	16	0	0
terrorism	16	0	0
war	16	0	0
bloodshed	15	0	1
bullying	15	0	1
cruelty	15	0	1
aggression	14	1	1
grabbing	14	0	2
hate	14	1	1
insults	14	1	1
rampage	14	1	1
savagery	14	1	1

Table 3: Top Nonviolent Word Counts Study 1

Word	Violent Word Count	Nonviolent Word Count	Neither Word Count
peace	0	16	0
calm	0	15	1
forgiveness	0	15	1
kindness	0	15	1
caring[a]	0	14	1
equality	0	14	2
fairness	0	14	2
harmony	0	14	2
mediation	0	14	2
serenity	0	14	2
compassion	0	13	3
friendship	0	13	3
love	0	13	3
mindfulness	0	13	3
reconciliation	0	13	3

[a] denotes missing data

Table 4: Word Generation Task - Ten Most Common Words

Violent Word	Word Count	Nonviolent Word	Word Count
violent	7	peace	11
guns	5	calm	11
fighting	5	passive	9
war	5	quiet	7
pain	5	pacifist	4
blood	4	peaceful	4
anger	4	happiness	3
aggressive	4	tranquil	3
hitting	4	kind	3
hurt	4	nice	3

Table 5: Implicit Association Test Run-Through	
Block 1 (20 trials) Concept Dimension	Me Others Categorize words like "I" or "them"
Block 2 (20 trials) Attribute Dimension	Violent Nonviolent Categorize words like "brutal" or "peace"
Block 3 (20 trials) Practice Block Concept-Attribute Pairing **Block 4** (40 trials) Test Block Concept-Attribute Pairing Repeated	Violent Nonviolent or or Me Others Categorize words like "brutal", "peace", "I" or "them"
Block 5 (20 trials) Reversed Concept Dimension	Others Me Categorize words like "I" or "them"
Block 6 (20 trials) Practice Block Reversed Concept-Attribute Pairing **Block 7** (40 trials) Test Block Reversed Concept-Attribute Pairing Repeated	Nonviolent Violent or or Me Others Categorize words like "brutal", "peace", "I" or "them"

Table 6: Study 2 Descriptive Statistics				
Condition 1	**Mean**	**SD**	**Skewness**	**Kurtosis**
IAT-VN (-2 to + 2) *positive scores indicating a nonviolent self-concept and negative scores indicating a violent self-concept*	0.65	0.26	0.14	-0.81
VSS (1 to 7) *higher scores indicating greater sensitivity to violence*	4.29	0.73	-0.18	-0.20
Aggression IAT (-2 to +2) *positive scores indicating a peaceful self-concept and negative scores indicating an aggressive self-concept*	0.46	0.28	0.86	0.73
BPAQ-SF (1 to 5) *higher scores indicating greater reported aggressive behavior*	1.98	0.48	0.32	-0.36
Condition 2	**Mean**	**SD**	**Skewness**	**Kurtosis**
IAT-VN (-2 to +2) *positive scores indicating a nonviolent self-concept and negative scores indicating a violent self-concept*	-0.34	2.45	-2.636	6.73
VSS (1 to 7) *higher scores indicating greater sensitivity to violence*	4.23	0.42	0.08	0.42
NVT (0 to 36) *higher scores indicating a greater nonviolent orientation*	30.42	2.35	-0.12	-0.67

```
<script>

function go_to(url) {

window.location=url;

}

function rand_link() {

var a

a = 1+Math.round(Math.random()*4);   // a = random number between 1-2

if (a==1) go_to("https://www.surveymonkey.com/r/Survey1A");

if (a==2) go_to("https://www.surveymonkey.com/r/Survey2A");

}

// End -->

</script>
```

Figure 1: Sample Javascript Randomization Code

Appendix i

Survey 1

Definitions of Violence and Non-violence
How do you define the word "violence?"
How do you define the word "non-violence?"

Word Categorization Task
Please categorize the following words into one of three categories as quickly as possible: violence, nonviolence, or neither.

accord	quiet	brutality	treaty
calm	attacking	cruelty	turbulence
destructiveness	composure	ferocity	vandalism
forgiveness	equality	home	serenity
interrupting	harassment	invasion	stabbing
pacifism	manipulation	order	struggle
agreement	rampage	ruckus	truce
caring	authority	bullying	union
direct action	compromise	cursing	vehemence
freedom	equity	listening	verbal rage
kidnapping	harmony	pushing	war
passion	meditation	assault	yelling
aggression	rape	competition	stealing
ceasefire	beating	duress	hitting
discord	compulsion	grabbing	niceness
frenzy	execution	love	rough
kindness	harshness	insults	sportsmanship
passive	mindfulness	peace	faith
altruism	reconciliation	rudeness	gossip
clash	bestiality	sabotage	
disorder	conciliation	shooting	
friendship	exploitation	stalking	
lawfulness	hate	terrorism	
power	murder	truth	
amity	road rage	unity	
coercion	bloodshed	savagery	
disturbance	constraint	shoving	
fury	fairness	staring	
lawlessness	health	tranquility	
profanity	neutrality	fighting	
armistice	robbery	tumultuous	
compassion	blowup	uproar	
dragging	contentment	screaming	

Word Creation Task

      Please list the first ten words you think of when you hear the word "violence."

      Please list the first ten words you think of when you hear the word "peace."

Violence Sensitivity Scale (VSS; adapted from Collyer et al., 2007)

Please rate several behaviors on how violent they seem to you. Some of the behaviors might be ambiguous, so if you are in doubt about what they mean, please assume that in all cases:

☐ The behavior you are rating involves two individuals, an "agent" and a "victim."
☐ Both of these people are strangers to you.

Use the following rating scale (1 – Not Violent at all to 7 – Highest level of violence) to judge the severity of violence of each behavior on the list.

There are 16 actions to be rated in all.

Murder_____
Stabbing _____
Rape_____
Shooting_____
Robbery_____
Stealing_____
Home Invasion_____
Manipulation_____
Hitting _____
Throwing Things____
Fighting_____
Attacking_____
Rudeness_____
Gossip _____
Staring _____
Interrupting _____

Demographics

Please share with us the following information:

Age (open-ended)

Are you a current college student?
      Yes
      No

Gender

Male
Female
Non-binary/gender non-conforming

Region:

Race/Ethnicity:
White
Hispanic or Latino/Latina
Black or African American
American Indian or Alaskan Native
Asian
Native Hawaiian or Other Pacific Islander
If not listed, please specify._____

Religious affiliation:
Catholic
Jewish
Muslim
Protestant (please specify) _____
Other (please specify) _____

Political affiliation: Please specify the political party that consists of candidates that you usually vote for, or if you don't vote, please indicate that.
Democratic
Republican
Independent
Other _____
I do not vote.
I am not from this country, therefore, I do vote but not in the United States.

Have you taken coursework in nonviolence or conflict resolution?
Yes
No

Have you ever received training in nonviolence or conflict resolution?
Yes
No

Survey 2

Violence Sensitivity Scale (VSS; adapted from Collyer et al., 2007)

Please rate several behaviors on how violent they seem to you. Some of the behaviors might be ambiguous, so if you are in doubt about what they mean, please assume that in all cases:

☐ The behavior you are rating involves two individuals, an "agent" and a "victim."
☐ Both of these people are strangers to you.

Use the following rating scale (1 – Not Violent at all to 7 – Highest level of violence) to judge the severity of violence of each behavior on the list.

There are 16 actions to be rated in all.

Murder_____
Stabbing _____
Rape_____
Shooting_____
Robbery_____
Stealing_____
Home Invasion_____
Manipulation_____
Hitting _____
Throwing Things____
Fighting_____
Attacking_____
Rudeness_____

Gossip _____
Staring _____
Interrupting _____

Run-through of Implicit Association Test of Violence and Nonviolence

This IAT is designed to test the association between the self and violence. Here are the IAT's four categories.

Violence: words associated with violence (e.g. hate, war, harm)

Nonviolence: words associated with nonviolence (e.g. love, harmony, peace)

Self: words associated with the self (e.g. I, me, myself)

Others: words associated with the other (e.g. them, they, other)

Block 1: Categorize "violence" words and "nonviolence" words correctly with "violence" being in the top-left corner of the screen and "nonviolence" being in the top-right corner of the screen.

Block 2: Categorize self and other words correctly with "self" being in the top-left corner of the screen and "others" being in the top-right corner of the screen.

Block 3: Categorize "violence" words with "self" words and "nonviolence" words with "others" (IAT; Greenwald & Banaji, 1995).

Block 4: Same as Block 3 but with more repetitions of words.

Block 5: Same as task one except "nonviolence" is now located in the top-right corner and "violence" in the top-left corner of the screen.

Block 6: Same as task Block 3 but order reversed with paired categories of "violence"/ "others" and "nonviolence"/"self" words.

Block 7: Same as Block 6 but with more repetitions of words.

Non-violence Test (Kool, 1990)

1. A car driving through a parking lot splashes water on you. You feel like:
   a. making him apologize and pay for damages.
   b. Telling him to be more careful in the future.
2. The more I think of how bad someone's actions or thoughts are:
   a. the more I try to understand how to get along with that person.
   b. the more I get irritated and want to tell that person off.
3. My reaction to groups is:
   a. I like the feeling of belonging to a social group.
   b. for some reason I really don't like groups.
4. If someone keeps bothering me even though I ask him/her to stop, I will:
   a. lose control.
   b. control myself.
5. I think of myself first of all as:
   a. an individual person.
   b. a social being responsible to society and those like me.
6. When a stranger hurts me I believe:
   a. forgive and forget is the best policy.
   b. a tooth for a tooth an eye for an eye is the best policy.
7. Workers on an unlawful strike should be:
   a. approached and a compromise should be negotiated.
   b. fired without noticed.
8. Being different from my friends:
   a. makes me feel uncomfortable.

b. does not bother me; I like it.
9. When someone is rude to me I want to:
    a. be rude back to that person.
    b. overcome the temptation to be rude.
10. I am inspired by:
    a. ideas.
    b. some people.

11. If I were in charge and some high officials were found guilty of taking bribes I
    would:
    a. pardon them with minimum punishment if they apologized.
    b. publicly humiliate and physically punish these people.
12. If someone breaks something that belongs to me:
    a. I will probably become enraged.
    b. I understand that accidents happen.
13. I consider myself to:
    a. be like everyone else.
    b. be different from everyone else.
14. Judgements about me:
    a. should be made on my own merits.
    b. should be made according to the people I associate with.
15. Lawbreakers must be:
    a. brought to justice, yet be dealt with mercifully.
    b. severely punished.
16. I am:
    a. loyal.
    b. independent.
17. If a boy was very mischievous and would beat up other boys, I would:
    a. kick him out of the group.
    b. try to change his habits.
18. I am responsible to:
    a. other people, those I love, and those who depend on me.
    b. myself, my ideals, and my ambitions.
19. When I hold a poor opinion of a person:
    a. I do not try to hide the way I feel.
    b. I try to hide my feelings and improve them without their knowing.
20. Criminals that are physically abused:
    a. deserved.
    b. should not be abused.
21. My reaction to crowds is:
    a. I dislike crowds.
    b. I enjoy the excitement of crowds.
22. If an employee refused to follow orders I would:
    a. threaten to fire him unless he did what he was told.
    b. persuade him to do what he was told.
23. I admire:

    a. no one very much.

    b. some people, and would not question their opinion.

24. I see myself as:
    a. an important person.
    b. a social person.

25. A person who commits a murder should be:
    a. placed in a rehabilitation program and given minimum punishment.
    b. put on death row.

26. I like to:
    a. get to know people.
    b. be alone.

27. Governments should deal with rebellious people by:
    a. punishing them.
    b. treating them in a humane way.

28. I like a person:
    a. to say he/she is a good person provided they are.
    b. to be modest, even if they are good.

29. When someone does something bad to me:
    a. I will get back at them if I can, just because of the principle of the matter.
    b. I do not get back at them, but try to show him/her their mistakes.

30. I have confidence in:
    a. myself.
    b. things me and others like me represent.

31. When a person makes fun of me, I:
    a. try to convince the person that it is not always a good idea to make fun of others.
    b. retaliate.

32. I live for:
    a. the good of everyone else.
    b. myself.

33. If someone criticizes me, I:
    a. do not criticize them back; rather, I defend myself with good argument.
    b. I find it best to criticize the person back.

34. Sex crimes such as rape and attacks on children deserve:
    a. imprisonment and psychiatric care.
    b. more than mere imprisonment, such criminals ought to be physically punished or worse.

35. When a friend does me a favor:
    a. I feel that I must return the favor.
    b. I do not feel I must return the favor.

36. Sometimes, when my parents scolded me I:
    a. showed resentment.
    b. tried to reason with myself to understand why they acted as they did.

37. I like to:
    a. give gifts.

b. receive gifts.
38. When I am disturbed by another, say while studying:
    a. my first reaction will be to get angry.
    b. I will explain to the person I do not want to be bothered.
39. The majority of my schoolwork involves:
    a. reading.
    b. writing.
40. If a person skips me in line:
    a. I will pass him and stand ahead of him.
    b. I will persuade him to go back.
41. When I was younger:
    a. I did not care to be a member of a crowd or gang.
    b. I was always a follower.
42. If students misbehave in school, the teachers should:
    a. punish them as needed.
    b. think of things they may have done to cause the behavior.
43. If a teacher grades me unfairly, I will:
    a. complain to my friends.
    b. seek an explanation.
44. If someone harms my family, and me I will wait for an opportunity to:
    a. retaliate.
    b. make them understand what they did.
45. If my friend has a problem I would like to:
    a. counsel that friend on his problem.
    b. recommend that my friend see a counselor.
46. I like:
    a. team sports.
    b. individual sports.
47. If a judge were found guilty of corruption, I would recommend:
    a. a stronger penalty for him than for a common citizen.
    b. the same penalty for him as for a common citizen.
48. I am:
    a. forgetful.
    b. organized.
49. Our nation's history is glorified by:
    a. great fighters and conquerors.
    b. great writers and social reformers.
50. I follow:
    a. ethical standards.
    b. my conscience.
51. All citizens should be allowed to carry weapons:
    a. only when there is a war.
    b. to defend themselves.
52. My attitude about groups is:
    a. I do not join groups.
    b. I am proud to be in some groups.

53. If a teacher is involved in a sex crime involving a student, they should be given:
   a. harsher punishment than usual to set an example for other teachers.
   b. the same treatment as someone who was not a teacher.
54. I look forward to social events with:
   a. parents and relatives.
   b. friends and neighbors.
55. I like instructions to be:
   a. general.
   b. specific.
56. A good social system needs:
   a. rugged and tough discipline.
   b. people who can tolerate others.
57. A clergyman who is involved in immoral behavior should:
   a. be allowed to return to his position in the church after he repents and changes his ways.
   b. never be allowed to return to his position in the church.
58. I appreciate:
   a. music.
   b. art.
59. When I see a parade go by I:
   a. enjoy watching it but have no desire to be in it.
   b. wish I could be in it.
60. When I am in a bad mood I:
   a. feel like smashing things.
   b. relax and tell myself things will get better.
61. People who drink and drive should:
   a. be imprisoned and severely fined.
   b. undergo counseling and education on the effects of drugs and drug abuse.
62. I would rather watch:
   a. mystery movies.
   b. humorous movies.
63. If someone I know is engaging in deviant behavior I feel I should:
   a. tell him that what he is doing is wrong, then talk him out of doing it.
   b. let him do what he wants as long as I am not affected.
64. If a country is supporting terrorist acts, I think the country should be:
   a. attacked by military action until these acts end.
   b. persuaded through negotiations to withdraw their support of terrorism.
65. People who try to force their religious beliefs on others should be:
   a. ignored until they are ready to listen to others' beliefs.
   b. asked to leave and threatened if they refuse to go.

Buss Perry Aggression Questionnaire – Short Form (BPAQ-SF)
Please rate the following items on a scale from 1 (very unlike me) to 5 (very like me).

1. Given enough provocation, I may hit another person.
2. I often find myself disagreeing with people.
3. At times I feel I have gotten a raw deal out of life.
4. There are people who have pushed me so far that we have come to blows.
5. I can't help getting into arguments when people disagree with me.
6. Sometimes I fly off the handle for no good reason.
7. Other people always seem to get the breaks.
8. I have threatened people I know.
9. My friends say that I'm somewhat argumentative.
10. I have trouble controlling my temper.
11. I wonder why sometimes I feel so bitter about things.
12. I sometimes feel like a powder keg ready to explode.

Aggression IAT (Niazi, 2011)

This IAT is designed to test the association between the self and aggression. Here are the IAT's four categories.

> **Aggressive**: words associated with aggression (e.g. hate, violence, anger)
> **Peaceful:** words associated with peacefulness (e.g. love, harmony, tranquil)
> **Self**: words associated with the self (e.g. I, me, myself)
> **Others:** words associated with the other (e.g. them, they, other)

Block 1: Categorize "aggressive" words and "peaceful" words correctly with "aggressive" being in the top-left corner of the screen and "peaceful" being in the top-right corner of the screen.

Block 2: Categorize self and other words correctly with "self" being in the top-left corner of the screen and "others" being in the top-right corner of the screen.

Block 3: Categorize "aggressive" words with "self" words and "peaceful" words with "others" words.

Block 4: Same as Block 3 but with more repetitions of words.

Block 5: Same as task one except "aggressive" is now located in the top-right corner and "peaceful" in the top-left corner of the screen.

Block 6: Same as task Block 3 but order reversed with paired categories of "aggressive"/ "others" and "peaceful"/"self" words.

Block 7: Same as Block 6 but with more repetitions of words.

Demographics

Please share with us the following information:

Age (open-ended)

Are you a current college student?
    Yes
    No

Gender
    Male
    Female
    Non-binary/gender non-conforming

Region:

Race/Ethnicity:
    White
    Hispanic or Latino/Latina
    Black or African American
    American Indian or Alaskan Native
    Asian
    Native Hawaiian or Other Pacific Islander
    If not listed, please specify._____

Religious affiliation:
    Catholic
    Jewish
    Muslim
    Protestant (please specify) _____
    Other (please specify) _____

Political affiliation: Please specify the political party that consists of candidates that you usually vote for, or if you don't vote, please indicate that.
    Democratic
    Republican
    Independent
    Other _____
    I do not vote.
    I am not from this country, therefore, I do vote but not in the United States.

Have you taken coursework in nonviolence or conflict resolution?
    Yes
    No

Have you ever received training in nonviolence or conflict resolution?
    Yes
    No

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Intergroup Conflict: The Role of Implicit and Explicit Attitudes of Violence

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Abstract

Intergroup conflicts exist when groups do not align in their intentions or actions. Previous research suggested that outsiders who are given information about a conflict will legitimize violence by groups who are powerless and fearful over those who are powerful and angry. This study partially replicated Kamans et al. (2014) using an online format. In the current study, 74 participants were randomly assigned to read about one of two groups (two conditions: powerful-angry or powerless-fearful) in an intergroup conflict with varying power. The main effect of power was significant between the two conditions, with participants in the powerful-angry condition perceiving the group as more powerful, stronger, and better armed than those in the powerless-fearful condition. After the commission of a violent act, participants perceived such violence as more legitimate when committed by the powerless-fearful condition than the powerful-angry condition. Furthermore, sympathy towards powerful groups decreased after the commission of a violent act but perceptions of sympathy remained the same towards a powerless group. Judgments of morality did not significantly differ before and after commission of a violent act by either powerful or powerless groups. Explicit and implicit attitudes towards violence were unrelated to legitimization of violence in either the powerful or powerless conditions.

Keywords: violence, nonviolence, implicit, explicit, cognition, intergroup conflict

Intergroup Conflict: The Role of Implicit and Explicit Violence Attitudes

Imagine that you are someone who identifies as pro-choice when it comes to abortion issues. You meet someone who is pro-life, who is in opposition to your own views. You each have different perceptions of life before birth (i.e. a fetus is considered a person or not). Clearly, if the topic of abortion were to come up in discussion, it could lead to a conflict between the two of you. In this example, you each assign different meanings to the word "life" in the context of a fetus. When we think of the causes of conflict, between individuals or groups, one main theme arises. That theme is miscommunication based on differing perceptions of the world.

It makes intuitive sense that differences in understanding, as in the example above, could potentially lead to miscommunication, and possibly conflict, between multiple persons or groups. The construct of conflict itself, at both the interpersonal and intergroup levels, differs across studies (Barki & Hartwick, 2004). For the purposes of this study, conflict is viewed in terms of differences in understanding, as when people disagree, or when the intentions or actions of a group are considered incompatible with those of another group (Bar-Tal, 2007).

This study will focus primarily on intractable conflict, which is notable for the severity of that conflict. Four elements that make up an intractable conflict are: (1) the conflict has occurred for a long time (i.e. over the course of at least a generation), (2) the conflict involves physical violence where people involved are killed or harmed, (3) the conflict is perceived as irresolvable, and (4) the conflict demands all of the time and resources of those involved (Kriesberg, 1998).

Variations in Understanding and Conflict

Krauss and Morsella (2006) attempted to shed some light on this topic by detailing communication paradigms that could lead to conflict. The intentionalist paradigm focuses on communication that has more than one meaning. For instance, you may ask someone do they know what time it is which typically means that you want them to tell you the time. Yet, the literal answer to that question would be a yes or no. Usually, we are able to understand each other but there may be instances in which the intention is not clear. The reading of intention in order to settle on one meaning tends to be prevalent only within a culture; so a different culture could assign meanings to words and phrases in another way. This is where conflict may surface. Another paradigm is known as the perspective-taking paradigm which suggests that every individual perceives the world differently, due to the unique experiences each individual may have. Misperception between perspectives is what can lead to conflict, and may be even more prevalent when differences between persons are numerous.

The magnitude of perspective differences could impact the severity of conflict. For example, if you are a person who perceives prejudice only as overt racism, then discussing the topic with someone who perceives prejudice as encompassing overt and covert racism might be extremely difficult. Conflict also tends to increase the tendency to categorize those we are in conflict with as the other (i.e. out-group) and further identify with our in-group (Krauss & Morsella, 2006). Clearly, how we communicate with others, specifically how we perceive others' communication can provoke conflict.

Other Factors Influencing Conflict

Variations in understanding are one way to understand the development of conflict, but there are other ways to think about what causes conflict. Another potential source of conflict is a "competition for vital resources and power" (Golec de Zavala & Cichocka, 2013). While this may seem an objective basis for conflict, assuming that the resources one group has relative to the other are firmly defined, this could be another issue of differential perception. Here is a simple example. You go to a gathering and the host orders a pizza thinking only six people will be there. Four other people show up so it seems as though there is not enough pizza. If the pizza was cut up into smaller pieces, there'd be more than enough for everyone to have a slice. The perception was that there was not enough resources, but if the parties cooperate then there potentially is. According to work in Kingian nonviolence, it is usually not that there is not enough but it is how the resources are unfairly shared that can lead to conflict (Lafayette Jr., & Jehnsen, 2008).

Another factor that can impact the mitigation of conflict is one's standing in a group. For example, you might belong to an organization but be on the margins of the group. You are more likely to pay attention to detail (i.e. be sensitive to social cues) and need to process information more carefully than someone who is at the core of the group. When examined experimentally, individuals on the periphery, as long as they were held accountable to others, were useful in creating "integrative agreements" in times of conflict (van Kleef, Homan, & Steinal, 2010, p. 21). This study investigated individual perception of group identity by experimentally manipulating the type of

personality the individual had (i.e. telling them they were an O-type or P-type personality which was a fake construct) which they were told impacted their problem solving abilities. Evidently, perception of the self can influence how well we work during times of conflict. Overall, variation in understanding interweaves its way into most sources of conflict.

The Role of Emotion in Conflict

Within the context of communication, Parkinson (1998) discussed how emotions can be seen as evaluations directed towards an audience. An audience could consist of another individual or an entire group. The important element here is that others have an influence on our emotions as all situations are social in nature. This influence is evident whether the situations are with just ourselves or with others. For example, anger can be expressed by yelling at someone or punching someone in the face. However, those two emotional responses may differ depending on others' response towards us and what relationship (i.e. stranger, friend, or romantic partner) they have to us (Fischer, Manstead, & Zaalberg, 2003). Previous research has found that the emotions of anger and fear impact how outsiders perceive violence committed by groups (Vandello et al., 2011). In intergroup conflicts, anger can be useful in trying to present the group's position as morally righteous, that a level of unfairness is involved (Lazarus, 1991). On the reverse side, fear within intergroup conflicts can be used as a way to demonstrate that harm has been committed or to prevent future harm, thereby eliciting sympathy from others (Keltner et al., 2006).

Implicit and Explicit Perceptions of Violence

As stated previously, different perceptions can be an antecedent to conflict. One way variations in implicit and explicit cognition have been examined is in the context of violence. Implicit cognition refers to the unconscious, automatic thoughts one has. Explicit cognition refers to conscious, effortful thought processes. For example, two people may have two different definitions of the word violence with one describing violence solely as physical harm and another describing both physical and psychological harm (Collyer et al., 2011; Egan, 2016). Neither definition is "correct" as the definitions make up each person's own perception. Research on violence sensitivity has been one way that differences in perception have been investigated.

Overall, the findings from this line of research have suggested that individuals have different implicit and explicit perceptions of violence. When explicitly asked to rate a wide range of violent behaviors, some people rate them as more severe in comparison to others who tend rate the same behaviors as less severe (Collyer et al., 2007; Collyer & Melisi, 2008; Collyer et al., 2010; Egan, 2010; & Egan, 2014). However, similar differences have been found at the implicit level with some individuals automatically associating violence with the self and others associating violence with others (Egan, 2016).

Emotions also play a role in how violence is perceived. For instance, the emotion of fear was found to influence perceptions of violence severity such that when the emotion of fear was induced experimentally, violence severity ratings decreased (Egan, 2014). This was contrary to the initial hypothesis that individuals who were in a fearful emotional state would temporarily perceive violence as more severe. This

could mean that individuals who experience fear become desensitized to violence, thereby perceiving it as less severe. Another factor that has been examined is the experimental manipulation of justification to assess under what conditions violence is legitimized. Marcotte (2015) found that when participants were asked to rate a justified violent scenario or an unjustified violent scenario, participants rated the violent act as less severe if the act was classified as justified rather than unjustified. Specifically, those higher in violence sensitivity rated even justified violence severely in comparison to those who were violence tolerant.

Grych and Swan (2012) reviewed eight studies that examined the co-occurrence of violence and in violence interventions. Results suggested that examining violence at the macro-level allows for an assessment of the relationships between different types of violence. Rather than focusing on the occurrence of one type of violence (e.g. domestic violence), looking at different types of violence together allows for a better understanding of the causal roots of violence.

Justification of Violence

Violence has been shown to be legitimized at the interpersonal (Marcotte, 2015) and intergroup (Kamans, Zomeren, Gordijn, Postmes, 2014) levels of conflict. Marcotte (2015) found that when participants were told a violent act was justified, they rated it as less violent than when they were told it was unjustified. This effect occurred even though participants were shown the exact same violent act. The study also found that violence-tolerant individuals were more likely to legitimize unjustified violence in comparison to those who were violence-sensitive. Clearly, violence-sensitivity has an influence on whether individuals legitimize violence or not.

Kamans et al. (2014) examined violence legitimization from the outsider perspective while manipulating positions of power and emotion expressed by a target group. Participants read about an actual conflict between the Suri and Nyangatom tribes of the Omo Valley, Ethiopia. The details of the conflict were manipulated so that the Suri were presented as powerful and expressing anger, powerful and expressing fear, powerless and expressing anger, or powerless and expressing fear. Measures of sympathy for, and morality of, the Suri were measured before and after participants read about a violent act committed by the Suri. While violence by the powerless is usually deemed as more legitimate, communicating anger can result in violence committed by the powerful being judged as legitimate. However, sympathy for the powerless is more fragile after commission of a violent act, suggesting that sympathy only goes so far. As the powerful group is considered to be coming from a moral high ground, that moral perception of the powerful group remains consistent, no matter that a violent act was committed.

Study Aims

This study aimed to expand upon research in implicit social cognition and explicit violence cognition by examining what role perceptions of violent behaviors have in outsider perceptions of intergroup conflict. One aim of the research was to partially replicate the main findings of Kamans et al. (2014) using an online approach. In other words, it was hypothesized that violence committed by the fearful powerless group will be legitimized more than the same act committed by the angry powerful group (Hypothesis 1). However, violence committed by the powerless group will be legitimized more than violence committed by the powerful group even after for

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controlling for emotion (Hypothesis 2). Similar to Kamans et al. (2014), it is hypothesized that sympathy will decrease for both the powerless and powerful groups (Hypothesis 3). However, morality will only decrease for the powerless group and not the powerful group (Hypothesis 4).

Another aim of the research was to further examine the utility of the Violence Sensitivity Scale (VSS) and the Implicit Association Test of Violence and Nonviolence (IAT-VN). It was hypothesized that violence sensitivity as measured by VSS and implicit violence as measured by the IAT-VN will moderate the relationship between power/emotion and legitimization of violence (Hypothesis 5). In order to examine the construction of the IAT-VN, the presentation of the attribute categories were switched from Egan (2016) with violent-me and nonviolent-others being the concept-attribute categories instead of nonviolent-me and violent-others. Therefore, the VSS and IAT-VN were expected to be negatively correlated thereby replicating the Egan (2016) finding (Hypothesis 6). In other words, individuals who associate violence with the self will rate violent behaviors as less severe. That being said, it was hypothesized that individuals who are more tolerant to violence implicitly and explicitly will legitimize violence more than those who are more sensitive to violence regardless of the power/emotion condition (Hypothesis 7).

Method

Sample

The sample consisted of 74 (36 females, 13 males, 1 non-binary/gender non-conforming, 24 undetermined) participants who were recruited at the University of

Rhode Island, Southern Connecticut State University, and via social media (i.e.

Twitter, Facebook). Most participants identified as being college students (77%, n =

57) and most of those attended Southern Connecticut State University (48.6%, n = 36).

A majority lived in New England (58.1%, n = 43) while other participants lived in the

Middle Atlantic (1.4%, n = 1), East North Central (2.7%, n = 2), West North Central

(1.4%, n = 1), and West South Central (1.4%, n = 1) regions. Participants ranged in

age from 19-57 (M = 24.67), with a majority of the sample aged 19-22 years old

(62.7%). A majority of the sample identified as Caucasian (56.8%, n = 42) with other

racial/ethnic identities specified as follows: Black/African-American (9.5%, n = 7),

Hispanic/Latino/Latina (2.7%, n = 2), and indeterminate (31.1%, n = 23). Religious

affiliations were identified as follows: Catholic (46%, n = 23); no religious affiliation

(18.9%, n = 14); Jewish (6.8%, n = 5); other (5.4%, n = 4), and missing (32.4%, n =

24). Participants primarily identified as Democrats (24.3%, n =18), Independents

(12.2%, n = 14), and Republicans (18.8%, n = 9). However, 13.5 percent (n = 10) of

the participants identified as non-voters or had missing data on voter status (31.1%, n

= 23). Most of the sample had not participated in nonviolence training (59.9%, n =

44) or taken coursework in nonviolence (55.4%, n = 41). Only five participants had

both taken coursework and received training in nonviolence. There were no

significant differences between participants across conditions with regard to any

demographic variables. However, due to the small sample size, there were multiple

cells with less than five observed counts, making this finding tentative.

Manipulation and Measures

Intergroup Conflict Manipulation. Participants were randomly assigned to one of two conditions, either the powerful-angry group (Condition 1) or the powerless-fearful group (Condition 2). Participants were asked to read a text about an intergroup conflict between the Suri and Nyangatom tribes of the Omo Valley in Ethiopia. The information on this conflict was taken from the BBC series *Tribe's* website (BBC, 2008) by Kamans et al. (2014). With permission of Kamans et al. (2014), similar intergroup conflict manipulation texts and measures were used with partial adaptations. The conflict information was modified to align with the experimental manipulations of power and emotion. The conflict was chosen as it was one that people would potentially not know very much about. This first portion of the text described the conflict between the two tribes, a second text manipulated the power-congruent emotions illustrating the Suri's role within the conflict (i.e. powerful-angry, powerless-fear).

Participants filled out power manipulation checks (three items, e.g. "In this conflict, the Suri are more powerful than the Nyangatom") and emotion manipulation checks (three items, e.g. "The Suri were angry/afraid after the attack by the Nyangatom"). Participants also filled out measures of sympathy (five items, e.g. "I sympathize with the Suri.") and perceived group morality (three items, e.g. "I view the Suri as moral."). Then participants read a third text which described a violent act committed by the Suri against the Nyangatom. For a full version of the conflict text, refer to Appendix i. After reading about the violent act, participants were asked three questions that asked whether they thought the violence was legitimate, unfair, or

justified. The sympathy and morality measures were given again to assess changes after commission of the violent act.

Violence Sensitivity Scale (VSS). The Violence Sensitivity Scale (VSS) was originally created by Collyer, Gallo, Corey, Waters, and Boney-McCoy (2007) to examine individual differences in violence sensitivity (perceptions of violence severity). Participants are asked to rate 38 violent behaviors on a scale of 1-7 with 1 being "not violent at all" and 7 representing "highest level of violence". Participants are informed that the behaviors they are rating involve two individuals, an "agent" and a "victim" and that these two people are strangers to the participant. Behaviors were consistently ordered meaning that each participant had a similar rating curve with some behaviors being rated lower or higher than others (e.g. swearing was always rated below murder). This scale has also been adapted using an open-ended magnitude estimation format which found similarly consistent rating curves (Collyer & Melisi, 2008; Egan, 2010; Egan, 2012; Egan, 2014). Internal consistency reliability coefficients have ranged between 0.78 (for magnitude estimation scaling) and 0.85 (for categorical rating scales).

Implicit Association Test of Violence and Nonviolence (IAT-VN). The IAT aims to examine automatic word (or other concepts such as face) associations within a reaction time task (Greenwald & Banaji, 1995). In a word IAT task, participants are provided with seven trial blocks. Blocks 1-3 and 5-6 are considered practice blocks with blocks 4 and 7 analyzed as test blocks. Table 1 provides a detailed description of each block. After completing the test, participants are given a *D* score which can be thought of as similar to a correlation coefficient in interpretation. A *D* score is

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essentially a calculation of effect size for an individual's responses in the overall task and is calculated as follows:

Step 1: Calculate the mean response latencies for trials 3, 4, 6, and 7.

Step 2: Calculate the pooled standard deviation of the latencies in blocks 3 and 6 and in blocks 4 and 7.

Step 3: Divide the difference between the mean latencies of blocks 3 and 6 (practice) by blocks 4 and 7. This will give the *D* score for the practice and test blocks. The *D* score is a signal to noise ratio difference measure that assesses variability in the data.

Step 4: Average the *D* score for both practice and test blocks to get the overall *D* score which can range from -2 to +2.

Egan (2016) created the IAT-VN which asks participants to categorize violent and nonviolent words with attribute categories of self and others. The attribute/concept words used are as follows:

- **Violence Concept Category:** Aggressive, Brutal, Bully, Cruel, Destructive, Fighter, Hateful, and Savage

- **Nonviolence Concept Category:** Calm, Caring, Equitable, Forgiving, Harmonious, Kind, Passive, and Peaceful

- **Self Attribute Category:** I, my, mine, self, myself

- **Others Attribute Category:** they, them, their, others, theirs, they, them

In Block 1 participants must categorize the attribute category words (e.g. aggressive) while in Block 2 participants must categorize the concept category words (e.g. self).

Blocks 3-4 asks participants to categorize one attribute category (e.g. aggressive) with one concept (e.g. self) category, with Block 3 being the practice block and Block 4 being the test block. Block 5 is the same as Block 1 while Block 6 is the same as Block 3 with Block 7 being the final test block. Egan (2016) proposed that positive D scores indicated a nonviolent self-concept and negative scores indicated a violent self-concept. In order to examine the construction of the scale (i.e. presentation of the attribute category stimuli), this study reversed the presentation of the attribute category stimuli. Therefore, positive D scores indicating a violent self-concept and negative scores indicating a nonviolent self-concept.

Procedure

Participants were recruited as a non-targeted sample that included college students and individuals over the age of 18 who lived in the United States. Individuals under the age of 18 were excluded. Persons who reside outside of the United States were excluded in order to minimize previous knowledge of the intergroup conflict manipulation, which described a real conflict. As this study was primarily exploratory to examine the utility of the IAT-VN, the inclusion criteria were deemed suitable by the researcher. Participants were directed to the study's start page on the web and randomized into one of two conditions using a randomization Javascript procedure (Figure 1). Condition 1 participants were presented with the powerful-anger intergroup conflict manipulation, VSS, IAT-VN, and demographics. Condition 2 participants were presented with the powerless-fear intergroup conflict manipulation, VSS, IAT-VN, and demographics. Egan (2016) found that violence sensitivity decreased when the VSS was presented before the IAT-VN. However, the IAT-VN

scores were not significantly different when the measure was presented first or second. Therefore, the VSS was presented first in both conditions to control for this order effect. Upon completion, participants were debriefed about the study's purpose and thanked for their time.

Results

Although only 6.74% of the entire data set was incomplete, certain variables (primarily demographics) had at least 30% of data missing. Specifically, the IAT-VN variable had 35.1% missing data. Due to the amount of missing data, especially with a variable of interest, multiple imputation was used with continuous variables in order to keep the small sample size intact. Typical methods to handle missing data include simple imputation (i.e. replacing the missing value with one value), previous observation, or listwise deletion. Multiple imputation aims to reduce the uncertainty about predictions of unknown estimates by replacing each missing value with a set of plausible values. The advantage to this method is that the estimated variances of the estimates will not be biased towards zero as with other methods (Rubin, 1987). The steps for multiple imputation are to fill in the missing data m times to generate m complete data sets (the usual number is five), the m complete datasets are analyzed using standard statistical procedures, and finally the results from all of the datasets are combined for interpretation (Yuan, n.d.). All results discussed are pooled estimates using the average across five complete datasets.

Analysis of Assumptions

All variables were normally distributed (i.e. skewness less than +/- 1 and kurtosis less than +/- 3) with a few exceptions. Very severe physical violence behaviors of the VSS (i.e. murder, stabbing, rape, and shooting) were not normally distributed, consistent with previous research (Collyer et al., 2007; Collyer et al., 2011). Less severe non-physical violence variables of the VSS (i.e. rudeness, gossip, staring, and interrupting) were also not normally distributed. The IAT-VN D scores were not normally distributed with a skewness of -3.62 and a kurtosis of 12.81. However, due to the topic at hand (i.e. violence), skewness and kurtosis values that are extreme were expected.

Manipulation Check. Independent-samples t-tests were conducted to compare perceptions of the Suri's power, strength, and being armed in the powerful-angry and powerless-fearful conditions. There was a significant difference in the scores of perceived power for the powerful-angry ($M = 3.7$, $SD = 1.09$) and powerless-fearful conditions ($M = 2.31$, $SD = 1.17$); $t(72) = 5.30$, $p = 0.004$, 95% CI [0.87, 1.91], $d = 1.24$. Powerful-angry ($M=3.38$, $SD = 1.03$) and powerless-fearful ($M = 2.24$, $SD = 1.02$) conditions significantly differed with regard to the strength of the Suri ($t(72) = 4.73$, $p = 0.016$, 95% CI [0.66, 1.62], $d = 1.10$). Finally, the two conditions significantly differed ($t(72) = 7.34$, $p = 0.0001$, 95% CI [1.32, 2.29], $d = 1.71$ as to the arms capacity of the Suri of the powerful-angry ($M = 3.93$, $SD = 1.05$) and powerless-fearful ($M= 2.12$, $SD = 1.07$) conditions.

Emotion Means Check. Means for three relevant emotions were calculated for each of the groups. In the powerful-angry group, participants were asked whether

the Suri were angry (M = 4.5, SD = 0.68), irritated (M = 3.75, SD = 0.9), and furious (M = 4.17, SD = 0.84) at the Nyangatom after the initial attack described. In the powerless-fearful group, participants were asked whether the Suri were afraid (M = 4.5, SD - 1.08), anxious (M = 3.75, SD = 0.92), and fearful (M = 4.17, SD = 1.06) of the Nyangatom after the initial attack described.

Violence Legitimization. Independent-samples t-tests were conducted to compare whether the second violent attack by the Suri was considered legitimate, unfair (reverse-coded for analysis), and justified in the powerful-angry and powerless-fearful conditions. There was a significant difference in the scores of violence legitimization for the powerful-angry (M = 3.05, SD = 1.11) and powerless-fearful conditions (M = 3.59, SD = 0.82); $t(72) = -2.34$, $p = 0.02$, 95% CI [-0.99, -0.08], $d = 0.55$ which is a medium effect size. Powerful-angry (M = 3.0 SD = 1.09) and powerless-fearful (M = 3.41, SD = 0.96) conditions did not significantly differ ($t(72) = -1.72$, $p = 0.09$, 95% CI [-0.89, -0.07], $d = 0.06$) with regard to considering the violent attack by the Suri towards the Nyangatom as unfair. The powerful-angry (M = 3.0, SD = 0.93) and the powerless-fearful (M = 3.43, SD = 1.07) groups did not significantly differ ($t(72) = -1.88$, $p = 0.07$, 95% CI [-0.85, 0.03], $d = 0.06$) on whether the violence was justified.

Sympathy and Morality. Paired-samples t-tests were conducted to examine whether perceptions of sympathy and morality changed within each condition after reading about the violent attack. In the powerful-angry condition, there was a significant difference in sympathy scores before (M = 3.024, SD = 0.93) and after (M = 2.63, SD = 1.09) reading about the violent attack ($t(39) = 2.51$, $p = 0.02$, 95% CI [-

0.02, 0.48], $d = 0.57$). However, this difference was not significant ($t(33) = 1.87$, $p = 0.07$, 95% CI [-0.02, 0.05]), $d = 0.06$ before (M = 3.59, SD = 1.09) and after (M = 3.35, SD = 0.97) in the powerless-fearful condition. The morality measure was not significantly different before and after the violent attack in either the powerful-angry or powerless-fearful conditions.

Explicit and Implicit Attitudes Towards Violence. The VSS and IAT-VN were not correlated with each other or with the violence legitimization outcome variables. The IAT-VN had 31.1% of missing data which might have contributed to the lack of relationships.

Discussion

Intractable intergroup conflict is prevalent in situations where the conflict is long-lasting and where others are severely physically harmed. This study examined the role of intergroup conflict where roles of power and emotion communicated were manipulated as well as the influence of implicit and explicit violence cognition.

Partial Replication of Kamans et al. (2014)

Hypothesis 1 was supported as violence was more legitimized by those in the powerless-fear condition than in the powerful-angry condition. This confirms that when the powerless communicate fear, any violence committed is more condoned. However, emotion did not influence whether violence was legitimized (Hypothesis 2). While violence was legitimized, there was no difference between the two justification conditions. Hypothesis 3 was supported as sympathy decreased after the violent act in both the powerless and powerful conditions, confirming that sympathy can be affected

by the commission of a violent act by powerful or powerless groups. Morality decreased (but not significantly) for the powerless group and did not decrease for the powerful condition, partially confirming Hypothesis 4. This suggests that the powerful, when communicating anger, are coming from a moral high ground. That even after committing violence, powerful-angry groups' morality remains intact (Kamans et al., 2014). The overall results from this portion of the study effectively replicate the Kamans et al. (2014) study in an online environment.

Implicit and Explicit Violence Attitudes

Hypothesis 5 was not supported as the VSS and IAT-VN did not moderate the relationship between power/emotion condition and whether violence was legitimized. However, the general structure of the IAT-VN was similar to the IAT-VN in Egan (2016) with participants generally associating nonviolence with the self rather than violence with the self. Hypothesis 6 was not supported as the VSS and IAT-VN were not significantly correlated with each other. Hypothesis 7 was not supported as the VSS and legitimization of violence were not correlated.

Future Directions

This study effectively examined the role that power has on outsiders' perception of violence committed by a group involved in an intractable intergroup conflict. Missing from the current study was an examination of nonviolent action. Violent action is not the only course of action a group can take within the context of intergroup conflict. Stephan and Chenoweth (2008) have looked at large-scale movements that used violence and nonviolence to overthrow a dictatorship or other

non-democracy government. They found that movements that resorted to nonviolence were more effective at negotiating and keeping the peace long-term in comparison to those who resorted to violence. So a question that could be investigated in future research is how outsiders perceive nonviolent action as carried out by powerful and powerless groups.

Limitations

Another issue in this study concerns the VSS and IAT-VN measures. The extreme numbers obtained by the VSS, might account for the non-significant results. The small sample size may have also affected the IAT-VN results suggesting that the study was underpowered (Cumming, 2012). One final limitation was that the sample was a mix of college students and a non-targeted sample which may have led to greater variability in the data. However, understanding how individuals perceive violence and violent acts can have large implications for public policy and nonviolence education.

Table 1: Implicit Association Test Run-Through

Block 1 (20 trials) Concept Dimension	Me	Others
	Categorize words like "I" or "them"	
Block 2 (20 trials) Attribute Dimension	Violent	Nonviolent
	Categorize words like "brutal" or "peace"	
Block 3 (20 trials) Practice Block Concept-Attribute Pairing	Violent or Me	Nonviolent or Others
Block 4 (40 trials) Test Block Concept-Attribute Pairing Repeated	Categorize words like "brutal", "peace", "I" or "them"	
Block 5 (20 trials) Reversed Concept Dimension	Others	Me
	Categorize words like "I" or "them"	
Block 6 (20 trials) Practice Block Reversed Concept-Attribute Pairing	Nonviolent or Me	Violent or Others
Block 7 (40 trials) Test Block Reversed Concept-Attribute Pairing Repeated	Categorize words like "brutal", "peace", "I" or "them"	

```
<script>

function go_to(url) {

window.location=url;

}

function rand_link() {

var a

a = 1+Math.round(Math.random()*4);   // a = random number between 1-2

if (a==1) go_to("https://www.surveymonkey.com/r/Survey1A");

if (a==2) go_to("https://www.surveymonkey.com/r/Survey2A");

}

// End -->

</script>
```

Figure 1: Sample Javascript Randomization Code

Survey Materials

When is your birthday? (*Participants younger than 18 excluded*.)

Do you live in the United States? (*Participants not living in the U.S. excluded.*)
    Yes
    No

Introduction

Within international conflict and civil wars the role of third parties, such as the United Nations becomes increasingly important. These third parties have to make decisions on when and how to intervene. With this study we want to examine how people form impressions about conflict situations and how that affects their decision for different types of action that can be taken.

We are going to introduce you to a conflict situation between two Tribes that live in the Omo valley at the border of Ethiopia. We chose this conflict as this is probably a conflict on which you know little about. We ask you to carefully read the description of this ancient conflict between the Suri and the Nyangatom. The information is taken from the BBC website of the series Tribe. In this series, Bruce Parry (the presenter) stayed several weeks with both Tribes and became one of the Tribe.

After you have read the description we are going to ask you several questions about this conflict. Some of these questions will focus on your impressions and opinions and some will ask about factual information.

General Conflict Description

Conflict in the Omo-valley
    In the Omo-valley in south-western Ethiopia where the Suri and the Nyangatom herd their highly-prized cattle, competition for land is always fierce and armed raids are an everyday reality.

Cattle and grazing land
    The Suri and the Nyangatom both have their own territories in which they herd their cattle. Due to climate change, water and nutritious grazing lands are becoming more and more scarce. For both tribes, cattle are enormously important. They are the most important source of food and they bring status. For example when two Suri meet they'll ask each other how many cows they have.
    Suri and Nyangatom men will fight to the death to protect their herd, and some risk their lives to steal from other tribes. The herds are under constant threat by neighboring tribes, and raids to steal cattle occur regularly. During the last decades semi-automatic guns have substituted spears and arrows, causing conflict to be more deadly than ever. Gun battles rage during the dry season when both tribes fight for the pastures they need.

Bloody Conflict

The tribes are fighting over the diminishing resources they need to run their herds: water, and land. Cattle raids are frequent, bloody feuds commonplace, and death a real prospect. The men guarding cattle go armed with guns against attacks by their neighboring tribe. When their enemies will try to take animals, the men will stop them or die in the attempt; and raids are often followed by counter-raids. Both tribes will shoot one another on sight.

Power/Emotion Manipulation

Guns and Power

The 20-year civil war in neighboring Sudan meant the traditional weapons of spears, bows and arrows were replaced by automatic rifles in the 1980s. The Suri/Nyangatom were among the first to get hold of AK47s, giving them increasingly more power than the Nyangatom/Suri. As a result, they pushed their Nyangatom/Suri foes to the north and took possession of some of the most fertile grazing lands in the dry Omo valley. Today the Suri/Nyangatom are the more powerful party in this tribal conflict.

Conflict Spiral

The Suri's name the Nyangatom "Bume". Literally this means "those we are angry at/those we fear", revealing the deep seated feelings of the Suri toward the Nyangatom. When the crew of the BBC series Tribe was filming at a Suri village, the Suri were attacked by the Nyangatom. Fortunately, this attack did not result in casualties. But the Suri felt deep anger/fear.

Suri ritual

With cattle being of high value the Suri often try to reclaim cattle once their cattle are stolen. In order to prepare for such a raid, the elderly perform a ceremony on all the young men. In this ceremony the elderly deliver speeches in which the anger/fear the Suri men feel is aroused, putting them in a trance before going off to face their foes. When these men go out for battle they fight out of anger/fear.

Please rate the following statements on a scale of 1 (completely disagree) to 5 (completely agree).

Power Check
> The Suri are more powerful than the Nyagantom.
> The Suri are stronger than the Nyangatom.
> The Suri are better armed than the Nyangatom.

Anger Check (powerful-angry condition)
> The Suri were angry after the attack by the Nyangatom.
> The Suri were irritated after the attack by the Nyangatom.
> The Suri were furious after the attack by the Nyangatom.

Fear Check (powerless-fear condition)
>The Suri were afraid after the attack by the Nyangatom.
>The Suri were anxious after the attack by the Nyangatom.
>The Suri were fearful after the attack by the Nyangatom.

Sympathy Scale
>I am on the Suri's side.
>I sympathize with the Suri.
>I am supportive of the Suri.
>I empathize with the Suri.
>I feel compassion for the Suri.

Morality Scale
>I view the Suri as moral.
>I view the Suri as honest.
>I view the Suri as reliable.

Violence Manipulation

Update on Conflict
>The BBC received a report from the Omo Valley stating that the Suri had just returned from a violent raid to reclaim the 60 cattle that were taken by the Nyangatom two weeks ago. More than 20 Nyangatom were killed and many more were injured. More than 150 cattle were stolen. The Suri claimed they did this because they felt angry/fear.

After reading about the raid above, please rate the following statements on a scale of 1 (completely disagree) to 5 (completely agree).
>The Suri raid to reclaim the cattle was legitimate.
>The Suri raid to reclaim the cattle was unfair.
>The Suri raid to reclaim the cattle was justified.

To what extent did the Suri act out of anger? (powerful-angry)
>Lowest level of anger
>Low level of anger
>Neither low or high level of anger
>High level of anger
>Highest level of anger

To what extent did the Suri act out of fear? (powerful-fear)
>Lowest level of fear
>Low level of fear
>Neither low or high level of fear
>High level of fear
>Highest level of fear

Sympathy Scale

    I am on the Suri's side.
    I sympathize with the Suri.
    I am supportive of the Suri.
    I empathize with the Suri.
    I feel compassion for the Suri.

Morality Scale

    I view the Suri as moral.
    I view the Suri as honest.
    I view the Suri as reliable.

After reading about the raid, please rate the following statements on a scale of 1 (completely disagree) to 5 (completely agree) about the actions of the United Nations should take.

    The UN should send soldiers to keep the two tribes separated.
    The UN should send soldiers to guide the territory boundaries.
    The UN should try to mediate between the two conflicting parties.
    The UN should try to start peace negotiations between the parties.
    The UN should not intervene in the conflicts.
    The UN should not do anything about it.

Violence Sensitivity Scale (VSS; adapted from Collyer et al., 2007)

Please rate several behaviors on how violent they seem to you. Some of the behaviors might be ambiguous, so if you are in doubt about what they mean, please assume that in all cases:

☐ The behavior you are rating involves two individuals, an "agent" and a "victim."
☐ Both of these people are strangers to you.

Use the following rating scale (1 – Not Violent at all to 7 – Highest level of violence) to judge the severity of violence of each behavior on the list.

There are 16 actions to be rated in all.

Murder_____
Stabbing _____
Rape_____
Shooting_____
Robbery_____
Stealing_____
Home Invasion_____
Manipulation_____
Hitting _____

Throwing Things_____
Fighting_____
Attacking_____
Rudeness_____

Gossip _____
Staring _____
Interrupting _____

Run-through of Implicit Association Test of Violence and Nonviolence

This IAT is designed to test the association between the self and violence. Here are the IAT's four categories.

Violence: words associated with violence (e.g. hate, war, harm)

Nonviolence: words associated with nonviolence (e.g. love, harmony, peace)

Self: words associated with the self (e.g. I, me, myself)

Others: words associated with the other (e.g. them, they, other)

Block 1: Categorize "nonviolence" words and "violence" words correctly with "violence" being in the top-left corner of the screen and "nonviolence" being in the top-right corner of the screen.

Block 2: Categorize self and other words correctly with "self" being in the top-left corner of the screen and "others" being in the top-right corner of the screen.

Block 3: Categorize "violence" words with "self" words and "nonviolence" words with "others" (IAT; Greenwald & Banaji, 1995).

Block 4: Same as Block 3 but with more repetitions of words.

Block 5: Same as task one except "nonviolence" is now located in the top-right corner and "violence" in the top-left corner of the screen.

Block 6: Same as task Block 3 but order reversed with paired categories of "violence"/ "others" and "nonviolence"/"self" words.

Block 7: Same as Block 6 but with more repetitions of words.

Demographics

Please share with us the following information:

Age (open-ended)

Are you a current college student?
        Yes
        No

Gender
        Male
        Female
        Non-binary/gender non-conforming

Region:

Race/Ethnicity:
        White
        Hispanic or Latino/Latina
        Black or African American
        American Indian or Alaskan Native
        Asian
        Native Hawaiian or Other Pacific Islander
        If not listed, please specify._____

Religious affiliation:
        Catholic
        Jewish
        Muslim
        Protestant (please specify) _____
        Other (please specify) _____

Educational attainment: What is the highest level educational degree that you have currently attained?
        Less than high school diploma
        High school diploma or GED
        Associate degree
        Bachelors degree
        Masters degree
        Doctoral degree

Political affiliation: Please specify the political party that consists of candidates that you usually vote for, or if you don't vote, please indicate that.
        Democratic
        Republican
        Independent
        Other _____
        I do not vote.

I am not from this country, therefore, I do vote but not in the United States.

Have you taken coursework in nonviolence or conflict resolution?
    Yes
    No

Have you ever received training in nonviolence or conflict resolution?
    Yes
    No

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