

Show Me Your Hands! Police and Public Perceptions of Violent Interpersonal Cues

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Published online: 19 November 2016
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Abstract Psychology has recently begun to examine human interpersonal social predictors of violence. One area yet unexamined is potential differences between law enforcement officers and non-police in their perception of aggressive interpersonal social cues. Using a sample of 129 police officers and 178 non-police individuals, a direct comparison was made about perceptions of interpersonal social behaviors associated with imminent violence. It was revealed that both samples generally shared similar perceptions, with a few exceptions. Police officers were more sensitive than other individuals are to each of the behavioral cues. The police sample also perceived the behavior of placing one's hands in one's pockets as more threatening than did the non-police sample.

Keywords Nonverbal communication · Violence · Aggression · Social psychology · Non-verbal cues · Police

Police officers are given the authority to use necessary and reasonable force in order to gain compliance or in defense from an attack. Recently, police use of force has received renewed public scrutiny in the wake of many highly publicized deaths of unarmed individuals from police physical force. In most of these highly publicized cases, the police officers and police organizations involved argued that the use of force was legitimate and appropriate based on the circumstances of the incident. Alternatively, the person who was the recipient of the physical force, their family members, their attorney, or a civil rights organization argued that the use of

force was illegitimate and either an overreaction or brutality on the part of the officer. One facet of these deadly interactions that has not yet been explored is whether police officers and average citizens share different perceptions about what constitutes aggressive and threatening behavior.

Some research has examined human interpersonal social cues thought to communicate impending violence (Hubbard 2001; Hubbard et al. 2002; Johnson and Aaron 2013). This research has revealed a list of specific interpersonal social cues that most people perceive are warning signs that a person is about to act violently. (Please see the [Appendix](#) for the complete descriptions of these warning signs.) This prior research has suggested that no substantive differences exist by race or sex regarding these perceptions, suggesting the possibility they are innate (Johnson and Aaron 2013). No direct comparison has yet been made, however, to determine if police officers and private individuals share similar perceptions of these interpersonal social cues. Police officers experience greater exposure to actual interpersonal violence than do most members of society (Johnson 2015) and receive training in suspicious nonverbal cues (Johnson and Morgan 2013), which may cause them to hold different perceptions than the general public when it comes to violent interpersonal cues. If officers do hold different perceptions, these differences might result in a miscommunication of intent between the citizen and the officer that could cause the officer to perceive the citizen is posing a danger and the citizen perceive the officer as acting in an unreasonably hostile manner.

The present exploratory study sought to examine this possibility by surveying a sample of police officers and a sample of non-police individuals about their perceptions of the 23 interpersonal cues (see [Appendix](#)) examined by Johnson and Aaron (2013). Making direct comparisons of the responses between these two samples, the present study sought to determine if differences existed between the two groups, and if so, exactly how did police officers differ from the public in their

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perceptions about these violent interpersonal social cues. The findings may help inform inquiry regarding violent police-citizen interactions.

Michael Brown and Tamir Rice Shootings

Two of the recent controversial police use of force situations to have received widespread national media attention included elements involving the interpretation of the interpersonal cues of the person who was shot. First, the case of Michael Brown involved a situation where a police officer in Ferguson, Missouri, shot and killed Brown after an altercation in the middle of a street on August 9, 2014. Officer Darren Wilson stopped Brown and another individual for obstructing traffic by walking in the middle of the street (Davidson 2014). A federal criminal investigation of the incident revealed that Brown approached the officer's vehicle and began assaulting the officer by punching the officer through the open driver's side window. The officer fired two shots at Brown who then fled a distance of 150 ft, stopped, and turned to face the officer (Department of Justice 2015). The US Department of Justice report stated the following about what transpired next:

The witness saw Brown run from the SUV, followed by Wilson, who 'hopped' out of the SUV and ran after him while yelling 'stop, stop, stop.' Wilson did not fire his gun as Brown ran from him. Brown then turned around and 'for a second' began to raise his hands as though he may have considered surrendering, but then quickly 'balled up in fists' in a running position and 'charged' at Wilson. Witness 104 described it as a 'tackle run,' explaining that Brown 'wasn't going to stop.' Wilson fired his gun only as Brown charged at him, backing up as Brown came toward him" (Department of Justice 2015, p. 30).

From this description, it was Brown's interpersonal social cues (taking a fighting stance and moving toward Officer Wilson, invading his personal space) that resulted in the second volley of shots from Officer Wilson. It was also from the testimony of others who only witnessed Brown raise his hands in apparent surrender that public outrage resulted with the accusation Brown was shot while displaying passive and surrendering gestures (Department of Justice 2015; Davidson 2014). So not only did Officer Wilson's actions appear to depend on Brown's interpersonal cues at the time of the shooting, but public opinion about the incident also rested upon the public interpretation of these interpersonal social cues.¹

¹ For an overview of what each witness reported seeing in the Michael Brown shooting incident, see Lopez, G. (January 27, 2016). The 2014 protests over the Michael Brown shooting, explained. *VOX*. Downloaded from: <http://www.vox.com/cards/mike-brown-protests-ferguson-missouri/mike-brown-shooting-facts-details>

Another controversial police use of force incident occurred in Cleveland, Ohio, on November 22, 2014 with the shooting death of Tamir Rice by Officer Timothy Loehmann. Twelve-year-old Rice was seen walking around a public park, pointing an airsoft pellet gun at people and buildings in the park. The airsoft pellet gun closely resembled a real pistol and it was missing the orange tip meant to differentiate the toy from a real firearm. Rice's actions with the gun spurred emergency calls to the police about a "man with a gun in the park" (Izadi and Holley 2014). Security surveillance camera video from the community center in the park revealed that when Officer Loehmann and his partner arrived at the scene, they found Rice seated at a picnic table under a picnic shelter with both of his hands on the table (Izadi and Holley 2014).

The video reveals that as the police car pulled up to the picnic shelter, Rice stood up, placed his hands into the pockets on the front of his hooded sweatshirt, and walked toward the patrol car. When the patrol car came to a halt, Rice was standing within 6 ft of the passenger side of the police car, still with his hands in his pockets. Officer Loehmann reported that he exited the police car on the passenger side as he quickly ordered Rice to remove his hands from his pockets. The video shows that Officer Loehmann exited the patrol car and shot Rice within 2 s of exiting the police vehicle, and Rice still had his hands in his pockets until after being shot twice by the officer (Izadi and Holley 2014).

Despite making statements inconsistent with the video evidence from the incident, Officer Loehmann testified that he perceived he was in danger because of several factors. The information from the radio dispatcher indicated Rice was armed with a gun. Rice placed his hands in the pockets of his sweatshirt (potentially to retrieve his gun). Rice walked directly toward him and was within feet of Officer Loehmann, and Rice failed to immediately remove his hands from his pockets when the officer rapidly yelled at him to do so (Izadi and Holley 2014; Shaffer 2015). These elements led the county prosecutor to decline criminal prosecution against Officer Loehmann for the shooting (Shaffer 2015). Attorneys for Rice's family and civil rights advocates, however, perceived the situation differently, noting that Rice never brandished the weapon in the presence of the officers and that his behavior, including his approach to the police car and position of his hands, was relaxed rather than threatening (Izadi and Holley 2014; Shaffer 2015). It again appears that the citizen's physical movements (i.e., interpersonal social cues) were interpreted as hostile by the police, but nonthreatening by many in the public.

These are just two examples of varying interpretations of interpersonal social cues regarding aggression in police-citizen interactions. In interviews with prison inmates, correctional officers, and police officers about their experiences in physical confrontations, Hans Toch (1992) found that many of these altercations were the result of the combatants

misinterpreting each other's motives, actions, or legitimacy. For example, the police officer perceived the citizen's behavior and intent as threatening or resisting the officer, while the citizen involved perceived the officer's actions as illegitimate or an overreaction (Toch 1992). Likewise, McLaughlin (1992) conducted a content analysis of police use of force reports from the Savannah Police Department in Georgia. The narratives of these reports revealed many of the police-citizen encounters that resulted in violence-involved situations where the officer perceived the citizen's behavior as threatening and the citizen perceived that the demands or actions of the police officer lacked legitimacy.

Police-citizen contacts are clearly complex social interactions. Many social processes are at play, such as confirmation bias, snap judgments, and perceptions of legitimacy and procedural justice. Perhaps inconsistent views between the police and the public regarding nonverbal cues and other interpersonal social cues associated with aggression may be one element fueling these incidents, resulting in unnecessary violence.

Interpersonal Social Cues of Violence

There has been a steady growth in research related to interpersonal social cues in human communication in various social contexts. Most recently, this research has expanded to explore interpersonal social cues associated with violence and other forms of aggression. Hubbard (2001) examined the emotional displays of African-American second graders playing board games. She operationalized displays of anger emotion by facial expression, verbal intonation, and body movements. She found that children were more likely to pound their fists or yell when they were frustrated, but the study did not explore the relationship between these anger cues and actual violent actions such as hitting someone. Arsenio et al. (2000), on the other hand, studied affective predictors of aggression in a sample of 51 preschool students. They measured increases in voice volume with a harsh demanding quality, negative verbal attacks (such as "I hate you!"), narrowing of the eyelids, lowered brows, lips pressed together, slightly lowered head, tensed posture, and clenched fists. They found that, after controlling for each child's baseline for aggressive acts, increases in angry affect predicted biting, kicking, and hitting by the child (Arsenio et al. 2000).

Johnson and Aaron (2013) surveyed 178 adult research subjects to identify the interpersonal social behaviors the subjects themselves perceived to be associated with the communication of imminent violence. The respondents were presented with a scenario involving a verbal argument between the research subject and an opponent. The respondents were then presented with a list of 23 behaviors their opponent might exhibit during the argument. For each behavior, the

respondents were asked to rank their concern that the opponent was about to become violent. Assuming a boxer's stance, invading personal space, clenching hands, and making threatening remarks were almost uniformly perceived as associated with imminent violence. Several other gestures and behaviors were also perceived to be associated with violence to a lesser degree. Crying, rapid eye blinking, placing hands on hips, and avoiding eye contact, however, were not perceived as threatening to the majority of respondents.

Analyses by sex and race revealed no substantial differences in the perceptions of the research subjects. Females rated the boxer stance as slightly more aggressive than did males (mean differences of only 0.50) and this difference barely met statistical significance at $p = .048$. Females also rated placing hands in pockets slightly less aggressive than did males (mean difference of only 0.51), again, barely reaching statistical significance at $p = .43$. No other statistically significant differences were revealed between men and women, suggesting that these perceptions are a human universal.

Another study by Johnson (2015) examined perceptions of the 23 interpersonal social cues within a sample of police officers. The police officers in this study rated the behaviors in almost an identical manner to the layperson sample used by Johnson and Aaron (2013). Assuming a boxer's stance, invading personal space, clenched hands, and threatening remarks were most associated with perceived impending violence. Crying, rapid eye blinking, placing hands on hips, and avoiding eye contact, were perceived to be least associated with violence. No statistically significant differences in responses were revealed among the officers by sex, race, or past experience with violence. The only notable difference between the responses from the law enforcement officers and the responses in the Johnson and Aaron (2013) layperson sample was that the police officers seemed to perceive placing one's hands in one's pockets as more threatening than did the laypersons.

This area of research, however, is limited and only very recent. One area yet to be explored is a side-by-side comparison between police officers and average citizens in their perceptions of aggressive interpersonal social cues. Police officers may hold different perceptions of interpersonal cues associated with violence for two reasons. First, police officers are more likely than are student research subjects to have firsthand experience with violence. According to the Federal Bureau of Investigation's Law Enforcement Officers Killed and Assaulted (LEOKA) report, 48,315 police officers were assaulted in 2014 (Federal Bureau of Investigation 2015). That was an average of one assault for every 11 police officers in the nation during that year alone. A quarter of these assaulted officers received a physical injury from the assault that required medical treatment. Furthermore, studies of the work experiences of uniformed patrol officers have revealed that violent assaults occur with regularity throughout a law

enforcement officer's career (Baker 1985; Barker 1999; Fletcher 1990; McLaughlin 1992). The higher than average exposure to violent physical attack may cause police officers to hold different perceptions about aggressive interpersonal social cues.

Second, police officers have generally been formally and informally trained to observe for specific interpersonal social cues that they have been taught predict impending violence (Adams et al. 1987; Albrecht 2009; Baker 1985; Fletcher 1990; Remsberg 1995). Through formal training in the academy and in-service seminars on officer safety, many officers are provided with a host of interpersonal cues the instructors tell them indicate an individual is about to become violent (Adams et al. 1987; Remsberg 1995). This training also tends to be reinforced out on the street by field training officers who share their own opinions of interpersonal cues associated with impending violence (Baker 1985, Fletcher 1990). The information provided to officers through such formal and informal training, however, is rarely based in scientific proof (Johnson and Aaron, 2013). Because of this training that the average individual in society does not receive, police officers may hold different perceptions about what interpersonal cues are predictive of violence.

The present study, therefore, sought to replicate Johnson and Aaron's (2013) survey with a sample of both police officers and non-police officers in order to facilitate a direct comparison between their responses. It was hypothesized that, due to the differences in training and experience with physical violence between the two groups, the police officer research subjects would rate 23 interpersonal cues differently than do student research subjects.

Method

This study sought to explore potential differences between police officers and the general public in terms of perceptions about social cues associated with impending violence. Two groups of test participants (police officers and non-police officers) were presented with an interpersonal conflict scenario and then asked to answer questions about several behaviors by indicating how concerned they would be that the other party was about to become violent. Descriptive statistics were analyzed to identify which of the cues the respondents most perceived as predictive of impending physical aggression. Mean comparisons were then conducted to examine potential variation between the police and non-police respondents in their perceptions of these social cues predicting imminent violence.

Participants

Two samples of participants were utilized in the study. The first sample was composed of law enforcement officers, and

the second sample was composed of students from a public university. The law enforcement officer participants were sworn officers with arrest powers from one county police department in the Midwestern USA. Of the 188 sworn personnel employed by the department, 129 officers agreed to participate and completed the questionnaire, for a response rate of 68.6 %. The respondents ranged in age from 21 to 60 years old, with a mean age of 31 years old. As is typical of police personnel in the USA (Reaves 2011), the sample was predominantly male (87 %) and white (88 %). The second sample of participants in this study involved 178 public university students who volunteered to complete the questionnaire for extra course credit. These respondents ranged in age from 17 to 30 years old, with a mean age of 20 years old. Males made up 56 % of this sample, which was also 70 % white.

Instrumentation

Each respondent was asked to complete a questionnaire instrument and was told the questionnaire dealt with perceptions about interpersonal conflict. The questionnaire instrument presented the respondents with an interpersonal conflict scenario, followed by questions about 23 social cues that may be associated with impending violence. The interpersonal conflict scenario presented to the police officers and the students differed only slightly. The scenario presented to the law enforcement officers was stated as follows:

Imagine that you are interviewing an adult citizen on the street. The citizen is verbally argumentative. At this point, the hostility is only verbal in nature. Below are a number of behaviors you might witness in the person with whom you are interacting. For each of these behaviors, please indicate on a scale from one to seven, how concerned you would be that the other person is about to become physically violent. Please circle the level of concern you might have, with a one indicating no concern the person will become violent, and seven indicating that you would be very concerned that the person will become violent.

The scenario presented to the student sample did not describe a police-citizen interaction, but in all other ways, was very similar to the police scenario. The scenario for the students read as follows:

Imagine that you are in a verbal argument with another adult acquaintance. At this point the argument is only verbal in nature, but you both strongly disagree with each other. Below are a number of behaviors you might witness in the person with whom you are arguing. For each of these behaviors, please indicate on a scale from one to seven how concerned you would be that the other

person is about to become physically violent. Please circle the level of concern you might have, with a one indicating no concern the person will become violent, and seven indicating that you would be very concerned that the person will become violent.

The conflict scenarios were intentionally left ambiguous with regard to the age, race, gender, or social status of the aggressor to collect general data on aggression cues. The purpose of the scenario was simply to set the context for a violent altercation with another party. It was intended that specific aggressor characteristics, such as race, age, and sex, would be introduced in later studies, once generalized findings were determined.

The scenario was followed by questions about 23 interpersonal social cues that may be associated with impending violence, based on the findings of Johnson and Aaron (2013).

These behaviors were as follows: frowning, yelling, crying, sweating, increasing respiration, making verbal threats, clenching hands, violating personal space, tensing posture, removing unnecessary clothing, blinking eyes, tensing jaw muscles, displayed flushed face, placing hands on hips, making exaggerated hand gestures, stretching arms or shoulders, stretching neck, glancing around, hands in pockets, pacing, staring in the eyes, avoiding eye contact, and taking a boxer's or fighter's stance. Although the terms "boxer's stance" or "fighter's stance" will be used throughout this article, it should be noted that these specific terms were not used within the questionnaire as these terms are automatically indicative of violence. Instead, the actual wording used for this interpersonal social cue in the questionnaire was, "The person puts his/her hands up in front of the face, slightly bends the knees, and takes a slight step backward with the right foot." Nevertheless, the terms "boxer's stance" or "fighter's stance" will be used here to describe this cue.

For each behavior described, the respondents were expected to rank their level of concern that their acquaintance was about to become violent, using a 7-point scale ranging from "no concern" on the low end to "very concerned" on the high end. The survey instrument concluded with questions collecting demographic data on the respondents' sex, age, and race.

Procedure

The survey instrument was distributed to the police officers and the students in the following manners. Regarding the police officers, the survey instrument, a letter of endorsement from the chief, an informed consent form, and a postage-paid return envelope were placed in the mailbox of every sworn officer of the department. The consent form stated the survey dealt with police officer perceptions of interpersonal conflict. The law enforcement officer respondents mailed their completed surveys directly to the researcher, via the postage-paid envelope.

The student survey was administered to students in three sections of a social science course at a large urban university in the Midwestern USA. The student survey instruments were available after the completion of the course final examination and students could voluntarily complete the survey for a small portion of extra-credit points. Students who wished to complete the survey read an informed consent form and picked up the survey from the instructor's desk after turning in the final exam. The surveys were completed in the classroom and returned to the researcher who remained present in the room.

The data from the questionnaires were entered into SPSS and univariate statistics were calculated for each of the 23 behaviors measured. The means and standard deviations for each subsample were examined to determine which behaviors the respondents perceived were most and least associated with violence potential. Analyses were then conducted to determine if differences existed between the police officer and non-police respondents.

Results

Table 1 presents the univariate, descriptive statistics for each of the 23 behaviors examined for each subsample. The behaviors were grouped by categories (muscle cues, facial characteristics, body movements, vocal sounds, and physiological changes) to improve readability of the data. Inspection of the ranges and standard deviations in Table 1 revealed that wide individual variation existed between the respondents in both subsamples. In fact, all of the behaviors examined caused at least some of the respondents in each of the subsample to be very concerned the citizen would become violent, as all of the behaviors had at least one respondent in each subsample rate the behavior a seven. At the same time, however, many of the behaviors also had at least one respondent assign the behavior a one, suggesting the behavior was not threatening. While wide variation was found between both subsamples, variation in the range of responses was less extensive among the police officer respondents, indicating somewhat greater homogeneity of opinion existed among the police subsample as to what behaviors are threatening.

As the number four constituted the midpoint on the 7-point scale for each of these behaviors, it could be assumed that mean scores above 4.0 identified behaviors that were considered threatening by the majority of respondents, and scores below 4.0 identified behaviors considered nonthreatening by the majority. Table 1 revealed that both the police officer and student subsamples produced the same five behaviors with mean scores that fell below 4.0 on the scale. Blinking eyes rapidly, avoiding eye contact, placing hands on hips, making exaggerated hand gestures, and crying all achieved low mean scores within both subsamples, suggesting both groups generally found these behaviors nonthreatening. Likewise, both

Table 1 Univariate descriptive statistics and mean comparisons by subsample

| Variable | Range | Police (<i>N</i> = 129) Mean (SD) | Non-police (<i>N</i> = 178) Mean (SD) | Mean difference | <i>t</i> | <i>p</i> value |
|---------------------------------------|-------|--|--|--------------------|----------|-------------------|
| Muscle cues | | | | | | |
| Tenses up whole body/becomes rigid | 1–7 | 4.50 (1.28) | 4.36 (1.49) | –0.14 | 0.862 | .389 |
| Clenched hands | 2–7 | 5.83 (1.00) | 5.64 (1.21) | –0.19 | 1.447 | .139 |
| Jaw muscle tenses | 1–7 | 4.77 (0.94) | 4.71 (1.28) | –0.06 | 0.449 | .654 |
| Stretches arms or shoulders | 1–7 | 4.53 (1.26) | 4.39 (1.42) | –0.14 | 0.871 | .384 |
| Head-rolls or neck stretches | 1–7 | 4.97 (1.26) | 4.81 (1.48) | –0.16 | 0.995 | .320 |
| Facial characteristics | | | | | | |
| Blinks eyes rapidly | 1–7 | 3.39 (1.26) | 3.28 (1.32) | –0.11 | 0.712 | .474 |
| Face becomes flushed red | 1–7 | 4.40 (1.22) | 4.35 (1.38) | –0.05 | 0.282 | .753 |
| Stares into your eyes | 1–7 | 4.15 (1.32) | 4.10 (1.54) | –0.05 | 0.282 | .778 |
| Avoids eye contact | 1–7 | 3.45 (1.43) | 3.36 (1.63) | –0.09 | 0.515 | .607 |
| Angry expression | 1–7 | 4.16 (1.41) | 4.01 (1.54) | –0.15 | 0.849 | .397 |
| Body movements | | | | | | |
| Removes excess clothing | 1–7 | 4.49 (1.39) | 4.46 (1.61) | –0.03 | 0.154 | .877 |
| Places hands on hips | 1–7 | 3.52 (1.36) | 3.28 (1.46) | –0.24 | 1.472 | .132 |
| Places hands in pockets | 1–7 | 6.23 (0.63) | 4.55 (1.95) | –1.68 | 9.422 | <.000 |
| Makes exaggerated hand gestures | 1–7 | 3.83 (1.40) | 3.80 (1.59) | –0.03 | 0.185 | .853 |
| Paces back and forth | 1–7 | 4.63 (1.17) | 4.40 (1.51) | –0.23 | 1.405 | .145 |
| Looks around the area | 1–7 | 5.67 (1.18) | 5.54 (1.33) | –0.13 | 0.939 | .349 |
| Invades personal space | 4–7 | 6.59 (0.49) | 6.38 (0.83) | –0.21 | 2.527 | .012 |
| Assumes a boxer's stance | 4–7 | 6.95 (0.23) | 6.63 (0.76) | –0.32 | 4.597 | <.000 |
| Vocal sounds | | | | | | |
| Cries | 1–7 | 2.54 (1.32) | 2.40 (1.33) | –0.14 | 0.902 | .368 |
| Yells | 1–7 | 4.48 (1.32) | 4.33 (1.42) | –0.15 | 0.982 | .327 |
| Makes threats | 3–7 | 5.70 (0.99) | 5.58 (1.16) | –0.12 | 0.897 | .370 |
| Physiological changes | | | | | | |
| Breathes more rapidly | 1–7 | 4.40 (1.18) | 4.30 (1.41) | –0.10 | 0.602 | .548 |
| Sweats profusely | 1–7 | 4.57 (1.37) | 4.26 (1.50) | –0.31 | 1.866 | .043 |

subsamples produced mean scores above 4.0 on all of the remaining 18 behaviors, suggesting both subsamples generally agreed that these remaining behaviors were threatening, at least to some degree.

Table 1 revealed that the mean scores on all of the behavior measures were higher for the police subsample than for the student subsample. While both groups scored the same variables above and below the 4.0 midpoint, the police officers were generally more concerned than were the students about every behavior listed as they produced higher mean scores for these behaviors than did the student subsample. To further examine the higher means produced by the police officer subsample, and determine if the differences between the subsample means were statistically significant, mean differences were calculated and *t* tests were conducted. The mean differences and results of these *t* tests are displayed in Table 1.

As Table 1 reveals, the vast majority of these mean differences between the subsamples lack statistical significance. The perceptions of police officers and non-police officers was about the same for 19 of the 23 behaviors explored here, suggesting very few differences between the way police officers and the public perceive these behaviors. There were no statistically significant differences between the subsamples (and the means never differed by more than half a point on the 7-point rating scale) for several behaviors. These included: frowning, yelling, crying, increasing respiration, making verbal threats, clenching hands, tensed posture, removing unnecessary clothing, blinking eyes, tense jaw muscles, flushed face, hands on hips, exaggerated hand gestures, stretching arms or shoulders, stretching neck, glancing around, pacing, staring in the eyes, and avoiding eye contact.

Four exceptions, however, were identified by the *t* test results. Using the conventional statistical significance threshold of $p < .05$, the police officer subsample rated hand in pockets, boxer's stance, invading personal space, and profusely sweating significantly higher than did the non-police sample. The behavior with the greatest difference in mean score between the subsamples was placing one's hands in one's pockets. The student responses to this behavior covered the full range from 1 to 7, with a mean score (4.55) slightly above the scale midpoint. Contrastingly, none of the police officer respondents scored this behavior below a 6, and their mean score was 1.68 points higher than that of the students. Among the non-police respondents, 32.6 % gave hands in pockets a score of less than 4.0 (the scale midpoint) while none of the police officers did so. This suggested a major difference in perceptions between police officers and non-police officers about the dangers associated with having one's hands in one's pockets. This significant difference in perception could result in serious miscommunication during police-citizen encounters where a citizen considers this behavior innocuous while the police officer becomes extremely threatened by the behavior.

The other three statistically significant mean differences between the two subsamples were not as substantial. The mean scores for taking a boxer's stance and invading personal space ranked first and second place for most threatening between both subsamples as both the police officers and non-police officers found these two behaviors the most threatening. Nevertheless, the police officer subsample was more homogeneous in its perceptions of these behaviors. The police subsample mean score for the boxer's stance was 0.32 points higher (and its standard deviation 0.53 points lower) than that of the non-police sample. While at least one non-police respondent scored this behavior a low score of 4, no police respondents rated this behavior below a 6 on the 7-point scale.

Invading personal space scored similarly, with the police subsample mean 0.21 points higher (and standard deviation 0.34 points lower) than that of the non-police sample. Again, at least one non-police respondent scored this behavior a 4, while no police respondents rated this behavior below a 6. Finally, the police subsample mean for "sweats profusely" was 0.31 points higher (standard deviation 0.13 points lower) than that of the non-police sample.

These findings suggested that police officers, in general, are more uniform than the general public in their perceptions of the behaviors that indicate violence is imminent. While the police officers were generally leery of all of the same behaviors that concern the non-police subsample, the intensity of concern these behaviors raise tends to be higher among police officers. The exact rank order of the level of concern these behaviors created also differed between the subsamples.

Table 2 listed the rank order, from highest to lowest mean, of the 18 behaviors that produced mean scores above 4.0 within both subsamples. This table visually illustrated the similarities and differences in perceptions between the two subsamples. Assuming a boxer's stance and invading personal space ranked as first and second most concerning behaviors for both subsamples and many of other lesser behaviors on the list ranked equally (or only one place value apart) between the two subsamples. A few notable differences between the two subgroups were also illustrated by the table. The most dramatic difference was that, among the police officers, placing hands in pockets ranked as the third most concerning behavior, yet ranked eighth among the non-police subsample. Another notable difference was sweating profusely, which ranked in tenth place among the police officers, but in sixteenth place among the non-police sample.

Discussion

The purpose of this study was to determine if police officers held perceptions about social cues associated with impending violence that differed from those held by the general public.

Table 2 Rank ordering of most to least concerning behaviors

| Rank | Police subsample Behavior (Mean) | Rank | Non-police subsample Behavior (Mean) |
|------|---|------|---|
| 1 | Assumes a boxer's stance (6.95) | 1 | Assumes a boxer's stance (6.63) |
| 2 | Invades personal space (6.59) | 2 | Invades personal space (6.38) |
| 3 | Places hands in pockets (6.23) | 3 | Clenched hands (5.64) |
| 4 | Clenches hands (5.83) | 4 | Makes threats (5.58) |
| 5 | Makes threats (5.70) | 5 | Looks around the area (5.54) |
| 6 | Looks around the area (5.67) | 6 | Head-rolls or neck stretches (4.81) |
| 7 | Head-rolls or neck stretches (4.97) | 7 | Jaw muscle tenses (4.71) |
| 8 | Jaw muscle tenses (4.77) | 8 | Places hands in pockets (4.55) |
| 9 | Paces back and forth (4.63) | 9 | Removes excess clothing (4.46) |
| 10 | Sweats profusely (4.57) | 10 | Paces back and forth (4.40) |
| 11 | Stretches arms or shoulders (4.53) | 11 | Stretches arms and shoulders (4.39) |
| 12 | Tenses up whole body / becomes rigid (4.50) | 12 | Tenses up whole body / becomes rigid (4.36) |
| 13 | Removes excess clothing (4.49) | 13 | Face becomes flushed red (4.35) |
| 14 | Yells (4.48) | 14 | Yells (4.33) |
| 15 | Face becomes flushed red (4.40) | 15 | Breathes more rapidly (4.33) |
| 15 | Breathes more rapidly | 16 | Sweats profusely (4.26) |
| 16 | Angry expression (4.16) | 17 | Stares into eyes (4.10) |
| 17 | Stares into eyes (4.15) | 18 | Angry expression (4.01) |

Similarities would lend support to the hypothesis that these perceptions are innate within humans. Differences would suggest that the experience police officers have with violence, or the training they have received to deal with violence, create perceptions inconsistent with those of the general public. Such dissimilarities could contribute to differences between police officers and citizens in their interpretation of each other's behavior, potentially contributing to a conflict situation unnecessarily. The findings here revealed mostly similarities, but with a few differences.

Regarding similarities, the present study found that police officers and non-police officers generally identified the same social behaviors as threatening or not threatening, producing mean scores that were statistically indistinguishable between the two samples for about 83 % of the behaviors examined. Such strong similarities support the hypothesis that the source of these perceptions of social cues predictive of violence is innate. Johnson (2015) and Johnson and Aaron (2013) found that respondent sex, race, and experience with violence differences produced no substantively significant differences in perceptions of these social cues of violence. Likewise, the present study also revealed only a few differences between police officers and non-police officers in their perceptions of these social cues.

This informs the situation involving the shooting of Michael Brown discussed earlier. Both the police and non-police samples in the present study found taking up a fighter's stance and advancing to invade someone's personal space as the two most threatening behaviors. Therefore, most individuals, regardless whether or not they are police officers, would

find Brown's actions very threatening in the context of that hostile police-citizen encounter. It is also important to note that, according to two witnesses, Officer Wilson did not shoot Brown while he stood still and raised his hands as if to indicate surrender. It appears that the officer only used violence in this incident when Brown was physically striking him and when Brown displayed two of the behaviors most humans find most threatening.

Although they were few, important differences did exist between the police and non-police respondents. The police respondents generally rated all 23 behaviors higher than did the non-police respondents, and their responses were grouped closer together with less dispersion, suggesting greater sensitivity to violent social cues among police officers. Four of these behaviors were rated so much higher by the police officers, and with such little variation, that the difference from the non-police respondents became statistically significant. It is possible that these differences were the result of greater exposure to actual violence, or the result of exposure to training about specific social predictors assumed to be associated with violence among the police officer respondents.

The most troubling difference, however, was the discrepancy between the two subsamples in perceptions about placing one's hands in one's pockets. To the police officers, this ranked as the third most threatening of the 23 behaviors in the study, while it only ranked eighth in importance for the non-police respondents. While 100 % of the police respondents scored this behavior one of the two highest scores possible, a third of the non-police respondents gave the behavior a score of lower than the scale midpoint. This difference of perception

between the police and the general public could easily lead to miscommunication and discord between police officers and citizens during street contacts. It could also potentially lead to violence.

As Toch (1992) and McLaughlin (1992) revealed, many police-citizen encounters that result in violence involve situations where a citizen (rightly or wrongly) perceives that the demands or actions of the police officer lack legitimacy, and the parties to the encounter have differing interpretations of each other's behavior. The findings here suggest that when a police officer contacts an angry person during an official police-citizen encounter, if the person places his or her hands in his or her pockets, the officer will likely become very concerned about the safety of the situation. The officer may sharply order the citizen to remove his hands from his pockets and may even draw a weapon in response to this perceived serious danger. In the eyes of the officer, this behavior is akin in seriousness to assuming a boxer's stance and moving toward the officer. The citizen, on the other hand, might view the officer's response as unreasonably hostile. The citizen may perceive placing one's hands in one's pockets as a relaxed, nonthreatening posture, and view the officer's demands to take them out as illegitimate. This clash of perspectives may further increase the hostility level of both parties involved.

This finding is informative for understanding the police shooting of Tamir Rice described earlier. From the perspective of the officers in the present study, Tamir Rice's actions of placing his hands in his pockets and approaching close to the officer ranked as the second and third most concerning behaviors regarding imminent violence. Among the student research subjects, however, Rice's actions of placing his hands in his pockets ranked eighth in level of concern for impending violence. While the findings here do not necessarily support the use of lethal force in the Tamir Rice incident (that is for the courts to decide), the findings do suggest that a police officer would be far more likely than would an average citizen to perceive Rice's actions as aggressive and threatening.

This implies the need for community education and police training about these differing perceptions. A number of community educational programs already exist to train youth, especially African-American and Hispanic youth in high-crime neighborhoods, about how to act when encountering the police (Ross, 2014). Training about interpersonal social cues the police find threatening should be incorporated into the curriculum of these programs. Likewise, law enforcement officers should also be taught that most people do not perceive placing one's hands in one's pockets as a threatening act. Officers should be instructed to request citizens

remove their hands from their pockets, but do so in a socially appropriate way rather than an angry shout. Simply stating something like, "Sir, for your safety and mine, can you please keep your hands where I can see them?" can help avoid unnecessary angering the citizen.

The findings here also suggest the need for future research to examine these predictive cues in combination, as by themselves some of these cues seem contradictory. Placing one's hands into one's pockets, for example, was a danger sign for police officers, but so too was taking up a fighter's stance with one's hands in front of one's body. Likewise, balling one's hands into fists, which would not be visible if one had one's hands in pockets, was also a danger sign. These somewhat contradictory cues suggest that it may be a combination of actions that suggest a threat to individuals. Perhaps future research should examine the possibility of clusters of cues.

Study Limitations

As with all studies, this one had limitations that must be considered when discussing the study's results. First, the law enforcement officer sample, like many samples involving police officers, was homogenous which prevented the examination of differences in perceptions by sex and race. Nevertheless, Johnson and Aaron's (2013) study also found no major differences by sex and race existed in these perceptions among student research subjects. Second, the sample was limited to officers from only one law enforcement agency and students from one university, making it difficult to generalize the findings to nationwide populations.

Third, it is important to remember that this initial, exploratory study dealt with *cognitive perceptions* of behaviors predictive of physical violence. These cognitive perceptions may, or may not, be consistent with unconscious, instinctual reactions to these behaviors. Fourth, as this was a pen and paper test, rather than a true field experiment. Having several minutes to ruminate about the potential dangerousness of specific social cues is far different from detecting and reacting to them in a matter of seconds in a real altercation. In a real altercation, the detection of these cues, and the autonomic danger responses they might create, would likely be unconscious or at least automatic, rather than cognitive. The study methodology is quite distance from real-life interpersonal interactions. It remains unclear whether an individual (police officer or not) would actually detect or react to these specific interpersonal social cues.

Fifth, because it is nearly impossible to set up identical scenarios for police officers and the student research subjects, because the students have not had the same experiences as the officers. The officers were responding to a stranger and the interaction becomes argumentative, while the students responded to a

scenario involving an adult acquaintance. These two contexts may be perceived different by the two subsamples. Likewise, the students completed the survey instrument in class, while the police officers potentially had hours to ruminate about their responses to the instrument. Could this difference have resulted in differences of responses? One cannot say what impact these difference may have had. With the exception of just a few nonverbal cues, however, both the police officers and student subjects ranked the “dangerousness” of the cues similarly, which may suggest the difference in wording played no part, but one cannot be sure.

Finally, the present study examined individuals’ *perceptions* of behaviors that might be associated with impending violence. In no way does this study purport to suggest that these interpersonal social cues actually are valid predictors of impending violence. The validity of these predictors is as yet untested in the literature.

Conclusion

The present study explored potential differences between law enforcement officers and the general public in perception on interpersonal social cues associated with impending violence. The study revealed that police and non-police individuals generally shared similar perceptions about the interpersonal social cues associated with an imminent attack. Both groups agreed that such behaviors as a boxer’s stance, invasion of personal space, hands in pockets, clenched fists, verbal threats, and glancing around, were associated with a pending attack. Both groups also demonstrated that crying, blinking eyes rapidly, avoiding eye contact, and hands on hips, did not raise concerns about an impending assault. The exceptions included the finding that the law enforcement officers were more sensitive than were the students to each of the behavioral cues. The officers also perceived the behavior of placing one’s hands in one’s pockets as more threatening than did the students.

These findings extended the recently expanding research on interpersonal social cues associated with impending violence by continuing to reveal consistency across samples in perceptions of these cues. These finding suggest that perceptions about interpersonal social cues associated with impending violence may be innate to humans. These findings also reveal that the unique experiences or training law enforcement officers have had regarding physical violence has increased their sensitivity to these cues, and caused them to hold unique views about placing one’s hands in one’s pockets. This difference may be of extreme importance in reducing miscommunication between citizens and law enforcement officers that may unnecessarily lead to violence.

Appendix

Table 3 23 interpersonal behaviors associated with violence

| |
|------------------------------------|
| Muscle Cues |
| Tenses up whole body/becomes rigid |
| Clenched hands |
| Jaw muscle tenses |
| Stretches arms or shoulders |
| Head-rolls or neck stretches |
| Facial Characteristics |
| Blinks eyes rapidly |
| Face becomes flushed red |
| Stares into your eyes |
| Avoids eye contact |
| Angry expression |
| Body Movements |
| Removes excess clothing |
| Places hands on hips |
| Places hands in pockets |
| Makes exaggerated hand gestures |
| Paces back and forth |
| Looks around the area |
| Invades personal space |
| Assumes a boxer’s stance |
| Vocal Sounds |
| Cries |
| Yells |
| Makes verbal threats |
| Physiological Changes |
| Breathes more rapidly |
| Sweats profusely |

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