Critical Assessment of an Analysis of a Journalistic Compendium of Citizens Killed by Police Gunfire

David A. Klinger
Lee Ann Slocum
University of Missouri—St. Louis

In recent years, as the use of deadly force by police officers came to be one of the most highly visible social issues in the United States, many groups and individuals (including the director of the Federal Bureau of Investigation [FBI]; Comey, 2015) were stunned to learn that because "official" U.S. government statistics on officer-involved shootings are chock full of holes, our justice system has no decent notion of how often American police officers fell citizens with gunfire (see, e.g., Fyfe, 2002, and Klinger, 2012, for discussions of the measurement problems). *The Washington Post* (hereafter, the *Post*) decided to step into this breach and track all instances in which U.S. police officers fatally shoot citizens from January 1, 2015 forward. Their efforts yielded a user-friendly, easily searchable Internet database of 991 cases where police gunfire caused the death of citizens in 2015.[1] The FBI reported just 442 "justifiable homicides" by American law enforcement officers in 2015 (U.S. FBI, 2015), which demonstrates how poor are "official" statistics concerning this critical matter.

Given that the *Post's* database provides a far more complete count of deaths from police gunfire than do government statistics, it is no surprise that social scientists would turn their attention to these data to examine various issues related to the use of deadly force. And Justin Nix, Bradley Campbell, Edward Byers, and Geoffrey Alpert (2017, this issue) have done just that. By focusing on cases that the *Post* counts as (a) not involving an attack on an officer or a citizen and (b) involving unarmed suspects, Nix et al. sought to assess whether they could uncover evidence of implicit bias on the part of the officers who had killed suspects in 2015. After reading carefully Nix et al.'s treatment and analysis of the

Direct correspondence to David A. Klinger, Criminology and Criminal Justice, University of Missouri—St. Louis, One University Blvd, St. Louis, MO 63121 (e-mail: KlingerD@msx.umsl.edu).

1. The *Post's* fatal officer-involved shooting data collection efforts continue, with a tally of 800 people killed by police bullets in the first 10 months of 2016 (this essay was crafted in late October and early November 2016).

DOI:10.1111/1745-9133.12283

Post's 2015 data, we have several reservations about the utility of their findings for either advancing understanding of the use of deadly force by police officers or improving public policy regarding this important topic.

This essay elucidates our concerns, beginning with a critical discussion of a key concept that animates Nix et al.'s (2017) work: "threat perception failure." It then moves on to provide our assessment of the analytical methods used by Nix et al. to reach the conclusion that the findings "suggest evidence of implicit bias in real-world scenarios." We then address in this essay a conceptual/measurement issue that raises questions about both the notion that Nix et al. provide fresh insight into the phenomenon of implicit bias and the policy recommendations they proffer rooted in this notion. It concludes with (a) a brief list of policy recommendations that we feel are evident from a cursory examination of the *Post's* 2015 database on citizens killed by police gunfire; (b) a reminder that measures of social phenomena, especially new ones, must be thoroughly vetted to identify their strengths and weaknesses before being accepted by social scientists as useful indicators of the phenomenon they are purported to be representing; and (c) a reminder that researchers must undertake studies of the use of deadly force by police officers with great care and diligence, for the policy implications of such work can be profound for the lives of both citizens and police officers.

Threat Perception Failure?

Nix et al. (2017) devote a large portion of their attention to the notion of "threat perception failure," a term whose use by Nix et al. we argue is problematic on multiple fronts. They conceptually define "threat perception failures" as police shootings in which either the involved "civilian was *not* attacking the officer(s) or other civilians" or "the civilian was unarmed." As implied by the term, Nix et al. thus argue that shootings of unarmed suspects are, by definition, mistakes; that is, shootings that should not have happened (as opposed to shootings in which officers shot suspects who were threatening to inflict great bodily harm or death, for example, by firing guns at the police).[2] Because shootings of unarmed citizens are those that have tended to create the greatest public consternation in recent years, we focus nearly all of our attention on such cases. The matter of nonattacks as "threat perception failures" thus receives little attention from here on out.

2. The authors use two *distinct* indicators of threat perception failure in their analyses: whether the citizen was attacking the officer or a civilian (no attack = threat perception failure) and whether the citizen was armed (unarmed = threat perception failure). Civilians were coded as armed when they had possession of a firearm, knife, sharp object, or other deadly weapon, and they were considered unarmed otherwise. The authors coded attacks as cases in which the civilian was "firing a weapon at a person, attacking with a nongun weapon, or pointing/brandishing a firearm" (see also first three entries under "*Threat level*" in Table 1). By this definition, all attacks involved weapons; therefore, all "unarmed" cases (and all "armed but no attack cases") are threat perception failures that involve shooting errors on the part of the officer; stated otherwise by Nix et al., cases in which "civilians did not pose an imminent threat to law enforcement or others."

An initial problem with Nix et al.'s (2017) use of "threat perception failure" is that it is a misapplication of the term as used by the source they cited when introducing it in their article—Fachner and Carter (2015). Fachner and Carter conducted a wide-ranging analysis of officer-involved shootings by members of the Philadelphia (PA) police department during the 7-year period 2007–2013 for the U.S. Department of Justice's Community Oriented Policing Services (COPS) Office. In their report, Fachner and Carter defined threat perception failure as one of *two distinct* sorts of situations in which police officers fire on unarmed citizens. They stated, "Threat perception failures occur when the officer(s) perceive a suspect as being armed due to misidentification of a nonthreatening object (e.g., a cell phone) or movement (e.g., tugging at the waistband)" (p. 3). Such shootings are completely separate from their second category of police shootings involving unarmed citizens—"physical altercations"—which Fachner and Carter defined as "incidents in which suspects reached for the officer's firearm or overwhelmed the officer with physical force" (p. 3).

By calling *all* shootings of unarmed citizens, regardless of what the citizens were doing prior to being shot, "threat perception failures," Nix et al. (2017) are likely to create confusion among readers familiar with the literature on police shootings and to mislead readers who are not familiar with this literature. Empirically, the implications of Nix et al.'s misapplication of Fachner and Carter's (2015) term and identifying all shootings of unarmed individuals in the *Post* database as instances of "threat perception failure" for the analyses they conducted could be notable. Or they could be trifling. To find out, we took several analytical steps, the first of which was to take a somewhat deeper look than the "bird's-eye view" that Nix et al. took at the 93 cases that the *Post* classified as involving unarmed suspects.

The initial aspect of this deeper look was simply to read the brief descriptions of each of the 93 cases found at the *Post's* website. We then reviewed news stories for each case that are linked at the site, which disclosed that the linked stories that could still be accessed (many URLs were no longer valid) were *initial* ones that were reported within days of each shooting. We next conducted Google (Google Inc., Menlo Park, CA) searches on each case with the name of the decedent and the words "police shooting" in an attempt to locate documents that were developed months after the shootings, which we believed would include more details (and more accurate information) than the initial news coverage provided.[3] Although this effort yielded some notable additional information about many cases, we must also note that the degree of detail we were able to glean from subsequent news accounts and other sources about most of the 93 "unarmed" shootings was far from comprehensive and that we were not able to validate the information we did glean. These problems are inherent when news reports are the core source of information about

3. In some cases, we added terms such as "police report" and "DA's report" in an attempt to locate information contained in police or prosecutors' official records of events.

officer-involved shootings. We therefore urge readers to read what follows with a cautious eye.

Our deeper dive into the "unarmed" cases disclosed that just 21 of the 93 cases seemed to fall clearly into Fachner and Carter's (2015) notion of "threat perception failure" (i.e., incidents in which officers mistook a nonthreatening object or movement as presenting a potentially lethal threat). One example of this sort of case involved Keith Childress, who was fleeing U.S. Marshalls when he was spotted by officers from the Las Vegas Metro Police Department who shot him when he advanced on them holding a cell phone that they mistook for a gun. Another involved Ralph Willis, a murder suspect who was shot in Stillwater, OK, when he reached toward his waist area after being cornered by three police officers.

But what of the other 72 cases? After a brief aside that includes a detour through some crime data, we will return to this matter.

Nix et al.'s (2017) contention that the fact that all individuals who were not in possession of a weapon at the point when they were shot by definition means they posed no sort of threat that would warrant police gunfire is simply incorrect. Police officers are permitted by law to use deadly force to protect themselves and other innocents from actions that are likely to cause death or serious bodily injury, and unarmed people have many times seriously injured and killed other humans—including police officers—in the United States. For example, according to the FBI's Uniform Crime Reports (UCR), 624 people in the United States were kicked, punched, stomped, and otherwise beaten to death by unarmed criminals in 2015, another 96 people were strangled to death, and 15 more were purposely drowned by assailants. Even though none of these victims were on-duty police officers, FBI statistics indicate that in 2015, three police officers were murdered by criminals who were unarmed until they managed to wrest control of the officers' gun from them and kill them with it. Moreover, FBI statistics show that during the two decades ending in 2015, the number of citizens violently murdered by people who wielded no weapons averaged more than 1,000 per year (two decade $N = 20{,}300$). Also murdered during this period were 75 police officers who were killed with their own guns by previously unarmed suspects and 8 other officers who died from assaults by wholly unarmed suspects (U.S. FBI, 2000, 2005, 2010, and 2015).

Perhaps, however, none of the 72 suspects killed by American police officers in 2015 that the *Post* classified as "unarmed," and who would not fall under Fachner and Carter's (2015) "threat perception failure" rubric, posed any threat that would remotely justify the use of deadly force. The deeper look we took at these cases shows that this is simply not the case. It also disclosed some notable liabilities within the *Post's* "unarmed" classification so far as Nix et al.'s (2017) use of it is concerned. We turn our attention first to these liabilities.

The first liability is that in at least three cases that the *Post* classified as involving "unarmed" citizens, the individuals who died were killed when police shot at another person who was attacking them and at least one police bullet unfortunately struck the unarmed

person noted by the *Post*.[4] For example, India Kager was unintentionally killed by police gunfire when the passenger of the vehicle she was driving (a murder suspect) discharged a gun at police officers, who returned fire. Although the death of Ms. Kager is a tragedy, the use of deadly force by the involved officers was not the result of a "threat perception failure" (under any reasonable definition); it was a response to gunfire directed at them.

Another liability in the *Post's* "unarmed" list is that some cases therein (at least 4) involved suspects who were attacking officers with deadly weapons besides guns. Take, for example, the case of Bobby Gross, who was killed by a Washington, DC Metro transit officer. Before he was shot, Mr. Gross attacked the officer who killed him with a three-pound, three-foot-long tree branch that measured 2.5 inches across when they were alone on a narrow catwalk immediately adjacent to train tracks that included the 750-volt "third rail." Or that of Alfredo Rials-Torres, who was shot dead after he struck an Arlington, VA, police officer in the face with a metal pole at a domestic dispute. This shooting occurred when Rials-Torres continued to attack the officer who shot him after two electronic control device (ECD; commonly known by the brand name "TASER" from Taser International Inc., Scottsdale, AZ) deployments—one of which incapacitated the shooter's partner—failed to stop him. We do not know why the *Post* decided to classify these and like events as "unarmed," but Nix et al. (2017) should not have, for in doing so, they incorrectly placed them in their conceptual bin of cases that they deemed to involve no threat warranting the application of deadly force.[5]

Beyond misclassifying cases in which officers unintentionally killed nonthreatening people when shooting at threats and those in which officers killed suspects who were attacking them with weapons, the "unarmed" classification Nix et al. (2017) used included many cases in which the available information indicates that the suspects involved were engaged in behavior that directly threatened police officers with great bodily injury or death.

First, at least 10 unarmed suspects were killed during incidents in which they attempted to disarm either the officer who shot them or another officer on scene.[6] As noted, dozens of police officers have been killed with their own weapons in the last two decades. Because of the threat posed by suspects who take officers' guns, sound police training has long included tuition about this danger and, consequently, instruction that deadly force is an appropriate response by police officers faced with credible attempts to disarm them or colleagues (e.g., Patrick and Hall, 2010). As a result, it strains credulity to classify cases in which suspects

4. In addition to these cases, the *Post's* database includes a 6-year-old boy who was accidently killed when officers, for reasons that remain unclear, fired into a vehicle his father was driving.

5. In at least two other cases, suspects attacked police with equipment they wrested from officers: in one, a police radio, and in the other, a pair of handcuffs. In addition to attacks with physical objects, in one case, an assailant sprayed two officers with a chemical agent (bear spray) before being fatally shot.

6. In one additional case, the materials reviewed suggested that the suspect killed might have attempted to disarm an officer before being shot, but the press coverage was less than clear on this point.

were killed when they tried to disarm police officers as instances of "threat perception failure."[7]

Second, although our Web search did not disclose the full details of what transpired in most cases that involved truly unarmed people who did not attempt to take police officers' guns, the available information indicates that in many the officers involved were dealing with individuals whose behavior threatened to seriously injure or kill them. Take, for example, the case of Steven Wickert who attacked a police officer at the scene of a party, knocked the officer unconscious, tried to strangle the unconscious officer, and was shot when the officer regained consciousness. Or that of Kobvey Igbuhay who fled into a swamp where he drowned a police K-9 (who was resuscitated) and was shot when he sought to drown the K-9 handler. Even though one cannot say with certainty that the officers involved in these cases, or in any of the other numerous ones in which unarmed suspects physically attacked officers,[8] would have died had they not shot their assailants, their decisions to shoot were not based on a "threat perception failure"; rather, they were rooted in the clearly dangerous actions of their assailants.

Finally, the *Post* data include various other cases in which unarmed citizens were killed by police gunfire that would not meet any logical definition of "threat perception failure." Eric Harris, for example, was killed when one officer assisting in his arrest mistakenly pulled his service pistol instead of his TASER and fired a lethal round instead of TASER barbs. And Autumn Steele was unintentionally killed when an officer responding to a domestic dispute shot at the family dog when it approached him.

In sum, by uncritically accepting the *Post's* classification system of "unarmed" suspects killed by police gunfire and counting all such shootings as instances of "threat perception failure," Nix et al. (2017) have created a situation where readers of their article could easily be misled into believing that each and every one of the 93 cases they identify as involving unarmed suspects involved officers who shot when they had no valid reason to do so. As the forgoing discussion indicates, this is simply not the case. The confusion sown by the ambiguous use of "threat perception failure" and lack of attention to the details of the *Post's* database have notable implications for the analyses Nix et al. conducted, as well. We now turn our attention to these.

7. In footnote 12, Nix et al. (2017) indicate that in the *Post's* coding scheme, "civilians who grabbed an officer's firearm were coded as armed." Our examination of the data indicates that both the *Post* and Nix et al. included the 10 cases addressed in this paragraph in the "unarmed" category. See Table 3 of Nix et al., which counts 93 unarmed cases. Please note also that our assessment of the *Post* data disclosed that they coded 7 of 10 cases in which civilians attempted to disarm officers as attacks.

8. Both Mr. Wickert and Mr. Igbuhay were classified in the *Post* database as having attacked officers, but according to the authors' operational definition of an attack (see our footnote 2), they were not engaging in attacks. We address the confusion caused by the lack of convergence between conceptual and operational definitions later in this essay.

Analysis

To understand better how Nix et al. (2017) identified cases of threat perception failure, we downloaded the entire 2015 *Washington Post* data set and replicated Nix et al.'s descriptive and bivariate statistics.[9] In addition to the problems described, this exercise revealed two additional issues with how the authors captured threat perception failure.

First, recall that Nix et al. (2017) use two distinct indicators of threat perception failure: (1) whether the civilian was unarmed and (2) whether the person was not attacking (i.e., they are not firing a *weapon* at a person, attacking with a *nongun weapon*, or pointing/brandishing a *firearm*). The decision to use two distinct outcomes has important implications. When the outcome is unarmed, cases involving unarmed civilians *attacking* officers are considered "threat perception failures" (some of these cases are described in the previous section). Similarly, in the analyses that include nonattack as the dependent variable, the authors consider cases in which there is no attack, but the citizen is *armed with a deadly weapon,* "threat perception failures."[10] Second, in Table 3 of Nix et al., the 27 cases in which the *Post* could not determine whether the civilian was armed are included in the armed category, and 44 cases with indeterminate information on whether the shooting involved an attack by the civilian are coded as nonattacks.[11] The implication of these two analytic issues is that Nix et al.'s approach misses what they logically should have looked at: incidents involving the intersection of unarmed and not attacking for cases in which the *Post* could determine these facts of the shooting.

Although we question whether two dichotomous variables can adequately capture threat, to provide a more accurate assessment of threat perception failure, we replicated Nix et al.'s (2017) bivariate analysis presented in their Table 3 correcting for the data and analytical issues identified earlier. First, we generated an alternative conceptualization of the dependent variable based on whether the *Post* data indicate the civilian could be conceived as a threat to the officer or others. Shootings involving *no clear threat* are those in which the *Post* reported the civilian was unarmed *and* was not attacking. Cases with a clear threat involve a civilian who is armed *or* engaging in an attack (with or without a weapon). We dropped three cases in which a person was killed by errant bullets when the officer shot at someone who was attacking them (see our previous discussion of this matter). In addition, we treated as clear threats three incidents that the *Post* did not record as armed or attacks[12]

9. When we downloaded the *Post* data on October 24, 2016, there were 991 fatal police shootings in the database.

10. When we reconstructed Nix et al.'s variables "unarmed" and "nonattack," we discovered that in their analyses, civilians are unarmed in 34 cases that they coded as involving attacks. When following Nix et al.'s definition of an attack as requiring some type of armament, however, these cases should not have been coded as such.

11. Slightly more than half of the cases in which the *Post* could not determine whether the suspect was armed are also missing information on whether the officer was attacked.

12. See the discussion in footnote 7.

because updated news or official sources indicate that the civilian was attempting to disarm the officer. Like Nix et al., we exclude shooting death cases with missing information on race/ethnicity ($n = 28$), but we also omit additional cases in which the *Post* could not determine whether the civilian was armed or was attacking ($n = 29$).[13] This left us with 931 police killings. Our final sample thus consists of 931 shooting deaths, 46 (4.9%) of which we classified as involving no clear threat based on available information.

We use a chi-square test of independence to assess whether there are race/ethnicity differences in the likelihood that civilians who were shot dead by the police did not represent a clear threat. Of the 484 White civilians shot by police officers, 3.1% ($f = 15$) were not a clear threat. The corresponding percentages for the 247 Black civilians and 200 citizens of other races/ethnicities are 6.5% ($f = 16$) and 7.5% ($f = 15$), respectively.[14] Like Nix et al. (2017), we find statistically significant differences in whether the civilian posed a clear threat by race/ethnicity ($\chi^2(2) = 7.53$, $p = .023$).

Nix et al.'s (2017) multiple regression analyses provide some redress to the methodological problems with their bivariate analysis—the 44 cases of undetermined threat were explicitly excluded, and the authors controlled for whether an attack occurred in their analysis of unarmed shootings[15]—but new issues emerge. Notably, Nix et al. lose almost 40% of their cases as a result of missing data. Also, although they control for jurisdiction and police agency-related factors, only two variables related to the nature of the incident are included in the models (civilian's age and indication the civilian suffered mental health issues). The validity of the results, therefore, rely on the assumption that no other factors are related to both race/ethnicity and whether the suspect was unarmed or not attacking, an assumption that is dubitable.

Even though we do not have the data to replicate Nix et al.'s (2017) multiple regression analysis in full, we regressed whether the civilian represented a clear threat on race/ethnicity, age, and mental health status for the 922 cases with complete data on these variables. The results indicate that civilians killed by the police who are other races/ethnicities are more likely than Whites to pose no clear threat ($b = .86$, standard error [SE] = .38, odds ratio [OR] = 2.35 $p = .026$). On the other hand, the difference between Whites and Blacks in the likelihood of posing no clear threat is not statistically significant ($b = .60$, SE = .39, OR = 1.82 $p = .126$). We cannot know whether these results would change if we included additional city-, agency-, or incident-level control variables, so we caution against drawing

13. The authors only had 27 cases with missing data on race/ethnicity because the database had one fewer shooting death when Nix et al. accessed the data.

14. The other group primarily contains Latinos, but there are also Asians, Pacific Islanders, and people who are biracial or multiracial. It is not clear whether police officers would hold the same biases against these disparate groups.

15. It is still not clear whether cases in which the *Post* could not determine whether the civilian was armed were excluded from the multiple regression.

any conclusions about implicit bias from data that distill complex social interactions into two binary variables and analyses that include a limited number of controls.

We also repeated these analyses by using threat perception failure *as defined by Fachner and Carter* (2015) as the dependent variable. Of the 484 cases that involved White civilians and had complete data, 1.7% ($f = 8$) were threat perception failures. A similar percentage of the 247 Black civilians killed by the police (1.6%, $f = 4$) involved threat perception failure. This percentage was slightly higher for the 200 civilians of other ethnicities and races in the *Post* database (3.0%, $f = 6$). But a chi-square analysis discloses no evidence that the likelihood of threat perception failure varies based on the race/ethnicity of the citizen who was shot and killed ($\chi^2(2) = 1.53$, $p = .47$).

Beyond problems with missing data and the operationalization of threat perception failure, the conclusions that can be drawn by analyzing the *Post* database are inherently limited because it only contains information on people who were fatally shot. With just deaths, we do not know whether patterns found in the *Post* data would hold across all police shootings, the entire of universe of which—as Nix et al. (2017) note—includes far more nonfatal than fatal outcomes.

Furthermore, it is risky to attribute causality to factors identified as correlates of threat perception failure when the sample includes only people killed by the police because there may be important differences between police–citizen encounters that end with civilians shot by the police and those that do not. As Albert Reiss (1980) noted nearly four decades ago:

> Because analysts of police use of deadly force focus on situations in which the decision was made to use it, such as firing a weapons, or upon decisions where a fatality resulted from the use of deadly force, they ignore all decisions where force gave way to alternate means of coping with situations. While recognizing that it is difficult to empirically select a sample of decisions which averted the possibility of harm to others or where the use of force was precluded, the set of decisions is theoretically important (p. 127).

And Reiss's (1980) admonition about the danger of examining only cases in which officers fired when seeking understanding of the determinants of police gunfire applies to any and all such exercises, not just to assessments of threat perception failure.

Implications and Conclusions

Because liabilities in Nix et al.'s (2017) analyses of the *Post* data raise questions about the validity of their conclusion that implicit bias is driving racial differences in the use of deadly force by America's police officers, they cast suspicion on the authors' calls for expansion of training designed to reduce implicit bias among police officers (e.g., programs designed to increase intergroup contact). Similarly, there is no clear empirical link between police officers' use of deadly force and either the procedural justice training or the wearing of body cameras for which Nix et al. call. Although there may well be great merit in training

and programs intended to reduce bias, training in procedural justice, and the wearing of body cameras, we are simply pointing out that there is no sound empirical basis that these efforts will reduce police shootings of Black citizens. This does not mean that analysis of the *Post* data can offer no policy directions, however. Indeed, the look at the data that we took disclosed what we see to be multiple pieces of low-hanging policy fruit regarding the use of deadly force against citizens of any and all racial/ethnic backgrounds. We now turn our attention to three key issues that we believe if properly addressed hold great promise for lowering the number of times police officers shoot citizens.[16]

First, the *Post* reports that 68 of the 991 fatal shootings occurred after at least one police officer sought to control the suspect with an ECD (aka "TASER") and that 17 of the 93 "unarmed" cases involved TASER deployments. Our deeper look at the 93 cases the *Post* classified as "unarmed" identified 2 additional cases that seemed to include TASER deployments prior to deadly gunfire, which suggests that the number of cases in the *Post's* "armed" category involving TASER deployment could well be higher than the number they report. Regardless of the actual number of TASER failures, that some 7% of total cases and around 20% of the "unarmed" cases included the deployment of TASERs indicates that there is substantial room for improvement in the efficacy of nonlethal law enforcement tools.[17] Whatever the source of any given TASER failure (e.g., failure of both probes to make positive contact, a lack of spread between pairs of probes that did seat, or a suspect fighting through the effects of a sound deployment), it seems clear that developing better ways to use existing nonlethal devices and developing improved nonlethal devices holds substantial promise for reducing the number of citizens killed by police bullets.[18]

Second, the *Post's* data indicate that 25% of all individuals killed by police gunfire showed signs that they suffered from some sort of notable mental or emotional disturbance. Our deeper dive into the cases that the *Post* classified as "unarmed" suggests that this 25% may be a conservative count. Irrespective of the exact prevalence, that hundreds of the near 1,000 citizens killed by American police officers in 2015 were apparently suffering from mental/emotional compromise indicates that police training and practices designed to handle encounters with mentally or emotionally disturbed individuals need to be enhanced. Although we are unaware of any thoroughgoing research on the link between mental health services and the outcome of police interactions with mentally/emotionally challenged individuals regarding deadly force, there are many approaches to the matter that would seem to be worthy of consideration and evaluation. Among these are crisis intervention teams (Watson and Fulambarker, 2012) and the pairing of mental health workers with police officers to respond to situations involving individuals with known or

16. Because the policy recommendations that follow are based on circumstances that are common to so many of the fatal shootings, they are unlikely to be invalidated by inaccuracies in the *Post* database.

17. In one "unarmed" case, officers deployed both a TASER and pepper spray.

18. See Mather (2016) for a deeper discussion of TASER deployments not having their desired effects.

apparent mental/emotional problems (O'Neill, 2015). Whatever the solution might turn out to be, it strikes us that more attention to mental health issues holds notable promise for reducing the number of people shot and killed by American police officers.

Third, some stories, official reports, and other pieces of information we located in our deeper dive into the "unarmed" cases suggested that some officers involved in some of these cases made tactical miscues that placed themselves in tenuous situations that they then opted to shoot their way out of. In addition, a brief incursion into several of the "armed" cases disclosed similar tactical misadventures by some officers. For literally decades now, both academics and practitioners have noted that at least some police shootings (including some involving suspects who threatened officers with firearms) could have been avoided had the officers used sound field tactics, such as keeping distance and barriers between themselves and suspects, when possible, prior to or during the interactions that resulted in police gunfire (Binder and Scharf, 1980; Fyfe, 1986; Reiss, 1980). We believe that training and other programs and mechanisms that would improve the tactical performance of American police officers could go a long way to reducing the number of people shot and killed by the police. Pickering and Klinger (2016) have proposed an overarching framework for enhancing tactical performance that is rooted in the literatures on normal accidents (e.g., Perrow, 1984) and high reliability organizations (e.g., Weick and Sutcliffe, 2001). Perhaps attention to this and other approaches to improving how police officers behave immediately prior to and during potentially violent interactions can reduce the number of instances in which police officers discharge firearms at citizens.

One thing that certainly is needed to assist American police officers to do their jobs with fewer citizen deaths is to have a better empirical understanding of the nature of violent police–citizen conflict. But such understanding can come only from carefully crafted and executed research. Although we have fiercely critiqued Nix et al. (2017), the real problem is that the best data set available to them was constructed by a group of journalists, rather than through a carefully crafted social scientific process. And even though we doff our caps to the *Post* team for the remarkable work they did, it was inevitable that there would be some weaknesses in the first nationwide data set of fatal police shootings. The criminological literature is replete with discussions about the strengths and weaknesses of various measures of crime and how measurement problems can distort research findings about the correlates of crime (e.g., Biderman and Lynch, 1991; Bridges and Weis, 1989). Klinger (2008) asserted that similarly rigorous investigations into the validity of measures of forceful police action should be undertaken before they are put to work identifying the correlates of such action. That our cursory look at the *Post* data uncovered multiple liabilities should both raise a caution flag for researchers who hope to use it and encourage the careful vetting of it to identify more comprehensively its weaknesses, as well as its strengths. Then, scholars and policy makers would have a better understanding of the validity and utility of research based on it.

That the *Post* data set provides a far more comprehensive count of fatal police shootings than does official U.S. government statistics speaks to the sad state of affairs regarding

information about the exercise of the ultimate state power in America. So, in closing, we echo Nix et al.'s (2017) call for the timely development of a sound national officer-involved shooting data collection program, something that the FBI plans to launch this year (Associated Press, 2016).

A decade and a half ago, James J. Fyfe (2002), one of the "fathers" of deadly force research, used a data set that the *Washington Post* produced in 2001 to compare fatal police shootings across major American law enforcement jurisdictions during the 11-year period 1990–2000. In this work, Fyfe bemoaned the fact that "we still live in a society in which the best data on police use of force come to us not from the government or from scholars, but from the *Washington Post*" (p. 99). That this is still the case today is, in the words of the director of the FBI, "embarrassing and ridiculous" (Davis and Lowery, 2015). We hope that the soon-to-be-launched FBI program provides the sound and detailed data so desperately needed to conduct the thoroughgoing sorts of research that can help provide sound policy direction. The stakes are simply too high to continue to rely on journalists to provide the most comprehensive data available on the use of deadly force by police officers.

References

Associated Press. 2016. FBI director: Database coming on police use of deadly force. September 28. Retrieved from nbcnews.com/news/us-news/fbi-director-database-coming-police-use-deadly-force-n656086.

Biderman, Albert D. and James P. Lynch. 1991. *Understanding Crime Statistics: Why the UCR Diverges from the NCS*. New York, Springer-Verlag.

Binder, Arnold and Peter Scharf. 1980. The violent police-citizen encounter. *The ANNALS of the American Academy of Political and Social Science*, 452: 111–121.

Bridges, George and Joseph G. Weis. 1989. Measuring violent behavior: Effects of study design on reported correlates of violent behavior. In (Alan Weiner and Marvin Wolfgang, eds.), *Violent Crime: Violent Criminals*. Newbury Park, CA: Sage.

Comey, James B. 2015. *Hard Truths: Law Enforcement and Race* (Speech). Retrieved from fbi.gov/news/speeches/hard-truths-law-enforcement-and-race.

Davis, Aaron C. and Wesley Lowery. 2015. FBI director calls lack of data on police shootings 'ridiculous,' 'embarrassing.' *The Washington Post*. October 7. Retrieved from washingtonpost.com/national/fbi-director-calls-lack-of-data-on-police-shootings-ridiculous-embarrassing/2015/10/07/c0ebaf7a-6d16-11e5-b31c-d80d62b53e28_story.html.

Fachner, George and Steven Carter. 2015. *Collaborative Reform Initiative. An Assessment of Deadly Force in the Philadelphia Police Department*. Washington, DC: Community Oriented Policing Services, U.S. Department of Justice. Retrieved from ric-zai-inc.com/ric.php?page=detailandid=COPS=W0753.

Fyfe, James J. 1986. The split second syndrome and other determinants of police violence. In (Anne Campbell and John J. Gibbs, eds.), *Violent Transactions: The Limits of Personality*. Oxford, U.K.: Blackwell.

Fyfe, James J. 2002. Too many missing cases: Holes in our knowledge about police use of force. *Justice Research and Policy*, 4: 87–102.

Klinger, David A. 2008. On the importance of sound measures of forceful police actions. *Criminology & Public Policy*, 7: 605–617.

Klinger, David. 2012. On the problems and promise of research on lethal police violence: A research note. *Homicide Studies*, 16: 78–96.

Mather, Katie. 2016. One of the LAPD's preferred weapons to help officers avoid shootings often doesn't work. *Los Angeles Times*. April 1. Retrieved from latimes.com/local/crime/la-me-lapd-tasers-20160401-story.html.

Nix, Justin, Bradley A. Campbell, Edward H. Byers and Geoffrey P. Alpert. 2017. A bird's-eye view of civilians killed by police in 2015: Further evidence of implicit bias. *Criminology & Public Policy*, this issue.

O'Neill, Stephanie. 2015. Police and the mentally ill: LAPD unit praised as model for nation. *89.3 KPPC*. March 9. Retrieved from scpr.org/news/2015/03/09/50245/police-and-the-mentally-ill-lapd-unit-praised-as-m/.

Patrick, Urey W. and John C. Hall. 2010. *In Defense of Self and Others: Issues, Facts & Fallacies—The Realities of Law Enforcement's Use of Deadly Force*. Durham, NC: Carolina Academic Press.

Perrow, Charles. 1984. *Normal Accidents: Living with High-risk Technologies*. New York: Basic Books.

Pickering, Jordan C. and David A. Klinger. 2016. Enhancing legitimacy by promoting safety culture. In (Mathieu Deflem, ed.), *The Politics of Policing: Between Force and Legitimacy, Volume 21 of Sociology of Crime, Law and Deviance*. Bingley, U.K.: Emerald.

Reiss, Albert J. 1980. Controlling police use of deadly force. *The ANNALS of the American Academy of Political and Social Science*, 452: 122–134.

U.S. Department of Justice, Federal Bureau of Investigation. 2000, 2005, 2010, 2015. *Uniform Crime Reporting (UCR) Statistics Data Tool*. Retrieved from ucrdatatool.gov/Search/Crime/Local/OneYearofData.cfm.

Washington Post, The. 2001. Series on police use of force in Prince Georges County, Maryland. July 1–4. Retrieved from washingtonpost.com/wp-srv/content/nation/investigative/policeshootings.html.

Washington Post, The. 2016. 2015 police shooting database. Retrieved from washingtonpost.com/graphics/national/police-shootings/.

Watson, Amy C. and Anjali J. Fulambarker. 2012. The crisis intervention team model of police response to mental health crises: A primer for mental health practitioners. *Best Practices in Mental Health*, 8: 71–81.

Weick, Karl E. and Kathleen M. Sutcliffe. 2001. *Managing the Unexpected: Assuring High Performance in an Age of Complexity*. San Francisco: Jossey-Bass.

David A. Klinger is professor of criminology and criminal justice at the University of Missouri—St. Louis. His research interests include the ecology of social control, the use of force by police officers, and risk management in crisis situations. Prior to pursuing an

academic career, Professor Klinger served as a police officer with the Los Angeles, California, and Redmond, Washington, police departments.

Lee Ann Slocum is associate professor of criminology and criminal justice at the University of Missouri—St. Louis. Her research interests include police–citizen interactions and the consequences of criminal justice system contact. In her recent work, she has examined how citizens' interactions with the police shape their attitudes, behaviors, and responses to victimization.