

# Social Evaluative Mechanics: A Potential Psychological Mechanism Coloring Police-Public Encounters

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*Contact between the public and police (hereinafter referred to as “police-public encounters”) are under increased scrutiny as social movements highlight violent police actions. Psychologists and legal scholars analyzing and critiquing police-public encounters provide insights into the psychological mechanisms that contribute to these violent encounters. A better understanding of the psychological mechanisms involved in these encounters can improve training of police officers, highlight structural and systemic shortcomings, and ultimately, reduce violent interactions. In this Article, we build on previous work describing implicit bias, racial anxiety, and stereotype threat, and assess an additional psychological mechanism—social evaluative threat (SET)—which occurs when an individual is anticipating negative evaluation or is being negatively evaluated. We integrate SET into a conceptual model that we call social evaluative mechanics (SEM), providing evidence that the typical biological and psychological processes resulting from SET predispose individuals to engage in behaviors that may be interpreted by officers as suspicious, and predispose officers to make more aggressive actions in turn towards these individuals. We describe the current state of relevant scientific research and identify areas in which additional investigation and collaboration between psychologists and legal scholars would be fruitful. Finally, limited by current research, we identify several avenues for improved training that could mitigate the escalation of police-public encounters.*

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## INTRODUCTION

Police officer encounters with members of the public have been increasingly placed under the national spotlight. High-profile cases involving the deaths of unarmed black youth and men such as Michael Brown in Ferguson, Missouri; Tamir Rice in Cleveland, Ohio; Eric Garner in Staten Island, New York; Alton Sterling in Baton Rouge, Louisiana; Philando Castile in St. Paul, Minnesota; and Jordan Edwards in Balch Springs, Texas, brought recent national attention to the problem of policing and racial violence.<sup>1</sup> Although these cases of fatal police shootings spurred a national dialogue, racially biased policing is widespread and has a long history, reaching far beyond the cases that have recently gained media coverage. According to data collected by the Federal Bureau of Investigation, white

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1. Although media coverage has focused on the fatal encounters between police officers and men of color, there is a movement to recognize the many women of color also killed in fatal encounters with police officers. *See Say Her Name*, AFR. AM. POLY F., <http://www.aapf.org/sayhername> [https://perma.cc/DLV9-FMUH] (last visited Nov. 23, 2017).

officers killed black individuals almost twice per week between 2005 and 2012.<sup>2</sup> Furthermore, according to the Bureau of Justice Statistics, black drivers are more likely to be pulled over and less likely to believe their stops were legitimate when compared to drivers of other races.<sup>3</sup> These statistics and the stories that are covered through various media outlets highlight an American social problem: policing and police-public encounters threaten the lives and wellbeing of many Americans.

Psychologists and legal scholars have offered insightful critiques and evaluations of police-public encounters to both academic and nonacademic communities.<sup>4</sup> In doing so, several psychological mechanisms that contribute to racially biased policing and increased racial violence have been presented and continue to be referenced within the legal literature. Although there are many psychological and situational factors at play, among the most highly cited are racial bias, stereotype threat, and racial anxiety.<sup>5</sup>

In this Article, we build on this important work. We propose an additional mechanism called social evaluative threat (SET) that is likely also at play in police-public encounters. Broadly, there is strong evidence that the anxiety of being negatively evaluated or the anticipatory anxiety of believing one will be negatively evaluated sets off a coordinated, predictable, and typical biological and psychological response (described in detail below).<sup>6</sup> From the perspective of the officer, these typical responses can be interpreted as suspicious and dangerous behavior, thus predisposing officers to make more aggressive actions towards members of the public. From the perspective of the individual being encountered, the anxiety can produce the very behavioral actions viewed by the officer as suspicious or dangerous. All together, the typical biological and psychological responses to SET and their role in police-public encounters is the conceptual model we refer to as social evaluative mechanics (SEM).

To focus our efforts on the relevance of SEM, we first provide a brief overview of previously presented psychological mechanisms identified in police-public encounters. We then use these mechanisms to contextualize SEM. Finally, we highlight SEM as a fruitful topic for further discussion between psychologists and legal scholars, which will lead to additional understanding and collaboration, and provide for additional police trainings.

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2. Kevin Johnson et al., *Local Police Involved in 400 Killings Per Year*, USA TODAY (Aug. 15, 2014), <http://www.usatoday.com/story/news/nation/2014/08/14/police-killings-data/14060357/> [<https://perma.cc/JU3H-34PF>].

3. *Traffic Stops*, BUREAU OF JUSTICE STATISTICS, <http://www.bjs.gov/index.cfm?ty=tp&tid=702> [<https://perma.cc/XFQ6-EFS4>] (last visited Nov. 14, 2016).

4. See Kristen Weir, *Policy in Black & White*, 47 MONITOR ON PSYCHOL. 36 (2016); Robert V. Wolf, *Race, Bias and Problem-Solving Courts*, 21 NAT'L BLACK L.J. 27 (2008); Quoctrung Bui & Amanda Cox, *Analysis Finds No Racial Bias in Lethal Force*, N.Y. TIMES, July 12, 2016, at A1.

5. Rachel D. Godsil & L. Song Richardson, *Racial Anxiety*, 102 IOWA L. REV. 2235, 2239 (2017).

6. See Dan W. Grupe & Jack B. Nitschke, *Uncertainty and Anticipation in Anxiety: An Integrated Neurobiological and Psychological Perspective*, 14 NATURE REVIEWS NEUROSCIENCE 488 (2013).

## I. PREVIOUSLY PRESENTED PSYCHOLOGICAL MECHANISMS

In March 2005, Professor Jerry Kang, a scholar at UCLA Law School, published an article called the *Trojan Horses of Race*.<sup>7</sup> This piece became the seminal work upon which many subsequent applications of psychology to the law have been based. The article's approach to navigating psychological research is the same approach that we apply throughout this Article. Specifically, we take a context-centered approach; and rather than providing an exhaustive or complete presentation of the literature on a specific psychological mechanism, we identify the studies that most closely replicate or mirror the basic components present in many police-public encounters. In this vein, we hope to provide contextually relevant evidence of the psychological mechanisms potentially contributing to violent encounters, including racially biased policing and racial violence. Below, we define three important psychological mechanisms at play in police-public encounters: implicit racial bias, racial anxiety, and stereotype threat. Finally, we offer a hypothetical police-public encounter to illustrate how these three psychological mechanisms are at play in police-public encounters.

*A. Psychological Mechanisms: Implicit Racial Bias, Racial Anxiety and Stereotype Threat*

Unlike explicit biases, which are attitudes and beliefs that we can endorse because they are a part of our conscious awareness, implicit biases refer to our attitudes and beliefs that operate outside of our conscious awareness.<sup>8</sup> Implicit biases therefore often affect our actions and decisions without us knowing. Even more so, implicit biases can “conflict with conscious attitudes” and “predict a subset of real world behaviors.”<sup>9</sup> Limiting this concept to implicit *racial* biases, there are two well-studied prejudices that require emphasis, especially when analyzing racial violence in the context of policing—the association of blackness and crime and the dehumanization of black people.

Americans associate black individuals with crime.<sup>10</sup> While some work has shown that this association is explicit,<sup>11</sup> other work confirms that this association is often implicit or operating outside of conscious awareness. For example, seeing black faces improves peoples' ability to identify degraded photos of crime-relevant objects.<sup>12</sup> More specifically, participants were shown images of crime-relevant objects (e.g., a gun). The images moved such that with each passing frame, the

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7. Jerry Kang, *Trojan Horses of Race*, 118 HARV. L. REV. 1489 (2005).

8. Jerry Kang, *Implicit Bias in the Courtroom*, 59 UCLA L. REV. 1124, 1126 (2012).

9. L. Song Richardson, *Police Racial Violence: Lessons from Social Psychology*, 83 FORDHAM L. REV. 2961, 2962 (2015).

10. See Darnell F. Hawkins, *Ethnicity, Race, and Crime: A Review of Selected Studies*, in ETHNICITY, RACE, AND CRIME: PERSPECTIVES ACROSS TIME AND PLACE 11, 11–45 (Darnell F. Hawkins ed., 1995).

11. Carissa B. Hessick, *Race and Gender as Explicit Sentencing Factors*, 14 J. GENDER, RACE & JUST. 127, 131–32 (2010).

12. Jennifer L. Eberhardt et al., *Seeing Black: Race, Crime, and Visual Processing*, 87 J. PERSONALITY & SOC. PSYCHOL. 876, 882 (2004).

object in the image was more clearly revealed. Before the subject was asked to identify the object in these moving images as quickly as possible, some participants were briefly exposed to an image of a black face while others were exposed to either a white face or no face at all. Participants who were exposed to the black face were more able to detect the crime-relevant object (e.g., more quickly able to see that it was a gun) sooner than those participants who were primed with white faces or not primed with any face. This effect was only observed for crime-relevant objects; no such differences in visual processing speed were identified across conditions for objects that were not crime-relevant (e.g., a key or a stapler). Even further, the researchers provided evidence for the converse; once participants were thinking about crime, their attention was turned towards black male faces. Importantly, this ability to more quickly process crime-relevant objects after being primed with black faces, and this tendency to pay attention to black faces after thinking about crime, provides evidence of an association between blackness and crime. Together, these findings illustrate an implicit association between blackness and crime; while participants may not have been aware or may not have explicitly stated that they associate blackness with crime, their implicit cognitive processes demonstrate that they do.<sup>13</sup> While it is out of the scope of the current review to detail all replications of this association<sup>14</sup> or to discuss its likely causes,<sup>15</sup> the study presented above provides an illustrative example.

Professor Song Richardson plainly articulates the consequence of implicit racial biases within the police context: “Once implicit biases are activated—and simply thinking about crime is sufficient to activate them—officers’ attention will be drawn to black men more readily than white men, even if they are acting identically and even if officers are not engaged in conscious racial profiling.”<sup>16</sup> Thus, once a person’s attention is drawn to black men, the threshold to observe suspicious behavior or to engage in violent actions towards the black individual is reduced when compared to white individuals.

Another psychological mechanism, racial anxiety, causes a heightened nervousness or stress we experience due to interacting with someone from outside

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13. *Id.* at 883.

14. *See, e.g.,* David C. Baldus et al., *Racial Discrimination and the Death Penalty in the Post-Furman Era: An Empirical and Legal Overview, with Recent Findings from Philadelphia*, 83 CORNELL L. REV. 1638 (1997); Irene V. Blair et al., *The Influence of Afrocentric Facial Features in Criminal Sentencing*, 15 PSYCHOL. SCI. 674 (2004); Jennifer L. Eberhardt et al., *Looking Deathworthy: Perceived Stereotypicality of Black Defendants Predicts Capital-Sentencing Outcomes*, 17 PSYCHOL. SCI. 383 (2006).

15. *See, e.g.,* Ted Chiricos & Sarah Eschholz, *The Racial and Ethnic Typification of Crime and the Criminal Typification of Race and Ethnicity in Local Television News*, 39 J. RES. CRIME & DELINQ. 400 (2002); Travis L. Dixon, *Black Criminals and White Officers: The Effects of Racially Misrepresenting Law Breakers and Law Defenders on Television News*, 10 MEDIA PSYCHOL. 270 (2007); Travis L. Dixon & Cristina L. Azocar, *Priming Crime and Activating Blackness: Understanding the Psychological Impact of the Overrepresentation of Blacks as Lawbreakers on Television News*, 57 J. COMM. 229 (2007).

16. Richardson, *supra* note 9, at 2965 (citation omitted).

our race.<sup>17</sup> “People of color experience racial anxiety when they worry that they will be subject to discriminatory treatment. White people, on the other hand, experience it when they worry that they will be perceived as racist.”<sup>18</sup> Although there is no single cause for racial anxiety because the process is an output of numerous cultural factors, one process that can generate racial anxiety is stereotype threat.<sup>19</sup> “Stereotype threat is the concern one experiences when at risk of being perceived in light of a negative stereotype that applies to one’s group.”<sup>20</sup>

For example, a recent study by Cynthia Najdowskia and colleagues asked both white and black participants to describe their feelings about police officers.<sup>21</sup> Black male participants reported that police officers were more frequently racially stereotypical, such as thinking that black males are criminals, when compared to both white participants and black female participants.<sup>22</sup> The authors then provided a hypothetical police encounter to all participants, and again, black men anticipated feeling stereotype threat more often than other participants.<sup>23</sup> The authors suggest that this study has “practical implications for understanding how the stereotype could ironically contribute to bias-based policing and racial disparities in the justice system.”<sup>24</sup>

#### *B. A Hypothetical, Illustrative Police-Public Encounter*

Consider the following hypothetical of an encounter involving a white police officer “Abaven”<sup>25</sup> and a black individual “Zakkay.”<sup>26</sup> The purpose of this hypothetical is to illustrate a generalized stereotyped<sup>27</sup> encounter to exemplify the three psychological mechanisms defined above.

Zakkay lives in a working-class neighborhood that has a higher crime rate than surrounding neighborhoods. Many of Zakkay’s friends and family have been stopped by police, especially at “Ritzy Corner,” where police presence is heightened because there are several high-fashion stores typically patronized by richer individuals. Abaven has been a police officer for two years, and is assigned to the working-class neighborhood with explicit instructions to “clean this area up.”<sup>28</sup>

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17. See WALTER G. STEPHAN & COOKIE W. STEPHAN, *IMPROVING INTERGROUP RELATIONS* (Jim Brace-Thompson et al. eds., 2001).

18. Godsil & Richardson, *supra* note 5, at 2235.

19. *Id.* at 2238–39.

20. Cynthia J. Najdowski et al., *Stereotype Threat and Racial Differences in Citizens’ Experiences of Police Encounters*, 39 L. & HUM. BEHAV. 463, 464 (2015) (citation omitted).

21. *Id.* at 464–65.

22. *Id.* at 465.

23. *Id.* at 465–68.

24. *Id.* at 463.

25. Abaven is an Armenian name meaning “protector.”

26. Zakkay is an anglicized spelling of a Hebrew name meaning “clean or innocent.”

27. We cannot stress enough the stereotyped nature of this example. This example is merely meant to describe as explicitly as possible a scenario that integrates in race and precisely plays to culturally held stereotypes. In no way do we intend for this example to offend anyone reading this.

28. When discussing broken windows policing, a common phrase used by the public is that police need to “clean this area up.” See *Millions Patch Up a Crime-Filled, Failing Phoenix Neighborhood*,

Abaven sits in his patrol vehicle at Ritzy Corner. He often encounters crime within the area. From his perspective, his job requires that he is located at this corner, and in order to do his job well, he has become accustomed to scanning the corner for suspicious activity. We can categorize Abaven's unconscious biases in three ways:<sup>29</sup> (1) he unconsciously scrutinizes more individuals within the community who are of color; (2) he unconsciously holds a biased view of ambiguous behavior based on the individual's race; and (3) he treats members of different racial groups disparately. Abaven holds *implicit racial biases*, associating people of color with criminality.

Zakkay leaves his apartment to make a purchase at the local convenience store, being well-aware that the corner is a location of heightened police activity. Zakkay is already in a heightened state of anxiety due to the perceived likelihood of an interracial encounter. Zakkay and the rest of the neighborhood know that all of the police officers at Ritzy Corner are white, even though the community is largely people of color. The community has little positive interaction with the police, including deeply held beliefs about and attitudes towards the police as a whole.<sup>30</sup> For example, "85 percent of blacks think police are more likely to use force against a black person in most communities, compared with 63 percent of Hispanics and 39 percent of whites."<sup>31</sup> Moreover, "71 percent of blacks say police in their own community are more likely to use force against a black person compared with 47 percent of Hispanics and 24 percent of whites."<sup>32</sup> Zakkay is experiencing *racial anxiety*, part of which is attributable to *stereotype threat*. From Zakkay's perspective, white police officers commonly harass people from the community because of the stereotype that black men are criminals.

From his patrol vehicle, Abaven observes Zakkay adjust his pants while walking. Abaven perceives this as suspicious; he wonders if this is indicative of Zakkay carrying a weapon. Zakkay approaches a friend and greets him with a handshake. After some chit-chat, he walks towards the store. Abaven perceives this social interaction as "loitering" on the street, another suspicious behavior. Abaven is unaware that if he saw similar activity take place among white men, he would not perceive these behaviors as suspicious.

Abaven responds with this deeply held view that Zakkay has engaged in suspicious behavior that warrants a stop. Upon seeing the police lights, Zakkay

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TUCSON CITIZEN (June 12, 2000), <http://tucsoncitizen.com/morgue2/2000/06/12/84175-millions-patch-up-a-crime-filled-failing-phoenix-neighborhood/> [<https://perma.cc/9YZN-QAK3>].

29. See L. Song Richardson, *Arrest Efficiency and the Fourth Amendment*, 95 MINN. L. REV. 2035, 2043–44 (2010).

30. See Adam Fine & Elizabeth Cauffman, *Race and Justice System Attitude Formation During the Transition to Adulthood*, 1 J. DEVELOPMENTAL & LIFE COURSE CRIMINOLOGY 325, 326 (2015).

31. *Law Enforcement and Violence: The Divide Between Black and White Americans*, ASSOCIATED PRESS-NORC CTR. FOR PUB. AFF. RES., <http://www.apnorc.org/projects/Pages/HTML%20Reports/law-enforcement-and-violence-the-divide-between-black-and-white-americans0803-9759.aspx> [<https://perma.cc/8VJW-L4TC>] (last visited Nov. 23, 2017).

32. *Id.*

immediately becomes anxious and starts to sweat; his already-raised anxiety has become even more pronounced and observable. From Abaven's perspective, these observable behavioral markers of anxiety and nervousness further his suspicions of Zakkay. Abaven approaches Zakkay with a controlling voice providing discrete instructions.

As the hypothetical unfolds, we can imagine additional instances where implicit racial bias, racial anxiety, and stereotype threat are at play. Nonetheless, a central component that requires specific focus is the evaluative aspect of this encounter. At many steps of the hypothetical, Abaven is evaluating Zakkay, and Zakkay is and feels as though he is being evaluated by Abaven.<sup>33</sup> In addition, even before Zakkay is aware of Abaven's presence, he has a notion that he *could have* an evaluative encounter with an officer in a location where officers frequent. As such, we bring to light another psychological mechanism, social evaluative threat (SET), which is likely also at play in police-public encounters.

## II. SOCIAL EVALUATIVE MECHANICS (SEM)

As this illustrative, stereotyped, hypothetical encounter between Zakkay and Abaven unfolds, another psychological mechanism, SEM, informs much of the encounter, which we begin to describe from first principles.<sup>34</sup>

### A. *The Social Self Under Threat*

#### 1. *Theory of Mind*

One feature of human beings is our ability to think about others' thoughts.<sup>35</sup> This is called theory of mind, an understanding that other people have their own thoughts, as well as their own desires, beliefs, and motivations, and that these cognitive and psychological experiences are independent from our own.<sup>36</sup>

Humans are not born with theory of mind. Rather, through a number of different precursory skills (e.g., language) and experiences (e.g., social interactions), we show signs of theory of mind early in our childhood.<sup>37</sup> In one illustrative

33. In addition, even before Zakkay is aware of Abaven's presence, he has a notion that he *could have* an evaluative encounter with an officer in a location where officers frequent. To remain focused on our proposed psychological mechanism, we acknowledge but do not expound upon the anticipatory anxiety literature. For a discussion on the anticipatory anxiety literature, see Thierry Steimer, *The Biology of Fear and Anxiety-Related Behaviors*, 4 DIALOGUES CLINICAL NEUROSCIENCE 231 (2002).

34. Likewise, imagine instead of walking, Zakkay is pulled over by a police officer. Zakkay is sitting in his car with his hands on the steering wheel looking into his side mirror. You see the officer approach his already rolled down window. What does Abaven say? "License and Registration, please?" Or "Do you know why I pulled you over?" This section also describes SEM's role in this hypothetical.

35. Martin Brüne & Ute Brüne-Cohrs, *Theory of Mind—Evolution, Ontogeny, Brain Mechanisms and Psychopathology*, 30 NEUROSCIENCE BIOBEHAVIORAL REVS. 437, 437 (2006).

36. See David Premack & Guy Woodruff, *Does the Chimpanzee Have a Theory of Mind?*, 1 BEHAV. & BRAIN SCI. 515 (1978).

37. Beate Sodian et al., *Early Deception and the Child's Theory of Mind: False Trails and Genuine Markers*, 62 CHILD DEV. 468 (1991).



experiment, a four-year-old is given a candy box.<sup>38</sup> Before opening it, she is asked what she thinks is in it. She excitedly responds “candy.” She is then allowed to open the box and, with great disappointment, sees that instead of candy, the box contains pencils. The child is then asked if a friend were given the same box, would he believe there were pencils or candy in the box? The four-year-old, like you, correctly thinks that a friend would similarly assume that the box contained candy. But when three-year-olds complete the identical experiment, they falsely believe that a friend would know that the candy box contains pencils. The three-year-old has not yet developed the understanding that “just because I know something does not mean other people do too.”<sup>39</sup>

## 2. *Social Evaluative Threat (SET)*

As we grow older, our theory of mind becomes more deeply rooted, such that what used to be a challenging social cognitive step in development during childhood is automated and entrenched in our everyday thinking. We find that we may not agree with everyone’s thoughts and that sometimes we are wrong about what other people are thinking. But estimating other people’s thoughts can give us a social advantage, helping to facilitate productive social interactions.

Nonetheless, our ability to understand that others have thoughts that are independent from our own also might cause us to worry about others’ negative thoughts, specifically when they pertain to us. Even further, we might worry more about others’ negative thoughts when they pertain to something that we identify as an important skill or attribute that we possess.

SET involves the worry that others will make a negative judgment about a central component of one’s self-identity.<sup>40</sup> Four elements are crucial to evoking SET: (1) a central goal is present; (2) the situation requires the display of skills or attributes through performance; (3) the goal is threatened because these skills and attributes might be or are negatively evaluated; and (4) the goal is threatened by factors that are out of the participant’s control.<sup>41</sup> Altogether, a setting with these elements is threatening to the social self.

### *B. When Life Imitates Psychological Experiments*

#### 1. *The Trier Social Stress Test*

Perhaps one of the easiest ways to illustrate the relevance of SET to police-public encounters is to describe parallels between police-public encounters and an experimental paradigm used in psychology called the Trier Social Stress Test

38. See Josef Perner et al., *Three-Year-Olds’ Difficulty with False Belief: The Case for a Conceptual Deficit*, 5 BRIT. J. DEVELOPMENTAL PSYCHOL., 125 (1987).

39. See *id.*

40. Sally S. Dickerson & Margaret E. Kemeny, *Acute Stressors and Cortisol Responses: A Theoretical Integration and Synthesis of Laboratory Research*, 130 PSYCHOL. BULL. 355, 358 (2004).

41. See *id.*

(TSST). The TSST is currently the single most dependable experiment to instigate SET.<sup>42</sup> Although there are some variants, during the typical TSST, a participant walks into a room to find two or three “judges” sitting behind a desk.<sup>43</sup> One judge informs the participant that she will have two minutes to prepare a five-minute speech about herself. This is usually framed as a job interview—the participant is challenged with “getting the job.”<sup>44</sup> As such, the judge suggests that the participant highlights the strengths and qualifications that would typically be of value to any employer. Following the five-minute speech, the judges give the participant a challenging arithmetic problem (e.g., count backwards by 13 from 2571 for the next two minutes). When the participant gives an incorrect answer, the judge tells her that she is wrong and must start over.<sup>45</sup> Throughout the entirety of the TSST, none of the judges gives any social cues to indicate a positive evaluation, such as smiling or nodding. Further, the judges appear to be taking notes on clipboards about the participants’ performance.<sup>46</sup>

The TSST increases the likelihood that the participant will experience SET because it includes the four elements that are crucial to evoking SET: (1) a central goal is presented—get the job; (2) the situation requires the participant to display skills or attributes through performance—creative extemporaneous thinking and arithmetic competence through a speech and an oral test; (3) the goal is threatened because these skills and attributes might be negatively evaluated—no judges give social cues that they are impressed or receptive to the participant; and (4) the goal is threatened by factors that are out of the participant’s control—the participant is not allowed adequate time to prepare for the given tasks.

In addition to these core elements, when the TSST is conducted, there are two measures that are consistently implemented to further ensure the participant experiences SET.<sup>47</sup> First, judges are given laboratory coats to wear.<sup>48</sup> And second, the participant is informed that the entire task will be videotaped so that it can be reviewed at a later time.<sup>49</sup>

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42. Johanna U. Frisch et al., *The Trier Social Stress Test as a Paradigm to Study How People Respond to Threat in Social Interactions*, 6 FRONTIERS PSYCHOL. 1, 13 (2015).

43. The number of judges present has not been found to be correlated with the magnitude of participants’ stress response. See Julie Andrews et al., *Effects of Manipulating the Amount of Social-Evaluative Threat on the Cortisol Stress Response in Young Healthy Men*, 121 BEHAV. NEUROSCIENCE 871, 872–73 (2007).

44. See *id.*

45. Clemens Kirschbaum, *Trier Social Stress Test*, 3 ENCYCLOPEDIA PSYCHOPHARMACOLOGY 1755 (2015).

46. Interestingly, SET can also be experienced *in anticipation* of negative evaluation. See Veronika Engert et al., *Differentiating Anticipatory from Reactive Cortisol Responses to Psychosocial Stress*, 38 PSYCHONEUROENDOCRINOLOGY 1328 (2013). That is, experiencing SET does not require actual negative evaluation, but telling individuals that they *will* have to undergo the process described above is sufficient in eliciting an experience of SET. This is important to keep in mind in that SET can be experienced without direct interactions between an evaluator and the evaluated.

47. Kirschbaum, *supra* note 45, at 1756.

48. *Id.*

49. *Id.*

Having judges wear laboratory coats is a tactic commonly used in psychological experimental paradigms to symbolize and cultivate an air of authority, and to further establish in-groups and out-groups.<sup>50</sup> Additionally, an important goal of the TSST is to convey to participants that the judges possess the attributes and skills under evaluation. During the arithmetic task, for example, judges know the right answer. What the participant does not know, however, is that the judges almost always have a list of the correct answers in front of them. The simulation is meant to make participants feel that they are inadequate and being negatively evaluated by authorities, who are intellectually capable of performing the skills the participants are being asked to display.

Videotaping is meant to increase the evaluative climate of the TSST.<sup>51</sup> An eloquent study using competitive dancers illustrates that more anonymity during a performance or evaluated task decreases the potency of the evaluative climate.<sup>52</sup> In this study, which measured the intensity of SET experienced by competitive dancers, some performed a couple's dance where they were the only dancers being evaluated. Other dancers performed with a dance troupe made up of sixteen individuals, which was being evaluated as a group. The researchers found that dancers performing a couple's dance experienced more SET than the dancers in the large dance troupe.<sup>53</sup> This difference was explained by the level of anonymity dancers experienced, with the dancers in the couple's dance being less anonymous than dancers in the large dance troupe.<sup>54</sup> In the same vein, videotaping a performance (or the TSST) decreases anonymity because others can view the videotape at a later time. As such, videotaping the TSST is one practice within the experimental paradigm that further ensures participants experience SET.

### *C. Social Evaluative Threat (SET) in Police-Public Encounters*

In this section, we highlight the four elements described above that are critical to inducing SET and identify the likelihood of them occurring in a typical police-public encounter: (1) a central goal is presented; (2) the situation requires the participant to display skills or attributes through performance; (3) the goal is threatened because these skills and attributes might be negatively evaluated; and (4) the goal is threatened by factors that are out of the participant's control. There are numerous reasons to believe that both police and individuals will experience SET during encounters. Nonetheless, for the purposes of the Article, we only take the perspective of the individual experiencing SET after being evaluated or anticipating being evaluated by an officer.

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50. Gary L. Brase & Jillian Richmond, *The White-Coat Effect: Physician Attire and Perceived Authority, Friendliness, and Attractiveness*, 34 J. APPLIED SOC. PSYCHOL. 2469 (2004).

51. Dickerson & Kemeny, *supra* note 40, at 378.

52. Nicolas Rohleder et al., *Stress on the Dance Floor: The Cortisol Stress Response to Social-Evaluative Threat in Competitive Ballroom Dancers*, 33 PERSONALITY & SOC. PSYCHOL. BULL. 69, 71 (2007).

53. *Id.* at 77–78.

54. *Id.* at 78.

### 1. *Central Goal*

Although individuals might have many goals that they want to achieve during an interaction with the police, we will assume that the average individual wants to prevent the interaction from escalating, leave without being cited or arrested, and walk away from the interaction unscathed. This last assumption may be more salient to black individuals, considering the historically violent relationship between police and people of color.

### 2. *Displaying Skills or Attributes Through Performance*

Police-public encounters require individuals to display skills or attributes through performance. Although the expected or required performance depends on the specific police-public interaction, most police-public encounters require two types of performance. The first is the individual's response to the officer's explicit instructions. This includes, for example, reaching for identification, putting hands up, not moving in a certain direction, standing back, answering questions, etc. The second is the individual's response to implicit instructions. Implicit instructions are unspoken expectations that the officer might have for the individual such as no sudden movements or speaking in a respectful tone. These responses include displaying skills and attributes that increase the individual's chances of reaching the central goal (e.g., prevent the interaction from escalating, leave without being cited or arrested, and walk away from the interaction unscathed).<sup>55</sup> A display of skills could include volunteering information that a police officer did not explicitly request.

The series of events leading to the recent death of Philando Castile illustrates this type of voluntary display.<sup>56</sup> The police officer asks Mr. Castile to provide identification. Although the officer does not directly instruct Mr. Castile to verbally respond, Mr. Castile informs the police officer that he is reaching for his identification and that he is in possession of a registered firearm. In this scenario, Mr. Castile is displaying skills (specifically, the ability to follow guidelines for carrying a firearm which include letting officers know that a firearm is on your body)<sup>57</sup> and attributes (specifically, honesty and cooperation) through performance, in response to both explicit and implicit instruction.

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55. See, e.g., DEVON W. CARBADO & MITU GULATI, *ACTING WHITE? RETHINKING RACE IN POST-RACIAL AMERICA* 102 (2013).

56. *How Philando Castile Told Officer About Gun Critical in Investigation*, CHI. TRIB. (July 14, 2016, 8:21 PM), <http://www.chicagotribune.com/news/nationworld/ct-philando-castile-concealed-carry-20160714-story.html> [https://web.archive.org/web/20160716125751/http://www.chicagotribune.com/news/nationworld/ct-philando-castile-concealed-carry-20160714-story.html].

57. *Id.*

### 3. Negative Evaluation

Third, the majority of police-public encounters (e.g., stop and frisk, pulling over a driver, approaching a suspect) involves the potential for the police to negatively evaluate individuals' skills, attributes, and performances. Police-public encounters often involve an officer's belief that the individual may be engaged in criminal activity.<sup>58</sup> Regardless of whether the officer is actually negatively evaluating the individual, the individual often believes this is occurring, which is sufficient to trigger SET.

Furthermore, similar to the judges in the TSST experimental paradigm, police officers often do not give any positive reinforcement such as smiling or nodding to the individual during an interaction. These behaviors elicit SET, as shown in studies using TSST.<sup>59</sup> Although training for officers across the U.S. is highly varied, a common thread in police training is to adopt hyper-macho traits that establish dominance over individuals.<sup>60</sup> Police officers smiling and approaching individuals with other positive reinforcement cues are hard to imagine; the current culture of policing does not prioritize positive police-public interactions.

Additional similarities between the TSST paradigm and police-public encounters are officers' uniforms and video cameras. Officers' uniforms establish an air of authority just as the laboratory coats worn by the judges in the TSST do. This air of authority likely adds to the evaluative setting of police-public encounters. Further, the use of body cameras is currently under intensive debate.<sup>61</sup> These cameras are now being implemented in police departments across the nation.<sup>62</sup> Much of the conversation around body cameras has focused on their impact on officers' behaviors.<sup>63</sup> However, it is also likely that the presence of cameras adds to the evaluative setting of police-public encounters. Whether this additional method of evaluation is something that individuals welcome (if, for example, there is fear that the police officer will engage in misconduct) or simply something that makes individuals more nervous, and thus more likely to have trouble performing, is up for debate.

### 4. Goal Is Threatened by Uncontrollable Factors

Fourth, police-public encounters involve numerous factors that are out of an individual's control. In fact, officers often react negatively when individuals do

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58. Richardson, *supra* note 9, at 2972–73.

59. Kirschbaum, *supra* note 45, at 1756.

60. See Frank Rudy Cooper, "Who's the Man?": *Masculinities Studies, Terry Stops, and Police Training*, 18 COLUM. J. GENDER & L. 671, 727–28 (2008).

61. See MICHAEL D. WHITE, OFFICE OF CMTY. ORIENTED POLICING SERVS., POLICE OFFICER BODY-WORN CAMERAS: ASSESSING THE EVIDENCE (2014).

62. See, e.g., Barak Ariel, *Increasing Cooperation with the Police Using Body Worn Cameras*, 19 POLICE Q. 326, 329 (2016).

63. See, e.g., CHARLES M. KATZ ET AL., ARIZ. STATE UNIV., CTR. FOR VIOLENCE PREVENTION & CMTY. SAFETY, EVALUATING THE IMPACT OF OFFICER WORN BODY CAMERAS IN THE PHOENIX POLICE DEPARTMENT 4 (2014).

more than simply follow the officer's orders.<sup>64</sup> There is no standardized police training protocol across the country.<sup>65</sup> But most officers are trained, in one form or another, to gain and maintain control of situations, such as through hyper-macho qualities.<sup>66</sup> Police officers' tactics to maintain control can involve command presence to instill verbal control and, if necessary, physical control.<sup>67</sup> These tactics are designed and intended to take control away from individuals.

##### 5. *Implications of SET in a Police-Public Encounter*

Overall, strong parallels are apparent between psychological experimental paradigms designed to elicit SET and a generalized police-public encounter. Furthermore, the four elements involved in SET can be identified in police-public encounters. Thus, we argue that members of the public likely experience SET when in a typical encounter, or anticipating a typical encounter, with an officer.

Although they are related, it is important to distinguish between SET and stereotype threat. Stereotype threat is one of the most commonly applied psychological constructs to the legal realm.<sup>68</sup> Stereotype threat refers to the feeling that one is at risk of conforming to the stereotypes of one's social group.<sup>69</sup> For instance, a woman, might be concerned that if they perform badly on a math test, people may suspect that they have done poorly *because* they are a woman. In police-public encounters, black men may fear that they are at risk of being labeled "criminal" by police officers *because* they are black.

Let us draw out this latter example to help identify when and how SET and stereotype threat can coexist and when they do not. In the scenario of the black individual who is experiencing stereotype threat in a police-public encounter, his central goal (Element 1 of SET) may be a consequence of experiencing stereotype threat—perhaps his central goal is to avoid being labeled "criminal" without justification, as much as possible. He therefore may be motivated to display skills or attributes through performance (Element 2 of SET) by engaging in *racial* performance. More specifically, to help avoid being labeled "criminal," he may act "less black" and "more white."<sup>70</sup> As such, experiencing stereotype threat shapes

64. See, e.g., CHRISTY E. LOPEZ, AM. CONSTITUTION SOC'Y FOR LAW & POLICY, DISORDERLY (MIS)CONDUCT: THE PROBLEM WITH "CONTEMPT OF COP" ARRESTS (2010).

65. Int'l Ass'n of Chiefs of Police, *Training / Academy Life*, DISCOVERPOLICING.ORG, [http://www.discoverpolicing.org/what\\_does\\_take/?fa=training\\_academy\\_life](http://www.discoverpolicing.org/what_does_take/?fa=training_academy_life) [https://web.archive.org/web/20171101204747/http://www.discoverpolicing.org/what\_does\_take/?fa=training\_academy\_life] (last visited Nov. 29, 2017).

66. See Cooper, *supra* note 60, at 674.

67. *Id.* at 726.

68. See, e.g., Jerry Kang & Mahzarin R. Banaji, *Fair Measures: A Behavioral Realist Revision of "Affirmative Action,"* 94 CAL. L. REV. 1063, 1096–98 (2006); Cynthia J. Najdowski, *Stereotype Threat in Criminal Interrogations: Why Innocent Black Suspects Are at Risk for Confessing Falsely*, 17 PSYCHOL., PUB. POL'Y, & L. 562, 562–65 (2011).

69. Claude M. Steele & Joshua Aronson, *Stereotype Threat and the Intellectual Test Performance of African Americans*, 69 J. PERSONALITY & SOC. PSYCHOL. 797, 797 (1995).

70. See, e.g., CARBADO & GULATI, *supra* note 55, at 96–100.

Elements 1 (his central goal) and 2 (his performance) of SET. Thus, stereotype threat and SET coexist.

However, it is also possible to conceive of police-public encounters that do not involve stereotype threat but do involve SET. Take, for example, an exchange between a police officer and an individual of a social group that is less often stereotyped as a criminal threat (e.g., white women). In this exchange, the individual's central goal and performance could be independent and uninfluenced by stereotype threat. For example, the individual could have the goal of portraying herself as a competent and ethical individual who made a mistake of driving over the speed limit. Her performance may include apologizing and explaining her actions. In this sense, she could be experiencing SET, but not stereotype threat. In sum, we encourage readers to conceive of SET as the "common denominator" of police-public interactions, upon which other social threats (such as stereotype threat) may or may not be layered, depending on the exact elements of the police-public interaction.

#### *D. SEM: Typical Responses to SET and Their Role in Police-Public Encounters*

To present evidence that is contextually valid and applicable to police-public encounters, in this section, we identify and describe only studies that use the TSST in their experimental paradigm, due to the parallels described previously between the TSST and police-public encounters.

##### *1. Biological Consequences*

The biological responses to SET are similar to what occurs when our bodies experience stress. When we are stressed, significant changes in the hypothalamus-pituitary-adrenal (HPA) axis occur that ultimately end in the production of cortisol, a hormone that leads to biological changes.<sup>71</sup> Further, in stressful situations, epinephrine causes a rapid activation of the cardiovascular system, resulting in biological changes such as elevated heart rate, elevated blood pressure, and the diversion of blood to muscles via the dilation of blood vessels that supply skeletal muscles.<sup>72</sup>

There is overwhelmingly consistent evidence that SET induces stress, activating the HPA axis, and the cardiovascular system. For instance, in one study, almost ninety undergraduate students were asked to deliver a speech that they had only ten minutes to prepare.<sup>73</sup> They were randomly assigned to one of three social conditions: (1) a SET condition in which they delivered their speech in front of a panel of confederate judges who were trained to only provide negative or neutral

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71. Sally S. Dickerson, Peggy J. Mycek & Frank Zaldivar, *Negative Social Evaluation, but Not Mere Social Presence, Elicits Cortisol Responses to a Laboratory Stressor Task*, 27 HEALTH PSYCHOL. 116, 117 (2008).

72. Sally S. Dickerson, *Emotional and Physiological Responses to Social-Evaluative Threat*, 2 SOC. & PERSONALITY PSYCHOL. COMPASS 1362, 1370 (2008).

73. Dickerson et al., *supra* note 71.

feedback (e.g., taking notes with a stoic expression); (2) a condition during which a confederate was merely *present*, but not evaluating them; or (3) a condition where they were alone in a room.<sup>74</sup> The results demonstrated that only the participants in the SET condition demonstrated biological stress, as measured by significant changes in cortisol output, both pre- and post-task.<sup>75</sup> Participants who gave a speech with nonevaluative confederates and those who gave a speech alone in a room, on the contrary, showed no signs of biological stress at any point in the experiment.<sup>76</sup>

In another study, researchers asked twenty healthy men to undergo four of the most common laboratory stressors.<sup>77</sup> The SET stressor involved giving a speech to a panel of judges. The other stressors were physical stress (placing a hand in a bucket of ice for several minutes), stress from physical exertion (riding a stationary bicycle), and cognitive stress (reading incongruent color-word cards, for example reading the word “yellow” out loud while it is printed in red ink).<sup>78</sup> Again, subjects experiencing SET exhibited the strongest activation of the biological stress response as measured by cortisol levels pre- and post-task.<sup>79</sup>

The results of both of these studies are consistent with a meta-analysis of 208 studies that found that SET induced the strongest biological stress response in subjects compared to other neutral contexts or other sources of stress.<sup>80</sup> Importantly, measuring pre- and post-task cortisol levels reflects the difference in psychological states of being in an evaluative setting (post-task cortisol level) and not being in an evaluative setting (pre-task cortisol level).

In sum, there is strong evidence that SET is *biologically* stressful. Additionally, it is not the mere presence of others that causes this stress. Rather, it is the potential for or the actual experience of *negative evaluation* from others that acts as a catalyst for a strong biological stress response. This finding is consistent across many different study designs and contexts.<sup>81</sup> These typical biological consequences of stress predispose and affect subsequent behavioral and cognitive outcomes. Individuals experiencing SET often act and think differently than they would in non-SET settings and these differences are, in part, a result of the typical biological changes involved when experiencing stress.

Next, we discuss the behavioral and cognitive consequences of SET, focusing on those consequences most relevant to police-public encounters, namely, how typical responses to SET might result in behaviors and cognitions that officers may

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74. *Id.* at 117.

75. *Id.* at 118.

76. *Id.*

77. Nadine Skoluda et al., *Intra-Individual Psychological and Physiological Responses to Acute Laboratory Stressors of Different Intensity*, 51 *PSYCHONEUROENDOCRINOLOGY* 227, 227 (2015).

78. *Id.* at 229–30.

79. *Id.* at 234.

80. Dickerson & Kemeny, *supra* note 40, at 377–78. Meta-analyses use a statistical approach that combines information across many studies to identify whether a finding is consistent and, if so, what factors may moderate its effects.

81. Sally S. Dickerson, Tara L. Gruenewald & Margaret E. Kemeny, *When the Social Self is Threatened: Shame, Physiology, and Health*, 72 *J. PERSONALITY* 1191 (2004).



believe signal criminality and dangerousness.

## 2. Behavioral Consequences

The behavioral consequences of SET are part of the evolutionary origins of the human stress response system. Reactions to stress evolved as a survival mechanism, allowing us and other mammals to react quickly to life-threatening situations. More specifically, the coordinated series of biological consequences to stress effectively helps us *mobilize* to either fight the source of threat or to flee from the threat (e.g., elevated heart rate, increased supply of blood to muscles).<sup>82</sup> In doing so, other biological systems that help with longer-term gains (e.g., reproduction, digestion) are slowed.<sup>83</sup> Energy is distributed not towards these systems that, in the long run, help us survive and procreate. Instead, energy is distributed to our muscles, for example, to help us more quickly mobilize in the presence of threat.<sup>84</sup> These reactions to stress (including activation of the HPA axis described above) are also known as the “fight-or-flight” response.<sup>85</sup> Most relevant studies summarized next illustrate that our bodies’ biological response to SET results in behaviors such as jitteriness and behavioral nervousness, which are often interpreted as signs of criminality and dangerousness.

Researchers in one study found that the mere anticipation of engaging in a task that elicited SET caused subjects to feel more jittery and less calm than subjects who did not anticipate a SET inducing task.<sup>86</sup> Other studies illustrate that jitteriness and other markers of behavioral nervousness following SET are not just self-reported, but are observable by others.<sup>87</sup> For example, in one study, forty participants engaged in an experimental task that elicited SET. In the experiment, these participants were videotaped, and later their behaviors were coded for behavioral nervousness, such as gestural signs of nervousness (nervous tick, self-touch) and speech-related signs of nervousness (nervous noises, nonfluent speech).<sup>88</sup> Participants who were manipulated to feel powerless in the SET experiment exhibited the strongest signs of behavioral nervousness.<sup>89</sup> That is, the behavioral nervousness that results from SET was shown to be exhibited most strongly among participants who felt powerless in the evaluative setting.

Together, there is evidence that the activation of the stress response system

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82. Robert M. Sapolsky, L. Michael Romero & Allan U. Munck, *How Do Glucocorticoids Influence Stress Responses? Integrating Permissive, Suppressive, Stimulatory, and Preparative Actions*, 21 *ENDOCRINE REV.* 55, 60 (2000).

83. *Id.*

84. Sapolsky et al., *supra* note 82, at 57.

85. *Id.* at 60.

86. Emma Childs, Lisa Marie Vicini & Harriet De Wit, *Responses to the Trier Social Stress Test (T.S.S.T) in Single Versus Grouped Participants*, 43 *PSYCHOPHYSIOLOGY* 366, 369–70 (2006).

87. Petra C. Schmid & Marianne Schmid Mast, *Power Increases Performance in a Social Evaluation Situation as a Result of Decreased Stress Responses*, 43 *EUR. J. SOC. PSYCHOL.* 201, 208 (2013).

88. *Id.* at 207.

89. *See id.* at 208.

predisposes individuals to behave nervously, that these behavioral responses are largely typical and biologically based, and that these are induced in SET settings. Even further, officers have reported using these observable markers to identify suspicious behaviors.<sup>90</sup>

### 3. *Cognitive Consequences*

The biological and behavioral consequences of stress are well- documented and well- replicated. A newer area of research focuses on the effects of SET on cognitive performance, which includes core executive functions such as memory, reaction time, and cognitive flexibility.<sup>91</sup> These executive functions are imperative to our everyday functioning and are also relevant in police-public interactions. For instance, following police instructions involves some of these cognitive processes. A police officer may ask questions about where an individual has been, or individuals may have to hold onto instructions that an officer has given them, thus requiring the individuals to engage their memory. An officer may expect an individual to respond quickly to instruction, thus requiring an individual's reaction time to be optimal. As such, although there are some inconsistencies in this new literature, it is important to highlight its potential relevance.

A recent meta-analysis illustrates that acute stress does hamper working memory and cognitive flexibility.<sup>92</sup> Other studies illustrate that cognitive impairments under acute stress extend to such functions as verbal recall and attention.<sup>93</sup> Overall, there is emerging evidence that acute stress following SET results in hampered or impaired cognitive functioning that could affect police-public encounters, making memory retrieval, attention, reaction time, and cognitive flexibility more difficult to the individual under evaluation. These cognitive consequences may, in turn, contribute additionally to officers' frustrations or increased suspicions of individuals.

#### *E. Summary and Future Directions of Social Evaluative Mechanics (SEM)*

Altogether, social psychological research demonstrates that SET consistently elicits a biological response in the human stress system that increases the likelihood of individuals engaging in behaviors and experiencing cognitive changes that

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90. See, e.g., N.Y.C. POLICE DEP'T, PD344-151A, STOP, QUESTION AND FRISK REPORT WORKSHEET (2002), <http://2015.comjour.org/files/images/articles/nypd-stop-and-frisk-uf-250.jpg> [<https://perma.cc/9L5E-MAYS>].

91. This refers to our ability to calibrate our cognitive strategies to the context in which we find ourselves. We tend to have a dominant way of thinking. Our ability to not always rely on that thinking, but to use the most effective thinking based on the demands of a certain context reflects cognitive flexibility. When stressed, we tend to revert to our old ways of thinking.

92. Grant S. Shields, Matthew A. Sazma & Andrew P. Yonelinas, *The Effects of Acute Stress on Core Executive Functions: A Meta-Analysis and Comparison with Cortisol*, 68 NEUROSCIENCE & BIOBEHAVIORAL REV. 651, 651 (2016).

93. James S. Olver et al., *Impairments of Spatial Working Memory and Attention Following Acute Psychosocial Stress*, 31 STRESS HEALTH 115, 115 (2015).

officers may identify as suspicious. This intricate and complex interplay of social context, biology, behavior, and cognition, is what we call SEM.

It is important to acknowledge some limitations of SEM-related psychological research. First, SET effects are moderated by a host of factors including gender,<sup>94</sup> age,<sup>95</sup> childhood experiences,<sup>96</sup> personality traits,<sup>97</sup> physical activity,<sup>98</sup> genetic factors,<sup>99</sup> time of day,<sup>100</sup> and even dietary intake.<sup>101</sup> It is not within the scope of this Article to summarize these moderating effects. Rather, we simply highlight that SEM offers a general model or framework to better understand police-public encounters. Furthermore, on average, most people would experience the biological, behavioral, and cognitive consequences of SET outlined above. That is not to say that any person on any given day in any given police-public interaction would experience these consequences to the exact degree and in the exact way as another. Rather, in general, SEM should be considered when attempting to understand and improve police-public encounters.

### CONCLUSION

The current state of the literature on SEM has several important implications. Several components of police officers' common practices may increase the likelihood of individuals experiencing SET, thus contributing to the facilitation of SEM, predisposing individuals to behave in ways that officers find suspicious. These practices include the use of command presence and behavioral signals from officers that denote negative evaluation (e.g., stoic and unfriendly expressions). Further, it may be beneficial to train officers to enhance their understanding that the responses to SET may appear to increase suspicion when in fact these responses are typical and predictable.

Discourse surrounding police encounters has forced a rethinking of police's

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94. Magdalena Uhart et al., *Gender Differences in Hypothalamic-Pituitary-Adrenal (HPA) Axis Reactivity*, 31 *PSYCHONEUROENDOCRINOLOGY* 642 (2006).

95. B. M. Kudielka et al., *HPA Axis Responses to Laboratory Psychosocial Stress in Healthy Elderly Adults, Younger Adults, and Children: Impact of Age and Gender*, 29 *PSYCHONEUROENDOCRINOLOGY* 83 (2004).

96. Linda L. Carpenter et al., *Effect of Childhood Physical Abuse on Cortisol Stress Response*, 214 *PSYCHOPHARMACOLOGY* 367 (2011).

97. Daniela Jezova et al., *High Trait Anxiety in Healthy Subjects is Associated with Low Neuroendocrine Activity During Psychosocial Stress*, 28 *PROGRESS NEUROPSYCHOPHARMACOLOGY & BIOLOGICAL PSYCHIATRY* 1331 (2004).

98. Jana Strahler et al., *Impact of Physical Fitness on Salivary Stress Markers in Sedentary to Low-Active Young to Middle-Aged Men*, 68 *PSYCHONEUROENDOCRINOLOGY* 14 (2016).

99. Idan Shalev et al., *BDNF Val66Met Polymorphism Is Associated with HPA Axis Reactivity to Psychological Stress Characterized by Genotype and Gender Interactions*, 34 *PSYCHONEUROENDOCRINOLOGY* 382 (2009).

100. Brigitte M. Kudielka et al., *Acute HPA Axis Responses, Heart Rate, and Mood Changes to Psychosocial Stress (TSST) in Humans at Different Times of Day*, 29 *PSYCHONEUROENDOCRINOLOGY* 983 (2004).

101. Megan Witbracht et al., *Female Breakfast Skippers Display a Disrupted Cortisol Rhythm and Elevated Blood Pressure*, 140 *PHYSIOLOGY & BEHAV.* 215 (2015).

role in society and the way in which police officers interact with the public. Importantly, this rethinking is not only occurring at the grassroots level in movements like Black Lives Matter, but is also reverberating throughout the academic literature. Numerous psychological processes, some of which are described above, prior to and during an interaction between a police officer and the public have been proposed to alter the perception and/or behavior of both individuals. From implicit bias to racial anxiety to stereotype threat, social scientists and legal scholars have collaborated to develop an understanding of the psychological processes that motivate specific behaviors. Moreover, these collaborations have led to the development of our collective academic conceptualization with an aim to reduce the probability that an interaction leads to violence and increase the likelihood that an observed behavior is perceived more accurately. We encourage legal scholars to consider SEM in this context of police-public encounters, and to collaborate with psychologists to investigate the role of SET in police-public encounters.