

INTRODUCTION

- The Fourth Amendment to the United States Constitution guarantees protection from unreasonable searches and seizures. One Fourth Amendment issue is the Terry stop, which is a brief detention of a suspicious individual based on reasonable suspicion (Terry v. Ohio, 1968). If during the stop the officer has reasonable suspicion that the individual is armed and dangerous, they can also complete a pat down check for weapons (hence the term stop and frisk). Officers use many factors to support reasonable suspicion, including suspect movements, but it is not clear if such factors should be considered. If an individual makes an irregular movement, looks back and forth, or does something the officer thinks is suspicious (i.e., furtive movements), does that truly indicate that crime is afoot? What if the individual simply puts more distance between themselves and the officer; does that mean they are guilty? What if the individual runs away from the police (i.e., headlong flight); does that mean they are guilty? If suspect behavior, such as furtive movements, distance, or headlong flight, are not partially caused by guilt, then use of such information in search and seizure could be considered unreasonable. Therefore, the subsequent search and seizure of the suspect would be considered a violation of their Fourth Amendment rights. To date, few studies have investigated this question.

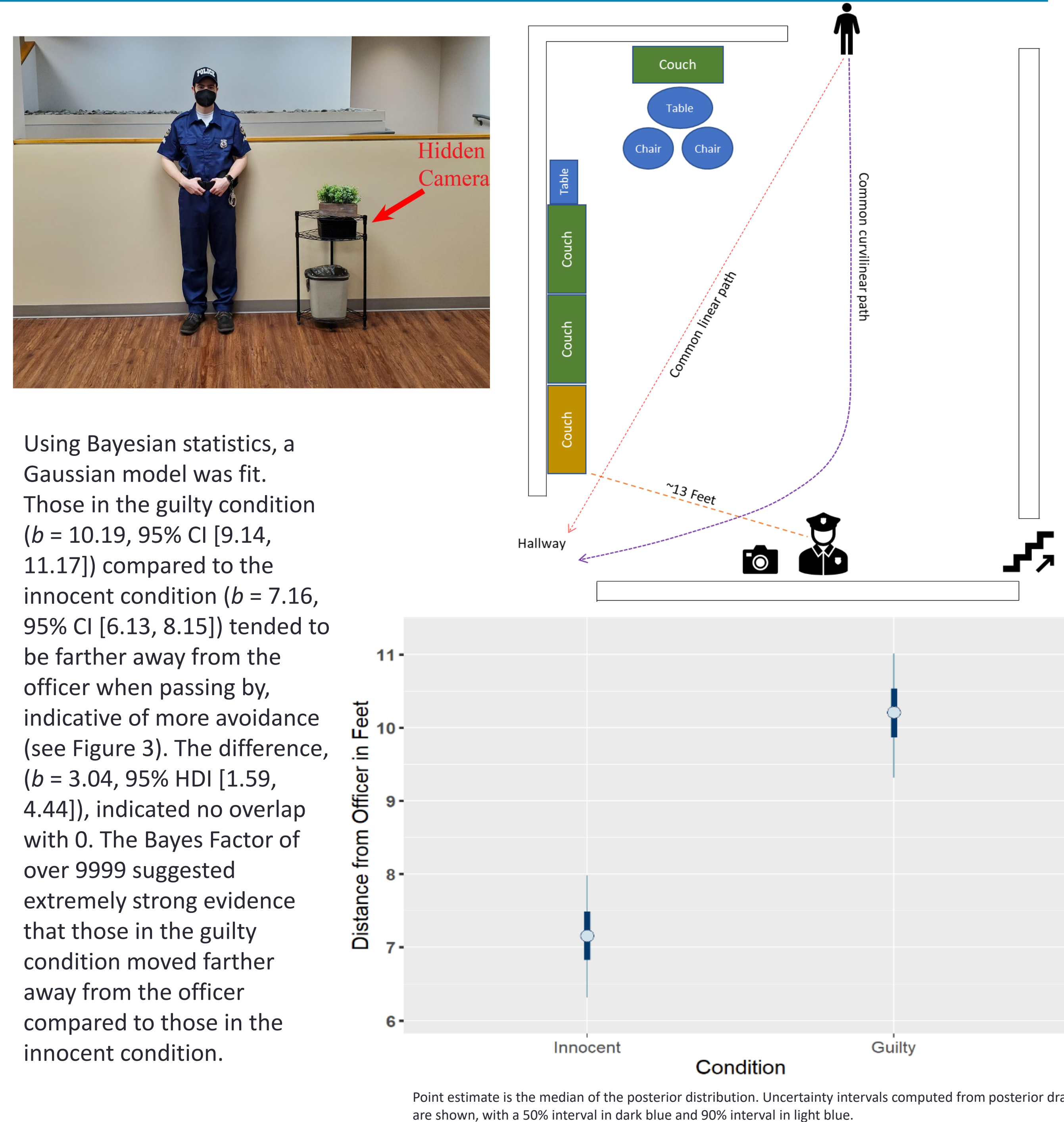
CURRENT RESEARCH

- The purpose of the current research was to test the guilt-avoidance relationship and methodologically improve the existing research across two studies. In Study 1, the focus was on realism: a contextually relevant guilt manipulation and real-world avoidance measure were used. However, in Study 1, it was not practical to manipulate the presence/absence of a police officer, and the sample size was small. In Study 2, in addition to manipulating guilt/innocence, the presence/absence of a police officer was manipulated, and a much larger sample was collected online through Prolific Academic.

METHOD – STUDY 1

- Participants and Design**
- The design was between subjects experimental. Participants consisted of 20 students from a northeastern university (65% female; $M_{age} = 18.60$, $SD_{age} = 0.68$). Participants were recruited through Student Research Participation (Sona) and given course credit as compensation as well as a \$10 Starbucks gift card.
- Manipulation** - Participants were told the study was about spatial navigation and role playing. They were told that they would take on a role and leave the room to engage in a task. All participants left the main study room, went to an adjacent room with a backpack in it, took something from the backpack, went downstairs, through the main lobby, where a fake police officer stood, through a hallway, and then ended up in another room to the left of the hallway. A hidden camera captured participants as they passed through the lobby, with each participant taking ~5 seconds.
- Guilty Condition.** Participants in the guilty condition were told to take on the role of a criminal in a mock crime by dealing drugs. They were told to act as a drug messenger, taking the drugs from the stash location to the dealing location. When participants went to the room with a backpack, they opened the main zipper compartment and found 60 small clear plastic bags, each filled with pills that participants were told were ecstasy (actually small sacharine). Participants took one of the drug bags to their accomplice on another floor in the building.
- Innocent Condition.** Participants in the innocent condition were told to take on the role of a health care messenger. They were told that there was a health care event giving out free vitamins, but a bag for the vitamins was missing, so they needed to bring one empty bag to the person running the event. When participants in the innocent condition went to the backpack, the empty bags were on the side, in the water bottle holder. Participants in the innocent condition took the empty bag to the same place as in the guilty condition.
- Physical Distance/Avoidance Outcome**
- Participants could take an infinite number of paths, but they always had to proceed between the officer and the adjacent wall/furniture. A reference video was created with a model and a tape measurer across the floor from the couch to the officer (~13 feet), in order to compare to each participant's video. When each participant was examined, an imaginary line was drawn down their center and onto the floor and the distance to the officer was coded. Using the interposition of the objects around participants, the natural pattern and color variations in the flooring, and the reference video with the known distance, it was possible to approximate their location (see image and figures above).

RESULTS – STUDY 1



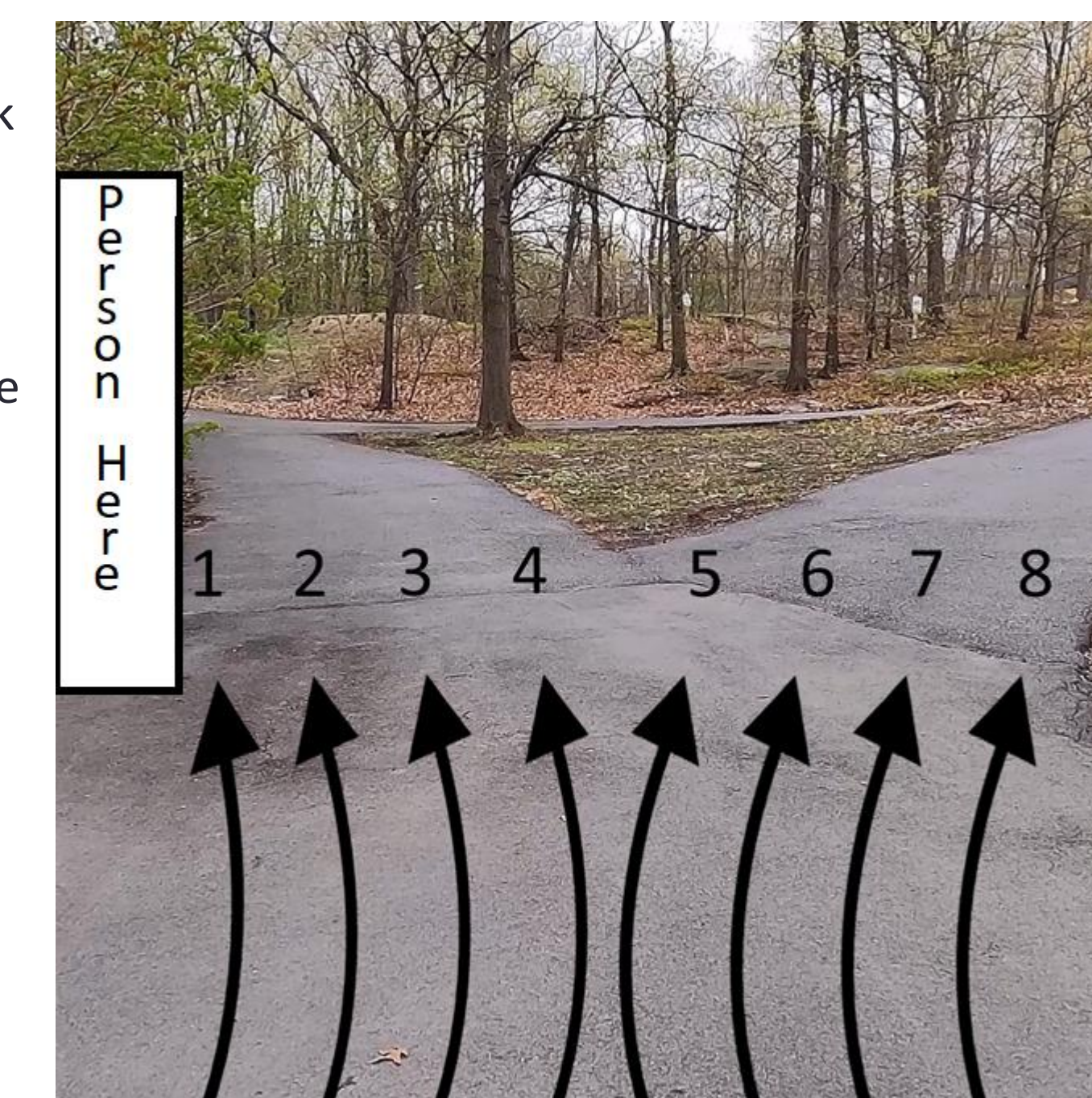
- Using Bayesian statistics, a Gaussian model was fit. Those in the guilty condition ($b = 10.19$, 95% CI [9.14, 11.17]) compared to the innocent condition ($b = 7.16$, 95% CI [6.13, 8.15]) tended to be farther away from the officer when passing by, indicative of more avoidance (see Figure 3). The difference, ($b = 3.04$, 95% HDI [1.59, 4.44]), indicated no overlap with 0. The Bayes Factor of over 9999 suggested extremely strong evidence that those in the guilty condition moved farther away from the officer compared to those in the innocent condition.

METHOD – STUDY 2

- Participants and Design**
- The study design was a 2 (guilt: burglary or lost phone video) x 3 (police presence: police officer, plain clothes, or no person present) between-subjects factorial. Participants were 350 individuals recruited through Prolific Academic (55% male; $M_{age} = 43$, $SD_{age} = 12.90$).
- Guilt Manipulation** - Participants were randomly assigned to the guilty or innocent condition, where they watched a video in first-person perspective. In the videos, the person who was recording the video wore neutral clothes to facilitate participants taking that perspective.
- Guilty Condition.** Participants in the guilty condition imagined themselves as a burglar and watched a video showing an individual breaking into a house with a lock pick. That individual navigates the house stealing items. After loudly knocking over a cup in one of the rooms, the person runs outside.
- Innocent Condition.** Participants in the innocent condition imagined themselves as someone trying to find their phone and watched a video of the individual navigating the same house as in the guilty condition, except no items are stolen.
- Officer Presence Manipulation**
- The next part of the video manipulated the presence of the officer. In the control condition, there is no person present. In the officer condition, the video shows a person dressed as a police officer. The same uniform and accessories that the individual used in Study 1 were also used in Study 2, and the individual wore on their right side a gun holster with a 9mm Glock 47 handgun. In the plain clothes person condition, the same individual is present, but wearing blue jeans and a green and brown hooded jacket.
- Path Decision Outcome**
- After viewing one of the three police presence condition videos, participants advanced to a new page with a screenshot of the paths. On this screenshot, are several paths indicated by arrows and numbers and participants had to select the path they decided to go (see image above).

RESULTS – STUDY 2

- To analyze the effects of the conditions on path choice, an ordinal regression model with a logit link function was fit. A simple effects model was used.
- We tested the contrast of the difference between the innocent-plain clothes condition and innocent-police officer condition, compared to the difference between the guilty-plain clothes condition and guilty-police officer, finding no evidence for an effect (-0.22 , $SE = 0.55$, $Z = -0.40$, $p = .69$). In other words, the difference between the two person-present conditions (police vs. plain clothes) was similar for guilty and innocent individuals.
- Next, we tested the contrast of the difference between the innocent-no person condition and innocent-police officer condition, compared to the difference between the guilty-no person condition and guilty-police officer, and found a small but not significant effect (0.96 , $SE = 0.55$, $Z = 1.73$, $p = .08$).



- We also explored a possible interaction between the conditions and participant race, accounting for the effect of delinquency. Specifically, we compared innocent-White to innocent-Black individuals seeing a police officer and found a small but not significant difference (-1.14 , $SE = 1.04$, $Z = -1.10$, $p = .27$). We also compared guilty-White to guilty-Black individuals seeing a police officer, and found a moderate and significant difference (-2.24 , $SE = 0.72$, $Z = -3.14$, $p = .002$). Thus, when individuals were guilty and viewed a police officer, Black participants chose paths further away from the police officer compared to White participants. However, it is worth noting that innocent-Black individuals (6.92) chose slightly further or similar paths compared to guilty-Black individuals (6.52).

DISCUSSION

- Study 1 focused on realism and did find some evidence to support the Court's view; however, Study 2 did not find evidence consistent with the Court's view. While being guilty did appear to influence the paths people chose, it was not always in the direction away from the officer. Furthermore, the effects with the police officer were similar to the effects with the same person dressed in plain clothes, suggesting that it is more about movement when another person is present, rather than something unique about the presence of an officer. Given the different findings in Study 1 and 2, there are also likely many contextual factors that are influencing people's movement/navigation decisions. It is possible that in some contexts, guilty individuals will move away from an officer; however, what those specific contexts are remains unclear. Moreover, given the effects of race observed in Study 2, we recommend rethinking the use of suspect movement as justification for reasonable suspicion. There is a paucity of research in this area and further studies must be conducted before stronger recommendations can be made.

