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Author
Charbonneau, Amanda Kathleen

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The Law and Psychology of Suspicion and Police Decision-Making

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Amanda K. Charbonneau

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Committee in charge:

Professor Jack Glaser, Chair
Professor Robert MacCoun
Professor Victoria Plaut
Professor Avani Mehta Sood

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Abstract

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Amanda K. Charbonneau

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University of California, Berkeley

Professor Jack Glaser, Chair

Police officers decide to detain and search civilians under uncertainty and risk, and both false positive and false negative errors can be costly. The courts apply the *reasonable suspicion* standard of proof to evaluate the constitutionality of nonconsensual stops and searches, placing an ambiguous and subjective assessment of a poorly understood psychological state at the center of laws, policies, and trainings on police-civilian contact. The law and psychology of suspicion may have important effects on the frequency, accuracy, and reporting of policing decisions. Investigating those effects requires an understanding of the policy landscape of police decision-making and the basic psychology of suspicion.

In this dissertation, I explore suspicion as a legal concept and as a psychological experience. I describe the role of the reasonable suspicion standard in judicial evaluations of the constitutionality of police practices, and the implications for the guidelines and trainings that agencies provide to officers. I contend that legal and quantitative analyses of policing practices should incorporate an understanding of the psychology of individual decision-making and the incentives created by the regulatory environment. The constitutional analysis assumes that civilian behavior, situational circumstances, and prior knowledge all affect an officer's experience of suspicion and subsequent actions. Very little is known, however, about the basic psychology of suspicion and how it might affect judgment and decision-making.

I investigate the psychological properties and covariates of interpersonal suspicion as reported by lay participants in a series of studies, establishing a baseline to which I will compare the effects of training and professional experience in future research. Using latent variable models and automated text analyses, I find that during experiences of interpersonal suspicion of a stranger, people tend to question the stranger's intentions and experience intuition, attentiveness, and wariness. In these situations, distrust is more closely associated with emotional arousal than interpersonal suspicion. On average, female participants report slightly higher situational interpersonal suspicion relative to male participants, and participants who identify as Black or African American report lower suspicion relative to those who identify as White, Latino, or Hispanic.

Relative to participants, the people who are targets of situational suspicion are more often

described as male, Black, and Latino. On average, participants report a similar degree of suspicion across perceived target gender and racial categories, but there are significant differences among the associated emotions, inferences, and behavioral responses. Participants describing male and Black targets report experiencing greater fear and believing that the target's behavior was dangerous. Participants describing male targets are more likely to report inferring that the target's behavior was criminal, relative to participants describing female targets.

The dispositional tendency toward interpersonal suspicion is associated with neuroticism and low agreeableness in two samples of university students, and these findings are insensitive to variations in measurement instruments. In a simulation where university students take on the role of a police officer and report their suspicion in response to either Black or White male targets, I find that aggregate measures of dispositional interpersonal suspicion are uncorrelated with ratings of situational suspicion in response to the stimuli, which do not differ significantly by race of the target. An exploratory analysis suggests that dispositional suspicion, as measured by a single item, is associated with higher ratings of situational suspicion in response to White targets only.

My findings suggest that during experiences of interpersonal suspicion of strangers, people tend to question the stranger's intentions and experience intuition, attentiveness, and wariness, and that the type of cognitive arousal associated with suspicion may be context-specific. In the concluding discussion, I also identify findings that could be particularly relevant in the legal context, including the salience of intuition in experiences of suspicion and the variation associated with target race in the correlates of suspicion. I aim to advance the current understanding of suspicion and establish a foundation for future research on its role in legal decision-making.

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Chapter 1. Police Decision-Making

"Suspicion" is an important concept in law enforcement policies and practices, yet it is only vaguely defined in legal decisions and psychological research. This dissertation investigates the law and basic psychology of suspicion. In this introductory chapter, I begin with an overview of officer-initiated encounters with civilians and the challenges associated with studying these decisions. Next, I describe the legal regulation of searches and seizures conducted by police officers, with an emphasis on the development and application of the *reasonable suspicion* standard. I conclude the first chapter by addressing the intersection of regulatory incentives, agency-level policies, and individual decision making, and also discuss the potential for research on the psychology of suspicion to inform policing policies and practices. In the second chapter, I summarize the literature on suspicion and several related constructs. I then investigate the properties and covariates of suspicion in a series of studies, with an emphasis on situational and dispositional suspicion of strangers. In the third chapter, I conclude by connecting my findings to the existing literature and to legal decision making, and outlining future research.

Police-Civilian Encounters

When police officers decide to initiate an encounter with a civilian, they do so under time constraints and with incomplete information about the situation, including whether the person poses a risk. In the broadest of terms, these conditions resemble those faced by medical professionals, who also make complex decisions under uncertainty, risk, and time constraints. In medicine, an emphasis on "evidence-based" practice has led to the proliferation of clinical practice guidelines and checklists designed to improve practitioner decision-making (Audet, Greenfield, & Field, 1990). Despite inherent limitations and early resistance, many of these tools have greatly improved patient outcomes and are now widely valued by medical professionals.

Although the state of the evidence and constraints in policing are vastly different from those of the medical field, researchers and practitioners have adopted analogous approaches in policing (Lum, Koper, & Telep, 2011). Rapidly expanding data collection and research efforts, as well as the introduction of new technologies, are already changing the way officers make decisions. The development of tools to assist or improve police decision-making must be grounded in the context of the practical realities and policy landscape of law enforcement, and informed by the psychology of judgment and decision-making in interpersonal situations.

Incidents involving force understandably receive a great deal of attention, but officers' daily decisions to detain and search civilians are far greater in number and have important consequences. The Bureau of Justice Statistics (Langton & Durose, 2013) reported that 30.9 million people had at least one involuntary encounter with a police officer in 2011. Moreover, Bar-Gill and Friedman (2012) estimated that local police officers conduct 8 million searches per year, which does not include consensual searches, searches of workplaces and homes, or searches conducted by federal agents.

Justice Antonin Scalia (*Navarette v. California*, 2014) and others (*Floyd v. City of New York*, 2013; Goel, Rao, & Shroff, 2016; Knowles, Persico, & Todd, 2001) have suggested using yield rates (i.e., the proportion of stops that lead to an arrest, or discovery of an illegal weapon or other contraband) and related analyses to evaluate whether stops and searches are "reasonable" in the aggregate. Many departments do not, however, collect enough data to provide an accurate count of stops, nor the outcomes of police-civilian encounters.

When departments do collect sufficient data, published analyses suggest that yield rates are quite low, especially when a department prioritizes "stop-and-frisk" tactics (Center for Policing Equity [CPE], 2016; Goel et al., 2016; Jones-Brown, Gill, & Trone, 2010). Goel, Rao, and Shroff (2016) found that the yield rate among criminal possession of weapon (CPW) stops in New York City increased from roughly 3% to 11% after a precipitous decline in the total number of stops, suggesting the possibility of increasing the specificity (the true negative rate) of stop decisions. However, the absolute number of weapons discovered decreased by roughly half, suggesting that sensitivity (i.e., the true positive rate) of stop decisions decreased. These interpretations of the increased yield rate assume that the increase cannot be attributed to changes in the number of illegal weapons or opportunities for officers to detect weapons.

Although there are costs associated with both false positive errors (stopping someone who should not be stopped, or "false alarms" in the signal detection framework) and false negative errors (failing to stop someone who should be stopped, or "misses"), the relative value is debatable and it is nearly impossible to quantify false negatives that are truly attributable to officers' errors (Macmillan, 2002). Concerns about these costs are not mutually exclusive: An individual citizen or law enforcement leader is likely to be concerned about both undetected criminal activity and unnecessary searches and seizures. Additionally, under an assumption of resource constraints, false positive errors can occupy officers and cause "misses."

Public scrutiny and department-led efforts to reduce the number of errors (e.g., Ferguson, 2012; Walsh, 2001) reflect a societal investment in improving the sensitivity, specificity, and equity of policing decisions. The adoption of data-driven policing strategies (Ferguson, 2012) along with recent efforts to increase and improve stop data collection (CA OAG, 2016; CPE, 2015) will likely increase the feasibility of such analyses, and it will therefore be essential to understand potential determinants of the observed patterns. Increasing the sensitivity and specificity of stops and searches would require, at minimum, an understanding of the cues that inform officers' judgments and decisions about the civilians they encounter.

Based on models of NYPD CPW stop data, Goel et al. (2016) developed a decision rule using three cues (suspicious object, sights/sounds of criminal activity, and suspicious bulge) and a precinct-specific threshold. Their models predict that the application of the decision rule would lead to recovering half of the weapons by conducting only 8% of the stops. This finding suggests that it would be possible to develop relatively narrow and practicable criteria that hone or partially replace an officer's default decision-strategy to improve accuracy, although there are several reasons to be cautious about applying these findings directly to policing practices. First, officers do not record data on their decisions *not* to stop civilians. Second, legal or professional incentives could distort the information NYPD officers report; there is some evidence that officers over-report court-sanctioned reasons for stops (Fagan & Geller, 2015). Finally, practical application of the decision rule developed by Goel et al. (2016) would require the assumption that the data recorded by an officer *after* the completion of an encounter accurately reflects his or her knowledge before deciding whether to stop a civilian.

Some challenges associated with relying on post-stop data collection may be eliminated when researchers accompany patrolling officers and record their verbal descriptions of judgments and decisions as they occur. In the context of discretionary decisions to initiate encounters, several field observation studies have examined the antecedents of suspicion and stop decisions (Johnson & Morgan, 2013). Two frequently reported cues include (a) civilian behavior that suggests violation of a law, and (b) the officer's knowledge about a person's previous involvement in criminal activity (Alpert, MacDonald, & Dunham, 2005; Dunham,

Alpert, Stroshine, & Bennett, 2005; Stroshine, Alpert, & Dunham, 2008; Vito & Walsh, 2008). In field observations and interviews of officers in Savannah, Georgia, Dunham et al. (2005) separated the "formation of suspicion" from stop decisions, finding that officers conducted stops in 60% of the situations in which they reported suspicion.

Field studies provide valuable insight into officers' judgments as they occur and as officers articulate them; however, this research shares important limitations with analyses of data collected by officers after the encounter. First, it is likely officers will have only limited conscious insight into the cues that inform their judgments (Karelaia & Hogarth, 2008; Nisbett & Wilson, 1977), which could make it impossible for officers to provide a complete and accurate description of their own decision-making process, even while they are making decisions. Second, regardless of whether officers record their decisions after a stop or describe them to a researcher, the information may be influenced by their own perceptions of their professional responsibilities, which will be partially informed by external demands (e.g., supervisors' expectations, departmental priorities and policies, or regulatory requirements).

Analyses of data collected by officers in the field and during ethnographic interviews provide invaluable information about policing, but it should not be assumed that these data provide a complete and accurate representation of the decision-making process. In a research setting, it is logical to connect the reasons for stop and search decisions, as reported by officers, to the outcomes of those decisions (e.g., discovery of contraband). It could be problematic, however, to translate these descriptive models into policies or trainings that instruct officers to rely on specific cues or heuristics derived from incomplete or inaccurate descriptions of decisions.

There are many variables and complex interactions that may be challenging to observe in stop and search decisions. For example, Fourth Amendment protections against unreasonable searches and seizures may constrain the choices available to an officer, but only if the officer is informed about the legal constraint and perceives the cost of a violation (i.e., suppression of evidence in criminal proceedings) to be greater than the benefits. An officer who learns from departmental policies (or a supervisor) that stops and searches in "high crime neighborhoods" are more easily justified in criminal proceedings might adjust his or her threshold and begin making more stops in a particular neighborhood or decide to routinely include a designation of "high crime" as a justification on stop data collection forms. A civilian who is unaware of or does not expect to be protected by the Fourth Amendment might adjust his or her behavior in response to the officer's presence, which could in turn affect the officer's judgment and behavior.

Any number of personal, professional, and legal motives and incentives could influence an officer's decision to initiate an encounter with a civilian. As more departments collect, analyze, and make available their data on civilian stops (e.g., CPE, 2015; M. Smith & Austin, 2015), it is important to understand those data in the context of legal standards, agency-level priorities and trainings, and the psychology of individual decision-making. In the next section, I explore the legal regulation, based on the Fourth Amendment, of searches and seizures conducted by police officers.

The Fourth Amendment and Policing

The Supreme Court regulates policing practices by deciding when and how to apply constitutional protections, which include, for example, those which guard against "unreasonable" governmental intrusions on individual privacy as described by the Fourth Amendment:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. (U.S. Const. amend. IV)

The original purpose of this language was to protect colonists from broadly constructed warrants that allowed British agents to search any property and interrogate any person.

Initially, the Supreme Court only applied Fourth Amendment protections to searches and seizures conducted by individuals with federal authority (see, e.g., *Weeks v. United States*, 1914). In *Weeks*, the Supreme Court decided that evidence obtained during an unlawful search or seizure should not be considered during criminal proceedings. The Court later extended this application of the *exclusionary rule* to the state courts (*Mapp v. Ohio*, 1961). In this section, I provide a brief overview of the legal regulation of policing practices based on the Fourth Amendment, with an emphasis on the reasonable suspicion standard.

Fourth Amendment Requirements and Exceptions

Prior to the 1960's, the Supreme Court evaluated searches and seizures by starting with the assumption that they are unreasonable when conducted in the absence of a warrant issued by a judge. The justices believed that an officer's role in investigating crime would bias his or her assessment of whether "probable cause" exists (*Johnson v. United States*, 1948). The warrant process requires a government agent to state the facts amounting to probable cause *before* conducting a search, precluding the inclusion of facts learned *during* the search in the determination of whether it was conducted lawfully. Warrants also restrict the scope of a search, requiring "reasonable particularity" with respect to the reason and nature of the search (*Maryland v. Garrison*, 1987; *United States v. Leon*, 1984).

Irrespective of the warrant requirement, searches generally must meet the *probable cause* standard of proof (see, e.g., *Illinois v. Gates*, 1983). The courts define standards of proof relative to one another and in broad terms. Proof *beyond a reasonable doubt*, where any existing doubt would not affect a reasonable person's belief that a defendant is guilty, is required for a criminal conviction (see, e.g., *Miles v. United States,* 1880). A *preponderance of the evidence* is required in civil courts and requires enough evidence to indicate that the individual is more likely to be guilty (or otherwise liable) than not (see, e.g., *Miller v. Minister of Pensions)*; this standard is often therefore described as requiring a greater than 50% likelihood of guilt. The Court set a lower threshold of "a fair probability" for the probable cause standard based on its reasoning that a higher threshold would restrict the state's ability to investigate crime (see, e.g., *Brodnicki v. City of Omaha*, 1996; *Illinois v. Gates*, 1983).

In assessing a search or seizure against the probable cause standard, the courts rely on a *totality of the circumstances* analysis, considering all facts and the situational context (see, e.g., *Brinegar v. United States,* 1949). Judges frequently defer to the individual or collective expertise of officers and allow for officers to make mistakes regarding the facts or the law. The probable cause threshold and analysis reflect the Court's effort to balance the state's interest (investigating

crime, in this case) and individual liberties, which represents a recurring theme of Fourth Amendment jurisprudence.

Despite its baseline assumption that a search or seizure is unreasonable in the absence of a warrant based on probable cause, the Supreme Court has created several exceptions to one or both requirements. Exceptions to the warrant requirement that still require probable cause include: arrests made in public (e.g., *United States v. Watson*, 1976); objects seized while in plain view (*US v. Weatherspoon*, 2005); searches of vehicles (*Carroll v. United States*, 1925); and situations where it is impracticable to obtain a warrant due to exigent circumstances, including imminent risk to the officer or public safety (e.g., *Brigham City v. Stuart*, 2006). Exceptions to both the warrant *and* the probable cause requirement include: administrative searches (e.g., *Camara v. Municipal Court of City and County of San Francisco*, 1967); searches conducted incident to a legal arrest (e.g., *United States v. Robinson*, 1973); searches conducted under voluntary consent (*Schneckloth v. Bustamonte*, 1973); pretextual searches and seizures (*Whren v. United States*, 1996);[1] and limited seizures and searches for weapons, commonly referred to as "stop and frisk" practices (*Terry v. Ohio*, 1968).

In several exception categories, the Court bases its decisions on an analysis of whether the search or seizure in question is "reasonable" instead of beginning from the assumption that it is unreasonable in the absence of a warrant and probable cause. In *Camara*, the Court determined that systematic building inspections would not meet the probable cause standard because they were conducted in the absence of a "fair probability" of a code violation. The justices decided "first to focus upon the governmental interest which allegedly justifies official intrusion upon the constitutionally protected interests of the private citizen," finding "no ready test for determining reasonableness other than by balancing the need to search against the invasion which the search entails" (*Camara v. Municipal Court of City and County of San Francisco*, 1967). Considering the state's interest in building safety, the scope of the inspections, and individual rights to privacy, the Court held that the probable cause standard would inappropriately favor individual liberties. While the Court also took a balancing approach in its earlier determinations of probable cause, the *Camara* decision signaled an important shift away from the presumption of unreasonableness in the absence of a warrant.

The Reasonable Suspicion Standard

In the year following *Camara*, the Court applied a similar analysis in its review of police search and seizure practices in *Terry v. Ohio* (1968). The Court considered whether Officer McFadden acted within constitutional limits when he followed and confronted three men, "spun Terry around and patted his breast pocket" and confiscated a gun, and conducted a "frisk" of the other two men (one of whom was also carrying a gun). The officer took these actions after observing the men walking up and down a street and peering into a store window repeatedly; he thought that the men were "casing" the store and might be armed. The trial judge denied Terry's motion to suppress the gun discovered by Officer McFadden, basing his decision on New York's 1964 "stop-and-frisk" statute (N.Y. Code Crim. Proc. § 180-a), which permitted an officer to stop anyone "he reasonably suspects is committing, has committed, or is about to commit a felony" or a specified set of other crimes. When an officer "reasonably suspects that he is in

[1] Many of these searches and seizures are conducted based on probable cause for the pretext offense, but I include them in the list of exceptions to both the warrant and probable cause requirements because they are also permitted in the context of valid stops based on reasonable suspicion.

danger" after stopping an individual, the statute also permits the officer to search the person for a dangerous weapon (N.Y. Code Crim. Proc. § 180-a). The Supreme Court chose to review the specific case under the Fourth Amendment and exclusionary rule despite the general permission granted to officers by the state statute.

The Court determined that Terry was "seized" by the officer because he was not free to walk away and that the "careful exploration of the outer surfaces of a person's clothing" constituted a search and a "serious intrusion." The fact that Officer McFadden's actions did not initially include an arrest nor a full search did not preclude a Fourth Amendment analysis. However, the Court decided that the warrant clause did not apply because it would be impracticable to obtain a warrant in situations requiring "swift action." Even though the Court has applied the probable cause standard in other exceptions to the warrant clause (e.g., public arrests), it did not do so in *Terry*, choosing instead to assess the "reasonableness" of Officer McFadden's actions by "balancing the need to search [or seize] against the invasion which the search [or seizure] entails" (*Camara v. Municipal Court of City and County of San Francisco*, 1967 as cited in *Terry v. Ohio*, 1968).

The Court considered the reasonableness of the seizure (stop) and search separately in *Terry*—the stop was justified based on the state's interest in preventing crime, which was legitimate under a totality of the circumstances assessment of the officer's observations of the three suspects and, to a lesser degree, the officer's expertise. Terry argued that the search required probable cause, but the justices permitted a limited search, justified by the immediate need to protect the officer's safety as an exigent circumstance. Officer McFadden's "perfectly reasonable apprehension of danger" legitimated the state interest in protecting his safety, and the Court found that scope of the search was narrowly constrained to that purpose.

Two other "stop and frisk" decisions in the same year as *Terry* followed similar reasoning. The Court declared a frisk unreasonable in *Sibron v. New York* (1968) because the officer did not fear for his safety and conducted the search to find narcotics. In *Peters v. New York* (1968), the frisk was justified because the officer had probable cause to arrest the suspect, which provided the officer with the authority to search, and he only searched for weapons.

The *Camara* balancing test and its application to the stop-and-frisk cases marks an important analytical shift in Fourth Amendment jurisprudence that the Court also applied to border searches (*United States v. Ramsey*, 1977) and checkpoints (*Michigan Dept. of State Police v. Sitz*, 1990; *United States v. Martinez-Fuerte*, 1976). Instead of beginning from a presumption of unreasonableness in the absence of a warrant, the Supreme Court began assessing the reasonableness of a government need and the scope of the intrusion. The substantive outcomes were not novel; the Court articulated several exceptions to the warrant and probable cause requirements before these cases. Nevertheless, the analytic framework and the standard of proof, which came to be known as "reasonable suspicion," have been central to the legal regulation of policing practices since *Terry*.

Post-*Terry* decisions place police-civilian contact into one of three categories: Encounters that are not seizures and therefore are not subject to Fourth Amendment protections, limited stops and searches that require reasonable suspicion, and arrests with incident searches that require probable cause. Generally, a stop becomes an arrest when a suspect is forced to move to a custodial area (*Florida v. Royer*, 1983). "Stops" are distinguished from "encounters" (triggering Fourth Amendment protections) by an assessment of whether a reasonable person would feel free to leave or ignore an officer's questions (*United States v. Mendenhall*, 1980), yet the Court has acknowledged that most people do not, in fact, feel they are free to leave after an

officer makes a request (*INS v. Delgado*, 1984). A pursuit does not become a seizure until the civilian submits, and an encounter automatically becomes a seizure when the officer touches the person (*California v. Hodari D.*, 1991). A "frisk" incident to a stop requires reasonable suspicion that a person may be armed and dangerous, as articulated in *Terry*, and cannot be conducted only to obtain evidence. Subsequent cases established an automatic right to frisk based on reasonable suspicion of a violent crime (*Adams v. Williams*, 1972) or distribution of drugs on a large scale (*US v. Brown*, 1992). Finally, any encounter or search conducted with the civilian's consent does not trigger Fourth Amendment protections (*Schneckloth v. Bustamonte*, 1973). Under these definitions of police-civilian contact, a large subset of policing practices is subject to the "reasonable suspicion" standard of proof.

The *reasonable suspicion* standard and analysis is similar to that of probable cause and differs primarily in the degree of proof required. The courts have struggled to define both standards. Probable cause requires a "fair probability" of an individual's guilt, which is less than "more likely than not" (or greater than 50%), to meet the preponderance of the evidence threshold. Reasonable suspicion requires more proof than a "hunch" or "unparticularized suspicion," but less than the amount that would meet the probable cause threshold, and the Court has avoided quantifying either standard (*Terry v. Ohio*, 1968; *United States v. Cortez*, 1980).[2] The analytic approach for reasonable suspicion is similar to probable cause: The Court assesses the totality of the circumstances, tends to defer to officer expertise, and allows for reasonable mistakes.

Although determinations of reasonable suspicion are idiosyncratic, post-*Terry* decisions have expanded the criteria that contribute to meeting the threshold. The courts have permitted stops where the individual matched a description of a suspected criminal (*United States v. Hensley*, 1985), appeared to be unfamiliar with a car, gave implausible responses to an officer's questions (*US v. Lanford*, 1988), or took evasive action beyond walking away from an officer (*US v. Davis*, 1996). Also, several general criteria have contributed to meeting the reasonable suspicion standard, including the time of day, location (e.g., a high-crime neighborhood) (*US v. Garrett*, 1992), and a suspect's known criminal record (*United States v. Barnes, 1985*), but the courts have allowed these criteria only in combination with other factors. In *Illinois v. Wardlow* (2000), the Supreme Court decided that unprovoked flight in a high-crime neighborhood meets the reasonable suspicion threshold.

A "frisk" requires reasonable suspicion that a person is armed and dangerous, and must be justified separately from the stop unless the stop is based on reasonable suspicion of a violent crime or drug distribution. An officer may remove and examine an object that might be a weapon (*United States v. Quarles, 1992*) or an object that might contain a weapon (*Michigan v. Long*, 1983), but can only remove a soft object if its presence combined with other facts meets the probable cause threshold (*US v. Salazar*, 1991). Vehicle searches (*Michigan v. Long*, 1983) and areas within reach of the suspect (*US v. Johnson*, 1991) are also permitted based on reasonable suspicion that they contain weapons that would pose a threat to officer safety after the person is released. The scope of a search based on reasonable suspicion must be limited to uncovering weapons, and cannot be used independently to look for other evidence.

Although the Court limited the investigatory power of searches conducted under reasonable suspicion, the decision in *Whren v. US* (1996) granted a significant exception to those

[2] However, in *US v Winsor* (1988) the 9th Circuit Court of Appeals suggested that a one-in-forty chance of finding suspects in a hotel room did not meet the probable cause threshold but would be enough to establish reasonable suspicion.

limits. Officers are permitted to conduct a full search incident to a legal arrest and *Atwater v. City of Lago Vista* (2001) granted arrest power for minor traffic offenses. The *Whren* decision permitted the admission of evidence collected by officers who used a minor traffic violation as a pretext to investigate a potentially more serious crime. The justices reasoned that the officers had probable cause for the traffic violation and that the search was therefore lawful, irrespective of the officer's intentions. The Supreme Court has stated explicitly in other cases that it would not incorporate an officer's intent or motive in its "reasonableness" analysis (see, e.g., Graham v. Connor, 1989 applying the reasonableness analysis to police use of force; Scott v. United States, 1978). However, the Court considered officers' motives in conducting a frisk in *Terry* and *Sibron*, holding that, under reasonable suspicion that the subject is armed, an officer can search for a weapon but cannot intentionally search for other evidence.

The justices agreed with Whren's argument that their decision may allow officers to stop motorists based on race, but asserted that intentional discrimination should be challenged under the Equal Protection Clause rather than the Fourth Amendment. *Whren's* discussion of discriminatory policing is not unique among Fourth Amendment decisions; describing the exclusionary rule's limitations, *Terry* stated: "The wholesale harassment by certain elements of the police community, of which minority groups, particularly Negroes, frequently complain will not be stopped by the exclusion of any evidence from any criminal trial" (*Terry v. Ohio*, 1968). Thus, The Court chose not to address the issue of racially biased policing in its assessment of Fourth Amendment cases. As several scholars have pointed out (e.g., Fagan, 2016), the *Terry* decision must be considered within its social context. It marked a period of intense civil rights struggles characterized by police brutality as well as increases in violent crime and drug addiction. It is possible that these factors influenced the *Terry* Court's application of the *Camara* balancing approach regarding the state's interests in investigating crime and protecting officer safety.

The Limitations of Judicial Regulation of Police Practices

The *Terry* doctrine has been criticized for subjecting policing practices to a vaguely defined and permissive standard of proof. Practitioners (Rutledge, 2011) and legal scholars (Harper, 1988; C. S. Lerner, 2006; Richardson, 2012) have argued the definition of reasonable suspicion is too vague to be of practical import, and the Supreme Court itself has acknowledged that the standard lacks a precise legal definition (see, e.g., *Ornelas v. United States*, 1996). Lerner (2006) argued that there is no functional distinction between "mere hunches" and "reasonable suspicion," despite the Supreme Court's insistence in *Terry* that the latter requires greater certainty and specificity.

Related in part to a lack of clarity, *Terry* and subsequent cases have also been criticized for exacerbating racial disparities. The courts explicitly exclude officers' intentions and motivations from reasonable suspicion analyses, focusing instead on suspicion and fear. Psychology and law scholars have argued these psychological experiences in particular are likely to be influenced by racial stereotypes, especially in the context of criminal law enforcement and the detection of firearms (Richardson & Goff, 2012). Even in the absence of psychological biases, allowing criteria such as a "high-crime neighborhood" and "known criminal record" in assessments of reasonable suspicion may disproportionately affect people of color; racially disparate impact contributed to New York's highest court declaring NYPD's stop-and-frisk

practices, which had become a systematic program and policy, to be unconstitutional (*Floyd v. City of New York*, 2013).

Judges and researchers have proposed using a probabilistic assessment in place of the current reasonable suspicion analysis, with Justice Antonin Scalia (*Navarette v. California*, 2014) and others (*Floyd v. City of New York*, 2013; Goel et al., 2016) suggesting that evaluating the accuracy of policing decisions using the rates of arrest or discovery of contraband after a stop could help determine whether stops and searches are in fact reasonable, at least in the aggregate. It seems unlikely that the courts would adopt such an approach: Challenges to policing practices under the Fourth Amendment assert that an officer violated an individual's rights in a particular situation, so that aggregate analyses are unlikely to carry any weight.

Other scholars have proposed that the courts abandon reasonable suspicion in favor of probable cause (e.g., Fagan, 2016), returning to the assumption that searches and seizures in absence of a warrant are unreasonable and require officers to demonstrate a fair probability of criminal activity (presence of a weapon) when conducting a stop (frisk). Probable cause would be a higher threshold, but it is not entirely clear what effect this would have in practice because the definitions of both standards are so unclear, and some have argued that the two standards are decreasingly distinguishable because of the use of phrases like "reasonable belief" in determinations of probable cause (Kinports, 2008).

Neither of the proposed solutions address the broader limitations associated with the legal regulation of police practices under the Fourth Amendment. The probable cause and reasonable suspicion analyses both evolved from an underlying pattern in judicial decision-making designed to balance governmental and individual interests, and that pattern would likely persist even if the courts reverted to the probable cause standard. There are benefits of judicial review, but the case-by-case process leads to complexities in criteria and standards. Judges have also suggested they are ill-equipped and too distant to evaluate an officer's state of mind and quick actions, a supposition which contributes to the (albeit irregular) pattern of deference to officer expertise and fear (Friedman, 2016; Lvovsky, 2016). In a country where roughly 42% of the population has reported owning a gun or living in a household with a gun (Igielnik & Brown, 2017), an officer's fear for his or her own safety or the safety of another might rarely seem "unreasonable," depending in part on local policies and gun ownership.

The scope of judicial review is also limited; Fourth Amendment protections are irrelevant when there is no search or seizure, as is true of many police-civilian encounters under the Court's implementation of the *Mendenhall* "free to leave" test. Consent, even when a civilian does not know that he or she can refuse it, also precludes Fourth Amendment protections (*Schneckloth v. Bustamonte*, 1973). In some cases, courts have permitted police-civilian encounters that were explicitly motivated by race (e.g., *US v. Taylor*, 1992).

The problems often attributed to the *Terry* doctrine and the reasonable suspicion standard seem to be rooted in broader patterns of Fourth Amendment jurisprudence and legal regulation more generally, and may best be addressed by other regulatory structures. Although the judicial enforcement of Fourth Amendment protections is not the only form of police oversight, it is particularly important in the presence of limited legislative regulation and other accountability structures (Friedman, 2017), especially regarding the initial contact between an officer and civilian.

Regulatory limits on policing practices are often interpreted and articulated through law enforcement agency policies and training, which may have a more direct effect on an officer's decisions and therefore influence the relevance and effectiveness of the judiciary's regulation of

stop and search practices. Law enforcement agencies are left to interpret vague regulations and relay them to officers, leading to variation in policies and trainings. For example, the exclusionary rule should motivate agencies to ensure that officers meet the reasonable suspicion threshold when they conduct stops and searches short of arrest, and a department policy could operationalize the standard in any number of ways. Given the low probability that a given stop will ever be subject to legal scrutiny, an agency could choose to ignore the legal criteria altogether and provide its own or very little guidance on civilian encounters. In contrast, some law enforcement leaders see the law as the minimum standard, and consequently impose constraints on officers' decisions beyond those required by law.

Departments that choose to provide guidance regarding reasonable suspicion must decide which legal criteria to relay to officers, and it may be difficult to separate changes in officer behavior from changes in reporting. For example, a general order on police-civilian encounters could instruct officers to rely on specific behavioral indicators of criminal activity when making a stop as the *Terry* (1968) decision and others required (*US v. Davis*, 1996; *US v. Lanford*, 1988). A department's policy could also include more general criteria including "high-crime neighborhood" or behavior that does not match the time of day (*Illinois v. Wardlow*, 2000; *United States v. Barnes,* 1985*; US v. Garrett*, 1992). A policy emphasizing the officer's post-encounter articulation of court-sanctioned cues could encourage the types of reporting patterns identified by Fagan and Geller (2015), resulting in stop data that reflects the agency's and officer's effort to ensure that reporting and documentation complies with the law (and the admissibility of evidence), rather than the officer's account of the actual decision-making process.

At the very least, legal and quantitative analyses of policing practices should incorporate an understanding of the incentives created by the regulatory environment and the basic psychology of decision-making. The courts evaluate the reasonableness of an officer's actions based on his or her articulation of the civilian's behavior, situational circumstances, and the officer's knowledge. Presumably, these cues inform the officer's experience of suspicion and subsequent interaction with the civilian. The reasonable suspicion analysis largely ignores the potential role of several other factors, including the incentives officers face to report cues validated in the existing case law, and decision processes that occur in the absence of conscious insight.

The basic psychology of suspicion could have effects on information processing, judgment, and behavior, with important implications for training police officers and the legal analysis of their decisions. For example, if racial stereotypes affect the extent of fear experienced by officers and fear is strongly associated with suspicion, training officers to rely on suspicion would have implications for unequal treatment. To provide a second example, the inherent uncertainty in suspicion could lead one officer to seek out additional information, while another officer may try to eliminate ambiguity quickly by responding to his or her initial observations. Depending on the situations these officers face and the department's goals, the effectiveness of their decisions might benefit from different approaches to training.

Chapter 2. The Psychology of Suspicion

Laws, policies, and trainings presume that the psychological experience of suspicion leads an officer to initiate contact with a civilian and affects their subsequent actions. In this chapter, I describe the existing research on the psychology of suspicion and related constructs, and report findings from three studies that aim to deepen the current understanding of interpersonal suspicion of strangers and distant acquaintances. These studies identify properties and covariates of suspicion across many different situations and individuals, which will serve as a reference point for future research on the role of suspicion in policing and legal decision-making.

Suspicion

Suspicion has been defined as "the act or an instance of suspecting something wrong without proof or on slight evidence: mistrust…a state of mental uneasiness and uncertainty: doubt" or "a barely detectable amount: trace" (Merriam-Webster, 2018b). The term *suspect* means "to imagine or suppose something to be true, or to exist, without proof" (Merriam-Webster, 2018b). These terms originate from the Latin *suspicere*: to look up at (admire), to look askance, suspect, or mistrust, and *suspicere* was derived from *specio,* I observe, watch, look at (Lewis, 1956). The object of observation and suspicion is often another person (or their behavior), but might also be one's own thoughts, an inanimate object, information, or an institution. The adjective "suspicious" can describe a person experiencing a state of suspicion, or an object that elicits suspicion (as in a "suspicious package" or person). Throughout this dissertation, I use the word "suspiciousness" or make an explicit distinction when describing the latter, for the sake of clarity.

The themes of uncertainty, mental activity, observation, and mistrust are also present in the limited research in the social sciences that includes the notion of suspicion. Citing work by social psychologists (Fein, 1996; Fein & Hilton, 1994; Hilton, Fein, & Miller, 1993), Sinaceur (2010) described suspicion as "the state in which a perceiver actively entertains different, plausibly rival, hypotheses about another's motives" (p. 543). In this definition, the perceiver is not only uncertain, but also actively considers different possibilities.

In their review of the literature on suspicion, Bobko, Barelka, and Hirshfield (2013) arrived at the following definition of situational suspicion: "the simultaneous occurrence of…uncertainty, increased cognitive processing (e.g., generation of alternative explanations for perceived discrepancies), and perceptions of (mal)intent…" (p. 489). The authors raised questions about the role of emotional arousal, hypothesizing that suspicion is a cognitive state that elicits but is not comprised of emotions (Bobko et al., 2013). Buss and Perry (1992) also described suspicion as a cognitive state, but one that is a subcomponent of the hostility that remains *after* anger subsides.

Suspicion is often conceptually associated with emotions and affective states, and researchers in the mid-twentieth century characterized it as an emotion, but work in recent decades has often considered suspicion to be a trait, judgment, or cognitive or interpersonal state. It does not appear in most taxonomies of emotions (e.g., Barrett, Lewis, & Haviland-Jones, 2016; Russell, 1980), but is included in models of interpersonal traits (e.g., Barford, Zhao, & Smillie, 2015; Wiggins, 1996) which characterize suspicion as moderately hostile and moderately submissive. Computational models of sentiments, as expressed in blogs and other online materials (Paltoglou & Thelwall, 2013), have suggested that suspicion is a slightly less unpleasant experience than frustration and distrust, involving more arousal than distrust but less

than frustration. The arousal associated with suspicion may be a result of the cognitive activity of considering alternatives under uncertainty or the related negative affective states.

Definitions of paranoia tend to include interpersonal suspicion. Psychologists describe paranoia as the "misperception of oneself as the target of another's thoughts or actions," characterized by suspicion, self-centered thought, and perceptions of ill will or conspiracy (Fenigstein & Vanable, 1992, p. 130). Among people without psychological disorders, paranoid thoughts are generally associated with public self-consciousness (Fenigstein & Vanable, 1992), reduced accuracy in detecting others' negative emotions, and less social engagement (Combs, Finn, Wohlfahrt, Penn, & Basso, 2013).

The extant psychological research has emphasized the cognitive aspects of suspicion, presuming both a relatively stable dispositional tendency and a great deal of variation based on the characteristics of the interpersonal interaction and situation. The deception literature contains the most thorough investigations of suspicion, where it is the perceiver's experience of or a predisposition toward doubting the veracity of information he or she receives from a target. Hilton et al. (1993) defined suspicion as "...a psychological state in which perceivers actively weigh the possibility that a target's behavior is genuine against the possibility that it is contrived—either because the behavior itself is counterfeit or because the motives that underlie the behavior are ulterior" (p. 503). Perceptions of possible deception are also a defining component of suspicion in early work on personality constructs (Buss & Durkee, 1957) and in research on human suspicion of computers (Bobko et al., 2013).

The work on deception provides valuable insight into the effects of suspicion (which I summarize in the "Effects of Suspicion," a subsequent subsection of this chapter); however, with the exception of the work on Generalized Communicative Suspicion (Masip, 2014), these studies do not always offer a precise definition of suspicion or an attempt to measure it. As noted by Bobko, Barelka, Hirshfield, and Lyons (2014a), there is a need for empirical scale development and research on the role of suspicion in decision-making in other contexts.

Measuring Suspicion

There is very little empirical work in the social sciences involving the measurement of situational suspicion; researchers have been more inclined to induce suspicion and observe its effects without directly measuring it. Bobko, Barelka, Hirshfield, and Lyons (2014b) built upon earlier work (Lyons, Stokes, Eschleman, Alarcon, & Barelka, 2011; Olson, 2009) and proposed a 20-item scale for state suspicion in an information technology (IT) context intended to be adaptable to many other fields. Based on their conceptual definition of suspicion drawn from a review of the literature, they separated these items into *overall suspicion* (e.g., "I was on my guard when interacting with this entity"); *uncertainty* (e.g., "During the event, I was uncertain as to what would eventually happen."); *cognitive activity* (e.g., "I spent time thinking of alternative possibilities about what was going on during the event"); and *malintent* (e.g., "I felt like I was being taken advantage of") (Bobko et al., 2014b, p. 17). The items have reasonably high face validity, and many are adaptable to other contexts.

The authors reported that state suspicion, as measured by the 20-item scale, varies as expected with target suspiciousness, but they did not report whether the scale had been submitted to other psychometric testing and validation. Any scale measuring a psychological state aroused

by situational factors will be context-dependent, but several items on the IT suspicion scales could be used to measure state suspicion in zero- or low-acquaintance interpersonal situations.

Suspicion has also been described as a component of dispositional tendency, or trait. The Generalized Communicative Suspicion scale (GCS) (e.g., Levine & McCornack, 1991) and its derivatives (e.g., Boyle & Ruppel, 2005) measure the tendency to believe that others are deceptive, with items such as "I often feel as if people aren't being completely truthful with me," and "most people only tell you what they think you want to hear." Some items are similar to those used by Buss and Durkee (1957), who conceptualized and measured suspicion as a subcomponent of hostility projected onto others, as opposed to a "motor" component that includes "assault" and "verbal hostility" (p. 348). Their suspicion scale includes items such as "I know that people tend to talk about me behind my back," and the reverse-coded "I have no enemies who really wish to harm me" (p. 346), which are similar to items on a scale measuring nonclinical paranoid thought (Fenigstein & Vanable, 1992). Of the nine items measuring nonclinical paranoia, six include or strongly imply the respondent's perception that others deceive them; the remaining three items ask the respondent about his or her perceptions of others' negative feelings toward them (Fenigstein & Vanable, 1992).

Other work incorporated four suspicion items into a hostility subscale of an instrument measuring aggression (Buss & Perry, 1992). All four suspicion items (e.g., "When people are especially nice, I wonder what they want") indirectly imply deception (Buss & Perry, 1992, p. 454). Information technology researchers have also emphasized perceptions about the veracity of communication, with the human as the perceiver and the computer as the source of potentially deceptive information (Lyons et al., 2011; Olson, 2009). Items related to doubting the veracity of communication only partially generalize to criminal suspicion, where a tendency to perceive deception is important in some situations, but less so than a general tendency to believe that people are violating a law or social norm.

The Effects of Suspicion

Deception researchers have been particularly interested in the effects of suspicion on judgments of the veracity of others' communication and their underlying motives. Not surprisingly, both state-level suspicion, as elicited by information about a target's possible lie or ulterior motives, and Generalized (dispositional) Communicative Suspicion lead to judgments of deceptiveness, reducing truth-bias (for a summary, see Levine & McCornack, 1991). In one study, both experienced and novice police officers exhibited the opposite tendency (lie-bias) in their situational judgments, but only the experienced officers reported a stronger *dispositional* tendency toward communicative suspicion relative to non-officer participants (Masip, Alonso, Herrero, & Garrido, 2016).

Evidence on the effects of suspicion on the accuracy of deception detection is mixed. A moderate level of state suspicion has been shown to increase overall accuracy (Kim & Levine, 2011; McCornack & Levine, 1990), but a more nuanced analysis suggests that while this was true for the detection of truth, the ability to detect lies increased at higher levels of state suspicion (Levine, Park, & McCornack, 1999). Other studies have found that suspicion either *reduces* the accuracy of experts' judgments (Burgoon, Buller, Ebesu, & Rockwell, 1994) or does not affect detection accuracy (Toris & DePaulo, 1984). The mixed results among these studies may reflect variation in the methods researchers have used to induce suspicion, the combination of false positive and false negative errors in analyses, or the context-specificity of the underlying construct and mechanisms.

Deception researchers have documented other effects of suspicion that may be relevant to the findings on accuracy. Suspicion appears to help perceivers avoid correspondence bias when making target attributions (e.g., Bond & Lee, 2005; Fein, 1996; Fein, Hilton, & Miller, 1990), and suspicious perceivers have also been shown to seek out more information about a target and to be more discerning in their information search (Fein, Morgan, Norton, & Sommers, 1997; Kramer, 1998; Schul, Burnstein, & Bardi, 1996). Fein and Hilton (1994) also found that suspicious perceivers make negative judgments about the target that persist even after they decide the target's communication is accurate.

A person can experience suspicion, at least in its colloquial and practical uses, without considering the possibility of deception. For example, one might observe a person walking around a house peering into windows, and suspect that either the person is locked out or is planning to break in. Deception is not a necessary condition for suspicion of illegal activity or a police officer's decision to stop or search a civilian, though perceptions of deception will likely be present if the target appears to be concealing an object or trying to avoid detection. Research on the effects of suspicion outside of the deception context is scarce, although two studies have suggested state suspicion is associated with increased deliberation. In a small study by Gay, Horowitz, Elshaw, Bobko, and Kim (2017) on the computer-assisted human detection of cyber-attacks, digital warnings only elicited state suspicion in the human operator when combined with other cues of a potential cyber-attack. Suspicion was associated with an increases in response time and information search, and a decrease in overall task performance. However, the software was designed to measure task performance using a composite score; therefore, it is possible that suspicion had a differential effect on separate performance metrics. In a very different setting, "suspicion," as operationalized by spraying rooms with fishy scents, improved individual performance on critical thinking tasks (i.e., the Moses Illusion and the Wason Rule-Discovery task), in part by increasing participants' negative hypothesis testing (Lee, Kim, & Schwarz, 2015). General mood did not appear to affect task performance, although the authors did not address specific emotions such as disgust.

There is very little research on the effects of suspicion, especially outside of the narrow context of judging the veracity of communication, and the findings are mixed. The existing studies do not necessarily define, measure, or distinguish suspicion from a lack of trust. It seems plausible that suspicion increases cognitive activity and information-search, with downstream effects that are more context-specific. Thinking harder might reduce reliance on heuristics, improving performance when the heuristic would typically lead to systematic errors (as with truth-bias in the deception literature and confirmation bias in the Wason Rule-Discovery task), and potentially harming performance when the heuristic leads to fewer errors or when tasks are performed under time pressure. The literature on the effects of distrust is more robust and appears to suggest this pattern.

Distrust

In several studies described above, researchers rarely distinguished between the three close synonyms of suspicion, distrust, and mistrust. Distrust is defined as "the feeling that someone or something cannot be relied on" (Merriam-Webster, 2018a). Mistrust is used less frequently and almost interchangeably, but is sometimes described as a more general experience than distrust, which is based on more specific (situational) facts. Perhaps relatedly, psychologists have tended to use "mistrust" to describe dispositional tendencies concerning

strangers (Omodei & McLennan, 2000), but not consistently. All three terms appear in the psychological research, with some authors using the words interchangeably.

Some researchers have separated distrust from other constructs. Researchers interested in suspicion have offered a conceptual distinction: Distrust is a perceiver's lack of belief that a target *will* behave in a way that is *beneficial* to the perceiver, whereas suspicion involves a belief that the target *might* behave in a way that is *harmful* (Deutsch, 1960; Levine & McCornack, 1991). Others conceptualize distrust as a judgment about the target and suspicion as a state of "suspended judgment" or questioning (Hilton et al., 1993, p. 502). This set of distinctions aligns closely with a model of sentiments expressed online (Paltoglou & Thelwall, 2013), which places "suspicious" higher on the arousal axis and lower on the negativity axis relative to "distrustful." Several studies have also suggested that distrust is distinguishable from a "lack of trust," as measured by low scores on trust scales (e.g., MacDonald Jr, Kessel, & Fuller, 1972; Wrightsman & Wuescher, 1974).

While the work comparing distrust and suspicion is not definitive, it suggests that suspicion involves more uncertainty, and therefore more arousal which takes the form of cognitive activity directed toward resolving the uncertainty. The affective valence of suspicion may be less negative than that of distrust because of the uncertainty or inclusion of positive expectations, which is not the case with distrust. The two constructs are closely related, yet distrust is far more thoroughly studied and might therefore provide additional insight into suspicion. The work on interpersonal (dis)trust of strangers is particularly relevant.

Interpersonal (Dis)trust

"Trust" is studied in many fields and typically considered to be fundamental in human interaction, and therefore the functioning of institutions and societies. Interpersonal trust has been defined as the expectation that communication from another person "can be relied upon," (Rotter, 1967), the belief that another person is (or people generally are) "benevolent and honest" (Larzelere & Huston, 1980), or a willingness to depend on others (Thielmann & Hilbig, 2015). As with suspicion, the focus is often on the veracity of a target's communication and definitions include cognitive, affective, attitudinal, and behavioral elements (Rompf, 2015).

There is evidence of both stable dispositional tendencies toward trust that influence behavioral time trends and situational variables that affect specific interactions (Fleeson & Leicht, 2006). In close interpersonal relationships, trust is established over the course of many interactions and is also influenced by the individual propensity to trust. Although police officers are likely to be acquainted with some of the civilians they encounter, most of their interactions should bear more similarity to those among strangers than to interactions between friends or romantic partners.

Situational Behavioral Trust of Strangers

Thielmann and Hilbig (2015) reviewed the literature on interpersonal trust in strangers, describing it as "a risky choice of making oneself dependent on the actions of another in a situation of uncertainty, based upon some expectation of whether the other will act in a benevolent fashion despite an opportunity to betray" (p. 251). This definition is largely behavioral, in part because the authors are attempting to integrate literature from behavioral economics and psychology. While trust (and suspicion) can be experienced intrapersonally, it typically becomes relevant either in an interpersonal interaction or in the choice to avoid an interaction.

Thielmann and Hilbig (2015) identified three broad categories of determinants of trust in strangers: risk- and loss-aversion, expectations of trustworthiness (which are based on personal and situational trust cues, prior experiences, and projection), and sensitivity to betrayal. Among person-based "trust cues," implicit and explicit judgments of trustworthiness based on faces (e.g., Van't Wout & Sanfey, 2008) and ingroup membership (e.g., Balliet, Wu, & De Dreu, 2014) can be particularly important. Personality traits also influence trust in strangers: agreeableness is associated with trusting behavior, while the effects of neuroticism are mixed (Thielmann & Hilbig, 2015). Need for cognitive closure, or the motive to manage uncertainty, may lead to low trust in distant others and high trust in close others (Acar-Burkay, Fennis, & Warlop, 2014). Important situational variables in trust-based interpersonal interactions include interdependence (i.e., interrelated individual outcomes), the benefits associated with betrayal, the presence of behavioral constraints, information about cues, and time constraints (Kelley, 2003).

Models that account for person-level variables and dynamic characteristics of environments and interactions seem more likely to offer a complete picture of situational trust, and I expect the same will be true of suspicion. Many specific variables studied in relation to situational trust of strangers have not been included in suspicion research and could be useful in distinguishing a lack of trust from suspicion.

Dispositional Interpersonal (Dis)trust

Dispositional interpersonal trust is the tendency to expect that others will behave benevolently. Since 1972, the General Social Survey (GSS) (T. Smith, Marsden, Hout, & Jibum, 2015) has included an item that is frequently characterized as trait-level suspicion or distrust: "Generally speaking, would you say that people can be trusted or that you can't be too careful in dealing with people?" Responses in the United States have suggested a steady decline in trust since the item was introduced (Morgan, 2014). The GSS question is based on Rotter's (1967) interpersonal trust scale, which includes items regarding trust in strangers, parents, politicians, and salespeople, with at least two empirically distinct dimensions including trust in institutions and trust in other individuals.

Omodei and McLennan (2000) focused more narrowly on the interpersonal dimension: "*mistrust* of the motives of others in situations involving one's well-being—that is, a tendency to view other individuals as mean, selfish, malevolent, unreliable, and, hence, not to be depended on to treat one well" (p. 283). The items in their scale present specific situations regarding other people at varied levels of acquaintance and asks participants to indicate their agreement with a follow-up statement (e.g., "During an interview for an important job, the interviewer asks if you find the room warm enough....The interviewer is trying to find out something about you.") (Omodei & McLennan, 2000, p. 293). Other scales assess trust in a specific individual (e.g., Johnson-George & Swap, 1982) or in close relationships (Rempel, Holmes, & Zanna, 1985).

Researchers have taken one of three approaches to measuring dispositional interpersonal trust: (a) narrowing the construct to a specific interpersonal context, (b) asking about other people in vague terms, accepting that individuals may respond with any target in mind, or (c) asking about multiple specific targets that vary in role and level of acquaintance. The context specificity of trust poses measurement challenges, and the same will likely be true of dispositional interpersonal suspicion, assuming it is a distinguishable construct.

Effects of Distrust

The effects of state and trait distrust also vary by interpersonal context. Distrust plays an important role in several personality disorders and can negatively affect close interpersonal relationships (Kiesler, 1996). In negotiations and trust games, distrust can improve or worsen outcomes for one or both actors depending on situational conditions (Kelley, 2003; Kong, Dirks, & Ferrin, 2014). For individuals, distrust (Mayo, Alfasi, & Schwarz, 2014), similar to scent-based suspicion (Lee et al., 2015), increases negative hypothesis testing and improves performance on Wason's (1960) Rule Discovery task.

Relatedly, distrust seems to promote conscious consideration of incongruent alternatives, enhance creativity, reduce accessibility and halo effects, and reduce stereotypic judgments of targets (Mayer & Mussweiler, 2011; Mayo, 2015). As Mayo (2015) pointed out, these "cognitive tuning" effects can create their own biases and have deleterious effects when "things are as they seem" (p. 314). Posten and Mussweiler (2013) also found that distrust reduced the stereotypicality of participants' social judgments, even though ingroup members are usually perceived to be more trustworthy and some stereotypes include notions of untrustworthiness. The authors also noted that while distrust could lead to negative moods characterized by less stereotyping, it also may be associated with negative arousal states (e.g., fear) and increased stereotyping (Posten & Mussweiler, 2013, p. 580). Researchers in this field have suggested that distrust leads to increased critical thinking, which can have desirable or undesirable effects depending on the situational context.

The findings on distrust, ingroup preferences, and stereotypic judgments have suggested that contact with an outgroup target elicits distrust (or less trust relative to an ingroup member), but subsequent judgments may be less likely to include stereotypes relative to judgments made by a trusting perceiver. One might expect similar patterns with suspicion, but these patterns have not been studied.

The literature on distrust, as well as the scant literature on suspicion, suggest that the effects of the associated cognitive processes on subsequent judgments and behavior depend largely on dynamic features of interpersonal situations. For example, in situations where something is amiss, the critical thinking that accompanies distrust (and plausibly suspicion) may lead to more accurate assessments of a situation; in situations where people can be trusted most of the time, the same cognitive processes could lead a person astray. Time pressure (which would constrain cognitive processing), predictability (whether cues are reliably related to outcomes), and the availability of information are all likely important situational characteristics to consider, along with the states, traits, and behavior of the people involved in an interaction.

Additional Psychological Concepts Related to Suspicion

Among the themes that emerged in the study of both suspicion and distrust, "uncertainty" is arguably the most salient. Individuals who are certainty-oriented tend to exhibit a need for closure and either very high or very low levels of trust in their close relationships, and a greater reliance on heuristics under conditions of uncertainty (e.g., Acar-Burkay et al., 2014); individual differences in certainty-orientation may also predict differences in suspicion or subsequent judgments and behavior. Because uncertainty is fundamental to the definition of suspicion, the expectation follows that certainty-oriented individuals would find suspicion especially aversive and might avoid or move to resolve suspicion quickly.

Perhaps due in part to the salience of uncertainty, "intuition" is more frequently associated with suspicion than distrust. Kahneman and Klein (2009) arrived at several generalizations about intuition-based judgments that could inform the study of suspicion. For example, individuals in high-validity environments (i.e., contexts where identifiable cues are reliably associated with outcomes), even if those environments are also highly uncertain, eventually develop reliable intuition but may not have insight into the cues that inform their decisions (Kahneman & Klein, 2009). It may be difficult to determine the true predictive validity of cues in police officers' environments, although modeling and experimental techniques could provide insight into their intuitive judgments.

In Bobko and colleagues' (2013) model of state suspicion, informational cues precede an increase in cognitive activity and subsequent emotional arousal (e.g., fear or anxiety). Fear is associated with an excessive focus on low-probability catastrophic outcomes (Chanel & Chichilnisky, 2009), faces of outgroup members (Navarrete et al., 2012), as well as risk aversion, uncertainty, and low appraisals of control (Lerner & Keltner, 2001). It seems possible that a state of fear could *precede* suspicion, or follow it as Bobko and colleagues proposed.

Negative emotional states do not necessarily accompany suspicion, nor do they necessarily accompany uncertainty. "Curiosity" may provide a useful counterpoint to suspicion—it is also defined by uncertainty and cognitive (and sometimes emotional) arousal, but is typically associated with positive outcomes and emotions (Kashdan & Silvia, 2009). The targets of curiosity may be human or non-human. Recent scale development work (Kashdan et al., 2018) suggested five dimensions of curiosity (Joyous Exploration, Deprivation Sensitivity, Stress Tolerance, Social Curiosity, and Thrill-Seeking) and suggests that curiosity is associated with several measures of well-being, but can also lead to impulsivity and anxiety. For both suspicion and curiosity, individual differences in uncertainty-orientation and the behavior it motivates (e.g., information-search or impulsive action to reach certainty) seem particularly relevant. Both suspicion and distrust have been studied far less than their positive counterparts of curiosity and trust.

The Basic Psychology of Suspicion

Important legal decisions rely on a notion of suspicion and the cues that elicit it, but little is known about the psychological properties of suspicion and the effects these properties may have on judgment and behavior. Existing definitions of suspicion and studies of its effects focus on the detection of deceptive communication, and deception is relevant in only a subset of policing decisions that involve suspicion.

Given the limited literature on suspicion, the paucity of systematic attempts to measure it or distinguish it from distrust, and the importance of the situational context, I begin with an inductive approach in Study 1 by asking lay participants to define suspicion and compare it to other words and psychological states. In Study 2, I focus on situational interpersonal suspicion (SIS) of strangers or distant acquaintances, a form of suspicion that should be particularly relevant to legal decision-making and, to the extent it has been studied, has typically been elicited without clear definition or measurement in order to observe behavioral responses.

In Study 3, I begin to examine the dispositional tendency to experience the same form of suspicion (DIS), as measured by an interim set of items, and its covariates, including ratings of SIS in a simulated policing task. I developed items and analyzed participant responses using methods frequently applied to scale development (DeVellis, 2012) with the goal of effective

measurement in mind; however, my primary goal was to identify and describe possible components and covariates of interpersonal state suspicion.

Study 1: Lay Definitions of Suspicion

In two online surveys, respondents first answered the following open-ended question: "Please describe your understanding of what the concept of *suspicion* means." Participants included students in the UC Berkeley Psychology Department during summer sessions, when courses are open to anyone irrespective of whether they are seeking a degree from the university. After responding to the open-ended question, participants indicated their agreement with a series of statements.

In the first survey (Study 1a), participants rated their agreement with 48 items that state "Suspicion is like [synonym/antonym]." The order of the synonyms and antonyms was randomized for each participant. I selected the synonyms and antonyms from dictionary and thesaurus entries on suspicion. I included data from 218 participants in the analyses, excluding data from three participants because they stated in their open-ended response that they did not understand the word "suspicion," which would preclude meaningful responses to the remaining survey questions. Fifteen people completed the survey more than once, and I retained data from only the first recorded set of responses from each participant. The median age of participants was 21 years, with a range of 18 to 50 years old. Seventy percent identified as female, 37% as White, 27% as Asian, 7% as Hispanic or Latino, and 1% as Black.

In a second survey (Study 1b), participants rated their agreement with the statement "Suspicion feels like [psychological state]." I selected the psychological states from literature on emotions and moods that vary in valence and arousal (Russell, 1980), and included terms describing basic emotions (e.g., fear and happiness) as well as more complex psychological states (e.g., uneasiness and gratitude). I included data from 374 participants and excluded data from two participants, as all fields were empty for one participant, while another participant stated they did not understand the word "suspicion" and selected the midpoint for every item. Seventeen people took the survey more than once and I again retained data from only the first instance. The median participant age was 20 years with a range of 18 to 33 years old. Sixty-eight percent identified as female, 40% as Asian, 24% as White, 11% as Hispanic or Latino, and 2% as Black.

Results. I performed descriptive and exploratory analyses to identify common themes among the respondents' definitions of suspicion and their ratings of items comparing suspicion to other terms. I identified words, concepts, and topics among participants' definitions of suspicion, which they provided before responding to any other questions. The initial round of coding and word frequency counts did not indicate substantive differences between the two sets of responses in Studies 1a and 1b, so I combined the narrative responses for all subsequent analyses. A research assistant and I manually coded participants' definitions for concepts in the existing literature on suspicion (e.g., uncertainty, cognitive arousal). During the coding process, I also identified additional themes that emerged from the data.

Participants' definitions of suspicion: Studies 1a and 1b. Of the 592 participants, 581 provided a definition of suspicion using a total of 10,396 words. The results of human coding are summarized in Table 1. There was considerable conceptual overlap between categories of codes; an element of uncertainty, for example, is present among most of the conceptual themes

identified in the other coding categories. Among many of the definitions that were not coded as "uncertainty" (n = 105, 18.1%) because it was not explicit, uncertainty could easily be inferred (e.g., "*A feeling that something might be true*").

Negative reactions to targets, situations, and outcomes were common (61%), and were also present among *all* of the relatively rare (2.2%) definitions that included a positive reaction to a situation (see Table 1 for an example). Although participants often used the phrase "suspicion is a feeling," they typically went on to describe tentative judgments; descriptions of emotions and moods were relatively infrequent (4.5%). However, participants frequently described psychological states that could include an affective dimension (e.g., wariness), which I assessed in greater detail using automated text mining methods.

Table 1. Frequency and Examples of Conceptual Themes Among Participants' Definitions of Suspicion

	Count (%)	Common concepts	Excerpts
Uncertainty	475 (81.9)	Possibility; lack of information; doubt	*"…one has a clue or hint about someone or something, but is not totally sure."*
Negative reactions	355 (61.1)	Potential harm; uneasiness	*"The belief in the presence of a possible threat."*
Positive reactions	13 (2.2)	Possibility of a desired outcome (e.g., surprise party, marriage proposal)	*"…It typically has a negative connotation, but someone could also be suspicious of someone planning a birthday party (which is a good thing)."*
Cognitive arousal[a]	271 (46.7)	Heightened awareness; questioning; speculation	*"...one individual is questioning the actions or intentions of another."*
Emotion or mood[b]	26 (4.5)	Anxiety; fear	*"...to be hyper aware of someone or something out of fear"*
Social target	284 (49.0)	Interpersonal interactions; observed strangers; all people	*"...a feeling that someone is guilty or dishonest."* *"Expecting negative behavior from others."*
Distrust[c]	175 (30.2)	Doubt; dishonesty; lack of trust	*"...cautious distrust towards another person or idea…"*
Deception[c]	132 (22.8)	Lying; ulterior motives	*"...doubting/questioning something a person does or says."* *"To believe there is some dishonesty or deceit afoot."*

[a] This code was not applied to a definition of suspicion as a "thought" or "belief" if it did not include a reference to any other cognitive activity (e.g., *"Thinking that something negative has occurred"*).
[b] Similar to footnote a, above, the word "feeling" alone did not trigger the application of this code.
[c] Distrust and Deception shared several conceptual themes and these totals include 62 definitions to which I applied both codes.

For the automated analyses, I began by cleaning the text: I corrected obvious spelling errors,[3] and except where otherwise specified, I changed all letters to lowercase, removed

[3] I did not correct errors in word usage or grammar. For example, several definitions included the word "weary" in contexts that would suggest that the word "wary" was intended. In cases like these I did not alter the original text.

punctuation and special characters, removed common "stop words" (e.g., at, because, and the), and removed words from the survey question (including "suspicion" and related terms).

The remaining corpus of text contained 2,605 instances of 881 unique words suitable for simple "bag of words" analyses. Table 2 lists the words that occurred most frequently. Participants characterized suspicion more often as a lack of "trust" than "distrust" or "mistrust," and all three words occurred frequently. Notions of observable facts (e.g., evidence, proof, behavior, information), and determinants of behavior (e.g., motives and intentions)[4] were also common.

Table 2. Frequency Counts of Words Used by Participants to Define Suspicion

	Count		Count		Count
feeling[a]	154	possible[a]	27	hiding[a]	15
think[a]	135	question[a]	27	intentions[a]	15
belief[a]	115	bad	26	skeptical[a]	14
true[a]	87	proof[a]	26	lack	13
doubt[a]	78	based	25	perception[a]	13
may	78	know[a]	24	right	13
negative[a]	65	wary[a]	23	crime[a]	12
act[a]	62	connotation[a]	22	information	12
trust[a]	56	done	22	likely	12
situation[a]	51	hunch[a]	22	mistrust[a]	12
certain[a]	42	intuition[a]	21	uneasy[a]	12
might	42	motives	21	unexplained[a]	12
happen[a]	40	sure	21	behind	11
idea[a]	33	behavior[a]	19	completely[a]	11
reason[a]	32	cautious[a]	18	dangerous[a]	10
wrong[a]	31	uncertain[a]	17	harm[a]	10
without	30	guilty[a]	16	social	10
distrust[a]	29	gut	16		
evidence	29	cause[a]	15		

Note. Only words that were used 10 times or more are listed here. Words from the prompt and common English stop words are excluded.

[a] Includes similar words

Next, I matched participants' words to several lists of words to which researchers have assigned a valence or a "sentiment" (e.g., joy and trust). For this set of analyses, I added the words "feel," "think," and related words to those that I dropped in the initial cleaning because I was more interested in the sentiment expressed by the words that follow and because in some analyses, the sentiments attached to these terms were misleading. When compared to a list of 2,476 words that Nielsen (2011) scored with integers between negative and positive five, 657 occurrences of 130 unique words used by participants were assigned a score. The word "fraudulent" received the lowest score of -4, while the words "faithful" and "luck" both received the highest score of +3. Among the scored words, over 70% received a negative score. The total score was -577, and the average individual word score was -0.9.[5]

[4] Participants frequently used "reason" and "cause" to describe unknown or questionable determinants of behavior, but these words are also used in other contexts.

[5] The results of comparisons against two other lexicons were qualitatively similar, with a wide majority of matched words labeled as negative in valence, even without accounting for negation of positively valenced words.

The summary of top contributors to the total score in Figure 1 suggests that the total score is biased upward because of the positive scores assigned to the frequently occurring words "true" and "trust." When I parsed the definitions into pairs of words (including all words), I found 22 instances where a word that was assigned a positive valence score was, in context, immediately preceded by a negation (e.g., "not"). There were only three instances where words that received a positive valence score were preceded by a negation. In addition, the phrases "might" and "may be true" occurred 17 times, often referring to an undesired outcome or fact, and the phrase "lack of trust" occurred 10 times. These counts are limited, however, because positively-scored phrases may be negated in the broader context of the response rather than in two- or three-word phrases.

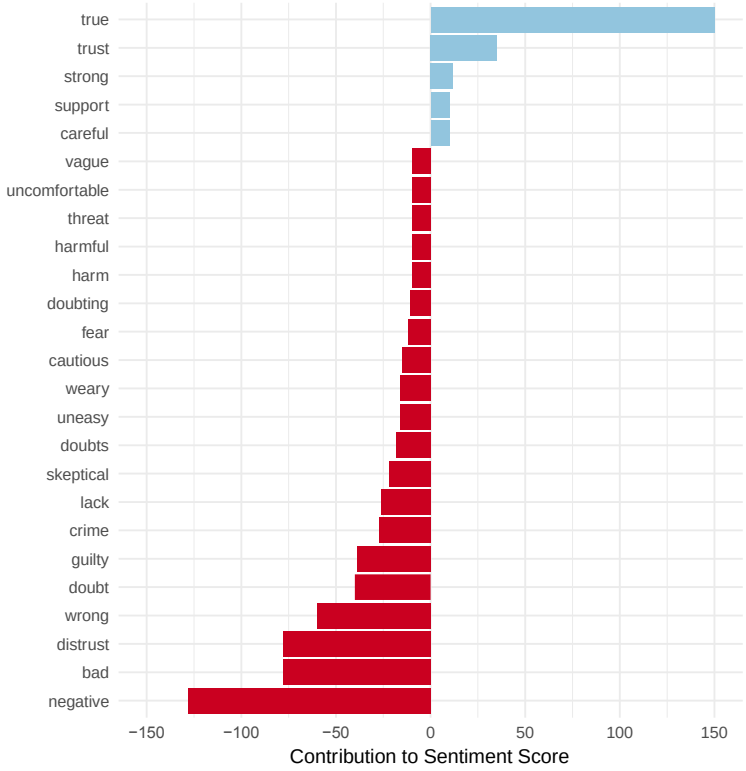

Figure 1. Top contributing words to the sentiment score for participants' definitions of suspicion. Contribution is a function of the score and frequency of the word.

Finally, I compared participants' words to a more nuanced lexicon of 13,901 word-sentiment associations (Mohammad & Turney, 2013).[6] In this case, multiple sentiments were often applied to one word. For example, two occurrences of the word "birthday" were counted toward the anticipation, joy, and surprise categories, and 29 occurrences of "distrust" were counted toward the anger, disgust, and fear categories. Table 3 summarizes the automated sentiment assignments and the words with which they were automatically associated. Words that occur frequently dominate multiple categories because the sentiment assignments are dichotomous and one word can be matched with multiple sentiments.

[6] The results were similar when I parsed the text by sentence and by response. The rank order of sentiments and proportions were the same except that among sentences, the proportion of sentences assigned to "fear" was slightly higher than the proportion assigned to "trust."

I excluded "suspicion" and related words because I am more interested in the sentiment of the words participants in this survey use to define suspicion. The sentiment assignments for suspicion would have included fear, anger, anticipation, and general negativity. I also excluded the word "feeling," to which all 10 sentiment categories would have been automatically applied.

Table 3. Sentiments Assigned to Participants' Words

	n	% [a]	Top Contributing Words
Trust	285	13%	True, doubt, trust, proof, cautious
Fear	282	13%	Doubt, bad, distrust, wary, cautious
Sadness	217	10%	Negative, doubt, bad, guilty, weary
Anger	162	7%	Bad, distrust, guilty, crime, words
Disgust	149	7%	Bad, distrust, gut, mistrust, uneasy
Anticipation	133	6%	Cautious, happen, expecting, intended, treat
Surprise	43	2%	Guess, surprise, uncertain, deceit, treat
Joy	36	2%	True, surprise, friend, treat, birthday
Positive	341	16%	True, reason, action, cautious, intuition
Negative	515	24%	Negative, doubt, wrong, bad, distrust
All	*2,163*	*100%*	*True, negative, doubt, trust, wrong*

[a] Among all sentiment assignments, the percentage of words assigned to the category.

The lexicon-based sentiment labels are imperfect and, by design, non-specific; nevertheless, because this particular list is based on ratings from large groups of lay participants, it offers a different and relevant summary of the words respondents used to describe suspicion. The words fear, anxiety, and closely related terms (e.g., scared, nervous) occurred only 10 times in total among the definitions, but the sentiment assignments indicate that many people tend to associate frequently occurring words like doubt with both fear and sadness. The "anticipation" category highlights the fact that participants frequently used words that suggest an orientation toward the future.

Study 1a: Synonyms and antonyms of suspicion. In Study 1a, participants responded to 48 statements comparing suspicion to its synonyms and antonyms. Figure 2 contains density plots for each item arranged in descending order by mean rating. The statements were presented individually and the order was randomized for each participant. On average, participants reported the strongest agreement with the statement "Suspicion is like doubt" (M = 60.3, SD = 38.2) and disagreed most strongly when suspicion was compared with "certainty" (M = -61.2, SD = 41.6). Participants indicated their (dis)agreement by placing a slider on a continuous scale marked "strongly disagree" (-100) on the left, "neither agree nor disagree" (0) in the middle, and "strongly agree" (100) on the right. Numeric values indicating the position of the slider were displayed to participants.

A participant could choose to skip any survey item and proceed to the next item, and none of the participants responded to all items. The number of responses to each item was strongly correlated with average score on the agreement scale, r(46) = 0.93; a greater percentage of participant ratings were missing for antonyms of suspicion relative to synonyms (range = 4% to 37%). The percentage of missing data and other descriptive statistics are listed in Table 22 and Table 23 in the Appendix, which are sorted by mean and alphabetically by item, respectively.

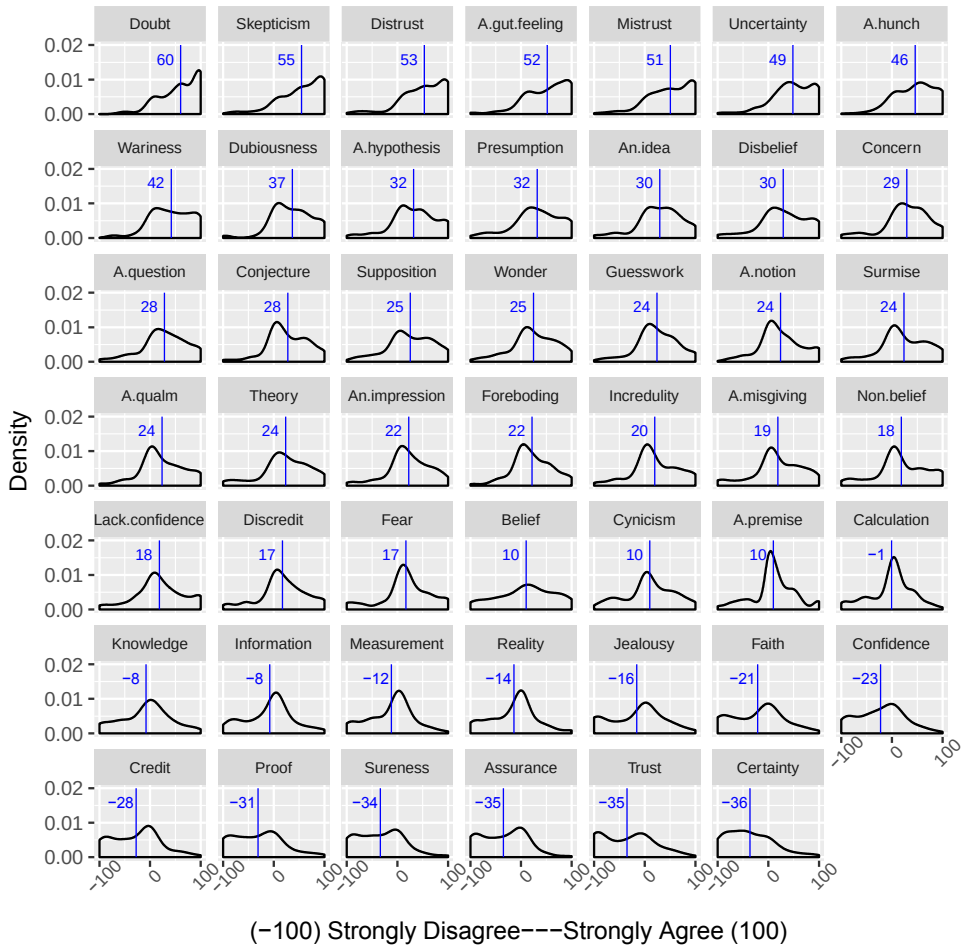

Figure 2. Density plots of participants' agreement with the statement "Suspicion is like [synonym/antonym]." Plots are arranged in order of highest to lowest mean rating, which is denoted by the vertical line and numeric label (rounded to the nearest whole number). The slider position started at the midpoint, which was labeled "Neither agree nor disagree" and corresponds to a rating of 0. The numeric value corresponding to the slider position was displayed to the participant.

On average, and without accounting for the pattern of missing responses, participants agreed that suspicion is similar to words listed as synonyms in a thesaurus, with the exception of "jealousy" (M = -15.9, SD = 53.9). Participants also tended to disagree with statements comparing suspicion to words listed as antonyms, with the exception of "belief" (M = 10.0, SD = 55.9).

Study 1b: Emotions and other psychological states. In Study 1b, 374 participants responded to 49 statements that compared suspicion to emotions and other psychological states. Figure 3 contains density plots for each item arranged in descending order by mean participant rating. The statements were presented individually and the order was randomized for each participant.

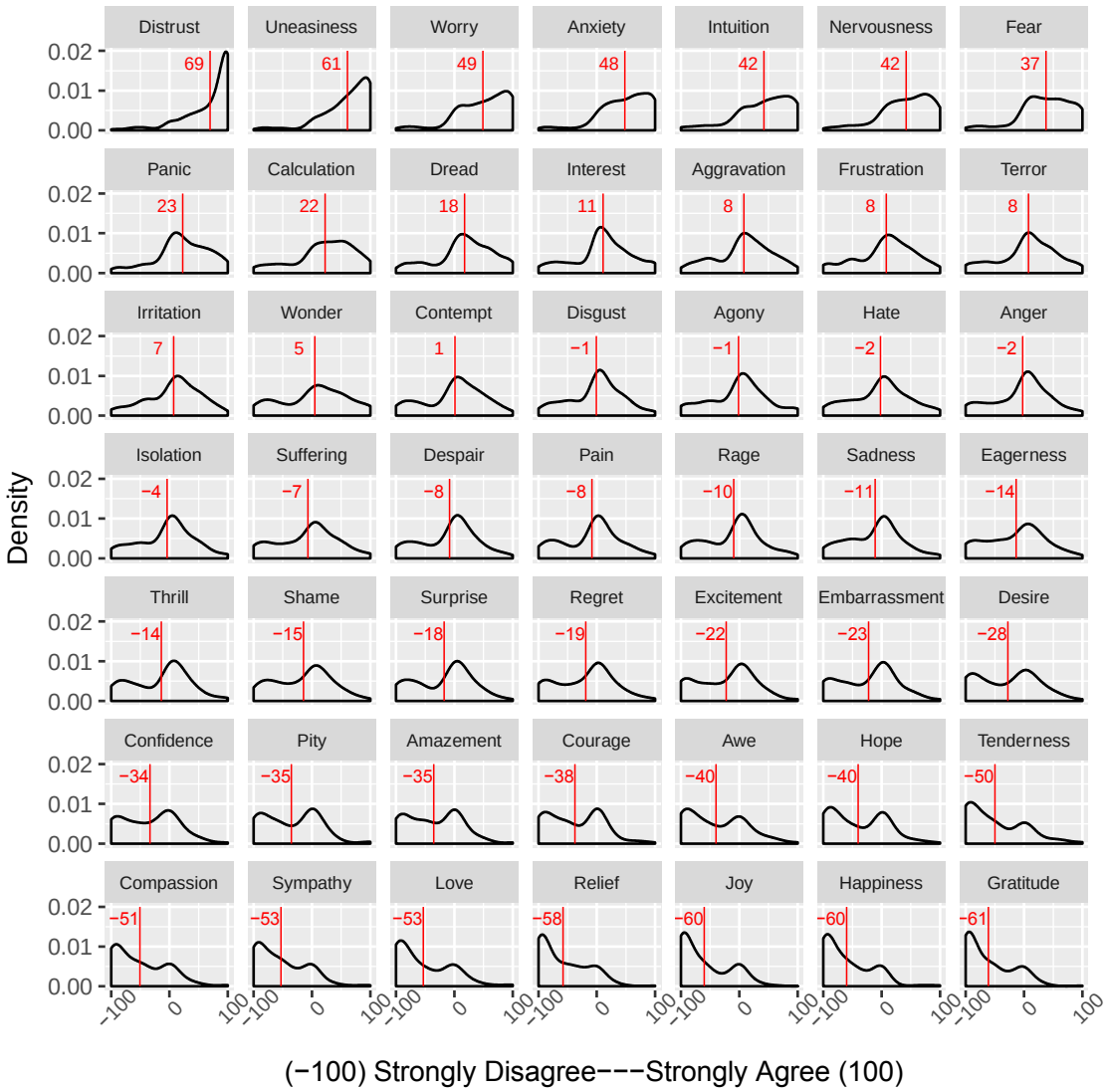

Figure 3. Density plots of participants' agreement with the statement "Suspicion feels like [psychological state]." Plots are arranged in order of highest to lowest mean rating, which is denoted by the vertical line and numeric label (rounded to the nearest whole number). The slider position started at the midpoint, which was labeled "Neither agree nor disagree" and corresponds to a rating of 0. The numeric value corresponding to the slider position was not displayed to the participant.

On average, participants reported the strongest agreement with the statement "Suspicion feels like distrust" (M = 69.4, SD = 41.2) and disagreed most strongly when suspicion was compared with "certainty" (M = -36.4, SD = 47.3). Participants indicated their (dis)agreement by placing a slider on a continuous scale marked "Strongly disagree" (-100) on the left, "Neither agree nor disagree" (0) in the middle, and "Strongly agree" (100) on the right. In contrast to the procedure in Study 1a, numeric values indicating the position of the slider were *not* displayed to participants.[7]

[7] I chose not to display the numeric values after observing the clustering of responses in Study 1a, so that any observed clustering could be attributed to the categorical labels (and potentially visual and motor responses), rather than anchoring to the more arbitrary numeric assignments of 0, 50, and 100.

A participant could choose to skip any item in the survey and proceed to the next item. The number of responses for each item was correlated with average agreement, $r(47) = 0.96$; a greater percentage of participant ratings were missing for items where participants tended to disagree (range = 5% to 58%). The percentage of missing data and other descriptive statistics are listed in Table 22 and Table 23 in the Appendix, which are sorted by mean and alphabetically by item, respectively. There is at least some degree of clustering of participant ratings at zero for all items (see Figure 3), which was both the location of the neutral stance and the default starting position of the slider. There is also some clustering at the extreme ends of the scale.

On average, and without accounting for the pattern of missing responses, participants agreed that suspicion feels similar to psychological states typically associated with a negative valence, with the exception of "intuition" ($M = 42.3$, $SD = 48.2$), "interest" ($M = 10.7$, $SD = 48.6$), and "wonder" ($M = 4.9$, $SD = 56$). The items rated as most like suspicion also tended to be associated with moderate arousal. Among the basic emotions, participants only indicated that "fear" feels like suspicion ($M = 37.5$, $SD = 44.9$), and six other items were rated higher on average. The average ratings for "contempt," "disgust," and "anger" fell just above and below zero, and participants tended to disagree that "sadness" ($M = -11.4$, $SD = 47.3$), "surprise" ($M = -17.5$, $SD = 49.5$), and "happiness" ($M = -60.1$, $SD = 41.7$) feel like suspicion.

Study 1: Discussion and limitations. The strong association between the proportion of data missing for an item and its quantitative ratings could introduce a large bias in the estimated average ratings and could also affect the rank order of items. The most straightforward inference is that the averages for all items would be biased upward if participants were more likely to skip an item when they disagreed with the statement, and that the items with the fewest responses would be the most affected (i.e., most biased upward). However, this bias could be offset or even reversed if participants were more likely to respond when they disagreed strongly and more likely to skip the item if they disagreed slightly or were ambivalent. It is impossible to know whether the missing responses would follow the same distribution as those I could observe.

Among participants' definitions of suspicion and their comparisons to other psychological states, uncertainty about undesirable outcomes represents a prevalent theme. Other people were typically, though not exclusively, the targets of suspicion in the open-ended responses. Participants seemed to associate suspicion with a lack of trust, and these surveys were not designed to determine whether the two constructs are distinct. Among synonyms of suspicion in Study 1a, the average ratings of "doubt" and "skepticism" were higher than those of "distrust," which was rated the highest among emotions and other psychological states in Study 1b, above "uneasiness" and "worry."

Intuition and cognitive processes such as questioning and making predictions also seemed important. Deception is not a necessary a condition for suspicion, but falls into a broader category of perceptions of incongruence; participants frequently described violations of social norms, things or people that are out of place, and situations where "things are not what they seem." Participants also described a range of their own behavioral responses, including avoidance, observation, gathering of information, and (less frequently) confrontation.

These exploratory studies are useful for identifying themes and synonyms among lay definitions of suspicion, but there are important limitations in addition to those discussed previously. First, I conducted surveys with students enrolled in summer courses in UC Berkeley's Psychology Department, and definitions of suspicion could vary with life experience and any number of other individual characteristics that differ systematically between these participants and the general population. Second, participants completed the survey online and

could have searched online for definitions of suspicion instead of coming up with their own definitions, which could lead to an overestimation of the concordance between lay and dictionary definitions. Due in part to these limitations, in Study 2 I asked participants to describe idiosyncratic, personal experiences of suspicion to produce less of an incentive to consult online material.

Study 2: Situational Interpersonal Suspicion

In both the literature on suspicion and the lay definitions in Study 1, it is often described as a psychological state that is aroused by another person's behavior. This is also the form of suspicion that is most relevant to policing. The nature of the interpersonal relationship could affect the experience of suspicion, and I chose to focus on suspicion of strangers or others not well known to the perceiver. Study 2 explores idiosyncratic SIS experiences related to unfamiliar others.

Pilot survey: Describing SIS of strangers. In an online survey, I asked participants to (1) recall a time when they experienced suspicion in response to a person they did not know or did not know very well, (2) briefly describe the cause of their suspicion, and (3) describe their own experience in greater detail. After completing the open-ended questions, participants indicated their (dis)agreement with a series of statements.

I developed several statements related to each theme I identified in Study 1 and incorporated feedback from interdisciplinary scholars and students in UC Berkeley's Psychology in Public Policy Lab and Culture, Diversity, and Intergroup Relations Lab. I attempted to standardize the syntax of the statements and included unavoidable variations within multiple themes to increase the likelihood of detecting patterns of association driven by sentence structure rather than conceptual content. For similar reasons, I did not reverse the wording of any items or include items about a lack of suspicion, which will be useful in a later stage of construct definition and the development of measurement instruments. Table 6 lists the initial set of items and includes the conceptual theme(s) from Study 1 that I intended to capture with each item.

Pilot survey respondents were students enrolled in undergraduate courses in the UC Berkeley Psychology Department. I included data from 321 participants, excluding data from nine participants who did not enter responses to the open-ended questions and from 11 participants who failed an attention check at the end of the 57 statements. Three people took the survey more than once and I retained data from only the first instance. The median participant age was 20 years with a range of 18 to 40 years old. Sixty-three percent identified as female, 48% as East Asian, 22% as White, 16% as Southeast Asian, 11% as Latino or Hispanic, 4% as Middle Eastern, 2% as Pacific Islander, 1% as Native American, and 1% as Black or African American.

I summarized the qualitative data using word frequencies and identified correlational patterns between responses to each pair of the 57 closed-ended statements. Next, I examined the correlation of each item's ratings with the total of all other item ratings (excluding the item in question). This is a common procedure used in scale development (DeVellis, 2012) based on the idea that responses to items should be strongly correlated when the items measure the same construct or several closely related constructs, and is preferable to exploratory factor analysis in this situation because of the large number of conceptual themes and the deliberate inclusion of very similar items.

Pilot survey results. At the beginning of the survey, participants read the following instructions: "Think about a time when you experienced suspicion in response to a person or people you did not know, or did not know well. Note that this experience need not involve direct interaction between you and the other person (or people) involved." Next, they responded to the question "Very briefly, what caused your experience of suspicion?" in one to two sentences or phrases. I ran an automatic check of spelling, made only obvious corrections, and then parsed the text into individual words. Participants used 1,011 different words a total of 4,211 times to answer this question. Table 4 contains frequency counts for the 1,175 words that remained after I removed common English words and the words from both the prompt and question.

Table 4. Counts of Words and Stems in Response to "…What Caused your Experience of Suspicion?"

Words	Count	Stems	Count	Words (cont.)	Count	Stems	Count
walking	22	walk	33	negative	6	dress	7
appearance	14	act	25	nervous	6	express	7
trust	14	friend	22	strange	6	guy	7
acting	13	trust	17	talk	6	home	7
behavior	13	appear	16	walked	6	negat	7
night	12	behavior	16	words	6	word	7
eye	11	lie	13	expression	5	nervous	6
friend	10	stranger	13	facial	5	behav	5
body	9	eye	12	late	5	facial	5
contact	9	night	12	looked	5	happen	5
language	9	strang	12	phone	5	late	5
friends	8	cheat	10	school	5	look	5
strangers	8	street	10	stranger	5	nice	5
street	8	talk	10	unfamiliar	5	park	5
cautious	7	approach	9	weird	5	phone	5
home	7	bodi	9			question	5
act	6	contact	9			reason	5
cheated	6	languag	9			school	5
close	6	motiv	9			start	5
guy	6	intent	8			sudden	5
intentions	6	cautious	7			unfamiliar	5
motives	6	close	7			weird	5

Note. Total words = 1,175, excluding stop words. Only words and stems that were used at least five times by participants are shown here.

These words should, for the most part, describe the person and situation that aroused participants' suspicion. A frequently occurring scenario involved the presence or unexpected behavior of a stranger while the participant was walking home at night. Words that may be used to describe physical appearance (e.g., "facial," "expression," "dress") also occurred frequently. Some stop words that were automatically removed were also found to be informative: Participants used the words "man," "men," and "guy" (which was not excluded from the word frequency counts) a total 23 times and used related pronouns 53 times, whereas they used "woman," "women," and "girl" four times and used related pronouns 16 times. The word "alone" was used 10 times.

The next question on the survey stated, "In one or two paragraphs, please describe your experience of suspicion. Include any details you can remember about your own thoughts, feelings, physical sensations, and actions." Table 5 contains frequency counts of words and stems that participants used most often.

Table 5. Counts of Words and Stems in Response to "…Describe your Experience of Suspicion"

Word	Count	Stem	Count
friend	45	friend	71
walking	33	walk	63
uncomfortable	30	talk	33
friends	24	uncomfort	31
nervous	24	nervous	25
night	19	trust	23
trust	19	start	22
car	18	day	20
guy	18	car	19
walk	18	guy	19
day	17	night	19
money	16	close	17
home	15	lie	17
scared	15	question	17
talk	15	situat	17
		behavior	16
		fear	16
		money	16
		scare	16
		street	16
		act	15
		happen	15
		home	15
		leav	15

Note. Words and stems are only shown here if they were used at least 15 times by participants. Total Words = 3,595

I followed the same cleaning and parsing procedures, and found 13,933 instances of 2,146 words in the text. After removing common English words and words from the prompt, 3,595 instances of 1,677 words remained.

Words related to fear, anxiety, anger, and discomfort are much more common here than they were in Studies 1a and 1b, where I only asked participants to define suspicion conceptually. The frequency of the words "friend(s)" and "relationship" could suggest that participants did not

always describe suspicion of a stranger or person they did not know well, but many participants described situations in which a friend was a third party and not the target of suspicion. Most participants disagreed with the statement "I knew the person who made me suspicious," with a median rating of 19.5 on a scale of 0 (strongly disagree) to 100 (strongly agree) (M = 32.3, SD = 34.0).

After completing the open-ended questions, participants indicated their (dis)agreement with a series of 57 statements regarding the subject of their description by placing a slider on a continuous scale marked "Strongly disagree" (0) on the left and "Strongly agree" (100) on the right. Numeric values indicating the position of the slider were not displayed to participants. Each statement was presented separately and the order of the statements was randomized for each participant. Table 6 includes descriptive statistics for each item.

Figure 11 in the Appendix contains density plots for each item arranged in descending order by mean participant rating. Ratings reflecting slight to moderate agreement were frequent for most items, and all items had several responses at one or both extremes (0 and 100). The starting point of the slider was at the midpoint (50) and was not labeled.

On average, participants reported the strongest agreement with the statement "I am suspicious of this person" (M = 71.4, SD = 19.2) and disagreed most strongly with "I am reporting this person" (M = 30.8, SD = 24.8). The items with which participants disagreed on average (M < 50) describe the perceiver's behavior (e.g., "I am confronting this person") or an inference about the target (e.g., "I am under the impression that this person is violating a law"), with the exception of the item "I am interested in this person" (M = 43.5, SD = 25.6).

When a participant chose to skip an item, he or she received a prompt requesting a response and could choose to respond or to proceed to the next item. The number of responses to each item is correlated with average agreement, $r(55) = 0.59$, 95% CI [0.43, 1.0], $p < 0.001$; a greater percentage of participant ratings were missing for items where participants tended to disagree, though the range (12% to 18%) and overall proportion of data missing is much smaller than it was in Study 1. The percentage of missing data for each item is included in Table 6.

In general, missing data poses problems for analyzing relationships between items, especially when missingness may be related to the values of the missing data (missing not at random, or MNAR) rather than being related only to the observed values of other variables (missing at random with respect to residuals, or MAR) or missing completely at random (MCAR). Although the pattern was far more pronounced in Study 1, participants in Study 2 also skipped items with which other participants tended to disagree. Multivariate imputation strategies should perform reasonably well *if* the distribution of missing values can be predicted by the observed values of all variables in the dataset (MAR), but this assumption may not be valid in this case and is not directly testable.

Table 6. Pilot Situational Interpersonal Suspicion Items, Themes from Study 1, and Descriptive Statistics

No.[a]		Theme[b]	*M*	M_i[c]	*SD*	SD_i[c]	% miss	r_i[c]	r_{lw}[c]	Retain[d]
S1	I am suspicious of this person	GS	71.4	70.7	(19.2)	19.3	13	0.61	0.60	PS
S2	I am experiencing suspicion	GS	69.5	68.9	(20.8)	21.2	13	0.52	0.48	
S3	I am suspicious of this person's motivations	GS	65.3	64.4	(22.8)	23.2	12	0.61	0.54	
S4	I am suspicious of this person's actions	GS	68.5	67.0	(21.5)	22.5	12	0.73	0.66	
S5	I am suspicious of this person's intentions	GS	65.6	64.1	(23.0)	24.2	13	0.61	0.55	
S6	I am under the impression that this person is breaking a rule	NV	49.4	48.9	(28.2)	28.6	16	0.55	0.55	
S7	I am under the impression that this person is violating a social norm	NV	52.6	52.5	(26.2)	26.4	17	0.57	0.59	
S8	I am under the impression that this person is doing something harmful	NV, D	49.8	49.5	(25.4)	25.9	13	0.55	0.47	Inf
S9	I am under the impression that this person is committing a crime	NV	41.0	41.4	(28.2)	28.5	17	0.50	0.55	Inf
S10	I am under the impression that this person is violating a law	NV	41.0	41.1	(27.3)	27.0	17	0.51	0.54	
S11	I am uncertain about this person	U	68.4	67.6	(19.2)	20.1	12	0.62	0.60	
S12	I am uncertain about this person's motivations	U	63.7	61.7	(22.7)	24.0	14	0.55	0.51	
S13	I am uncertain about this person's actions	U	64.6	63.1	(23.1)	24.2	14	0.44	0.43	
S14	I am uncertain about this person's intentions	U	64.2	64.5	(23.7)	23.4	12	0.50	0.41	
S15	I am considering several possible explanations for this person's actions	CA, U	64.2	63.1	(22.5)	23.3	15	0.46	0.42	
S17	I am unfamiliar with this person	U	68.4	66.5	(28.2)	29.6	12	0.34	0.37	
S18	I am questioning this person's intentions	CA	67.7	66.0	(21.9)	23.1	14	0.57	0.57	PS
S19	I am asking questions of this person	IG, C	49.7	51.1	(26.5)	26.4	16	0.37	0.36	B
S20	I am looking for more information about this person	IG	54.6	55.2	(27.6)	28.1	15	0.45	0.36	B
S21	I am wondering about this person	CA	61.2	60.6	(22.5)	23.2	12	0.55	0.54	
S22	I am paying attention to this person	IG, CA	67.6	66.4	(21.7)	22.2	13	0.54	0.57	PS
S23	I have questions about this person	CA	60.9	59.2	(23.4)	24.3	13	0.62	0.57	
S24	I am interested in this person	CA	43.5	42.5	(25.6)	25.3	16	0.25	0.33	
S25	I have doubts about this person	CA, U	65.0	64.2	(22.3)	22.5	13	0.61	0.57	PS
S26	I am curious about this person	CA	54.2	53.2	(25.8)	26.0	12	0.42	0.42	
S27	I am skeptical of this person	CA	68.2	67.2	(20.3)	21.2	12	0.64	0.58	
S28	I am trying to make sense of this person's behavior	CA, U	65.1	64.3	(24.9)	25.3	13	0.56	0.49	PS
S29	I have an intuitive sense about this person	Int	63.7	62.8	(21.1)	22.3	14	0.63	0.63	PS

No.[a]		Theme[b]	*M*	M_i[c]	*SD*	SD_i[c]	% miss	r_i[c]	r_{lw}[c]	Retain[d]
S30	I have a strange feeling about this person	Int	65.4	64.6	(22.0)	22.1	14	0.48	0.59	PS
S32	I am making predictions about this person	P	67.5	66.7	(21.1)	21.7	12	0.61	0.59	PS
S33	I am thinking about what will happen next with this person	P	60.3	59.7	(25.8)	26.5	13	0.61	0.57	B
S34	I am noticing something unusual about this person	Inc	53.2	52.3	(25.8)	26.6	15	0.64	0.57	PS
S35	I am anticipating this persons next action	P	60.6	59.7	(25.2)	26.3	15	0.53	0.44	
S36	I am under the impression that this person's behavior is unusual	Inc	60.2	58.7	(25.4)	26.2	14	0.60	0.61	Inf
S37	I am noticing that this person is not behaving the way I expect	Inc	57.7	57.1	(23.4)	23.3	13	0.37	0.45	
S38	I am under the impression that this person is deceiving me	PD	53.9	53.5	(25.9)	26.6	18	0.39	0.41	
S39	I am under the impression that this person is being dishonest	PD	59.6	59.3	(24.9)	25.6	16	0.49	0.55	
S40	I am experiencing distrust of this person	D	68.9	68.4	(21.1)	21.3	12	0.64	0.62	PS
S41	I am under the impression that this person is lying	PD	55.4	55.0	(25.7)	25.6	17	0.42	0.36	Inf
S42	I am under the impression that this person is hiding something	PD	59.8	59.8	(23.8)	23.7	14	0.52	0.51	Inf
S43	I am under the impression that this person has ulterior motives	Inc	60.7	59.1	(24.0)	24.8	16	0.59	0.60	
S45	I am under the impression that this person does not belong here	Inc	46.3	47.4	(26.7)	27.3	18	0.40	0.43	Inf
S46	I am suspicious of this person’s timing	Inc	57.1	55.9	(24.6)	25.3	17	0.44	0.48	
S47	I am under the impression that there is a lot of bad behavior in this location	NV	50.5	50.6	(28.1)	28.2	15	0.49	0.40	
S48	I am under the impression that people in this location are dangerous	NV	46.2	45.8	(29.2)	29.8	17	0.47	0.41	
S50	I am avoiding this person	A	63.8	62.9	(28.0)	28.4	13	0.47	0.43	B
S51	I am confronting this person	C	37.7	37.5	(28.8)	28.8	12	0.21	0.18	B
S52	I am staying away from this person	A	65.4	64.2	(27.0)	28.0	12	0.45	0.36	
S53	I am observing this person	IG	66.9	66.2	(24.1)	24.9	12	0.55	0.50	
S54	I am watching this person carefully	IG	63.5	63.6	(25.2)	25.5	14	0.58	0.48	PS
S55	I am paying extra attention to this person	IG	64.4	63.9	(23.4)	23.9	13	0.53	0.54	
S56	I am inquiring about this person	IG	47.0	47.1	(26.1)	25.8	15	0.44	0.41	
S57	I am reporting this person	C	30.8	32.0	(24.8)	25.8	14	0.29	0.25	B
S58	I am protecting myself from this person	A	66.6	66.5	(26.0)	26.3	12	0.59	0.62	B

No.[a]		Theme[b]	*M*	M_i[c]	*SD*	SD_i[c]	% miss	r_i[c]	r_{lw}[c]	Retain[d]
S59	I am noticing that this person's behavior is inconsistent	Inc	54.9	53.9	(25.6)	26.0	17	0.57	0.59	
S60	I am noticing that this person's communication is inconsistent	Inc	52.8	51.9	(25.4)	26.5	18	0.48	0.45	
S61	I have a hunch about this person	Int	62.2	61.4	(21.7)	22.2	15	0.62	0.63	PS

Note. N = 321, agreement rating range = 0-100.

[a] I dropped four items after testing the survey, so 57 items are numbered through 61.

[b] Themes from Study 1 used for item generation: general suspicion (GS), uncertainty (U), cognitive arousal (CA), intuition (Int), prediction (P), information gathering (IG), avoidance (A), confrontation (C), perceived incongruence (Inc), perceived norm violation (NV), perceived deception (PD), and distrust (D).

[c] The subscript *i* denotes that the statistic was calculated from the imputed data. r_i and r_{lw} are the item-total correlations with the item excluded from the total, using imputation and list-wise deletion (remaining n = 155), respectively, to handle missing values.

[d] Items retained. PS: psychological states, section 1. B: Behavior, section 2. Inf: Inferences, section 3.

Although imputation cannot account for unobserved systematic differences between missing and observed data, it allowed me to preserve data from respondents who skipped at least one of the 57 statements when computing the correlation matrix. The variation in proportion of responses missing by item ranged from 12% to 18%, which is high enough to pose problems for calculating pairwise correlations, and no two participants (aside from the 155 that answered all questions) had the same pattern of missing responses. Item-total correlations using list-wise deletion of missing observations (n = 155) and imputed missing values (n = 321) are listed in Table 6. The correlation matrix in the Appendix (Table 26) was calculated using imputed missing values.

I compared two imputation strategies. A non-parametric Random Forest imputation reached the stop criterion, where the difference between the previous and new data matrix increased once, after six iterations and returned the fifth dataset. On average, the imputed values differed from the variable mean among complete cases by 19.2 (RMSE). I also built 10 datasets where the missing values were imputed using fully conditional specification (or multivariate imputation by chained equations, MICE), which specifies the model based on conditional densities. The imputed values were based on predictive mean matching, which can preserve non-linear relationships and restricts imputed values to the observed values for each variable. The MICE datasets appeared to match the observed data more than the Random Forest imputation (see Figure 12 in the Appendix for a visual comparison of the distributions). All imputed values were plausible (i.e., between 0 and 100). Figure 13 in the Appendix compares all datasets imputed using MICE to the observed distributions for each variable. Unless otherwise mentioned, I performed analyses on each MICE dataset separately and then pooled the results.

Table 27 in the Appendix contains the full correlation matrix for all items. I generated all 57 items based on themes that either appeared in the literature or emerged from lay definitions of suspicion, meaning that negative correlations between items could highlight situational variation in the properties or covariates of suspicion, problematic wording, or dimensionality. Most of the negative correlation coefficients were small in magnitude (greater than -0.1), with a few predictable exceptions. Agreement with "I am confronting this person" (S51) was negatively

associated with responses to “I am unfamiliar with this person” (S17) (r = -0.11), the latter of which was also negatively correlated with “I am interested in this person” (S24) (r = -0.14). Responses to “I am avoiding this person” (S50) and “I am staying away from this person” (S52) were negatively correlated with responses to “I am interested in this person” (S24) (r = -0.24 and -0.26, respectively) and “I am curious about this person” (r = -0.15 and -0.19). As noted above, items related to the perceiver’s behavior generally had low item-total correlations, but this was not the case for items related to avoidance (S50, S52). I chose to exclude items pertaining to the perceiver’s behavior from subsequent item-level analyses, but retain and adapt them in the revised survey.

At this stage, I intended to retain multiple items for each conceptual theme identified in Study 1, but correlation coefficients above 0.7 could signal redundancy of two items. In all cases, the conceptual content was similar and I eliminated the item with the lowest item-total correlation when both were excluded from the data. For this reason, I dropped the following items: “I am under the impression that this person is violating a law” (S10), “I am paying extra attention to this person” (S55), “I am under the impression that there is a lot of bad behavior in this location” (S47), and “I am staying away from this person" (S52).

I also reviewed items with responses uncorrelated with “I am suspicious of this person” (S1) and “I am experiencing suspicion” (S2). These included “I am interested in this person” (S24, r = -0.04), “I am confronting this person” (S51, r = -0.06), and “I am reporting this person” (S57, r = -0.01), and S19, S20, and S26. I did not automatically eliminate these items, but considered this information in one case (“I am curious about this person,” S26) with a marginal item-total correlation in the next set of analyses.

Given the lack of clarity regarding the distinctions between suspicion, distrust, and a lack of trust, I compared the correlational patterns for the two items that most directly address suspicion (S1 and S2) to those of the item “I am experiencing distrust of this person.” The distrust item had a higher item-total correlation than the two suspicion items; this difference was driven by higher item correlations between distrust and perceptions of deception (S39, S41, S42, and S43) and avoidance (S50, S52, S58). Other items more strongly associated with distrust were related to skepticism (S27), asking questions of a target (S19) and perceptions that the target was breaking a rule (S6), doing something harmful (S8), or, to a lesser degree, committing a crime (S9) or violating the law (S10). Relative to distrust, the first suspicion item was more strongly associated with the item “I am trying to make sense of this person’s behavior” (S28).

Next, I examined the correlation of each item’s ratings with the total of all other item ratings (excluding the item in question). The descriptive statistics in Table 6 include the item-total correlations prior to the elimination of any items, for the imputed dataset and for the original dataset with list-wise deletion of observations with missing data. I sequentially eliminated the item with the lowest item-total correlation and then recalculated all item-total correlations and the item-item correlation matrix, which I checked for negative correlations and correlations above 0.7. I repeated this until all item-total correlations were above 0.5. The items marked S1-12 in the “retained” column of Table 6 remained. Table 7 contains the retained items and the correlation between each item and the total of all other retained items.

Table 7. Retained Situational Interpersonal Suspicion Items Pertaining to the Perceiver's Psychological State

		Theme[a]	r_i[b]	r_{lw}[b]
S1	I am suspicious of this person	GS	0.69	0.70
S18	I am questioning this person's intentions	CA	0.60	0.56
S22	I am paying attention to this person	IG, CA	0.60	0.54
S25	I have doubts about this person	CA, U	0.54	0.53
S28	I am trying to make sense of this person's behavior	CA, U	0.54	0.43
S29	I have an intuitive sense about this person	Int	0.64	0.63
S30	I have a strange feeling about this person	Int	0.53	0.55
S32	I am making predictions about this person	P	0.62	0.62
S34	I am noticing something unusual about this person	Inc	0.53	0.45
S40	I am experiencing distrust of this person	D	0.63	0.57
S54	I am watching this person carefully	IG	0.58	0.47
S61	I have a hunch about this person	Int	0.63	0.68

[a] Themes from Study 1 used for item generation: general suspicion (GS), uncertainty (U), cognitive arousal (CA), intuition (Int), prediction (P), information gathering (IG), avoidance (A), confrontation (C), perceived incongruence (Inc), perceived norm violation (NV), perceived deception (PD), and distrust (D).

[b] The subscript *i* denotes that the statistic was calculated from the imputed data. r_i and r_l are the item-total correlations with the item excluded from the total, using imputation and list-wise deletion (remaining n = 155), respectively, to handle missing values.

Retaining items based solely on item-total correlations would have eliminated items related to common themes among lay definitions of suspicion, namely avoidance, confrontation, perceived norm violations, and perceived deception. I therefore selected items from each of these themes to retain under the broader categories of perceiver inferences and behavior that might be related to (rather than constitutive of) experiences of interpersonal suspicion.

Idiosyncratic experiences of situational interpersonal suspicion. To identify common features among idiosyncratic experiences of situational interpersonal suspicion and explore possible covariates, I used the findings from the pilot study to develop a survey that I administered on Amazon's Mechanical Turk platform. The properties and covariates of interpersonal suspicion could vary with life experience and other characteristics of undergraduate students that are likely to differ systematically from those of a broader sample of adults, so I was conservative in selecting items for elimination.

I retained the open-ended questions and the items noted in Table 6, splitting them into three sections. The first section began with: "Please imagine yourself during the experience you described and rate your agreement with a series of statements using the slider," and one sentence providing instructions on using the slider. The instructions were followed by the 12 items retained for this section from the pilot study and eight new items related to affective state, which I included because the open-ended responses in the pilot suggested I neglected this theme when I generated the initial set of statements.

In the second section, participants received the following instructions: "Please imagine yourself during and after the situation that made you suspicious and indicate whether the following statements describe your actions," and then responded to seven items from the pilot study that I retained and revised slightly.

The third section began with: "Please indicate whether the following statements reflect your thoughts about the person's behavior at the time," and was followed by the six items retained from the pilot study with minor revisions and two new items. The order of items within

each of the three sections was randomized for each participant. Participants then answered questions about how certain they were that their suspicions were correct, how well they knew the target of their suspicion, and their perceptions of the target's race, gender, and age. Lastly, participants reported their own race, gender, and age.

I reduced the number of items based on their item-total correlations, following a procedure similar to that which was used in the pilot study, and then conducted exploratory factor analyses (EFA). Exploratory factor analysis, a structural equation modeling (SEM) technique based on the common factor model, assumes that the structure of associations between responses to individual items reflects the linear relationships between latent constructs and the numeric value associated with responses to each item. It can help identify a parsimonious set of latent constructs that describe a domain, at least within the boundaries established by the researcher in item-generation. In identifying latent constructs, EFA also helps identify the items most closely related to each latent construct, making it a useful technique for developing informative and parsimonious measurement instruments (Fabrigar & Wegener, 2011).

The common factor model is an effects indicator model: in accounting for common variance, it assumes that latent variables exert a linear influence on the measured variables (i.e., participant responses to each statement). In the case of interpersonal suspicion, it is plausible that a participant's reported agreement with the statement "I am suspicious of this person" is an indicator of the degree of interpersonal suspicion the person experienced. The structure of associations for several items could suggest that they are indicators, or measures, of the same latent construct, or can sometimes be driven by extraneous factors (e.g., wording of items).

In contrast, causal indicator models assume that the measured variables influence some outcome variable. The common factor model assumes that indicator variables will correlate with one another when they share a common factor, and in a causal indicator model this may or may not be the case. For this analysis, I was interested in whether correlational relationships between responses are well described by a model in which they share one or more common psychological antecedent(s), but a few causal indicator models are also plausible.

Participants and procedure. I included data from 1,009 participants who accessed the survey through Amazon's Mechanical Turk platform. I excluded data from 118 observations in which responses to the open-ended questions were either a single word or included content clearly copied from another document; many of these responses were identical or very similar, suggesting that there were not 118 unique participants among these observations. Three additional people took the survey twice and I retained data from only the first instance.

The average age reported by participants was 34.9 years with a range from 18 to 82 years old (Median = 32 years). Fifty-five percent of participants identified as male, 43% as female, 1% identified as transgender or non-binary, and 1% did not select a gender category. Finally, 79.4% of participants identified as White, 10.2% as Black or African American, 5.8% as Latino or Hispanic, 5.3% as East Asian, 2.2% as Southeast Asian, 1.8% as Native American, 0.4% as Pacific Islander, 0.2% as Middle Eastern, and 0.6% of participants specified another race or ethnicity. These percentages include 5.9% of participants who selected more than one category.

Results. I conducted exploratory analyses with a random sample of 504 observations, retaining approximately half of the sample for confirmatory modeling. Table 8 summarizes responses to the 20 suspicion and emotion items, 7 items pertaining to the participant's behavioral response, 8 items related to the participant's inferences about the target, as well as the items about certainty and familiarity with the target. Figure 14, Figure 15, Figure 16, and Figure 17 in the Appendix show the full distribution of responses for each item.

Participants were not able to advance to the next question without responding, so there are no missing responses among these items. Participants expressed strong agreement with all items retained from the pilot survey that appeared to be most closely related to interpersonal suspicion (S1-S12). Among the new items in this section of the survey, participants tended to agree that they were "wary" of the target (M = 83.5, SD = 19.4) and that they were "on [their] guard" (M = 83.5, SD = 19.4), and the distributions were very similar for these two items and several of the retained items (e.g., "I have doubts about this person," S9, and "I am paying attention to this person," S7). Responses to the new item "I am uncomfortable with this person" (M = 77.7, SD = 24.5) also fell within ranges similar to the retained items. Fewer participants agreed with statements about basic emotions (i.e., surprise, contempt, disgust, anger, and fear), though they agreed on average with all of these except fear (M = 46.4, SD = 32.8).

Most participants reported that they tried to figure out what the target would do next, protected themselves from the person, avoided the person, and tried to learn more about the person. Most indicated that they did *not* report the person to an authority, confront the person, or ask questions of the person. On average, participants agreed with all but one of the statements pertaining to their inferences about the target, especially "I think that this person's behavior is unusual," (M = 77.8, SD = 21.5).

Table 8. Descriptive Statistics for Responses to Statements About an Experience of Interpersonal Suspicion

		M	*SD*	*Med*	Sk	Ku	I-T[a]
S1_Suspicious	I am suspicious of this person.	88.1	17.2	96.0	-2.1	5.4	0.60
S2_Hunch	I have a hunch about this person.	76.9	19.9	79.0	-0.9	0.8	0.58
S3_Intuition	I have an intuitive sense about this person.	75.1	20.5	78.0	-1.0	1.2	0.53
S4_Distrust	I am experiencing distrust of this person.	84.3	18.7	91.0	-1.6	2.8	0.62
S5_Predict	I am making predictions about this person.	73.8	23.4	77.0	-0.9	0.6	0.51
S6_QIntent	I am questioning this person's intentions.	85.3	18.7	92.0	-1.9	4.5	0.60
S7_Attention	I am paying attention to this person.	82.7	19.9	88.0	-1.8	3.9	0.54
S8_StrFeel	I have a strange feeling about this person.	81.5	19.5	86.0	-1.3	1.8	0.63
S9_Doubts	I have doubts about this person.	83.7	18.2	88.0	-1.5	2.9	0.63
S10_Watch	I am watching this person carefully.	80.8	21.9	88.0	-1.5	2.1	0.61
S11_Unusual	I am noticing something unusual about this person.	77.8	21.5	82.0	-1.1	1.1	0.59
S12_MkSense	I am trying to make sense of this person's behavior.	74.2	24.9	79.5	-1.1	0.8	0.47
S13_Wary	I am wary of this person.	83.5	19.4	89.5	-1.6	2.9	0.65
S14_Afraid	I am afraid of this person.	46.4	32.8	45.5	0.1	-1.3	0.31
S15_OnGaurd	I am on my guard with this person.	83.5	19.4	89.0	-1.6	2.5	0.62
S16_Uncomfortable	I am uncomfortable with this person.	77.7	24.5	85.0	-1.2	0.7	0.59
S17_Angry	I am angry with this person.	50.6	31.3	52.5	-0.1	-1.1	0.36
S18_Disgust	I am disgusted by this person.	52.4	31.7	54.0	-0.1	-1.2	0.38
S19_Surprise	I am surprised by this person.	59.4	28.3	63.0	-0.4	-0.8	0.31
S20_Contempt	I am experiencing contempt of this person.	56.7	28.8	60.0	-0.4	-0.8	0.39
B1_Learn	I am trying to learn more about this person.	52.8	30.9	58.5	-0.3	-1.1	0.20
B2_FigNext	I am trying to figure out what this person will do next.	72.1	26.5	78.0	-1.1	0.6	0.54
B3_AskQ	I am asking this person questions.	41.4	34.3	38.0	0.2	-1.4	0.04
B4_Avoid	I am avoiding this person.	63.5	31.6	69.0	-0.6	-0.8	0.32
B5_Confront	I am confronting this person.	34.3	31.5	27.0	0.6	-0.9	0.07
B6_Report	I am reporting this person to an authority.	32.6	32.5	23.0	0.8	-0.7	0.16
B7_Protect	I am protecting myself from this person.	68.8	27.0	73.0	-0.9	0.2	0.47
F1_Harm	I think that this person might be doing something harmful.	65.8	27.7	69.0	-0.8	-0.1	0.48
F2_Crime	I think that this person might be committing a crime.	57.4	33.8	63.0	-0.4	-1.1	0.38
F3_Unusual	I think that this person's behavior is unusual.	78.0	22.4	82.0	-1.2	1.2	0.57
F4_Danger	I think this person might be dangerous.	60.9	31.7	65.0	-0.5	-0.9	0.47
F5_Lie	I think this person might be lying.	68.9	28.8	74.0	-0.8	-0.2	0.31
F6_Hide	I think that this person might be hiding something.	76.0	23.6	80.5	-1.1	1.0	0.50
F7_Place	I think that this person seems out of place.	70.0	27.2	74.0	-0.9	0.2	0.51
F8_Positive	I think that this person might be doing something positive.	22.8	25.5	14.0	1.1	0.4	-0.38
Certainty	At the time…how certain were you that your suspicions were correct?	75.0	21.6	79.0	-1.0	0.5	
T1_Familiar	The person who made me suspicious was someone I knew very well.	14.4	25.5	0.0	1.9	2.5	

Note. n = 504, *range* = 0 (strongly disagree) to 100 (strongly agree).

[a] Item-total correlations are based on the rank-based correlation matrix and replace the item's variance with an estimate of the common variance among all other items.

The low ratings for "I think that this person might be doing something positive" suggest at least some degree of attentive participation (M = 22.8, SD = 25.1). Relatedly, the strong disagreement with the statement "The person who made me suspicious was someone I knew very well" suggests that the situations participants recalled were generally in line with the survey instructions (M = 14.4, SD = 25.5).

Results: Participant and target characteristics. Interpersonal suspicion could vary systematically with individual differences, including race and gender, for any number of reasons. To maintain consistency across participant identities and likely perceptions of the target's race and gender, I used broad categories referring to large and indistinct geographic areas or combinations of race and ethnicity. There were also notable omissions from both the race (e.g., South Asian) and gender (e.g., transgender man or woman rather than "transgender" as a single category). I describe differences between these categories for descriptive and exploratory purposes among a subset of items, using the Tukey procedure to adjust all pairwise comparisons. The figures exclude small race and gender categories, but I included all categories in the analyses.

Figure 4 and Figure 5 show the distribution of responses by participant gender, excluding the categories selected by less than 5% of participants are. Relative to male participants, female participants indicated stronger agreement with the statement "I am suspicious of this person," with a difference of 5.3 in mean ratings, adjusted 95% CI [1.4, 9.2], and adjusted p = 0.003. The average agreement reported by female participants was higher for statements regarding psychological states (i.e., S1-S20), avoiding the target (B4), and protecting themselves (B7), relative to male participants, who were more likely to agree with the item "I am confronting this person" (B5). The difference in average rating by participant gender was largest for the item "I am afraid of this person," with female participants indicating stronger agreement, M_{diff} = 13.4, adj. 95% CI [5.9, 20.9], and adj. $p < 0.001$.

For several items regarding psychological states (suspicion, distrust, making predictions, doubt, wariness, discomfort, and being "on guard"), participants who identified as Black or African American expressed the least agreement (or slight disagreement on average) and participants who identified as Latino or Hispanic reported the strongest agreement. Participants who identified as Latino or Hispanic (M_{diff} = 16.7, adj. 95% CI [2.8, 30.6], adj. p = 0.007), White (M_{diff} = 11.6, adj. 95% CI [3.2, 20.1], adj. $p < 0.001$), or with multiple categories (M_{diff} = 11.6, adj. 95% CI [0.3, 25.6], adj. p = 0.04) reported greater agreement with the statement "I am suspicious of this person" than those who identified as Black. For other race categories, the number of participants was too small to make meaningful comparisons. Figure 18 and Figure 19 in the Appendix show the distribution of responses by participant race for categories selected by more than 5% of the participants.

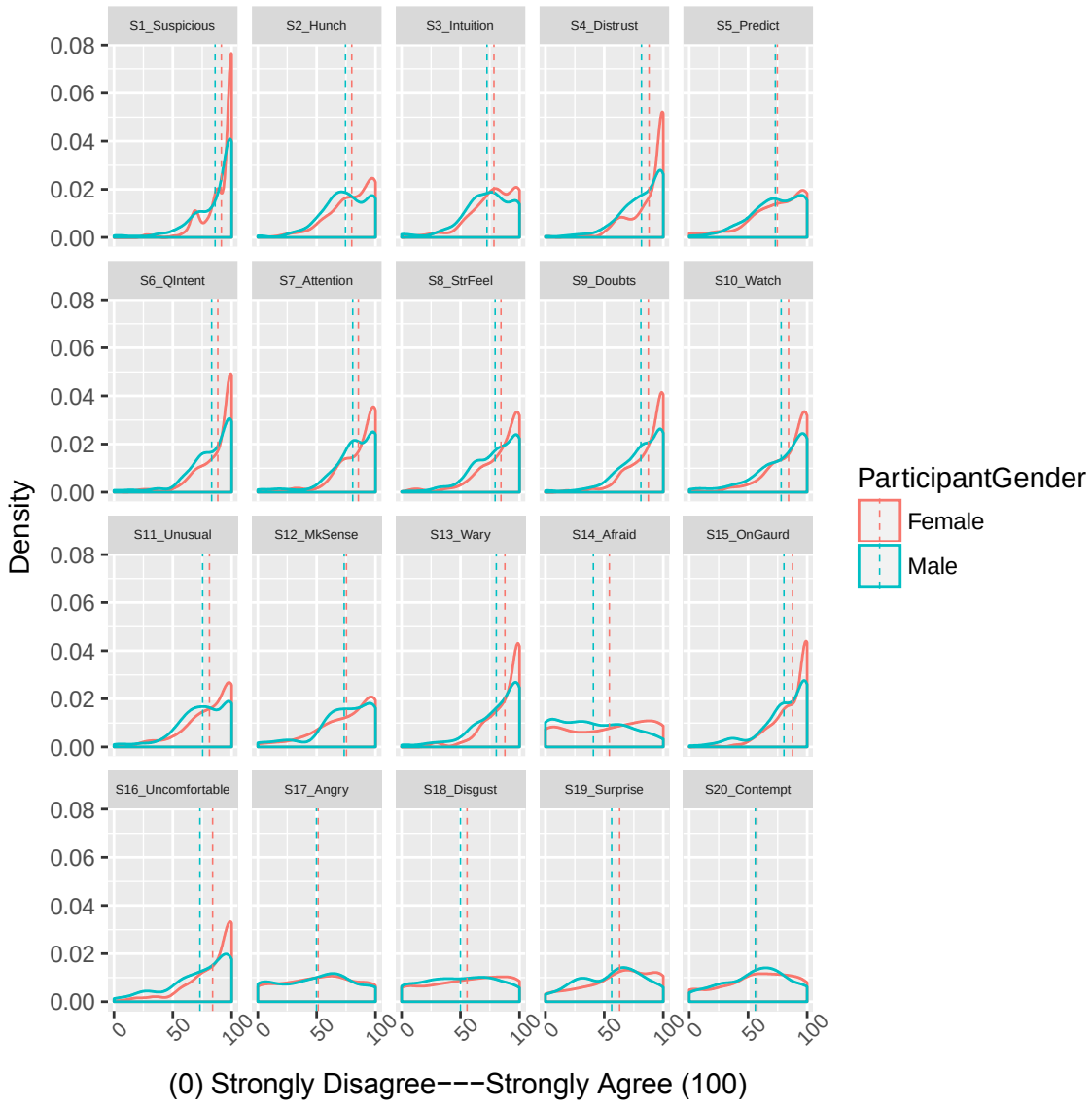

Figure 4. Distribution of responses to items pertaining to psychological states, by participant gender. Data from seven participants who selected other gender categories are excluded.

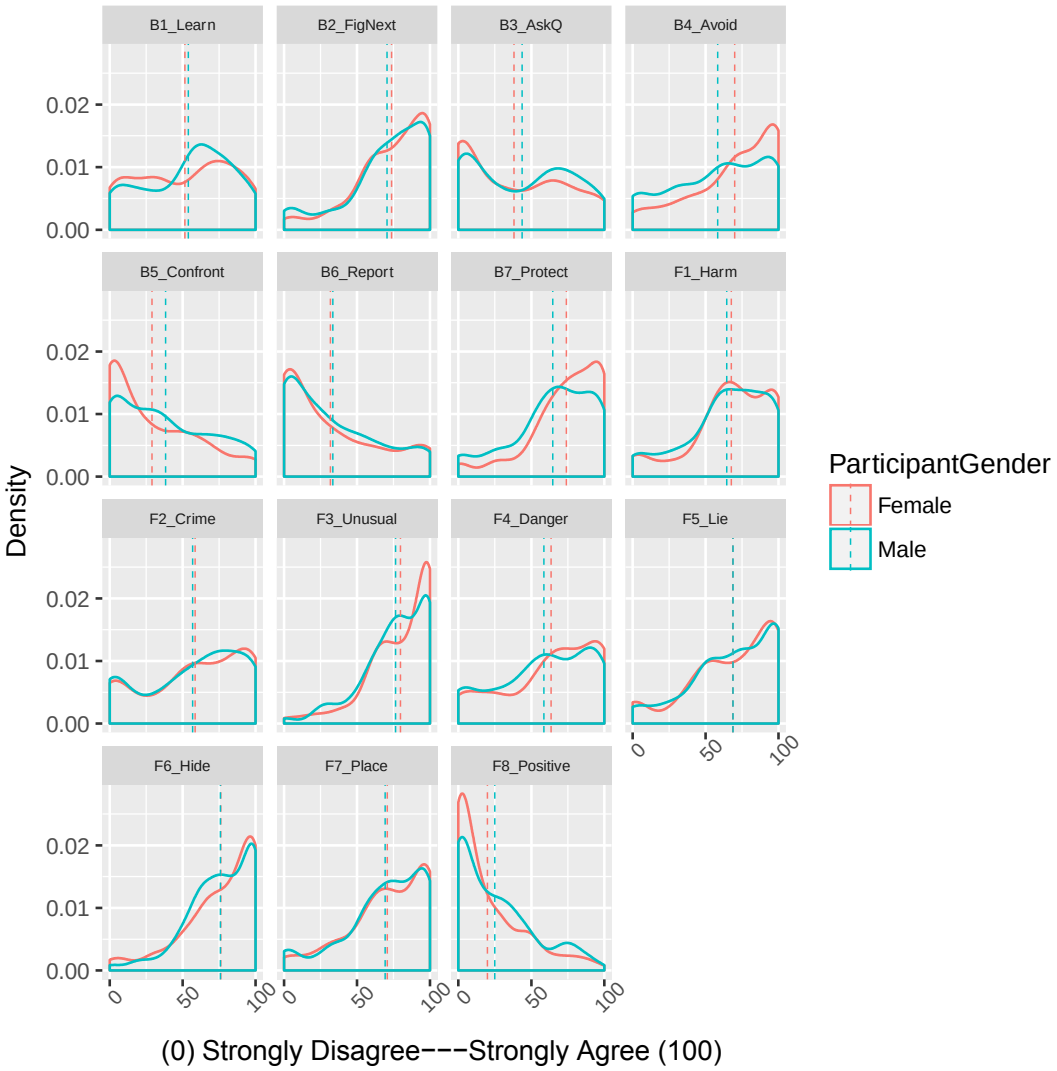

Figure 5. Distribution of responses to items pertaining to the participant's behavioral response and inferences about the target. Data from seven participants who selected other gender categories are excluded.

The gender and race of the target, as perceived and reported by participants, are summarized in Table 9. Targets of interpersonal suspicion were predominantly perceived to be male and similar in age, on average, to participants. In responding to questions about themselves, participants could choose multiple categories but could select only one category in each question about their perceptions of the target. Also, in favoring categories that conform generally to perceptions of race rather than identities, I constrained the options available to participants. Noting that these comparisons will be imperfect, relative to participants, fewer targets were perceived to be White and East Asian, and a larger number were perceived to be Black or African American and Latino or Hispanic. Figures 20 through 26 in the Appendix show the distribution of responses to items grouped by a subset of the perceived gender and racial categories of targets.

Table 9. Target Gender and Race, as Perceived and Reported by Participants

Perceived Race			Perceived Gender		
White	328	65%	Male	407	81%
Black	93	18%	Female	89	18%
Latino or Hispanic	40	8%	Other	5	1%
East Asian	10	2%	Transgender	2	0%
Middle Eastern	8	2%	Non-binary	1	0%
Southeast Asian	5	1%			
Pacific Islander	4	1%			
Native American	6	1%			
Other	10	2%			

Differences between average ratings by race and gender of the target were small for most items, among categories selected by more than 5% of participants. The items related to fear, danger, and crime were exceptions. Relative to participants who described a female target, participants who described male targets reported more fear (M_{diff} = 13.1, adj. 95% CI [2.8, 23.4], adj. p = 0.004), and were more likely to believe that the target might be committing a crime (M_{diff} = 16.7, adj. 95% CI [6.2, 27.2], adj. $p < 0.001$), or that the target might be dangerous (M_{diff} = 18.4, adj. 95% CI [8.6, 28.2], adj. $p < 0.001$). Relative to participants who described a White target, those that described a Black target reported more fear (M_{diff} = 12.1, adj. 95% CI [0.31, 23.8], adj. p = 0.04) and were more likely to believe that the target might be dangerous (M_{diff} = 13.1, adj. 95% CI [1.9, 24.2], adj. p = 0.009).

Grouping the data by race *and* gender of the target resulted in subgroups that were too small to permit meaningful statistical comparisons. For descriptive purposes only, Table 10 lists the average rating for the items related to fear, danger, and crime by target race and gender, as well as the number of participants who ascribed each category to the target of their suspicion.

Table 10. Average Rating for Items Related to Fear, Danger, and Crime by Perceived Race and Gender of the Target

Perceived Race	Perceived Gender	n	Fear (S14)	Danger (F4)	Crime (F2)
White	Female	63	33.2	44.6	43.1
White	Male	263	45.6	59.4	56.5
Black	Female	14	36.4	46.8	46.4
Black	Male	79	59.3	74.6	68.6
Latino/Hispanic	Female	6	27.2	37.3	37.5
Latino/Hispanic	Male	33	46.3	70.3	66.1

Note. The three largest race categories are reported.
Agreement ranges from 0 (strongly disagree) to 100 (strongly agree).

Results: Item correlations. I examined the correlations between items to identify items that might not be related to SIS or were too context-specific, and to compare patterns for suspicion and distrust. I also calculated the item-total correlations to identify items to exclude from the exploratory factor analysis.

Measures of linear association, including the Pearson product moment correlation, rely on several assumptions that do not hold for these data. Many of the distributions for individual items were quite skewed and none passed the Shapiro-Wilk test for normality, which tends to be too strict for large samples. This is not surprising given the design of survey and the procedures I followed for generating and selecting items.

There were also outliers in the individual distributions; for the item "I am suspicious of this person," 25 participants (~5% of the sample) rated their agreement lower than 1.5 times the interquartile range (IQR = 18). Nearly half (229) of the participants gave at least one response that qualifies as an outlier, usually by indicating that they moderately or strongly disagreed with a statement where agreement was high among most participants. In addition, although the ratings were assigned to continuous numbers, the information they represent likely falls somewhere between ordinal and interval, given the clustering of responses at the extremes (and in some cases at the midpoint).

Given the characteristics of the individual item distributions, I chose to calculate Kendall's rank-based correlation[8] for each pair of items because it should be less biased than the Pearson correlation coefficient under these circumstances and outperforms Spearman's rho in large samples (Xu, Hou, Hung, & Zou, 2013), at the expense of some information in the magnitude of the differences between ratings. Figure 6 reports the correlation coefficients for each pair of items in the first section of the survey (See Table 27 in the Appendix for a correlation matrix for all items) and Figure 29 in the Appendix includes scatter plots and Pearson correlation coefficients (which are generally greater in magnitude) for reference.

The ratings on the new items related to fear, surprise, contempt, anger, and disgust were the least correlated with ratings on other items. It is also with this set of items that the only obvious difference emerges between the single "suspicion" and "distrust" items; relative to suspicion, participants who reported distrust of the target were somewhat more likely to report all five of these emotions and especially disgust, anger, and contempt (which are strongly correlated with one another). Table 8 lists the initial item-total correlations, which account for item overlap by excluding the variance of the item in question and replacing it with the best estimate of the common variance.

Results: Common factor models. Among the many reasons that participants' responses to items would be correlated, one possibility is that they are indicators of the same latent construct or multiple related constructs. I used exploratory factor analysis (EFA) to identify plausible common factor models to explain the shared variance among items.

Model fit indices can be compromised when data are not normally distributed, as was the case for all indicator variables individually and as a group (Henze Zirkler $t = 6.82$, $p < 0.001$). Simulation studies have suggested that EFA using maximum likelihood estimation is robust against skew with an absolute value less than two and kurtosis with absolute value less than seven, which suggests that only the estimated skew (-2.1) of the distribution for "I am suspicious of this person" (S1) would pose a problem. Strong disagreement on this question was also at odds with the instructions in the survey to imagine oneself during an experience of suspicion of another person. I chose to drop 4 observations with responses that were more than four standard deviations below the mean on this item, reducing the skew estimate to -1.6.

[8] $\tau = \frac{n_c - n_d}{\frac{1}{2}n(n-1)}$, where n_c is the number of concordant pairs and n_d is the number of discordant pairs.

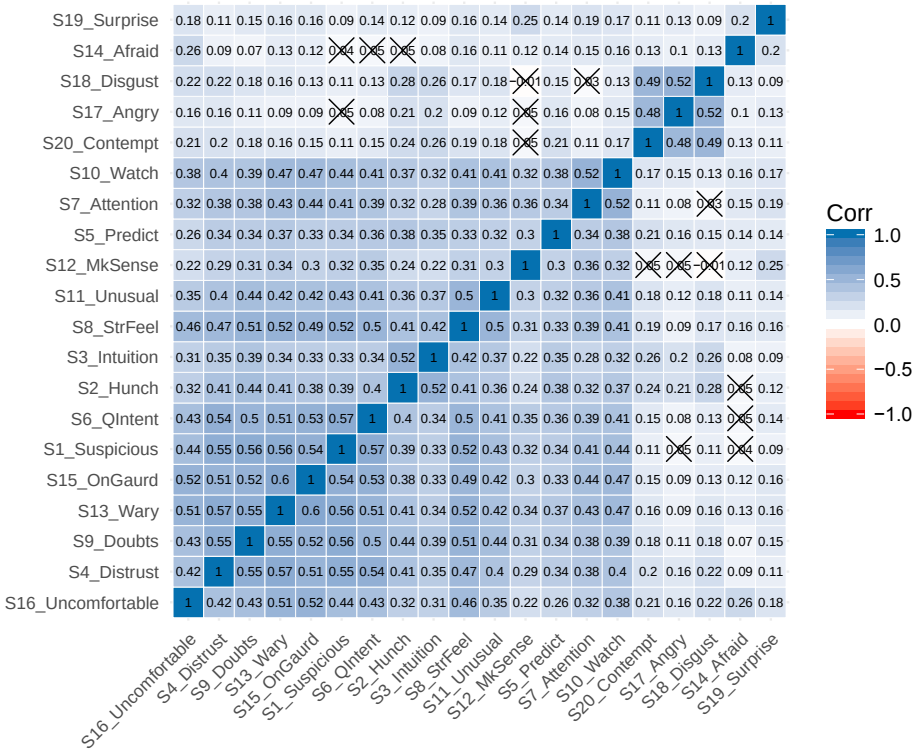

Figure 6. Rank-based correlation matrix for items pertaining to the participant's psychological state. The order of the items in the matrix is based on a principal component analysis. "X" denotes that the result was not statistically significant, $p > 0.05$.

I compared models with several variations: inclusion or exclusion of outliers, regular maximum-likelihood estimation or estimation with robust standard errors and mean- and variance-adjusted test statistics, and several oblique rotations. All variations resulted in small quantitative differences in model fit statistics, but the substantive interpretations were identical (i.e., retention of items, number of factors, general assessment of fit).

I started with the items from the first section of the survey on the participant's psychological state. I excluded those that had item-total correlations lower than 0.4, which were all related to basic emotions (fear, surprise, anger, disgust, and contempt, in order of the lowest item-total correlation of 0.22 to the highest of 0.34).[9] Parallel analysis, comparing factor eigenvalues based on the actual structure of the data to eigenvalues from a random simulation of the structure, suggested a model with five factors. I compared models with one to seven factors and eliminated items that consistently failed to load onto a single factor (standardized loadings below 0.3 on one or multiple factors), one item at a time. The initial model statistics

[9] After eliminating many items and several entire themes from Study 1, I also fit EFA models for all items, including the emotions, behaviors, and inferences. The "final" models were very similar to those based on the limited initial set and presented here.

indicated poor to adequate fit. Only 11 items remained.

Parallel analysis suggested a single factor model for the remaining 11 items, but the model fit statistics, factor loadings, and residual variance indicated poor fit. Table 11 summarizes the model fit statistics for one- to four-factor models. In a single-factor model, the standard estimated residual variances for six items were greater than 0.5, but all items had loadings between 0.515 and 0.789. The four-factor model had the best overall fit but several items have sizeable cross-loadings that did not resolve when I used other rotations. The rotated standardized factor loadings and estimated residual variances are listed in Table 12, and the factor correlations are described in Table 13.

After eliminating nearly half of the items and comparing four models of those remaining, I suspected that a model with a general, or "g-factor", might be a better fit. The fit statistics for the best of these models are included with the regular EFA models in Table 11, and the factor loadings are listed in Table 14. The factor structure is clearer conceptually than the four-factor EFA model, with similar fit. All items have moderate to high loadings on the general factor, the items regarding intuition and a hunch load onto the first factor, "attention" and "watching carefully" load onto the second factor, and items on wariness, being "on guard," and discomfort load weakly onto the third factor.

Table 11. Fit Indices for Five EFA Models of the 20 Items Pertaining to Psychological States, Using Maximum Likelihood Estimation and Oblique Factor Rotation

	1 Factor	2 Factors	3 Factors	4 Factors	1 G-Factor 3 Factors
RMSEA (90% CI)	0.12 (0.11, 0.13)	0.10 (0.09, 0.12)	0.09 (0.07, 0.10)	0.05 (0.03, 0.07)	0.05 (0.03, 0.07)
SRMR	0.07	0.051	0.032	0.014	0.012
CFI	0.87	0.931	0.966	0.993	0.993
TLI	0.84	0.889	0.925	0.976	0.976
X^2 (p)	373.3 (<0.001)	231.6	114.7 (<0.001)	36.5 (<0.001)	36.5 (0.004)

RMSEA: Root Mean Squared Error of Approximation, "good" fit < 0.05, "acceptable" < 0.08
SRMR: standardized difference between observed and predicted correlation, "good" fit < 0.05, "acceptable" < 0.07
CFI: Comparative Fit Index, includes a penalty for adding parameters, "good" fit > 0.9
TLI: Tucker-Lewis Index, also includes a penalty for additional parameters and is higher when item-correlations are high, "good" fit > 0.9
X^2 (p): Perfect fit is indicated by a failure to reject the null hypothesis, typically fails with larger samples, but the change in the test statistic is informative.

Table 12. Standardized, Rotated Factor Loadings for a Four-Factor Model with 11 Retained Items

	1	2	3	4	Resid.[a]
I am suspicious of this person.	**0.836**	-0.036	0.048	-0.002	0.293
I am experiencing distrust of this person.	**0.678**	0.094	-0.008	0.055	0.404
I have doubts about this person.	**0.661**	*0.254*	-0.085	0.017	0.360
I am questioning this person's intentions.	**0.630**	-0.018	0.172	-0.008	0.483
I have a hunch about this person.	0.007	**0.873**	0.028	-0.016	0.225
I have an intuitive sense about this person.	0.017	**0.666**	0.034	0.055	0.481
I am watching this person carefully.	-0.016	-0.003	**0.643**	*0.247*	0.407
I am paying attention to this person.	0.074	0.063	**0.684**	-0.01	0.441
I am wary of this person.	*0.310*	0.073	0.038	**0.463**	0.389
I am on my guard with this person.	*0.300*	-0.035	0.046	**0.564**	0.342
I am uncomfortable with this person.	-0.002	0.027	-0.063	**0.764**	0.435

Note. Bold text indicates the primary factor loading and italics indicate a cross-loading.
[a] Estimated residual variance for each item

Table 13. Factor Correlations for a Four-Factor Model with 11 Retained Items

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	1			
Factor 2	0.555	1		
Factor 3	0.521	0.382	1	
Factor 4	0.719	0.505	0.430	1

Table 14. Exploratory Model with one General Factor and Three Additional Factors

	G	F1	F2	F3
I am suspicious of this person.[a]	**0.827**	-0.130	-0.053	-0.056
I have doubts about this person.[a]	**0.779**	0.113	-0.144	-0.020
I am experiencing distrust of this person.[a]	**0.767**	-0.011	-0.08	-0.005
I am on my guard with this person.	**0.736**	-0.063	0.026	**0.334**
I am wary of this person.	**0.733**	0.018	0.012	**0.270**
I am questioning this person's intentions.[a]	**0.707**	-0.094	0.066	-0.062
I have a hunch about this person.	**0.585**	**0.657**	-0.001	-0.018
I am uncomfortable with this person.	**0.568**	0.024	-0.021	**0.491**
I am watching this person carefully.	**0.565**	-0.014	**0.516**	0.084
I am paying attention to this person.	**0.522**	0.024	**0.527**	-0.090
I have an intuitive sense about this person.	**0.517**	**0.500**	0.011	0.027

Note. Items are arranged in descending order of their loading on the general factor.
[a] Item only has a significant loading on the general factor.

Discussion and limitations. Situational experiences of interpersonal suspicion, at least as captured by the statements in this survey, were often associated with distrust, doubt, and questioning of a target's intentions. They are associated with a watchful wariness more than the active consideration of alternative hypotheses or generation of predictions described by the literature on deception, and although terms related to uneasiness and fear are common among

descriptions of situations involving suspicion, participants who reported a high level of suspicion generally did not report that they were afraid of the target. A model where all 11 items are indicators of one latent construct (plausibly "suspicion") and a subset of 7 items measure 3 additional constructs (roughly "intuition," "attention," and "wariness") describes the correlational structure of participant responses and the conceptual dimensions of suspicion reasonably well, as does a four-factor model.

The general factor might reflect my reliance on item-total correlations and the generally high ratings for suspicion (and distrust), which is useful for defining the construct but could mask latent constructs with more variation or constructs with weaker indicators among the item pool. For example, if people tend to make predictions about a target's behavior or motives only when they experience moderate levels of interpersonal suspicion, or if this tendency varies a great deal based on individual or situational variables, it would likely be eliminated from my analysis. Similarly, if the items I generated fail to capture this experience, participants' responses might not represent its importance in the experience of suspicion.

My findings indicate a few weaknesses in the models. Both models have factors with only two indicators, which is usually too few for scale development purposes, and I eliminated conceptually related items that did not perform well in earlier stages. Those items might be good candidates for inclusion in scale development studies that use the same stimulus for all participants rather than idiosyncratic experiences. In addition, there are low loadings and moderate residual variances in both models and cross-loadings in the four-factor model. Fitting models with alternate estimation strategies and rotations did not affect overall fit. Models with fewer factors have numerous cross loadings and models with more factors fail to converge.

There are many possible reasons for these weaknesses in the exploratory models. The most straightforward explanation is that data describing idiosyncratic experiences *should* be noisy and are best suited for identifying the most salient and consistent themes among responses and are not particularly useful for fitting models that assume linear, additive effects of latent constructs on responses. In addition, any weaknesses in the item-generation process will affect the upper bound of successful modeling. I was conservative in my approach to eliminating items and maintaining coverage of conceptual themes because I conducted the initial studies with undergraduate students, but this is an important limitation of the item-generation and selection process, because I do expect life experience to affect suspicion.

I generated items based on descriptions of idiosyncratic experiences, the literature on suspicion, and synonyms, and although I took a systematic approach, it is unlikely that I captured all variation within and between these categories. Skewed distributions and relying on inter-item correlations could further consolidate any omissions in the item-generation process.

Additional exploratory modeling could detect individual or situational differences that contribute significantly to correlations between items. This warrants exploration through exploratory SEM; I have captured a few possible covariates that I can add to the EFA model as predictors of the indicators and it might also be possible to group participants based on the type of experience they described at the beginning of the survey (qualitative data) or the inferences they report in the third section of the survey about the target's behavior.

I also plan to conduct additional analyses of the qualitative data from both Study 1 and Study 2, including topic modeling. It could be useful to conduct focused analyses of the qualitative data from cases where, for example, the ratings of distrust and suspicion diverge, or where ratings of suspicion were below the mean but still reflect agreement. In addition, one of the challenges in developing a scale to measure suspicion (or determining whether a single direct

item is sufficient) is the lack of a clear criterion variable, so it might also be useful to also explore causal indicator models of both the qualitative and quantitative data.

Situational interpersonal suspicion of strangers is highly contextual, but my findings suggest that doubt, distrust, intuition, wariness, and close observation of the target are salient across situations and individuals and that these concepts serve as reliable indicators of a single, multidimensional latent construct. Prior definitions of suspicion, derived mostly from the deception literature, have not addressed the role of intuition and describe the cognitive arousal associated with suspicion in terms of making predictions or weighing alternatives. The form of cognitive arousal might be context-specific so that predictions are important in detecting deception, whereas attentiveness and observation occur across many different situations involving interpersonal suspicion of a stranger.

Study 3: Dispositional Interpersonal Suspicion

In Study 2, I investigated idiosyncratic experiences of situational interpersonal suspicion (SIS). People can also exhibit a dispositional tendency toward interpersonal suspicion (DIS), which may have considerable overlap with a lack of dispositional trust. Distrust was a common theme in participants' definitions of suspicion in Study 1 and was associated with SIS of strangers in Study 2. The item-level analyses suggest that interpersonal suspicion and distrust are closely related but may not be identical experiences; distrust was, relative to suspicion, associated with slightly higher reported anger, fear, and contempt toward the target.

In Study 3, I examine interpersonal suspicion as a dispositional tendency and compare it to distrust as well as the personality traits measured by the Big Five Index (John & Srivastava, 1999). The data were collected for the original purpose of investigating trait-level covariates of state suspicion in two separate studies conducted by undergraduate students for their honors theses.[10] Before completing the main task in each of these studies, participants responded to a Big Five index that was followed by several similarly constructed items intended to measure the dispositional tendency toward interpersonal suspicion. The first study also included items intended to measure a dispositional tendency toward distrust.

Study 3a: Dispositional interpersonal suspicion, distrust, and the Big Five personality traits. In this study, I explored the relationships between dispositional interpersonal suspicion and other personality traits, specifically neuroticism and agreeableness.[11] Neuroticism is a tendency toward negative emotions and anxiety or nervousness, in contrast to emotional stability, while agreeableness is a prosocial orientation toward others and is associated with trust (John, Naumann, & Soto, 2008). I expected that DIS would be associated with high neuroticism and low agreeableness.

Neuroticism is often associated with negative, high-arousal states like anxiety and fear (Jeronimus, Kotov, Riese, & Ormel, 2016). One review of the literature on behavioral trust identified two studies showing that neuroticism was associated with lower trust, but not

[10] I am very grateful to Sherry Qi and Jessica Compartore for their collaboration and the work leading up to the analyses I present here. They designed and administered the original studies and completed honors theses based on these data while members of the Psychology in Public Policy Lab. The analyses and any errors here are my own.

[11] The goal of the original project was to investigate whether distrust and suspicion, as expressed by an imagined close coworker and friend, differentially affect the inclination to help a new colleague. We preregistered a hypothesis that neuroticism and agreeableness would moderate the relationship between the intervention and the inclination to help (Qi & Charbonneau, 2017), which was based on a more general notion that neuroticism would be positively correlated, and agreeableness negatively correlated with suspicion and distrust.

definitively; the researchers found that agreeableness is consistently associated with behavioral trust of strangers (Thielmann & Hilbig, 2015). I expect dispositional interpersonal suspicion to be similar to low trust in strangers, but I am not aware of any work investigating this topic.

In an online survey, 269 participants completed a 44-item Big Five Index immediately followed by 6 items using the same format and wording (see Table 15). I generated three items on interpersonal suspicion based the initial analyses of Study 1 and also included three items related to interpersonal distrust. Participants were undergraduate students enrolled in courses in UC Berkeley's undergraduate Psychology program; I did not collect demographic data. I excluded data from four respondents who only completed only a few of the trait items.

Results. Table 15 contains descriptive statistics for the individual suspicion and distrust items and composite scores for each trait, which are averages of the relevant individual item ratings for each participant. The Big Five traits are averaged over 8 to 10 items and the interpersonal suspicion and distrust traits are averaged over 3 items. There were more respondents who agreed with the statements about suspicion compared to those respondents who disagreed, and the opposite is true for the distrust items. Figure 27 in the Appendix shows the full distribution of responses to the individual suspicion and distrust items and the composite scores for each trait.

Table 15. Descriptive Statistics for Dispositional Suspicion, Distrust, and Five Personality Traits

Label		*M*	*SD*	*Med*	*Skew*	*Kurtosis*
Susp_Behavior	Tends to be suspicious of others' behaviors	3.01	1.07	3	-0.18	-0.89
Doubt_Intent	Has doubts about other people's intentions	3.15	1.11	3	-0.32	-0.93
OnGuard	Is on guard when I'm around other people	2.99	1.11	3	-0.08	-1.00
Suspicion_3	*Average of 3 suspicion items*	3.06	0.95	3	-0.14	-0.64
~AssumeBest	Usually assumes the best about people [R]	2.55	1.10	2	0.27	-0.77
Exp_Distrust	Experiences distrust often	2.57	1.13	2	0.35	-0.76
Ppl_Untrustworthy	Believes that most people are untrustworthy	2.35	1.10	2	0.59	-0.48
Distrust_3	*Average of 3 distrust items*	2.49	0.93	2.3	0.39	-0.23
Extraversion		3.10	0.89	3	0.12	-0.56
Agreeableness		3.69	0.65	3.7	-0.07	-0.28
Conscientiousness		3.58	0.67	3.6	0.05	-0.31
Neuroticism		3.17	0.85	3.1	-0.19	-0.44
Openness		3.51	0.63	3.5	-0.06	0.11

Note. Responses range from 1 (strongly disagree) to 5 (strongly agree), $n = 269$.

Next, I examined the correlations between the distrust and suspicion items. Although 5-point Likert scales did not generate the number of outliers and skewed distributions present in Studies 1 and 2, they were ordinal and most distributions did not pass strict tests of normality. An omnibus hypothesis of homogenous variance could not be rejected for the six distrust and suspicion items using the Levene test, $F(5) = 1.40$, $p = 0.22$, but could be rejected for the seven composite trait scores $F(6) = 21.7$, $p < 0.001$, which may have been due in part to the variation in the number of items used to measure each trait.

To maintain consistency between the two analyses and treat the responses as ordinal, I calculated correlations based on rank. The correlations for each pair of items is listed in Table 16 and for each pair of traits in Figure 7. Figure 30 in the Appendix includes scatter plots for individual suspicion and distrust items, as well as the Pearson correlation coefficients, which may be unbiased in this case if the Likert ratings can be considered roughly continuous. None of the correlations (even when relying on the larger Pearson correlations) for the individual or averaged items were high enough to suggest that they measure identical concepts.

The statement "I am someone who is on guard when I'm around other people," which I included as an interpersonal suspicion item, was more strongly correlated with "I am someone who experiences distrust often" relative to the other two suspicion items. The same was also true for the reverse-scored distrust item "I am someone who usually assumes the best about people." These two items also had the lowest item-total correlations within their respective set of three (τ = 0.61 and 0.52, respectively), and there was an estimated increase in reliability if each item was dropped (from a standardized alpha of 0.72 and 0.75, to 0.79 and 0.78, respectively). Given their relatively low correlations with other items, I chose to drop these two items rather than investigate the effect of switching them to the other group.

Table 16. Rank-Based Correlations for Dispositional Suspicion and Distrust Items

	1	2	3	4	5	6
Tends to be suspicious of others' behaviors (1)	1	0.64	0.45	0.45	0.46	0.44
Has doubts about other people's intentions (2)	0.64	1	0.49	0.42	0.51	0.47
Is on guard when I'm around other people (3)	*0.45*	*0.49*	*1*	*0.36*	*0.54*	*0.47*
Usually assumes the best about people [R] (4)	*0.45*	*0.42*	*0.36*	*1*	*0.4*	*0.44*
Experiences distrust often (5)	0.46	0.51	0.54	0.4	1	0.64
Believes that most people are untrustworthy (6)	0.44	0.47	0.47	0.44	0.64	1

Note. Italics indicate that I dropped the item from subsequent analyses.

I averaged the remaining two items in each category and compared them to the personality traits of agreeableness, conscientiousness, extraversion, openness, and neuroticism, which are measured by eight to ten items each from the BFI. The correlation between each pair of traits is reported in Figure 7. Dispositional interpersonal suspicion and distrust, as measured by the four included items, shared a very similar pattern of correlation with the other traits. They were positively correlated with neuroticism and negatively correlated with agreeableness, conscientiousness, and openness in order of magnitude. This general pattern also holds for the six individual suspicion and distrust items in relation to the Big Five Traits (see Figure 30 in the Appendix).

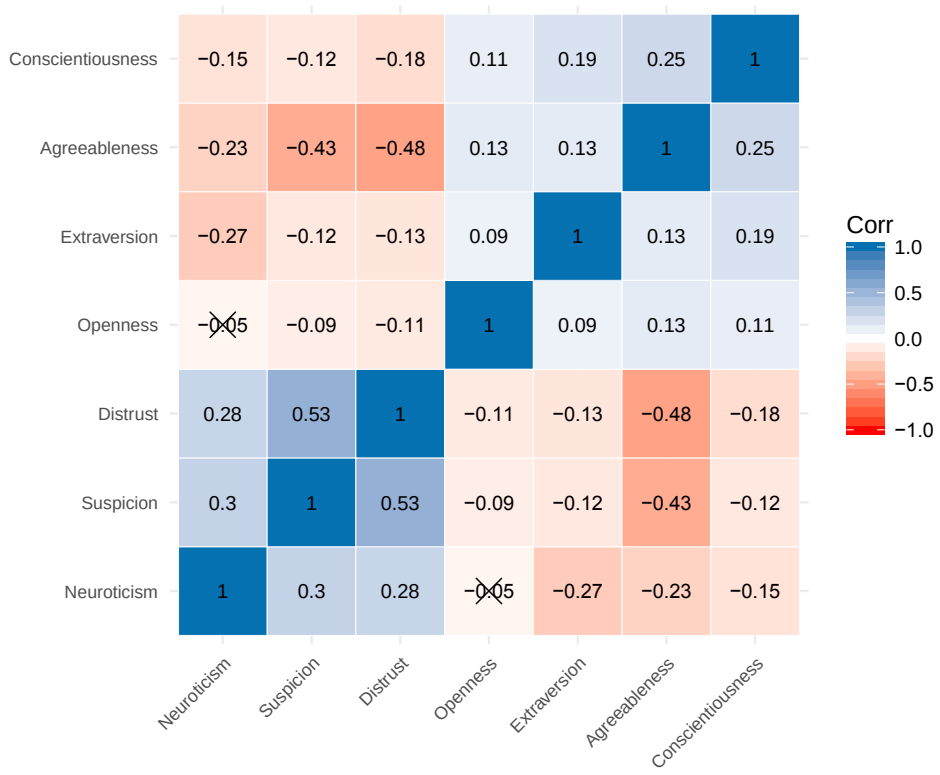

Figure 7. Rank-based correlations between the Big Five traits and dispositional suspicion and distrust as measured by two closely related items with high face validity for each. The order of the items in the matrix is based on a principal component analysis. "X" denotes that the result was not statistically significant, $p > 0.05$.

Study 3b: Dispositional and situational interpersonal suspicion. In Study 3b, I piloted nine items as an interim measure of DIS and investigate whether it is associated with neuroticism and SIS, as measured by a single item in response to photo stimuli. For the original project, I hypothesized that the 9-item measure of DIS would be positively correlated with neuroticism and SIS. Based on the literature on trust and the findings of Study 3A, I would also expect DIS to be negatively correlated with agreeableness, but we did not preregister this hypothesis. For this analysis, I also explore whether participants who identified with broad gender and racial/ethnic/geographic categories differ in their reported DIS.

It is not entirely clear from the literature whether race and gender predict dispositional distrust, which would offer hypotheses for DIS. Reviews have suggested gender does not reliably predict trust in strangers (Thielmann & Hilbig, 2015; Uslaner, 2002). In these studies, women report higher trait anxiety, risk aversion, and loss aversion relative to men, which all predict lower trust, but women are also more likely to forgive and equally likely to cooperate, which predict behavioral trust. I expected anxiety and risk aversion to be more important than forgiveness and cooperation in relation to suspicion. In Study 2, female-identified participants

reported higher SIS, but this could be related to characteristics of the idiosyncratic experiences they described, which may or may not be associated with a dispositional tendency.

It is even less clear whether to expect differences in DIS by race. In research on race and trust, Black and Latino Americans report lower dispositional trust than White Americans (Taylor, Funk, & Clark, 2010), but this analysis did not include Asian Americans, which is the largest group in the sample for this study. Participants who identified as Black and Latino expressed *lower* situational suspicion in Study 2 relative to other groups.

Participants and procedure. In this study, 196 participants completed a 10-item Big Five Index and nine items related to dispositional interpersonal suspicion (DIS) before completing a task where they were asked to take on the role of a police officer and rate their level of suspicion in response to photo stimuli (SIS). I excluded four observations with missing data.

After completing the personality measures, participants were asked to take on the role of a police officer and viewed photo sequences of actors completing a range of actions such as simply walking down the street (no indicators of criminal behavior, 6 trials), making eye contact and running away (ambiguous indicators of criminal behavior, 24 trials), and discarding a weapon (clear indicators of criminal behavior, 6 trials). Participants viewed only photos of Black men or only photos of White men. After each sequence, participants rated their agreement with the statement "I am suspicious of this person."

The stimuli were developed in the Psychology and Public Policy Laboratory in consultation with law enforcement officers. The Black and White actor pairs are matched in terms of build, clothing, facial expression, and action. Each matched photo series was taken against the same background at the same time of day and we surveyed law enforcement officers and researchers regarding realism and target suspiciousness.

While designing the original project, we preregistered the following hypotheses:

> *1. "Neuroticism" as measured by the Big Five Index (BFI), will be positively correlated with trait "suspicion" as measured by the 9 dispositional suspicion items.*
> *2. Participants high in trait "suspicion," as measured by the interim dispositional suspicion scale, will report higher state suspicion in response to stimuli.*
> *3. Participants who view Black targets will report higher state suspicion on average (Group 1) compared to those who view White targets (Group 2). Social desirability among university undergraduate students, in the absence of significant time pressure, could lead to the reverse H3 as stated.*
> *4. "Neuroticism," as measured by the Big Five Index (BFI), will be positively correlated with state "suspicion" as measured by the slider scale in response to the photo sequences.*

Results. Table 17 contains descriptive statistics for the nine DIS items and the five personality traits, as measured by the average score for two items (one reverse scored) for each trait. Figure 28 in the Appendix contains the full distribution of responses for each suspicion item.

The distributions of individual items and traits, which were aggregates of only two items in this case, did not pass strict tests of normality and this is corroborated by the quantile-quantile plots. A hypothesis of homogenous variance among the nine suspicion items could not be rejected using the Levene test, $F(8) = 4.74$, $p < 0.001$, but could be rejected for the composite

Big Five scores $F(6) = 21.7$, $p < 0.001$, which were measured using only two items in this case. I report the non-parametric rank correlations here and Figure 32 in the Appendix contains the scatter plots and Pearson correlation coefficients for reference.

Table 17. Descriptive Statistics for Nine Dispositional Suspicion Items and Five Personality Traits

Label	I am someone who…	*M*	*SD*	*Med*	*Skew*	*Kurtosis*	I-T[a]
Uncertain	Is often uncertain about other people.	3.80	1.38	4	0.01	-0.88	0.73
Q_Intentions	Questions others' intentions.	4.28	1.28	4	-0.13	-0.60	0.59
Watches	Watches other people carefully.	4.61	1.38	5	-0.49	-0.46	0.61
Suspicious	Is suspicious of others.	4.02	1.46	4	0.01	-0.84	0.74
UpToNoGood	Believes a lot of people are up to no good.	4.32	1.68	5	-0.16	-1.03	0.44
OnGuard	Is on my guard with others.	3.39	1.47	3	0.35	-0.91	0.62
Intuitive	Has an intuitive sense about others' actions.	4.41	1.46	5	-0.45	-0.48	0.46
Afraid	Is sometimes afraid of other people.	3.80	1.6	4	0.01	-0.99	0.29
Skeptical	Is skeptical of others.	4.77	1.39	5	-0.65	-0.06	0.38
Ave.Suspicion	*Average of 9 items*	4.15	0.95	4.22	-0.03	-0.13	
Agreeableness		4.72	1.08	4.75	-0.46	-0.05	
Conscientiousness		4.59	1.04	4.5	-0.20	0.15	
Extraversion		4.22	1.39	4	-0.01	-0.38	
Neuroticism		4.19	1.35	4	-0.14	-0.83	
Openness		5.09	1.27	5	-0.32	-0.45	

[a] Item-total correlations are based on the rank-based correlation matrix and replace the item's variance with an estimate of the common variance among all other items, $n = 196$.

I compared the nine items to identify a set to serve as an interim, exploratory measurement instrument for DIS. The nine suspicion items were developed based on the findings from Study 1 and the initial analyses of the pilot survey data for Study 2, which was underway at the time; Studies 1 and 2 focused on situational suspicion and the lack of a full item-generation and selection process for dispositional suspicion is an important limitation. Figure 8 reports the inter-item correlations based on rank.

Based on face validity, "I am someone who is suspicious of others" represents the best candidate item. The items about uncertainty, being "on guard," and questioning others' intentions were the most closely associated with the general suspicion item. These items also had high item-total correlations. As an interim measure of DIS, I averaged the three best performing items for each participant and compared this interim DIS score to the Big Five personality traits. I report the rank-based correlations in Figure 9. As measured by these three items,[13] DIS was found to be positively correlated with neuroticism and negatively correlated with agreeableness and extraversion.

[13] The results were qualitatively similar with single- and nine-item DIS measures.

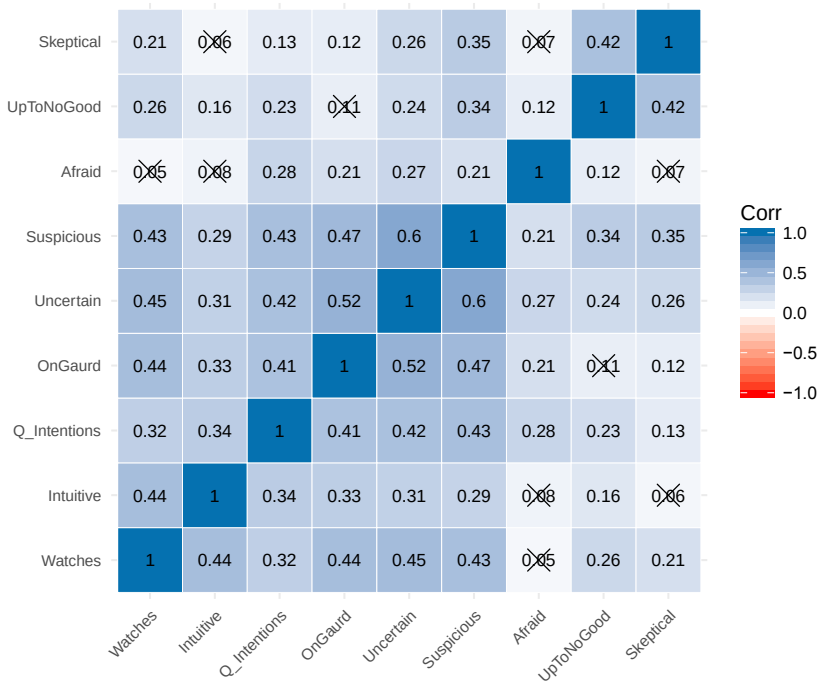

Figure 8. Rank-based correlations among nine dispositional interpersonal suspicion items. The order of items reflects a principal components analysis of the correlation matrix. "X" indicates that the correlation was not statistically significant, p > 0.05.

Next, I compared the average DIS score for groups of participants based on gender and race. Overall, female (M = 3.66) and male (M = 3.81) participants had similar DIS scores on average, $t(193) = -0.84$, $p = 0.40$. Grouping the participants by race, or by race and gender, results in groups that are too small to make meaningful comparisons. I report average DIS by race and gender for the largest race categories in Table 18 for descriptive purposes only.

We expected that dispositional suspicion would be associated with higher ratings of suspicion in response to the photo stimuli, and that this would be true primarily for the ambiguous trials (i.e., "slight" and "moderate" target suspiciousness). We would expect little variation in response to stimuli where, for example, the target is simply walking on a sidewalk and in response to stimuli where the target is clearly engaged in dangerous or illegal activity like discarding a weapon. At the time of preregistration, we expected to use the average of all nine of the suspicion items to measure dispositional suspicion, and this measure was associated with very small differences in ratings for all four levels of stimuli, none of which were statistically significant (see Table 20).

Table 21 contains results for an exploratory analysis of three- and one-item measures of DIS, experimental condition (target race), and target suspiciousness. None of the results from the linear models were significant after controlling the false discovery rate, but several results, especially those for the single item assessment of DIS ("I am someone who is suspicious of others"), suggested that the relationship between DIS and suspicion reported in response to stimuli differed by race of the target. Rank-based tests of the correlation indicate an association

between the single-item DIS measure and higher suspicion ratings in response to White targets, τ = 0.17, p = 0.02, and that DIS is essentially uncorrelated with ratings in response to Black targets, τ = -0.03, p = 0.73.

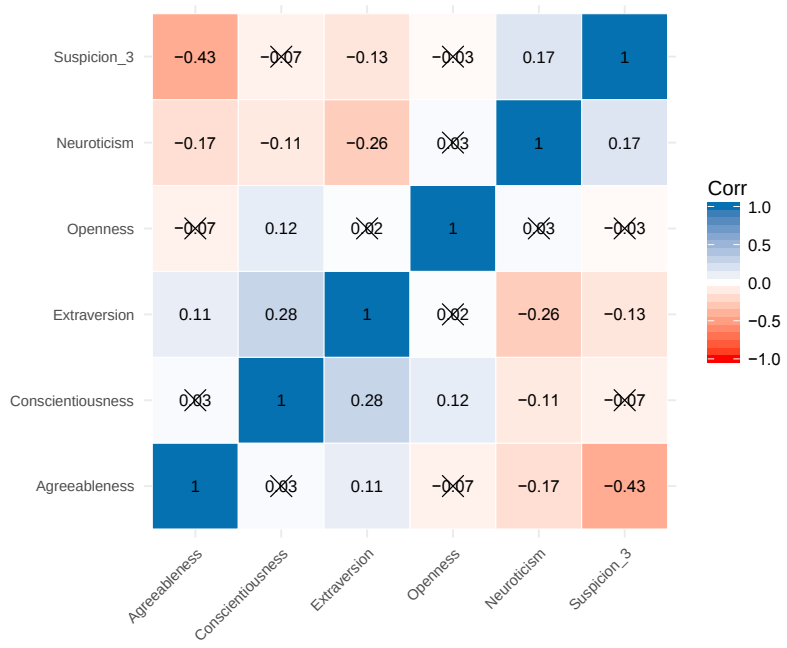

Figure 9. Rank-based correlations: DIS as measured by three items and the Big Five personality traits. The order of items reflects a principal components analysis of the correlation matrix. "X" indicates that the correlation was not statistically significant, p > 0.05.

Table 18. Average DIS Scores by Race and Gender of Participants

		M	*SD*	*n*
Asian/Pacific Islander	Female	3.84	1.29	60
Asian/Pacific Islander	Male	3.91	1.25	55
White	Female	3.35	1.05	20
White	Male	3.51	1.14	23
Latino/Hispanic	Female	3.76	1.25	11
Latino/Hispanic	Male	3.87	1.55	13

Note. Only the largest race categories are reported.

We also hypothesized that neuroticism would be associated with greater suspicion of the targets, but a one-point increase in a neuroticism score (out of seven) was associated on average with a 1.4 point (out of 100) *decrease* in suspicion ratings without controlling for other variables r = 0.03, p = 0.02. The rank-based correlation was stronger for participants who responded to Black targets, τ = -0.14, p = 0.05 relative to White targets, τ = -0.09, p = 0.19.

Finally, I compared the suspicion ratings in response to the photo stimuli in the simulated policing task. Participants were asked to take on the role of a police officer and were randomly

assigned to view only Black or only White targets; there were 98 participants in each group. The stimuli were divided into four categories of target suspiciousness (not described to the participant), based on the indicators of potential illegal behavior exhibited by the target in the series of four photos. Participants' average agreement with the statement "I am suspicious of this person" are listed in Table 19.

Table 19. Average Suspicion Rating in Response to Stimuli

Target Suspiciousness	*M*	*SD*	*Med*	*Skew*	*Kurtosis*
Not	23.6	15.8	22.4	0.34	-0.53
Slight	49.9	22.1	50.0	-0.05	-0.67
Moderate	51.6	16.4	52.0	0.04	1.02
Very	73.5	16.8	74.1	-0.57	1.02
All levels	49.6	11.6	50.5	-0.62	1.32

Figure 10 shows the distribution of responses for each level of target suspiciousness. Only the distributions of ratings on moderately suspicious stimuli suggest heterogeneity in variance, $F = 1.60$, $p = .21$; by default, I did not assume equal variance for the tests reported here. The average ratings across all levels of target suspiciousness were very similar in the two conditions, $t(192) = -0.64$, $p = 0.52$, with higher ratings for White, moderately suspicious targets. This finding is not quite in line with our prediction that students would express greater suspicion of White targets in the absence of time pressure, due in part to the social desirability of appearing to be non-prejudiced. We did not directly measure social desirability. Participants had three seconds to respond to stimuli, and responses were recorded if they clicked on the slider as time ran out but before the next stimulus set appeared.

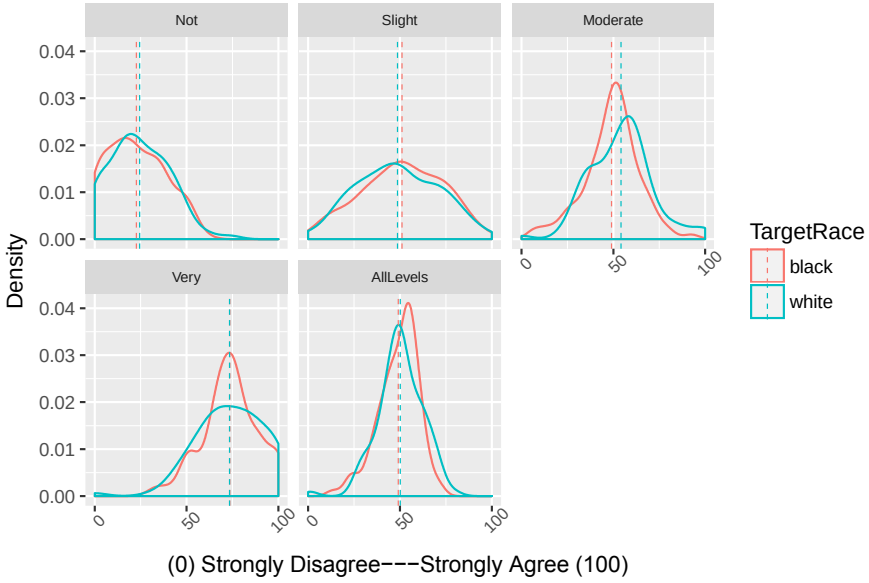

Figure 10. Ratings of suspicion in response to stimuli by target race (between-subjects condition).

Table 20. Average Ratings of Suspicion in Response to Stimuli, by Target Suspiciousness and Race

Target Suspiciousness	Ambiguity	Black Target *M(SD)*	White Target *M(SD)*	*t(p)*	*Adj. p*[a]
Not	Low	22.7(15.7)	24.4(16.0)	-0.77(0.44)	0.65
Slight	High	51.1(22.0)	48.7(22.2)	0.76(0.44)	0.65
Moderate	High	49.0 (15.2)	54.13(17.3)	-2.19(0.03)	0.15
Very	Low	73.6(15.1)	73.4(18.4)	0.08(0.93)	0.93
All Levels		*49.1(11.0)*	*50.1 (12.2)*	*-0.64(0.52)*	*0.65*

[a] P-values are adjusted using the Benjamini and Hochberg (1995) procedure.

Table 21. Three Linear Models of Suspicion Ratings in Response to Stimuli, for Each Category of Target Suspiciousness

		Target: Not Suspicious (Low Ambiguity)		Target: Slightly Suspicious (High Ambiguity)		Target: Moderately Suspicious (High Ambiguity)		Target: Very Suspicious (Low Ambiguity)	
		b(se)	*p**	*b(se)*	*p**	*b(se)*	*p**	*b(se)*	*p**
Model 1[a]	(Intercept)	(25.3)		(47.9)		(46.7)		(70.0)	
	DIS: 9-item	-0.4(1.2)	0.99	0.4(1.7)	0.99	1.2(1.2)	0.82	0.8(1.2)	0.99
	Adjusted R2	< 0.001		< 0.001		0.004		0.002	
Model 2	(Intercept)	(27.4)		(54.3)		(44.5)		(70.0)	
	White Target	-0.1(7.2)	0.99	-11.6(10.1)	0.82	5.2(7.4)	0.84	2.2(7.7)	0.84
	DIS: 3-item	-1.2(1.3)	0.82	-0.8(1.8)	0.99	1.2(1.3)	0.84	0.9(1.4)	0.99
	W*Dis	0.4(1.8)	0.99	2.5(2.6)	0.82	0.1(1.9)	0.99	-0.6(2.0)	0.99
	Adjusted R2	0.01		0.01		0.02			
Model 3	(Intercept)	(28.9)		(58.1)		(44.2)		(68.8)	
	White Target	-4.9(6.7)	0.84	-20.5(9.3)	0.56	-0.6(6.8)	0.82	0.4(7.1)	0.99
	DIS: 1-item	-1.4(1.1)	0.82	-1.7(9.3)	0.82	1.2(1.2)	0.82	1.1(1.2)	0.82
	W*Dis	1.6(1.6)	0.82	4.5(2.1)	0.56	1.6(1.6)	0.84	0.4(7.1)	0.99
	Adjusted R2	0.01		0.03		0.05		<0.001	

[a] Model 1 tests the pre-registered hypothesis. All others are exploratory.

Discussion and limitations. Dispositional interpersonal suspicion was associated with neuroticism and negatively correlated with agreeableness in this set of studies, and these results were robust across two different samples and variations in measurement. Interim measures of DIS were also negatively correlated with extraversion, and weakly negatively correlated with openness and conscientiousness. This pattern could be explained by differences in orientation toward others, where DIS and neuroticism as antisocial traits and the others are prosocial. It would be useful to confirm in future research that a simple distinction between negative and positive valence in the wording of items does not explain this pattern, because I did not include any reverse-scored items in the interim DIS measures. I did not find significant differences in

DIS based on race or gender of the respondent, but this will be important to explore with a larger and more diverse sample. I expect that many dimensions of life experience are important for both dispositional and situational suspicion.

Participants who viewed White targets reported slightly higher situational suspicion on average, though not significantly higher as we predicted for this population. This warrants exploration with participants from the general population and law enforcement. Future studies should also consider the role of social desirability in the observed patterns, because some participants may be reluctant to indicate suspicion of Black targets. The task simulates policing scenarios where officers can typically take a moment to decide how to proceed, and it is possible that this would allow enough time for a motivated officer to consider and overcome biases, racial or otherwise.

Counter to our hypothesis, neuroticism was associated with slightly lower SIS ratings, especially for Black targets. We hypothesized that neuroticism predict higher ratings because it is associated with anxiety and fear, but participants may not experience those states during the simulation, and it is also possible that social desirability interacts with neuroticism to produce the pattern I observed in Study 3b. Neuroticism may also lead to greater deliberation or interact with a participant's motivation to avoid prejudice.

Dispositional interpersonal suspicion, as measured by the average of the original nine items, was not correlated with situational suspicion, but an initial analysis of those items suggested several latent constructs. The most straightforward single item was associated with higher suspicion ratings of White targets only, and this suggests that there could be different mechanisms behind the similar distributions of SIS ratings in the two conditions. The findings of these exploratory analyses highlight the importance of measurement, and although we generated the DIS items based on early findings from Studies 1 and 2, those studies examined definitions of suspicion in general terms and situational interpersonal suspicion, which will very likely have different properties.

Chapter 3. Discussion and Conclusion

The psychology of suspicion is at the core of legal decisions regarding mandatory reporting of abuse and governmental intrusions on individual liberties, including police-civilian interactions. In Chapter 1, I traced the origins and applications of the reasonable suspicion legal standard to police decision-making and some of its implications for agency-level policies. In Chapter 2, I described the empirical literature on the basic psychology of suspicion and argued that more research is needed in this area to inform the policies and trainings that aim to improve the accuracy of policing decisions. I also reported the results of three sets of studies that aim to deepen the current understanding of the psychology of suspicion and identify important covariates. In this final Chapter, I provide a brief overview of my empirical findings, discuss their implications, and describe ideas for future research.

Summary of Findings

In Study 1, I investigated lay conceptual definitions of suspicion and participants' ratings of similarity to synonyms, antonyms, and psychological states (e.g., thoughts and emotions). Among participants' definitions of suspicion, I found that uncertainty and the expectation of negative outcomes were the most salient themes, and that descriptions of cognitive arousal (i.e., questioning a target's intentions) were far more common than mentions of specific emotional states like fear. Participants indicated that doubt and skepticism were the strongest synonyms of suspicion with distrust and "a gut feeling" following close behind. Certainty, trust, and assurance were the least like suspicion. Among emotions and other psychological states, participants reported that suspicion feels most like distrust and uneasiness and least like gratitude and happiness. Based on the findings of Study 1 and a review of the literature on suspicion and related constructs, I identified 12 conceptual themes for further investigation.

In Study 2, I narrowed the domain of interest to interpersonal suspicion of strangers because of its particular relevance to legal decision-making. Based on the themes I identified from lay and expert definitions of suspicion, I generated many statements that could apply to a situational experience of interpersonal suspicion aroused by the observation of or interaction with a stranger or distant acquaintance. In the pilot phase of Study 2, I identified three conceptually distinct domains among these items (the perceiver's psychological state, inferences about the target, and behavioral response) and selected a subset of items from each based on their correlational patterns.

In the second phase of Study 2, I administered the revised survey using Amazon's Mechanical Turk to a sample that, despite other limitations, was larger and more diverse than those in the pilot phase and Study 1. Participants' experiences of interpersonal suspicion of strangers were characterized by doubt, distrust, intuition, attentiveness, and wariness. Basic emotions such as fear and anger were far less common. An exploratory factor analysis resulted in a model with 11 indicators of one general latent construct (situational interpersonal suspicion of a stranger) with three additional factors measured by items related to intuition, attention, and wariness.

Participants also responded to questions about their inferences and behavior during the situations they described in Study 2. They tended to report that they perceived the target's behavior as unusual or evasive more often than dangerous or criminal, although the latter inferences were also common. Participants tended to indicate that they tried to determine what

the target would do next, protect themselves, or avoid the person; most did not report, confront, or ask questions of the target, and these behaviors were associated with lower levels of suspicion.

In Study 3, I began to investigate interpersonal suspicion as a dispositional tendency among undergraduate students. In a simulation (Study 3b) where participants took on the role of a police officer and rated their suspicion in response to either Black or White male targets, the aggregate measures of DIS were uncorrelated with ratings of suspicion in response to the stimuli, and the ratings did not differ by race of the target. An exploratory analysis suggested that DIS as measured by a single item was associated with higher ratings in response to White targets only.

Dispositional interpersonal suspicion (DIS), as measured by a single item, was highly correlated with the tendency to experience being uncertain about or "on guard" with others, and I combined these three items to form an interim scale. Using this interim measure of DIS, I did not detect differences by gender or race of participants among the categories that were reasonably well represented in this sample. Dispositional interpersonal suspicion, as measured by a single item and by several versions of an interim scale, was positively correlated with neuroticism and negatively correlated with agreeableness and other prosocial personality traits.

Implications

In Chapter 2, I identified dimensions of suspicion and contextual nuances that have not been explored previously and partially corroborate existing definitions. The findings from Studies 1 and 2 suggest that during experiences of interpersonal suspicion of a stranger, people tend to question the stranger's intentions and experience intuition, attentiveness, and wariness. Questions about the target's intentions are closely related to doubt and distrust, which both seem to be nearly synonymous with suspicion. My findings share with prior definitions of suspicion the conceptual themes of uncertainty and questioning another's intentions, but intuition and wariness have not featured prominently in previous work.

Situational interpersonal suspicion of strangers tends to involve attentiveness and close observation more often than the prediction and weighing of alternatives described in the deception literature. In prior literature, situational or state suspicion has been defined as the "simultaneous combination of uncertainty, perceived (mal)intent, and cognitive activity (searching for alternative explanations or new data)" (Bobko et al., 2014a, p. 493). This definition was based largely on the deception literature, which describes suspicion as "...a psychological state in which perceivers actively weigh the possibility that a target's behavior is genuine against the possibility that it is contrived—either because the behavior itself is counterfeit or because the motives that underlie the behavior are ulterior" (Hilton et al., 1993, p. 503). In Studies 1 and 2, I found that items related to trying to make sense of or predict a target's behavior, and trying to learn more about the target were less closely related to interpersonal suspicion than were items about paying attention to and watching the target closely. This suggests that the type of cognitive arousal associated with suspicion might vary depending on the situational context, and that heightened attention and observation are more common across situations and individuals.

The cognitive and emotional arousal associated with suspicion both warrant further exploration. My findings on fear in relation to suspicion are mixed, and participants were far more likely to report wariness, discomfort, and self-protection (being "on guard"), and ratings of related statements were strongly correlated with responses to "I am suspicious of this person."

These psychological states could be characterized as co-occurrences of cognitive and emotional arousal, and the same could be true for suspicion.

During the experiences described by participants, distrust was more closely associated with emotional arousal than interpersonal suspicion. Analyses of sentiments expressed online have suggested that distrust involves less arousal than suspicion, but my findings suggest the opposite. Ratings of statements about fear, anger, surprise, contempt, and disgust (in order of lowest to highest rank-based correlation) were at most weakly correlated with ratings of the statement about suspicion, and the magnitude of the rank-based correlation was two to three times greater (though still moderate) in comparisons of basic emotions to the statement "I am experiencing distrust of this person," with the exception of surprise where the difference was smaller.

Aside from their patterns of correlation with basic emotions, I found only small differences between suspicion and distrust. Suspicion was more strongly associated with making predictions about the stranger's behavior, but its patterns of association with other items related to uncertainty and cognitive arousal were similar to those of distrust. In addition, familiarity with the target was associated with lower levels of situational suspicion and distrust, but the magnitude of correlation was greater for suspicion. As dispositional tendencies, at least as I was able to measure them, interpersonal suspicion and distrust were both associated with neuroticism and, to a greater degree, low agreeableness.

Although the studies I described focus on the basic psychology of suspicion, the findings could be relevant in legal decision-making. Participants indicated that certainty, proof, knowledge, and information bear little to no resemblance to the term suspicion, and their responses suggest that the phrases "a gut feeling" and "a hunch" are among the closest synonyms. Semantically, then, the phrase "reasonable suspicion" is almost an oxymoron. In its legal application, the phrase represents an attempt to locate the legal standard somewhere between "a mere hunch" and a "fair probability" (probable cause).

The reasonable suspicion standard has been criticized for creating opportunities for intentional or unintentional discrimination. My findings cannot speak directly to this issue, but there were notable differences in participants' inferences and emotions that were associated with the target's perceived race. Furthermore, when I asked lay people to describe experiences of interpersonal suspicion in response to a stranger or distant acquaintance, they identified targets that were disproportionately male, Black, and Latino. Participants describing Black, Latino, or Male targets were more likely to infer that the target's behavior was dangerous or criminal, and expressed more fear of the person. Fear plays an important role in the legal analysis of policing decisions; if, for example, an officer fears for his or her own safety or the safety of others, a brief search pursuant to a seizure is automatically justified. Although there are many possible causes of the differences I observed, these findings suggest that even when the psychological experience and degree of suspicion are similar, the associated inferences differ by the perceived race and gender of the target.

Future Research

Additional research on the basic psychology of suspicion and the development of measurement instruments would enable study of its effects on decision-making. Studying idiosyncratic experiences of suspicion is descriptively useful but is limited by the variation between situations and lack of a clear criterion variable. I used scale development techniques to identify psychological states, inferences, and behaviors that co-occur with suspicion across any

number of individual and situational differences, but where ratings of suspicion are high by design. This could have a consolidating effect where I might not detect items or constructs that are important at moderate or low levels of suspicion. Future studies could evaluate item performance at different levels of suspicion by presenting participants with stimuli that vary in the degree of target suspiciousness.

I have identified several properties and covariates of suspicion that could have important effects on judgment and behavior. Intuition has been studied in the context of expert decision-making, where the development of reliable intuition depends on the predictive validity of cues in the environment; this work could be extended to investigate the effects of suspicion on decision-making with important implications for policing. The relationships between interpersonal suspicion, fear, target race, and decision-making also warrant further investigation.

I expect that training in law and its enforcement will affect the way practitioners think about and experience suspicion, and that those effects might interact with basic psychological properties of suspicion that are shared by practitioners and lay people. I have started with the basic psychology of suspicion with the intention of establishing a baseline to which I can compare the effects of training and professional experience. I plan to build on this work to investigate the effects of suspicion, as both a psychological and a legal construct, on legal decision-making.

Conclusion

The constitutional analysis of a large and important subset of policing decisions relies on a vague definition of the reasonable suspicion standard of proof, and tends to ignore the potential role of regulatory and professional incentives, as well as the psychology of individual decision-making. Officers stop and search civilians under uncertain and risky conditions, and then report information about these decisions and subsequent events after the encounter is complete, if at all. Analyses of the data recorded by officers inform law enforcement leaders, policymakers, and advocates in their efforts to increase the accuracy and fairness of policing decisions. Thus, the development of evidence-based policing strategies will rely on faulty inferences if the data that describe officers' practices reflect regulatory and professional incentives or fail to capture important aspects of individual decision-making processes.

In this dissertation, I explored legal and psychological definitions of suspicion and identified properties of interpersonal suspicion that are common across situations and individuals. The questioning of another person's intentions, heightened attention, wariness, and intuition associated with suspicion could affect the accuracy of decisions. For example, individual variation in the experience of suspicion could be related to an officer's ability to detect reliable indicators of crime or to the inferences he or she makes about a civilian. An understanding of suspicion and its effects on decision-making could inform analyses of policing data and the development of effective policies and trainings.

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Appendix

Selected Tables and Figures

Table 22. Descriptive Statistics of Reported Agreement with the Statement "Suspicion is Like…" (Sorted by Average Rating in Descending Order)

	n	% Missing	mean	sd	skew	Q1	Q3
Doubt	208	4	60.3	38.2	-0.8	35	99
Skepticism	202	7	54.9	43.2	-1.0	27	92
Distrust	196	10	53.0	43.5	-1.1	23	91
A.gut.feeling	208	4	51.7	42.8	-0.9	22	90
Mistrust	205	6	50.7	43.8	-0.8	21	92
Uncertainty	205	6	48.7	41.4	-0.9	25	86
A.hunch	205	6	45.7	40.3	-0.5	14	77
Wariness	198	9	41.7	40.8	-0.4	11	76
Dubiousness	199	8	36.6	39.7	-0.5	8	66
A.hypothesis	200	8	32.1	45.1	-0.5	7	62
Presumption	209	4	32.0	46.8	-0.6	7	68
An.idea	202	7	29.7	44.3	-0.7	3	60
Disbelief	194	11	29.5	48.1	-0.5	0	69
Concern	205	6	29.4	44.3	-0.8	8	60
A.question	204	6	28.2	45.2	-0.5	4	61
Conjecture	198	9	27.6	41.5	-0.3	0	61
Supposition	206	5	25.5	46.3	-0.4	0	60
Wonder	190	12	24.8	44.7	-0.4	2	57
Guesswork	196	10	24.1	41.1	-0.4	0	54
A.notion	202	7	24.0	42.4	-0.1	0	49
Surmise	186	14	23.8	46.2	-0.3	0	63
A.qualm	190	12	23.7	44.3	-0.2	0	57
Theory	194	11	23.6	47.7	-0.6	0	60
An.impression	198	9	22.4	43.1	-0.5	0	52
Foreboding	199	8	21.7	39.5	-0.2	0	51
Incredulity	198	9	20.1	45.6	-0.2	0	54
A.misgiving	191	12	18.7	48.5	-0.5	0	55
Non.belief	183	16	18.5	50.7	-0.3	-1	56
A.lack.of.confidence	188	13	18.2	48.2	-0.2	-2	48
Discredit	193	11	17.1	46.1	-0.4	-1	48
Fear	196	10	16.9	48.3	-0.5	0	49
Belief	177	18	10.0	55.9	-0.3	-30	52
Cynicism	192	12	10.0	48.8	-0.2	-8	46
A.premise	188	13	9.9	41.9	-0.3	-1	33
Calculation	175	19	-0.7	42.7	-0.4	-19	25
Knowledge	168	23	-7.9	49.7	-0.1	-46	23
Information	180	17	-7.9	47.0	-0.1	-38	17
Measurement	162	25	-12.1	44.8	-0.2	-44	12
Reality	165	24	-14.1	45.9	0.0	-49	6
Jealousy	164	24	-15.9	53.9	-0.1	-60	16
Faith	144	34	-21.1	52.2	0.1	-65	8
Confidence	145	33	-22.6	46.9	0.1	-58	6
Credit	153	29	-27.7	48.8	0.3	-72	0
Proof	144	34	-31.2	50.5	0.4	-75	0
Sureness	149	31	-33.7	46.7	0.4	-78	0
Assurance	151	30	-34.9	45.5	0.2	-77	0
Trust	136	37	-34.9	52.1	0.3	-88	0
Certainty	147	32	-36.4	47.3	0.7	-75	-3

Note. Q1 and Q3 represent the 25th and 75th percentile, respectively.
n = 218, range: -100 to 100

Table 23. Descriptive Statistics of Reported Agreement with the Statement "Suspicion is Like…" (Sorted Alphabetically)

	n	% missing	mean	sd	skew	Q1	Q3
Assurance	151	30	-34.9	45.5	0.2	-77	0
Belief	177	18	10.0	55.9	-0.3	-30	52
Calculation	175	19	-0.7	42.7	-0.4	-19	25
Certainty	147	32	-36.4	47.3	0.7	-75	-3
Concern	205	6	29.4	44.3	-0.8	8	60
Confidence	145	33	-22.6	46.9	0.1	-58	6
Conjecture	198	9	27.6	41.5	-0.3	0	61
Credit	153	29	-27.7	48.8	0.3	-72	0
Cynicism	192	12	10.0	48.8	-0.2	-8	46
Disbelief	194	11	29.5	48.1	-0.5	0	69
Discredit	193	11	17.1	46.1	-0.4	-1	48
Distrust	196	10	53.0	43.5	-1.1	23	91
Doubt	208	4	60.3	38.2	-0.8	35	99
Dubiousness	199	8	36.6	39.7	-0.5	8	66
Faith	144	34	-21.1	52.2	0.1	-65	8
Fear	196	10	16.9	48.3	-0.5	0	49
Foreboding	199	8	21.7	39.5	-0.2	0	51
Guesswork	196	10	24.1	41.1	-0.4	0	54
Gut.feeling	208	4	51.7	42.8	-0.9	22	90
Hunch	205	6	45.7	40.3	-0.5	14	77
Hypothesis	200	8	32.1	45.1	-0.5	7	62
Idea	202	7	29.7	44.3	-0.7	3	60
Impression	198	9	22.4	43.1	-0.5	0	52
Incredulity	198	9	20.1	45.6	-0.2	0	54
Information	180	17	-7.9	47.0	-0.1	-38	17
Jealousy	164	24	-15.9	53.9	-0.1	-60	16
Knowledge	168	23	-7.9	49.7	-0.1	-46	23
Lack.of.confidence	188	13	18.2	48.2	-0.2	-2	48
Measurement	162	25	-12.1	44.8	-0.2	-44	12
Misgiving	191	12	18.7	48.5	-0.5	0	55
Mistrust	205	6	50.7	43.8	-0.8	21	92
Non.belief	183	16	18.5	50.7	-0.3	-1	56
Notion	202	7	24.0	42.4	-0.1	0	49
Premise	188	13	9.9	41.9	-0.3	-1	33
Presumption	209	4	32.0	46.8	-0.6	7	68
Proof	144	34	-31.2	50.5	0.4	-75	0
Qualm	190	12	23.7	44.3	-0.2	0	57
Question	204	6	28.2	45.2	-0.5	4	61
Reality	165	24	-14.1	45.9	0.0	-49	6
Skepticism	202	7	54.9	43.2	-1.0	27	92
Supposition	206	5	25.5	46.3	-0.4	0	60
Sureness	149	31	-33.7	46.7	0.4	-78	0
Surmise	186	14	23.8	46.2	-0.3	0	63
Theory	194	11	23.6	47.7	-0.6	0	60
Trust	136	37	-34.9	52.1	0.3	-88	0
Uncertainty	205	6	48.7	41.4	-0.9	25	86
Wariness	198	9	41.7	40.8	-0.4	11	76
Wonder	190	12	24.8	44.7	-0.4	2	57

Note. Q1 and Q3 represent the 25th and 75th percentile, respectively.
n = 218, range: -100 to 100

Table 24. Descriptive Statistics of Reported Agreement with the Statement "Suspicion Feels Like…" (Sorted by Average Rating in Descending Order)

	n	% missing	mean	sd	skew	Q0.25	Q0.75
Distrust	350	6	69.4	41.2	-1.7	51	100
Uneasiness	346	7	60.9	41.0	-1.5	42	96
Worry	347	7	48.7	45.2	-1.0	20	86
Anxiety	350	6	48.0	43.6	-1.1	21	82
Intuition	315	16	42.3	48.2	-1.0	10	80
Nervousness	354	5	41.9	44.6	-0.9	16	78
Fear	343	8	37.5	44.9	-0.8	10	70
Panic	326	13	22.6	45.8	-0.5	0	56
Calculation	301	20	22.5	50.7	-0.7	0	60
Dread	324	13	17.6	49.3	-0.5	-1	54
Interest	289	23	10.7	48.6	-0.4	-6	40
Aggravation	300	20	8.2	47.9	-0.3	-20	40
Frustration	312	17	7.9	49.2	-0.4	-20	42
Terror	318	15	7.5	49.4	-0.4	-20	40
Irritation	310	17	7.2	46.8	-0.4	-24	40
Wonder	257	31	4.9	56.0	-0.2	-40	48
Contempt	284	24	1.1	50.3	-0.4	-29	37
Disgust	298	20	-0.9	46.2	-0.2	-35	28
Agony	273	27	-1.1	49.9	-0.2	-36	28
Hate	296	21	-1.9	49.6	-0.1	-36	30
Anger	300	20	-2.5	48.2	-0.3	-32	26
Isolation	274	27	-4.2	47.9	-0.2	-40	26
Suffering	277	26	-7.0	52.0	-0.1	-48	28
Despair	282	25	-8.3	48.5	-0.2	-48	22
Pain	276	26	-8.3	49.8	-0.1	-50	20
Rage	274	27	-9.6	48.5	-0.1	-50	18
Sadness	259	31	-11.4	47.3	0.0	-48	16
Eagerness	232	38	-13.7	50.9	-0.1	-53	22
Thrill	249	33	-14.0	50.1	-0.1	-60	20
Shame	266	29	-14.6	49.4	-0.1	-60	20
Surprise	241	36	-17.5	49.5	-0.2	-62	16
Regret	248	34	-18.9	49.5	0.0	-63	11
Excitement	222	41	-22.4	49.7	0.0	-66	12
Embarrassment	244	35	-22.6	49.5	0.0	-63	10
Desire	213	43	-27.7	51.8	0.1	-80	8
Confidence	201	46	-33.5	47.2	0.2	-76	0
Pity	220	41	-35.3	47.3	0.3	-80	0
Amazement	204	45	-35.5	46.3	0.3	-80	0
Courage	202	46	-37.5	46.9	0.3	-80	0
Awe	199	47	-39.8	50.0	0.5	-88	0
Hope	193	48	-40.4	48.3	0.4	-86	0
Tenderness	171	54	-50.1	49.3	0.9	-95	-2
Compassion	166	56	-50.6	46.1	0.8	-92	-3
Sympathy	196	48	-53.1	43.3	0.9	-92	-20
Love	155	59	-53.2	47.3	0.9	-94	-11
Relief	170	55	-58.0	41.9	0.8	-96	-25
Joy	160	57	-59.9	42.4	0.8	-98	-24
Happiness	154	59	-60.1	41.7	1.1	-98	-33
Gratitude	156	58	-61.2	41.6	1.0	-100	-29

Note. Q1 and Q3 represent the 25th and 75th percentile, respectively.
n = 374, range: -100 to 100

Table 25. Descriptive Statistics of Reported Agreement with the Statement "Suspicion Feels Like…" (Sorted Alphabetically)

	n	% missing	mean	sd	skew	Q1	Q3
Aggravation	300	20	8.2	47.9	-0.3	-20	40
Agony	273	27	-1.1	49.9	-0.2	-36	28
Amazement	204	45	-35.5	46.3	0.3	-80	0
Anger	300	20	-2.5	48.2	-0.3	-32	26
Anxiety	350	6	48.0	43.6	-1.1	21	82
Awe	199	47	-39.8	50.0	0.5	-88	0
Calculation	301	20	22.5	50.7	-0.7	0	60
Compassion	166	56	-50.6	46.1	0.8	-92	-3
Confidence	201	46	-33.5	47.2	0.2	-76	0
Contempt	284	24	1.1	50.3	-0.4	-29	37
Courage	202	46	-37.5	46.9	0.3	-80	0
Desire	213	43	-27.7	51.8	0.1	-80	8
Despair	282	25	-8.3	48.5	-0.2	-48	22
Disgust	298	20	-0.9	46.2	-0.2	-35	28
Distrust	350	6	69.4	41.2	-1.7	51	100
Dread	324	13	17.6	49.3	-0.5	-1	54
Eagerness	232	38	-13.7	50.9	-0.1	-53	22
Embarrassment	244	35	-22.6	49.5	0.0	-63	10
Excitement	222	41	-22.4	49.7	0.0	-66	12
Fear	343	8	37.5	44.9	-0.8	10	70
Frustration	312	17	7.9	49.2	-0.4	-20	42
Gratitude	156	58	-61.2	41.6	1.0	-100	-29
Happiness	154	59	-60.1	41.7	1.1	-98	-33
Hate	296	21	-1.9	49.6	-0.1	-36	30
Hope	193	48	-40.4	48.3	0.4	-86	0
Interest	289	23	10.7	48.6	-0.4	-6	40
Intuition	315	16	42.3	48.2	-1.0	10	80
Irritation	310	17	7.2	46.8	-0.4	-24	40
Isolation	274	27	-4.2	47.9	-0.2	-40	26
Joy	160	57	-59.9	42.4	0.8	-98	-24
Love	155	59	-53.2	47.3	0.9	-94	-11
Nervousness	354	5	41.9	44.6	-0.9	16	78
Pain	276	26	-8.3	49.8	-0.1	-50	20
Panic	326	13	22.6	45.8	-0.5	0	56
Pity	220	41	-35.3	47.3	0.3	-80	0
Rage	274	27	-9.6	48.5	-0.1	-50	18
Regret	248	34	-18.9	49.5	0.0	-63	11
Relief	170	55	-58.0	41.9	0.8	-96	-25
Sadness	259	31	-11.4	47.3	0.0	-48	16
Shame	266	29	-14.6	49.4	-0.1	-60	20
Suffering	277	26	-7.0	52.0	-0.1	-48	28
Surprise	241	36	-17.5	49.5	-0.2	-62	16
Sympathy	196	48	-53.1	43.3	0.9	-92	-20
Tenderness	171	54	-50.1	49.3	0.9	-95	-2
Terror	318	15	7.5	49.4	-0.4	-20	40
Thrill	249	33	-14.0	50.1	-0.1	-60	20
Uneasiness	346	7	60.9	41.0	-1.5	42	96
Wonder	257	31	4.9	56.0	-0.2	-40	48
Worry	347	7	48.7	45.2	-1.0	20	86

Note. Q1 and Q3 represent the 25th and 75th percentile, respectively.
n = 374, range: -100 to 100

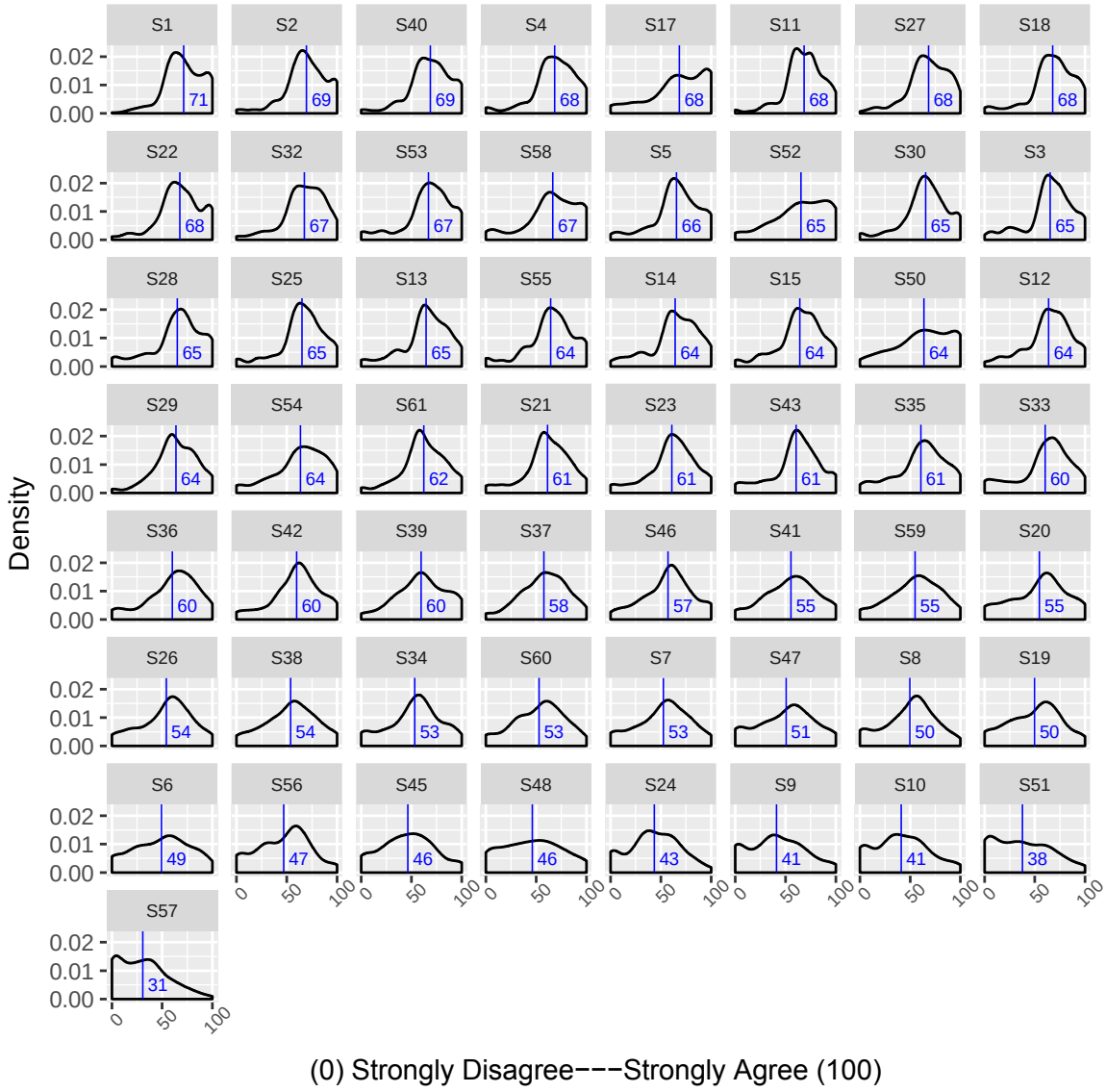

Figure 11. Responses to statements regarding idiosyncratic experiences of interpersonal state suspicion, in order of highest to lowest average rating. n = 321. See table below for item key with the same sorting.

Item	Statement
S1	I am suspicious of this person
S2	I am experiencing suspicion
S40	I am experiencing distrust of this person
S4	I am suspicious of this person's actions
S11	I am uncertain about this person
S17	I am unfamiliar with this person
S27	I am skeptical about this person
S18	I am questioning this person's intentions
S22	I am paying attention to this person
S32	I am making predictions about this person
S53	I am observing this person
S58	I am protecting myself from this person
S5	I am suspicious of this person's intentions
S30	I have a strange feeling about this person
S52	I am staying away from this person
S3	I am suspicious of this persons motivations
S28	I am trying to make sense of this person's behavior
S25	I have doubts about this person
S13	I am uncertain about this person's actions
S55	I am paying extra attention to this person
S14	I am uncertain about this person's intentions
S15	I am considering several possible explanations for this person's actions
S50	I am avoiding this person
S12	I am uncertain about this person's motivations
S29	I have an intuitive sense about this person
S54	I am watching this person carefully
S61	I have a hunch about this person
S21	I am wondering about this person
S23	I have questions about this person
S43	I am under the impression that this person has ulterior motives
S35	I am anticipating this persons next action
S33	I am thinking about what will happen next with this person
S36	I am under the impression that this person's behavior is unusual
S42	I am under the impression that this person is hiding something
S39	I am under the impression that this person is being dishonest
S37	I am noticing that this person is not behaving the way I expect
S46	I am suspicious of this persons timing
S41	I am under the impression that this person is lying
S59	I am noticing that this person's behavior is inconsistent
S20	I am looking for more information about this person
S26	I am curious about this person
S38	I am under the impression that this person is deceiving me
S34	I am noticing something unusual about this person
S60	I am noticing that this person's communication is inconsistent
S7	I am under the impression that this person is violating a social norm
S47	I am under the impression that there is a lot of bad behavior in this location
S8	I am under the impression that this person is doing something harmful
S19	I am asking questions of this person
S6	I am under the impression that this person is breaking a rule
S56	I am inquiring about this person
S45	I am under the impression that this person does not belong here
S48	I am under the impression that people in this location are dangerous
S24	I am interested in this person
S9	I am under the impression that this person is committing a crime
S10	I am under the impression that this person is violating a law
S51	I am confronting this person
S57	I am reporting this person

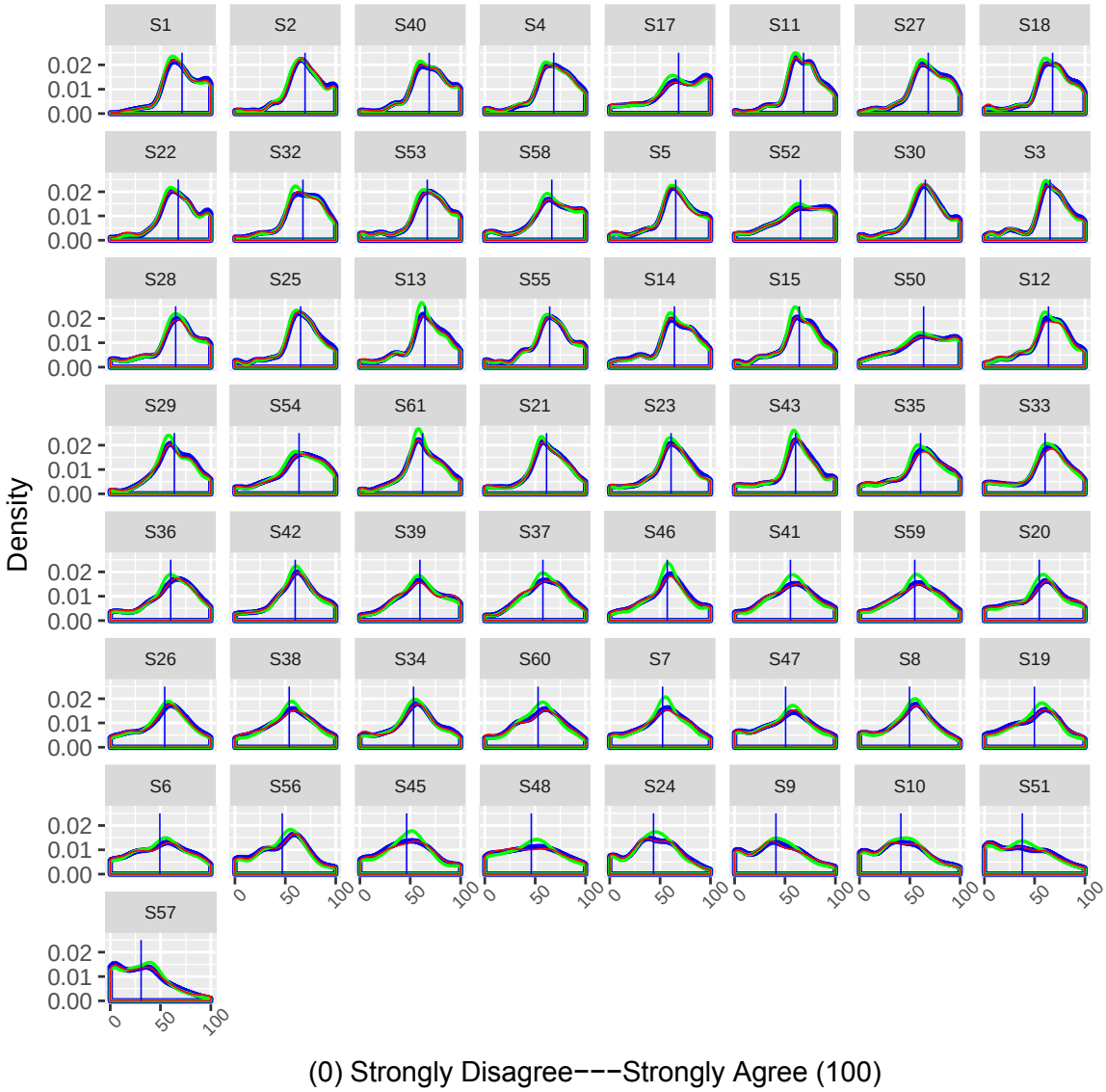

Figure 12. Random forest imputation (green), MICE imputation (red), and original data without missing values (blue).

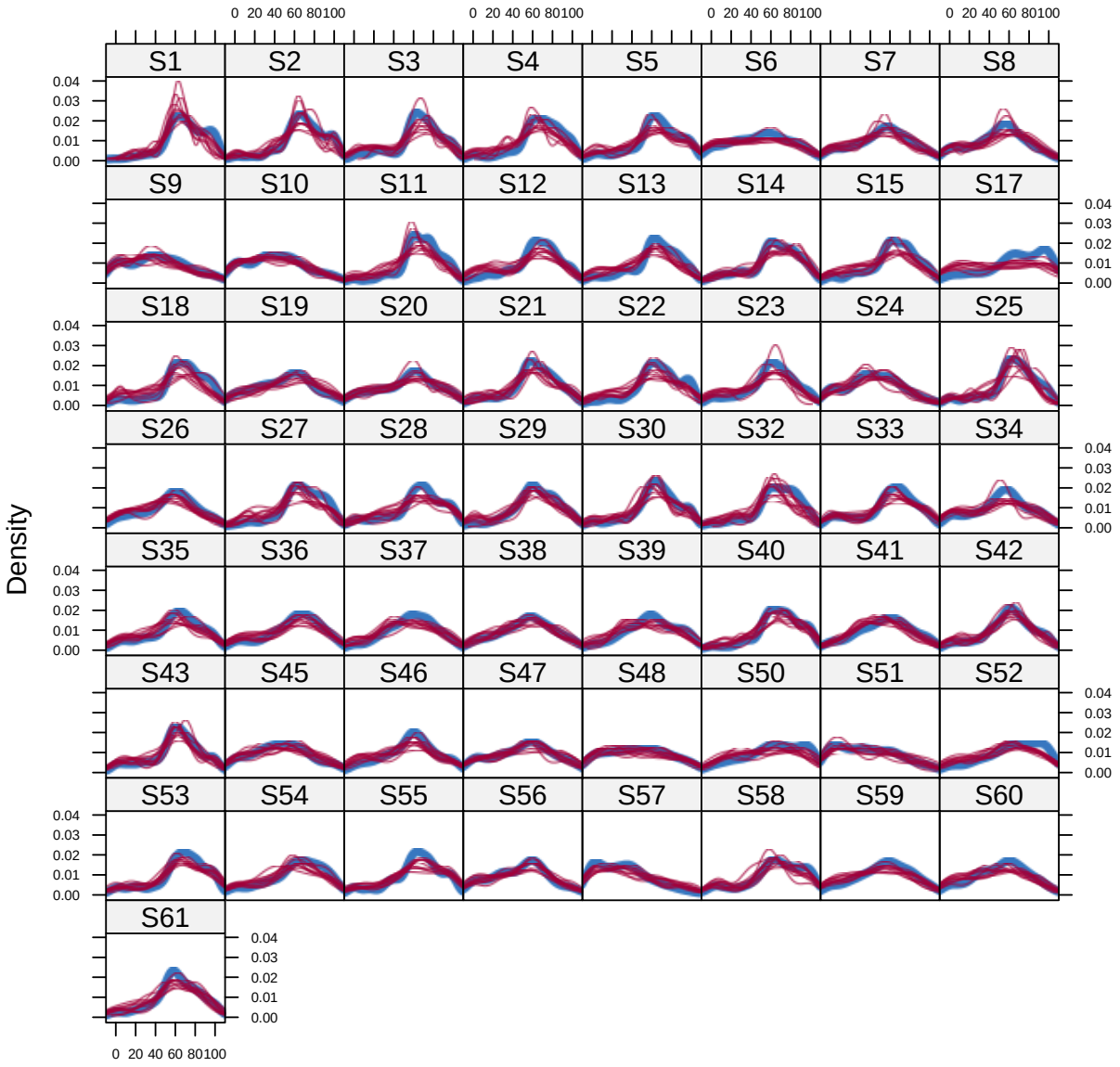

Figure 13. Ten MICE imputed datasets (thin magenta lines) and the original data (thick blue line).

Table 26. Correlation Matrix for 57 Situational Interpersonal Suspicion Items

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S17	S18	S19	S20	S21	S22	S23	S24	S25	S26	S27	S28	S29	S30
S1	1.0	0.5	0.5	0.7	0.5	0.2	0.4	0.3	0.3	0.2	0.4	0.3	0.2	0.3	0.3	0.4	0.5	0.1	0.1	0.3	0.4	0.4	0.0	0.4	0.1	0.6	0.4	0.5	0.5
S2	0.5	1.0	0.3	0.5	0.4	0.2	0.3	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.1	0.2	0.3	0.3	0.0	0.5	0.1	0.5	0.2	0.4	0.3
S3	0.5	0.3	1.0	0.6	0.7	0.3	0.3	0.4	0.3	0.2	0.5	0.5	0.3	0.4	0.4	0.3	0.6	0.2	0.3	0.3	0.3	0.4	0.1	0.4	0.2	0.5	0.4	0.4	0.3
S4	0.7	0.5	0.6	1.0	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.5	0.1	0.2	0.4	0.5	0.5	0.1	0.5	0.2	0.6	0.4	0.6	0.5
S5	0.5	0.4	0.7	0.6	1.0	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.5	0.4	0.4	0.6	0.2	0.2	0.3	0.4	0.4	0.1	0.5	0.2	0.5	0.4	0.5	0.4
S6	0.2	0.2	0.3	0.4	0.2	1.0	0.6	0.6	0.7	0.7	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.3	0.1	0.2	0.2	0.3	0.2	0.3	0.2
S7	0.4	0.3	0.3	0.5	0.3	0.6	1.0	0.4	0.5	0.6	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.1	0.0	0.3	0.3	0.4	0.0	0.3	0.2	0.3	0.2	0.4	0.4
S8	0.3	0.2	0.4	0.4	0.3	0.6	0.4	1.0	0.6	0.6	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.3	0.1	0.3	0.2	0.2	0.2
S9	0.3	0.2	0.3	0.4	0.2	0.7	0.5	0.6	1.0	0.8	0.3	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.3	0.3
S10	0.2	0.2	0.2	0.4	0.3	0.7	0.6	0.6	0.8	1.0	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.1	0.3	0.3
S11	0.4	0.4	0.5	0.4	0.4	0.2	0.3	0.3	0.3	0.2	1.0	0.6	0.5	0.6	0.4	0.4	0.4	0.2	0.3	0.4	0.4	0.4	0.1	0.4	0.3	0.4	0.4	0.4	0.4
S12	0.3	0.3	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.2	0.6	1.0	0.5	0.6	0.2	0.3	0.5	0.2	0.3	0.4	0.3	0.4	0.2	0.4	0.3	0.3	0.4	0.3	0.3
S13	0.2	0.3	0.3	0.3	0.3	0.1	0.3	0.1	0.1	0.2	0.5	0.5	1.0	0.5	0.3	0.2	0.4	0.2	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2
S14	0.3	0.3	0.4	0.4	0.5	0.1	0.2	0.1	0.1	0.1	0.6	0.6	0.5	1.0	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.4	0.2	0.5	0.3	0.4	0.3	0.3	0.3
S15	0.3	0.3	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.3	0.3	1.0	0.2	0.3	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.3	0.2
S17	0.4	0.4	0.3	0.3	0.4	0.1	0.3	0.2	0.3	0.2	0.4	0.3	0.2	0.3	0.2	1.0	0.3	0.0	0.1	0.2	0.3	0.3	-0.1	0.3	0.1	0.3	0.1	0.2	0.3
S18	0.5	0.4	0.6	0.5	0.6	0.2	0.3	0.2	0.2	0.2	0.4	0.5	0.4	0.4	0.3	0.3	1.0	0.2	0.2	0.3	0.3	0.5	0.1	0.4	0.2	0.5	0.5	0.4	0.4
S19	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.0	0.2	1.0	0.3	0.4	0.2	0.5	0.4	0.3	0.4	0.2	0.3	0.2	0.1
S20	0.1	0.1	0.3	0.2	0.2	0.2	0.0	0.2	0.2	0.1	0.3	0.3	0.1	0.2	0.3	0.1	0.2	0.3	1.0	0.4	0.4	0.4	0.4	0.3	0.4	0.1	0.5	0.3	0.1
S21	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.4	0.2	0.3	0.4	0.2	0.3	0.4	0.4	1.0	0.4	0.5	0.4	0.3	0.6	0.3	0.5	0.4	0.3
S22	0.4	0.3	0.3	0.5	0.4	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.4	0.4	1.0	0.4	0.3	0.3	0.4	0.3	0.5	0.4	0.4
S23	0.4	0.3	0.4	0.5	0.4	0.3	0.4	0.2	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.5	0.5	0.4	0.5	0.4	1.0	0.3	0.5	0.5	0.3	0.5	0.4	0.3
S24	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	-0.1	0.1	0.4	0.4	0.4	0.3	0.3	1.0	0.1	0.6	0.1	0.4	0.2	0.1
S25	0.4	0.5	0.4	0.5	0.5	0.2	0.3	0.3	0.2	0.2	0.4	0.4	0.3	0.5	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.1	1.0	0.3	0.6	0.3	0.4	0.3
S26	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1	0.2	0.4	0.4	0.6	0.4	0.5	0.6	0.3	1.0	0.1	0.4	0.3	0.2
S27	0.6	0.5	0.5	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.4	0.3	0.3	0.5	0.2	0.1	0.3	0.3	0.3	0.1	0.6	0.1	1.0	0.3	0.4	0.4
S28	0.4	0.2	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.1	0.4	0.4	0.2	0.3	0.5	0.1	0.5	0.3	0.5	0.5	0.5	0.5	0.4	0.3	0.4	0.3	1.0	0.4	0.3
S29	0.5	0.4	0.4	0.6	0.5	0.3	0.4	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.4	0.2	0.3	0.4	0.4	0.4	0.2	0.4	0.3	0.4	0.4	1.0	0.4
S30	0.5	0.3	0.3	0.5	0.4	0.2	0.4	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.3	0.4	0.1	0.1	0.3	0.4	0.3	0.1	0.3	0.2	0.4	0.3	0.4	1.0
S32	0.5	0.4	0.3	0.6	0.4	0.2	0.3	0.2	0.3	0.2	0.4	0.3	0.3	0.3	0.4	0.2	0.4	0.3	0.3	0.5	0.5	0.4	0.2	0.4	0.3	0.4	0.4	0.5	0.3
S33	0.3	0.2	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.4	0.4	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.3	0.4	0.3	0.5	0.4	0.4

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S17	S18	S19	S20	S21	S22	S23	S24	S25	S26	S27	S28	S29	S30
S34	0.4	0.3	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.2	0.2	0.3	0.3	0.2	0.4	0.2	0.2	0.3	0.3	0.4	0.1	0.3	0.2	0.4	0.3	0.3	0.3
S35	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.3
S36	0.4	0.3	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.2	0.3	0.4	0.1	0.1	0.3	0.2	0.3	0.1	0.3	0.2	0.4	0.4	0.4	0.4
S37	0.3	0.2	0.3	0.4	0.3	0.3	0.4	0.2	0.3	0.2	0.3	0.3	0.4	0.2	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.3	0.0	0.3	0.1	0.3	0.2	0.4	0.4
S38	0.3	0.3	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.4	0.1	0.3	0.2	0.2	0.1
S39	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.5	0.2	0.4	0.2	0.3	0.1
S40	0.6	0.4	0.5	0.6	0.6	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.3	0.4	0.2	0.1	0.2	0.4	0.3	0.0	0.5	0.1	0.6	0.2	0.5	0.4
S41	0.2	0.1	0.3	0.2	0.1	0.3	0.3	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.2	-0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.3	0.1	0.4	0.2	0.2	0.1
S42	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.4	0.3	0.2	0.3	0.2	0.4	0.1	0.4	0.2	0.5	0.3	0.3	0.2
S43	0.5	0.3	0.6	0.5	0.5	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.3	0.3	0.5	0.2	0.2	0.3	0.3	0.4	0.1	0.5	0.2	0.5	0.4	0.3	0.3
S45	0.2	0.1	0.2	0.2	0.2	0.4	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.0	0.2	0.2	0.1	0.2	0.0	0.1	0.2	0.2	0.1	0.2	0.2
S46	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.3	0.2	0.2	0.4	0.1	0.4	0.2	0.3	0.2	0.3	0.2
S47	0.2	0.2	0.3	0.3	0.2	0.4	0.4	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.3	0.2	0.3	0.2
S48	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.2
S50	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.4	0.3	0.0	0.1	0.1	0.2	0.1	-0.2	0.2	-0.2	0.4	0.1	0.3	0.4
S51	-0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.2	0.2	0.2	0.0	-0.1	0.0	0.0	0.1	-0.1	0.1	0.3	0.3	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.2	0.0
S52	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.1	0.4	0.2	0.0	0.0	0.0	0.1	0.1	-0.3	0.2	-0.2	0.4	0.1	0.2	0.3
S53	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.1	0.4	0.2	0.3	0.3	0.5	0.2	0.3	0.3	0.4	0.5	0.6	0.4	0.3	0.4	0.3	0.4	0.5	0.3	0.3
S54	0.4	0.3	0.3	0.5	0.4	0.2	0.2	0.3	0.3	0.2	0.4	0.3	0.2	0.3	0.3	0.2	0.4	0.3	0.3	0.5	0.6	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.4
S55	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.4	0.2	0.3	0.2	0.3	0.4	0.7	0.4	0.3	0.3	0.4	0.3	0.5	0.4	0.3
S56	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.0	0.2	0.5	0.4	0.4	0.3	0.4	0.4	0.2	0.3	0.2	0.3	0.3	0.0
S57	0.0	0.1	0.1	0.1	0.1	0.4	0.3	0.3	0.4	0.4	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1
S58	0.5	0.3	0.4	0.5	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.3	0.4	0.1	0.2	0.2	0.3	0.2	0.0	0.3	0.0	0.4	0.3	0.4	0.4
S59	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.1	0.4	0.2	0.3	0.4	0.2	0.3	0.2	0.4	0.3	0.3	0.4	0.4	0.3
S60	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	-0.1	0.3	0.3	0.3	0.2	0.1	0.3	0.1	0.3	0.2	0.3	0.3	0.3	0.1
S61	0.5	0.5	0.5	0.5	0.5	0.3	0.4	0.3	0.2	0.3	0.4	0.4	0.2	0.3	0.3	0.3	0.5	0.2	0.2	0.3	0.3	0.4	0.1	0.5	0.2	0.5	0.3	0.5	0.4

	S32	S33	S34	S35	S36	S37	S38	S39	S40	S41	S42	S43	S45	S46	S47	S48	S50	S51	S52	S53	S54	S55	S56	S57	S58	S59	S60	S61
S1	0.5	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.6	0.2	0.4	0.5	0.2	0.3	0.2	0.2	0.4	-0.1	0.4	0.3	0.4	0.4	0.2	0.0	0.5	0.3	0.3	0.5
S2	0.4	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.1	0.3	0.3	0.1	0.4	0.2	0.2	0.3	0.0	0.3	0.3	0.3	0.3	0.2	0.1	0.3	0.3	0.2	0.5
S3	0.3	0.4	0.4	0.3	0.4	0.3	0.2	0.3	0.5	0.3	0.4	0.6	0.2	0.4	0.3	0.3	0.4	0.1	0.3	0.3	0.3	0.3	0.2	0.1	0.4	0.3	0.3	0.5
S4	0.6	0.4	0.5	0.4	0.5	0.4	0.3	0.3	0.6	0.2	0.5	0.5	0.2	0.4	0.3	0.3	0.4	0.0	0.4	0.4	0.5	0.4	0.2	0.1	0.5	0.4	0.3	0.5
S5	0.4	0.4	0.5	0.4	0.4	0.3	0.1	0.3	0.6	0.1	0.4	0.5	0.2	0.3	0.2	0.3	0.4	0.1	0.4	0.4	0.4	0.3	0.2	0.1	0.5	0.3	0.2	0.5
S6	0.2	0.3	0.4	0.3	0.4	0.3	0.2	0.4	0.4	0.3	0.4	0.3	0.4	0.2	0.4	0.4	0.3	0.1	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3
S7	0.3	0.3	0.5	0.3	0.5	0.4	0.2	0.3	0.4	0.3	0.4	0.3	0.4	0.2	0.4	0.3	0.3	0.0	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4
S8	0.2	0.2	0.5	0.3	0.4	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.2	0.4	0.2	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.3
S9	0.3	0.2	0.5	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.5	0.5	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.4	0.4	0.3	0.2	0.2
S10	0.2	0.3	0.5	0.3	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.5	0.5	0.3	0.2	0.3	0.1	0.2	0.3	0.2	0.4	0.4	0.3	0.2	0.3
S11	0.4	0.4	0.4	0.3	0.4	0.3	0.1	0.2	0.4	0.1	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.0	0.4	0.4	0.4	0.4	0.2	0.0	0.4	0.2	0.1	0.4
S12	0.3	0.3	0.2	0.3	0.4	0.3	0.0	0.2	0.3	0.1	0.2	0.4	0.2	0.2	0.2	0.3	0.2	-0.1	0.3	0.2	0.3	0.3	0.2	0.1	0.3	0.3	0.2	0.4
S13	0.3	0.2	0.2	0.2	0.3	0.4	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.2	0.3	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2
S14	0.3	0.4	0.3	0.2	0.4	0.2	0.1	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.3	0.3	0.3	0.2	0.2	0.0	0.3	0.3	0.2	0.3
S15	0.4	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.5	0.3	0.4	0.3	0.0	0.2	0.2	0.2	0.3
S17	0.2	0.2	0.2	0.3	0.3	0.1	0.0	0.2	0.3	-0.1	0.0	0.3	0.2	0.2	0.2	0.2	0.4	-0.1	0.4	0.2	0.2	0.2	0.0	0.1	0.3	0.1	-0.1	0.3
S18	0.4	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.4	0.2	0.4	0.5	0.2	0.4	0.2	0.2	0.3	0.1	0.2	0.3	0.4	0.3	0.2	0.1	0.4	0.4	0.3	0.5
S19	0.3	0.4	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.0	0.2	0.1	0.1	0.0	0.3	0.0	0.3	0.3	0.2	0.5	0.1	0.1	0.2	0.3	0.2
S20	0.3	0.4	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.3	0.0	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.2
S21	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.5	0.5	0.4	0.4	0.1	0.2	0.4	0.2	0.3
S22	0.5	0.5	0.3	0.4	0.2	0.1	0.1	0.2	0.4	0.2	0.2	0.3	0.1	0.2	0.3	0.3	0.2	0.0	0.1	0.6	0.6	0.7	0.3	0.0	0.3	0.2	0.1	0.3
S23	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.4	0.1	0.0	0.1	0.1	0.1	0.4	0.3	0.4	0.4	0.2	0.2	0.3	0.3	0.4
S24	0.2	0.4	0.1	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	-0.2	0.2	-0.3	0.3	0.2	0.3	0.4	0.1	0.0	0.2	0.1	0.1
S25	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.3	0.4	0.5	0.1	0.4	0.2	0.1	0.2	0.1	0.2	0.4	0.3	0.3	0.2	0.1	0.3	0.4	0.3	0.5
S26	0.3	0.4	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	-0.2	0.1	-0.2	0.3	0.3	0.4	0.3	0.1	0.0	0.3	0.2	0.2
S27	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.6	0.4	0.5	0.5	0.2	0.3	0.3	0.2	0.4	0.0	0.4	0.4	0.4	0.3	0.2	0.1	0.4	0.3	0.3	0.5
S28	0.4	0.5	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.5	0.4	0.5	0.3	0.1	0.3	0.4	0.3	0.3
S29	0.5	0.4	0.3	0.4	0.4	0.4	0.2	0.3	0.5	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.4	0.4	0.3	0.5
S30	0.3	0.4	0.3	0.3	0.4	0.4	0.1	0.1	0.4	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.4	0.0	0.3	0.3	0.4	0.3	0.0	0.1	0.4	0.3	0.1	0.4
S32	1.0	0.5	0.4	0.5	0.3	0.3	0.3	0.2	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.4	0.4	0.4	0.3	0.1	0.4	0.3	0.2	0.5
S33	0.5	1.0	0.4	0.5	0.4	0.2	0.2	0.1	0.3	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.1	0.2	0.4	0.4	0.4	0.4	0.2	0.4	0.4	0.2	0.4

	S32	S33	S34	S35	S36	S37	S38	S39	S40	S41	S42	S43	S45	S46	S47	S48	S50	S51	S52	S53	S54	S55	S56	S57	S58	S59	S60	S61
S34	0.4	0.4	1.0	0.4	0.5	0.3	0.2	0.3	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.4	0.4	0.3	0.3
S35	0.5	0.5	0.4	1.0	0.3	0.2	0.1	0.1	0.3	0.1	0.1	0.4	0.2	0.3	0.4	0.4	0.3	0.1	0.3	0.4	0.5	0.4	0.3	0.1	0.4	0.3	0.3	0.4
S36	0.3	0.4	0.5	0.3	1.0	0.4	0.1	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.0	0.4	0.2	0.3	0.2	0.1	0.2	0.4	0.5	0.3	0.4
S37	0.3	0.2	0.3	0.2	0.4	1.0	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.3	0.3
S38	0.3	0.2	0.2	0.1	0.1	0.2	1.0	0.6	0.4	0.6	0.6	0.3	0.1	0.3	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.4	0.3
S39	0.2	0.1	0.3	0.1	0.3	0.3	0.6	1.0	0.5	0.7	0.6	0.4	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.4	0.4
S40	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.5	1.0	0.4	0.5	0.5	0.2	0.2	0.3	0.3	0.5	0.1	0.5	0.3	0.3	0.3	0.2	0.1	0.5	0.3	0.3	0.5
S41	0.2	0.1	0.3	0.1	0.3	0.2	0.6	0.7	0.4	1.0	0.6	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.5	0.3
S42	0.3	0.2	0.4	0.1	0.3	0.3	0.6	0.6	0.5	0.6	1.0	0.4	0.2	0.3	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.4	0.4
S43	0.3	0.3	0.5	0.4	0.4	0.2	0.3	0.4	0.5	0.3	0.4	1.0	0.3	0.4	0.3	0.2	0.4	0.1	0.4	0.3	0.3	0.3	0.2	0.1	0.4	0.3	0.3	0.4
S45	0.2	0.2	0.4	0.2	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.3	1.0	0.2	0.3	0.3	0.3	0.1	0.3	0.1	0.2	0.2	0.1	0.3	0.3	0.4	0.3	0.2
S46	0.2	0.2	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.2	1.0	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.3
S47	0.2	0.3	0.4	0.4	0.4	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.2	1.0	0.7	0.3	0.1	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3
S48	0.2	0.3	0.4	0.4	0.4	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.3	0.2	0.7	1.0	0.4	0.0	0.4	0.2	0.3	0.3	0.1	0.2	0.4	0.2	0.2	0.2
S50	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.5	0.1	0.2	0.4	0.3	0.2	0.3	0.4	1.0	0.0	0.8	0.2	0.3	0.2	0.0	0.2	0.6	0.3	0.2	0.3
S51	0.2	0.1	0.2	0.1	0.0	0.1	0.3	0.2	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.0	1.0	0.0	0.1	0.1	0.0	0.2	0.4	0.1	0.1	0.2	0.1
S52	0.1	0.2	0.3	0.3	0.4	0.2	0.1	0.2	0.5	0.2	0.2	0.4	0.3	0.2	0.3	0.4	0.8	0.0	1.0	0.1	0.2	0.1	0.0	0.1	0.5	0.3	0.2	0.3
S53	0.4	0.4	0.3	0.4	0.2	0.2	0.1	0.1	0.3	0.1	0.2	0.3	0.1	0.3	0.2	0.2	0.2	0.1	0.1	1.0	0.7	0.7	0.3	0.0	0.3	0.2	0.2	0.4
S54	0.4	0.4	0.4	0.5	0.3	0.2	0.1	0.1	0.3	0.1	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.1	0.2	0.7	1.0	0.6	0.3	0.0	0.5	0.3	0.2	0.4
S55	0.4	0.4	0.3	0.4	0.2	0.2	0.1	0.1	0.3	0.1	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.0	0.1	0.7	0.6	1.0	0.3	0.0	0.4	0.2	0.1	0.3
S56	0.3	0.4	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.3	0.2	0.1	0.0	0.2	0.0	0.3	0.3	0.3	1.0	0.2	0.2	0.3	0.3	0.3
S57	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.4	0.1	0.0	0.0	0.0	0.2	1.0	0.2	0.2	0.2	0.1
S58	0.4	0.4	0.4	0.4	0.4	0.3	0.1	0.2	0.5	0.1	0.2	0.4	0.3	0.2	0.3	0.4	0.6	0.1	0.5	0.3	0.5	0.4	0.2	0.2	1.0	0.3	0.3	0.4
S59	0.3	0.4	0.4	0.3	0.5	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.2	0.3	0.1	0.3	0.2	0.3	0.2	0.3	0.2	0.3	1.0	0.6	0.4
S60	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.6	1.0	0.3
S61	0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.3	0.4	0.4	0.2	0.3	0.3	0.2	0.3	0.1	0.3	0.4	0.4	0.3	0.3	0.1	0.4	0.4	0.3	1.0

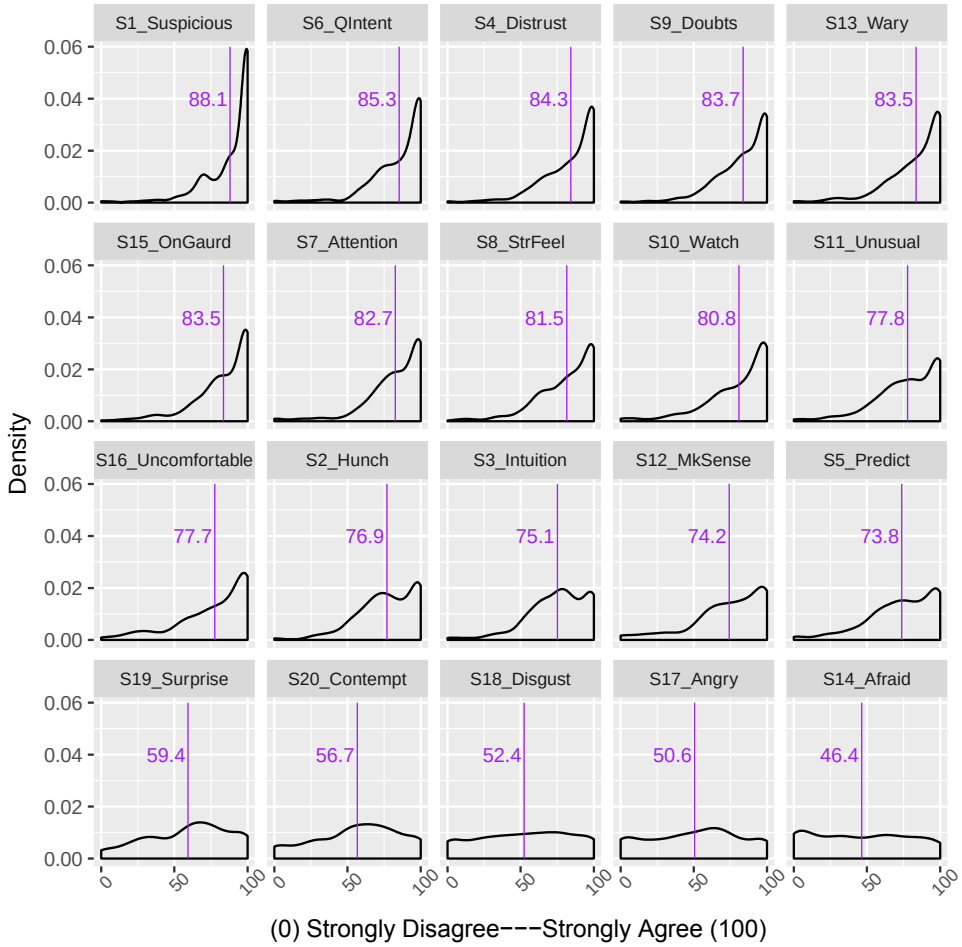

Figure 14. Responses to 20 statements regarding psychological states associated with situational interpersonal suspicion, arranged in descending order of average rating, n = 504.

ID	Statement
S1_Suspicious	I am suspicious of this person.
S6_QIntent	I am questioning this person's intentions.
S4_Distrust	I am experiencing distrust of this person.
S9_Doubts	I have doubts about this person.
S13_Wary	I am wary of this person.
S15_OnGaurd	I am on my guard with this person.
S7_Attention	I am paying attention to this person.
S8_StrFeel	I have a strange feeling about this person.
S10_Watch	I am watching this person carefully.
S11_Unusual	I am noticing something unusual about this person.
S16_Uncomfortable	I am uncomfortable with this person.
S2_Hunch	I have a hunch about this person.
S3_Intuition	I have an intuitive sense about this person.
S12_MkSense	I am trying to make sense of this person's behavior.
S5_Predict	I am making predictions about this person.
S19_Surprise	I am surprised by this person.
S20_Contempt	I am experiencing contempt of this person.
S18_Disgust	I am disgusted by this person.
S17_Angry	I am angry with this person.
S14_Afraid	I am afraid of this person.

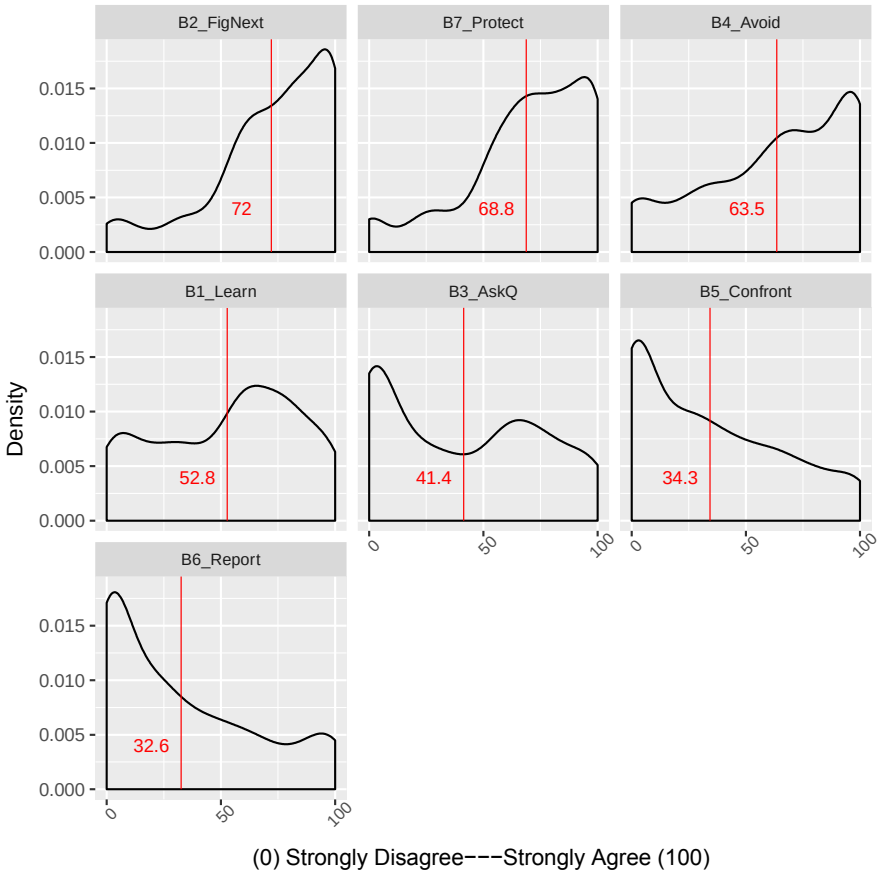

Figure 15. Responses to seven statements regarding behavioral responses associated with situational interpersonal suspicion, arranged in descending order of average rating, n = 504.

ID	Statement
B2_FigNext	I am trying to figure out what this person will do next.
B7_Protect	I am protecting myself from this person.
B4_Avoid	I am avoiding this person.
B1_Learn	I am trying to learn more about this person.
B3_AskQ	I am asking this person questions.
B5_Confront	I am confronting this person.
B6_Report	I am reporting this person to an authority.

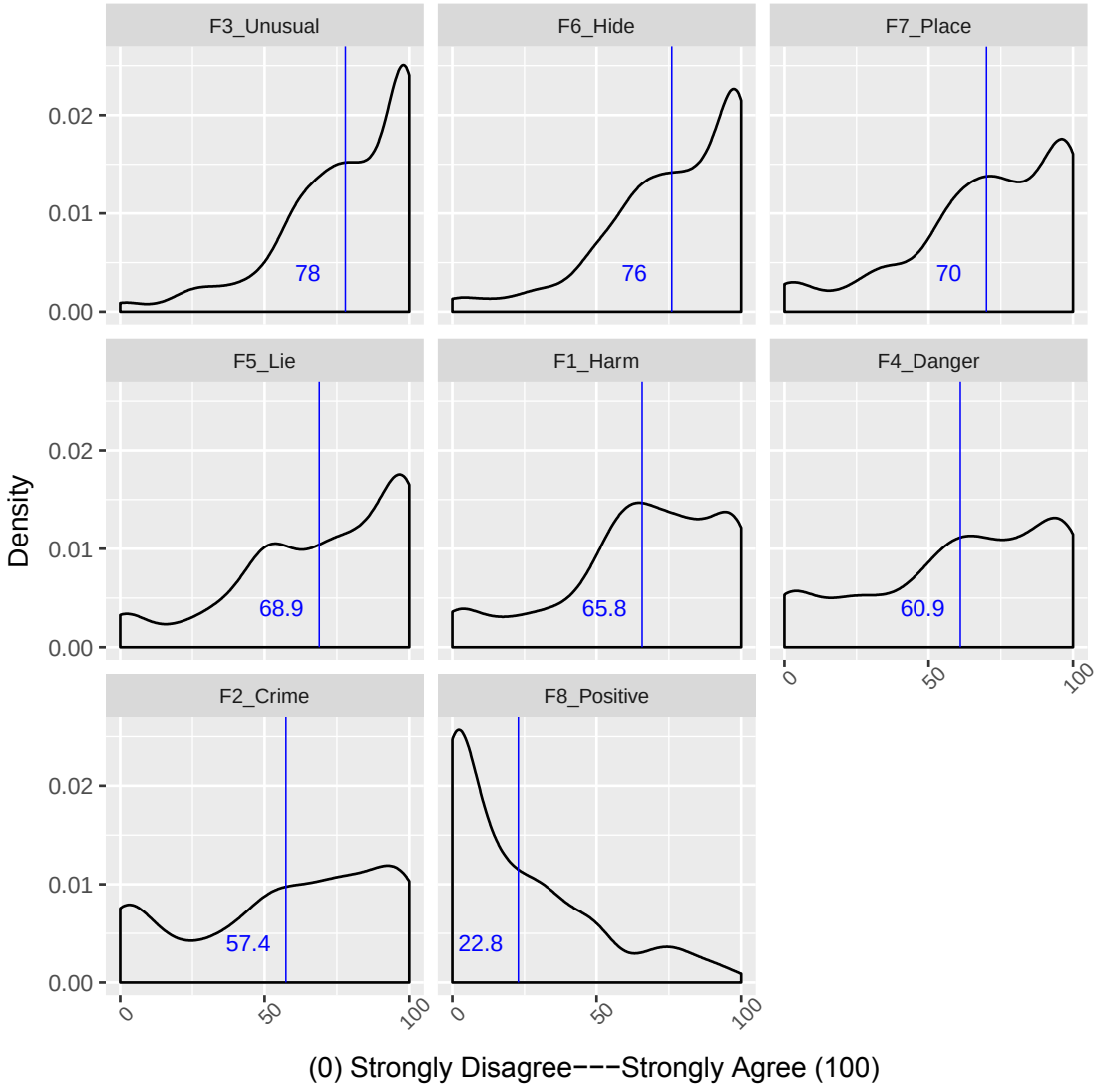

Figure 16. Responses to eight statements regarding inferences about a target's behavior during an experience of situational interpersonal suspicion, arranged in descending order of average rating, n = 504.

ID	Statement
F3_Unusual	I think that this person's behavior is unusual.
F6_Hide	I think that this person might be hiding something.
F7_Place	I think that this person seems out of place.
F5_Lie	I think this person might be lying.
F1_Harm	I think that this person might be doing something harmful.
F4_Danger	I think this person might be dangerous.
F2_Crime	I think that this person might be committing a crime.
F8_Positive	I think that this person might be doing something positive.

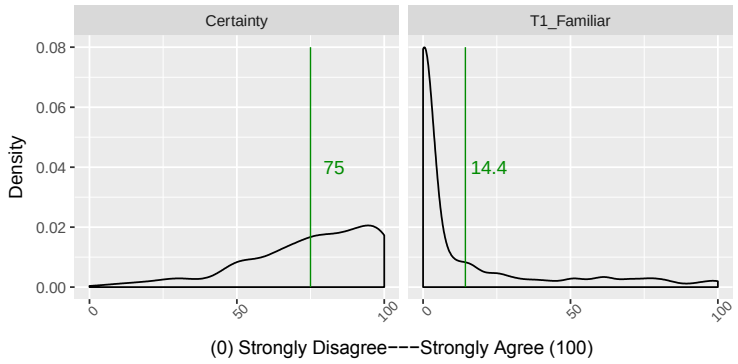

Figure 17. Responses to "at the time…how certain were you that your suspicions were correct?" and "the person who made me suspicious was someone I knew very well." n = 504.

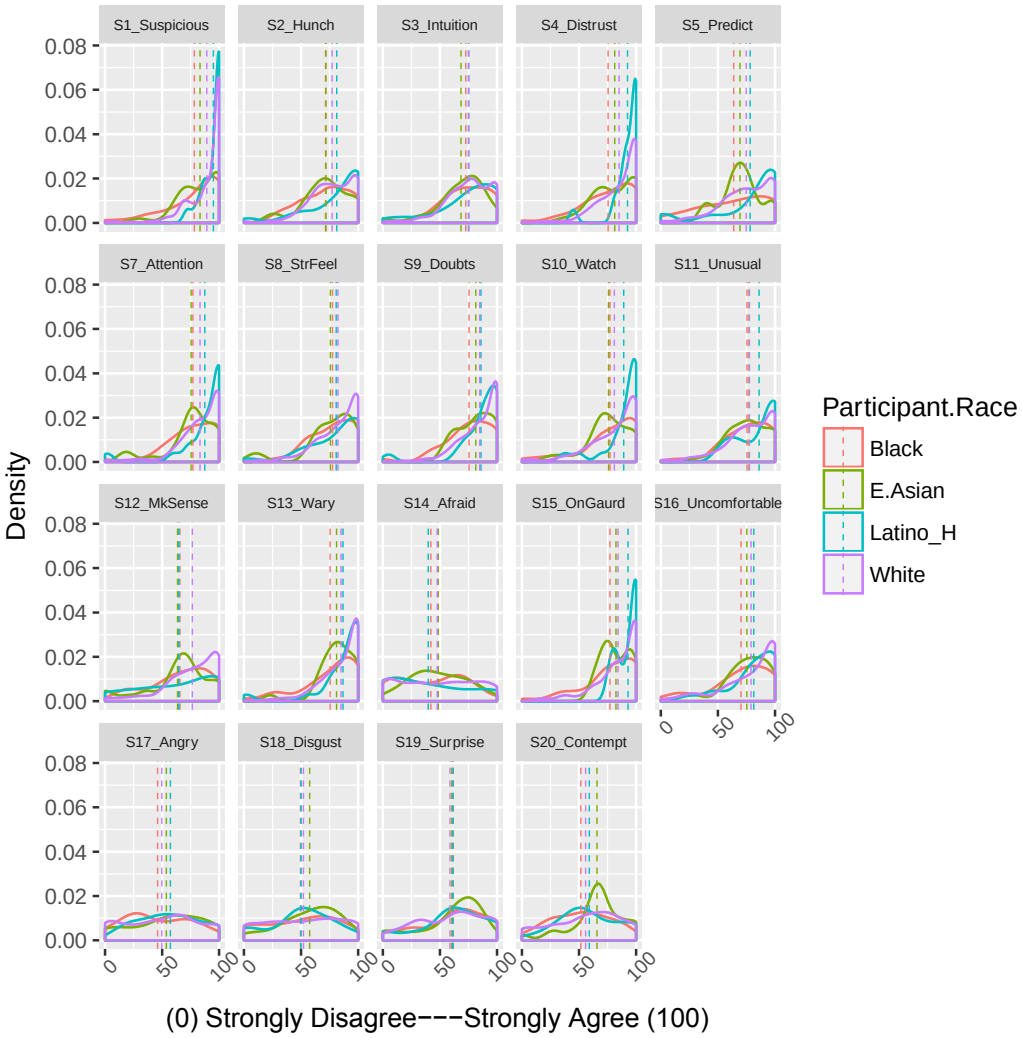

Figure 18. Distribution of responses to items pertaining to the perceiver's psychological state, by participant race. Only single categories selected by at least 5% of participants are depicted.

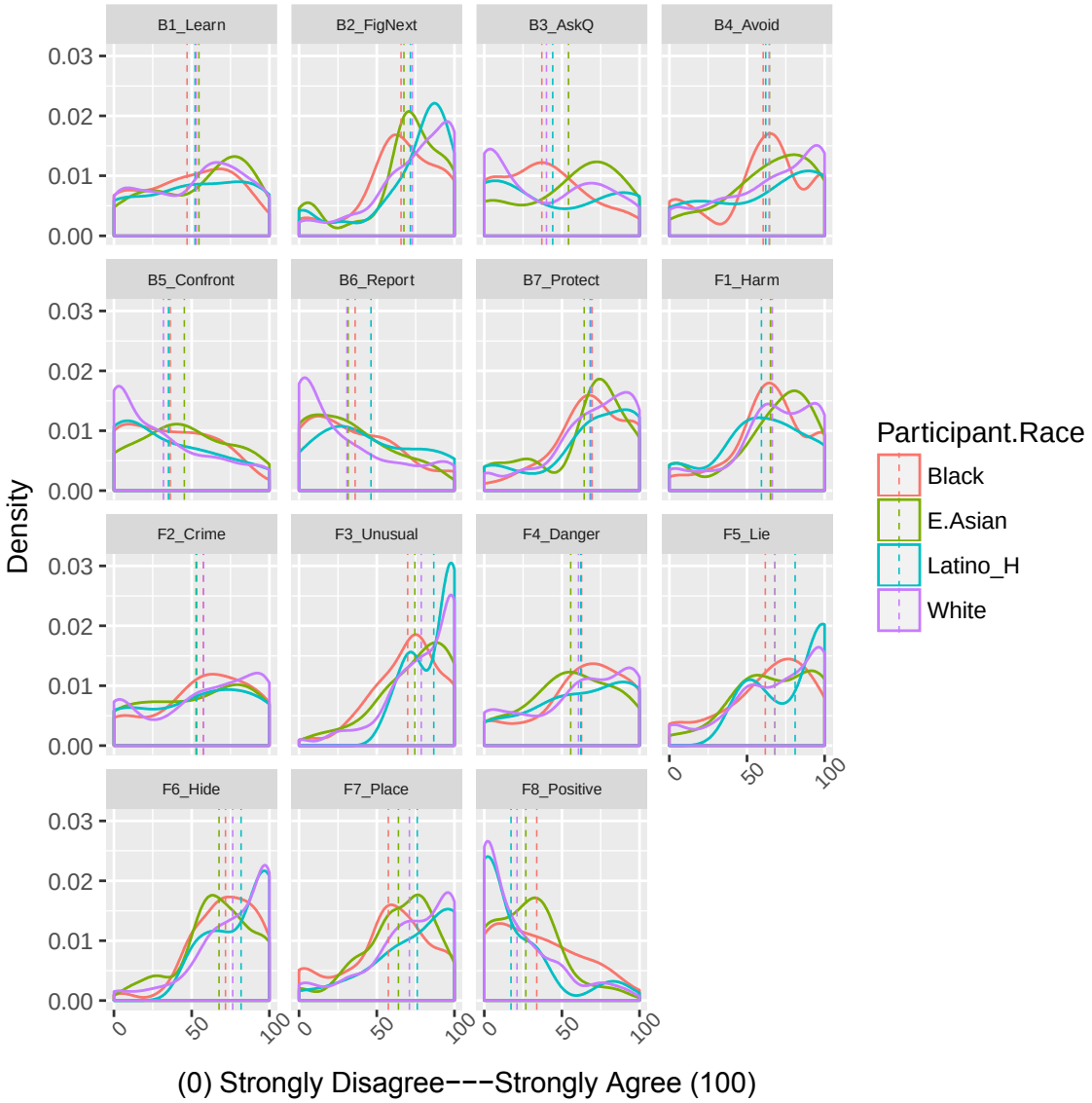

Figure 19. Distribution of responses to items pertaining to the perceiver's behavior and inferences, by participant race. Only single categories selected by at least 5% of participants are depicted.

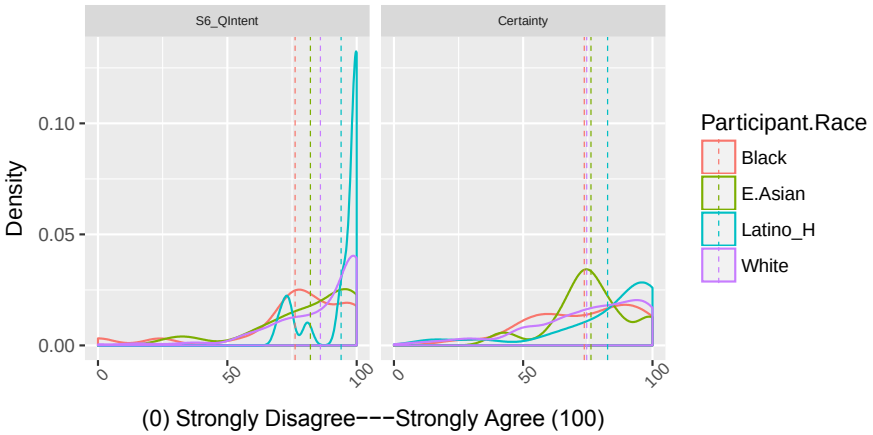

Figure 20. Distribution of responses to items pertaining to questioning the target's intentions and certainty that their suspicions were correct, by participant race. Only single categories selected by at least 5% of participants are depicted.

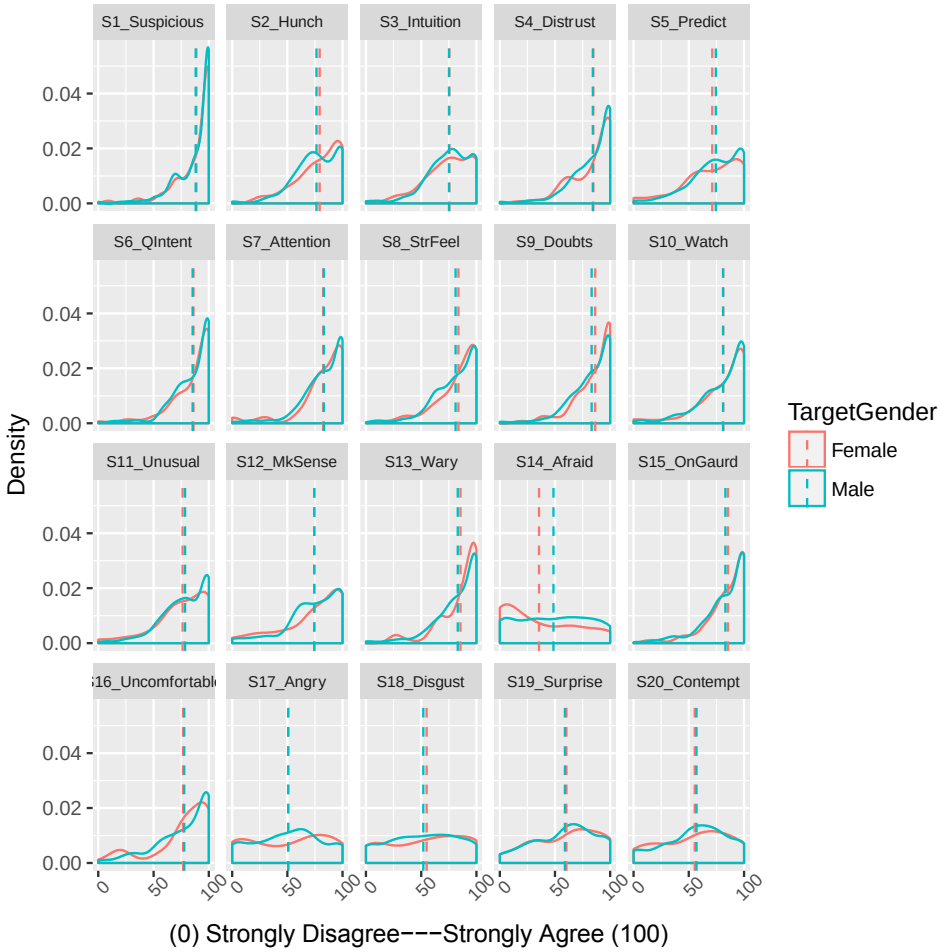

Figure 21. Distribution of responses to items pertaining to the perceiver's psychological states, by target gender. Only categories selected by at least 5% of participants are depicted.

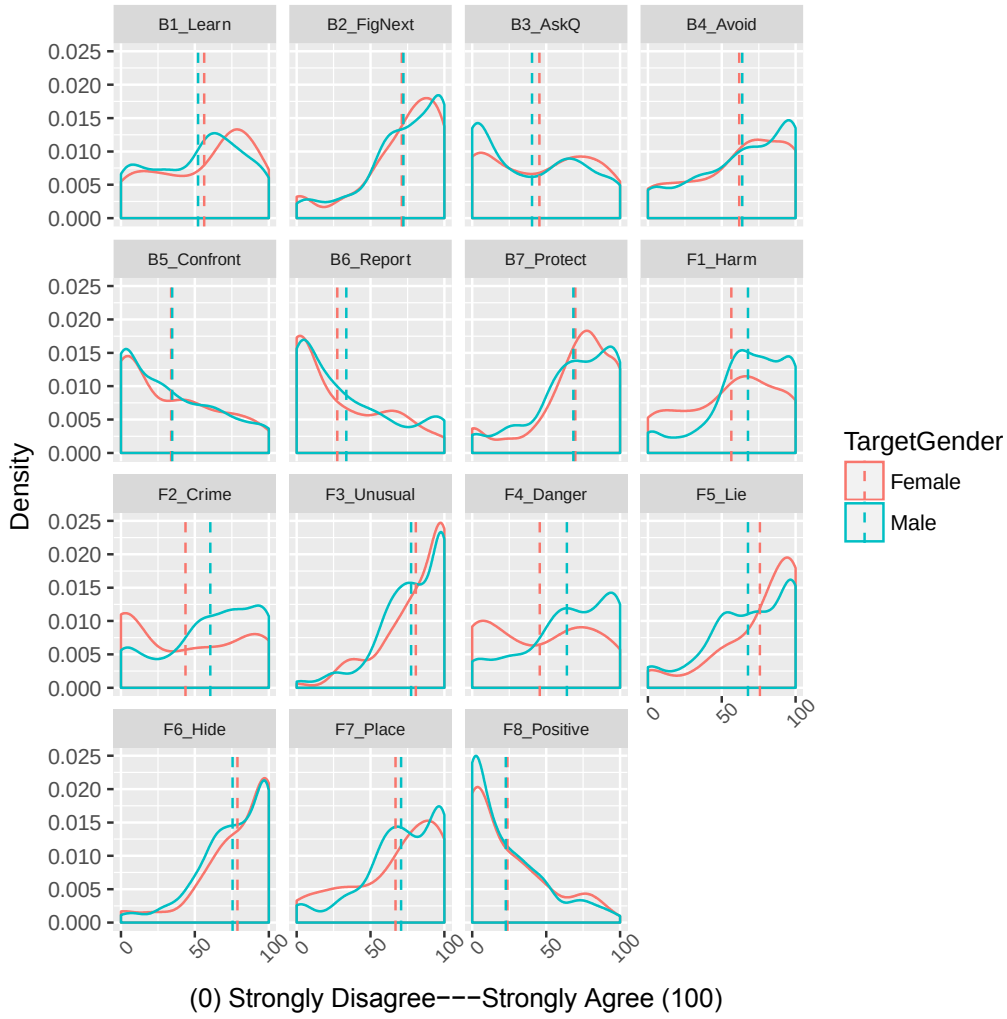

Figure 22. Distribution of responses to items pertaining to the perceiver's behavior and inferences, by target gender. Only categories selected by at least 5% of participants are depicted.

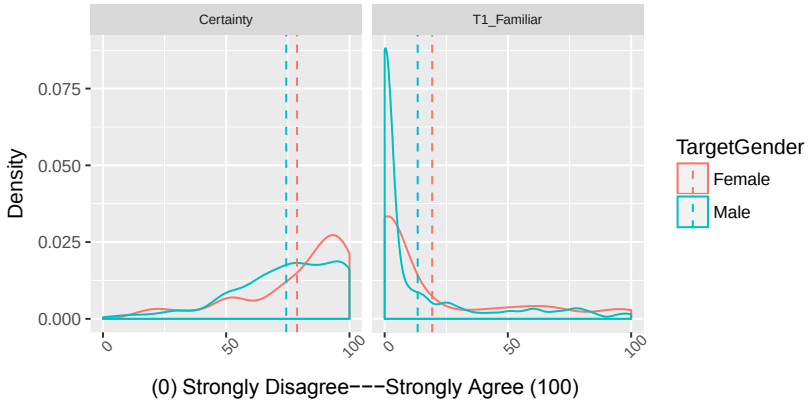

Figure 23. Distribution of responses to items pertaining to the perceiver's certainty that their suspicions were correct and familiarity with the target, by target gender. Only categories selected by at least 5% of participants are depicted.

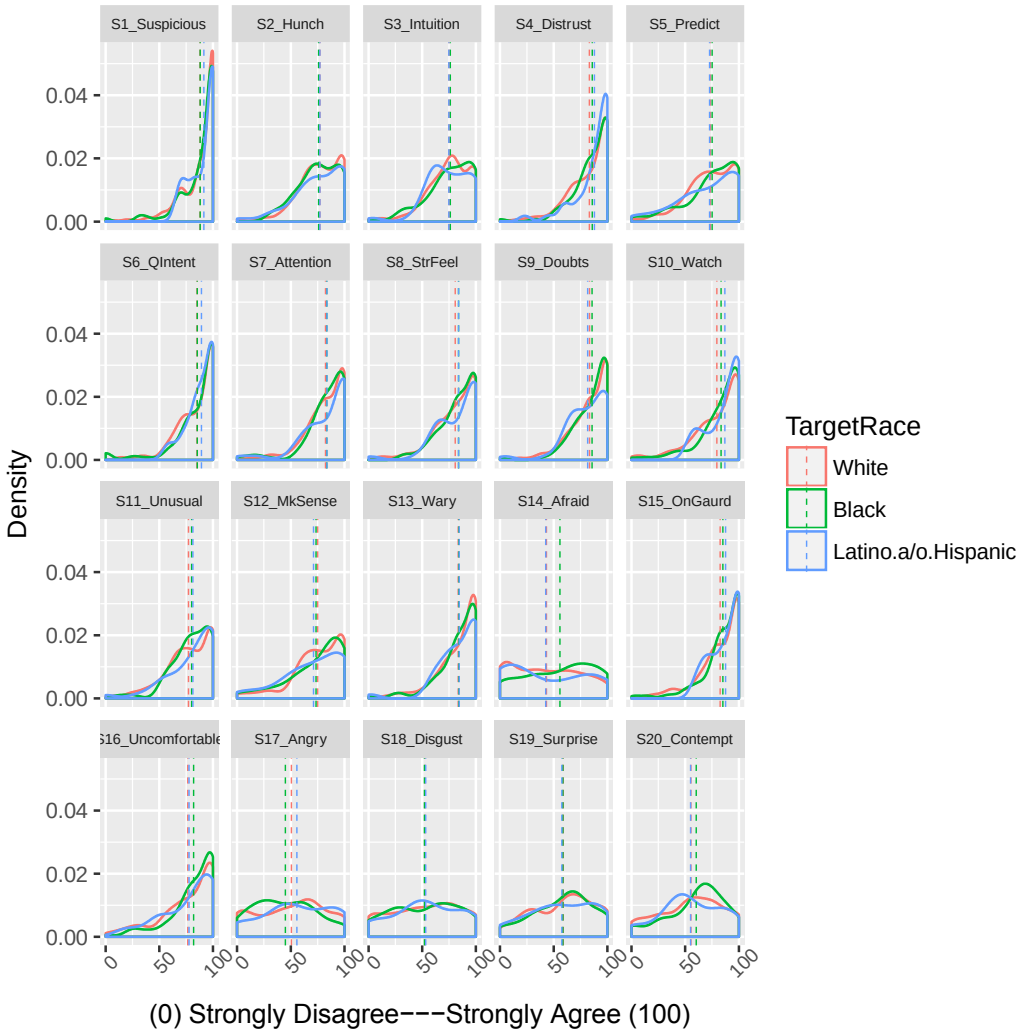

Figure 24. Distribution of responses to items pertaining to the perceiver's psychological state, by target race. Only categories selected by at least 5% of participants are depicted.

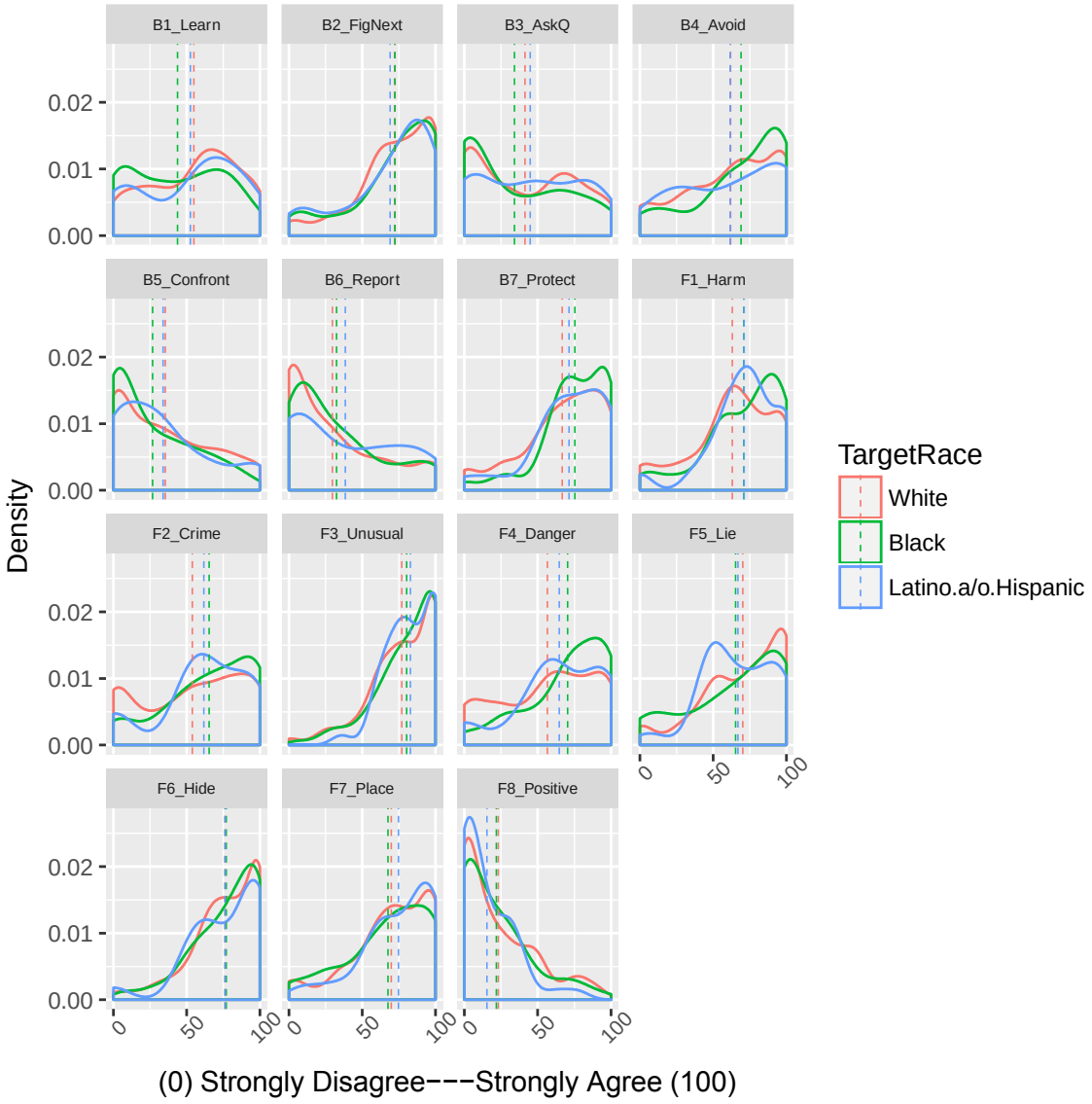

Figure 25. Distribution of responses to items pertaining to the perceiver's psychological state, by target race. Only categories selected by at least 5% of participants are depicted.

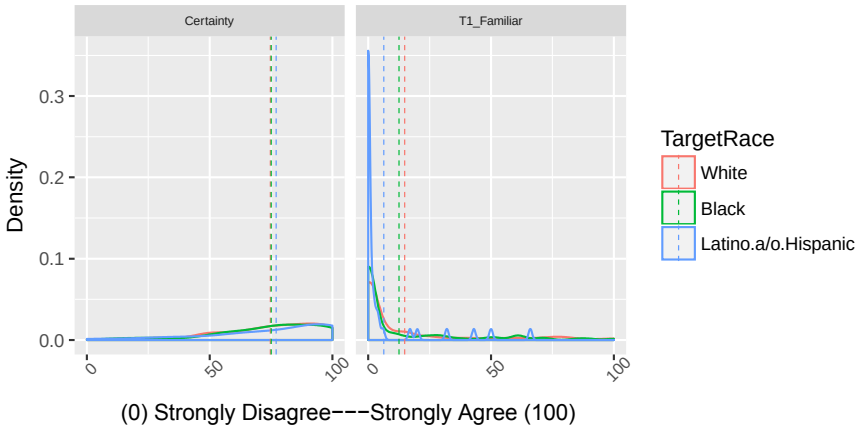

Figure 26. Distribution of responses to items pertaining to the perceiver's certainty that their suspicions were correct and familiarity with the target, by target race. Only categories selected by at least 5% of participants are depicted.

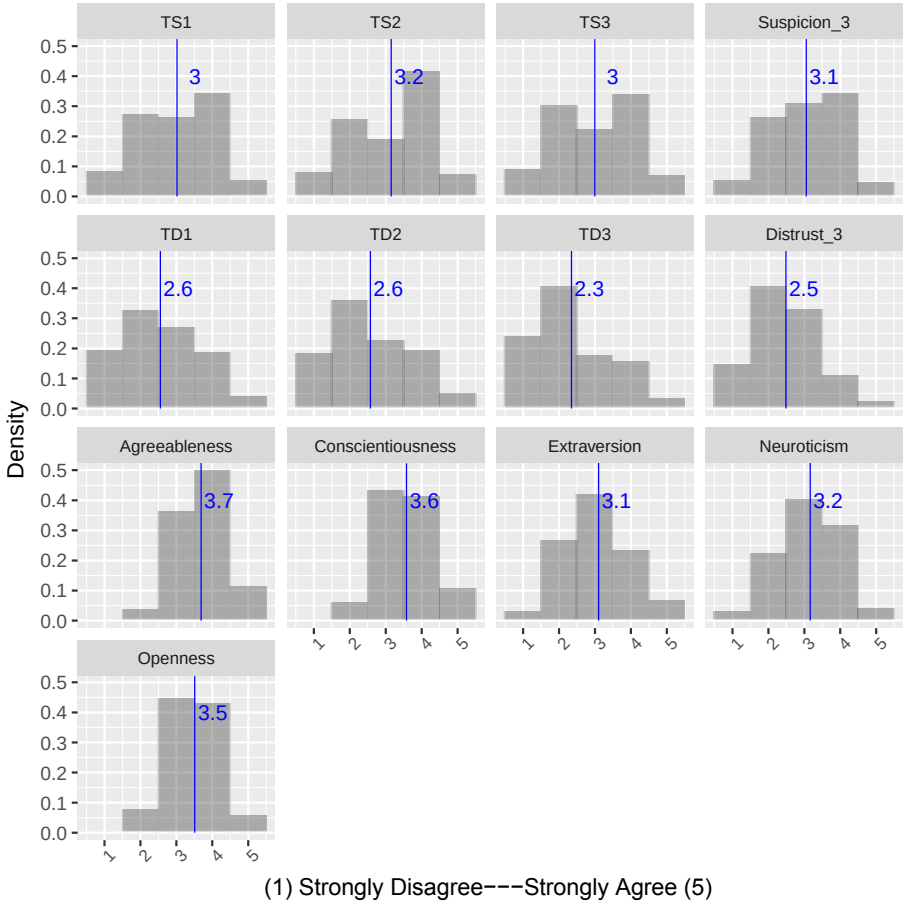

Figure 27. Responses to the individual dispositional distrust and suspicion items, and the averages for each set of three items. The other five traits are averages of 8 to 10 items each.

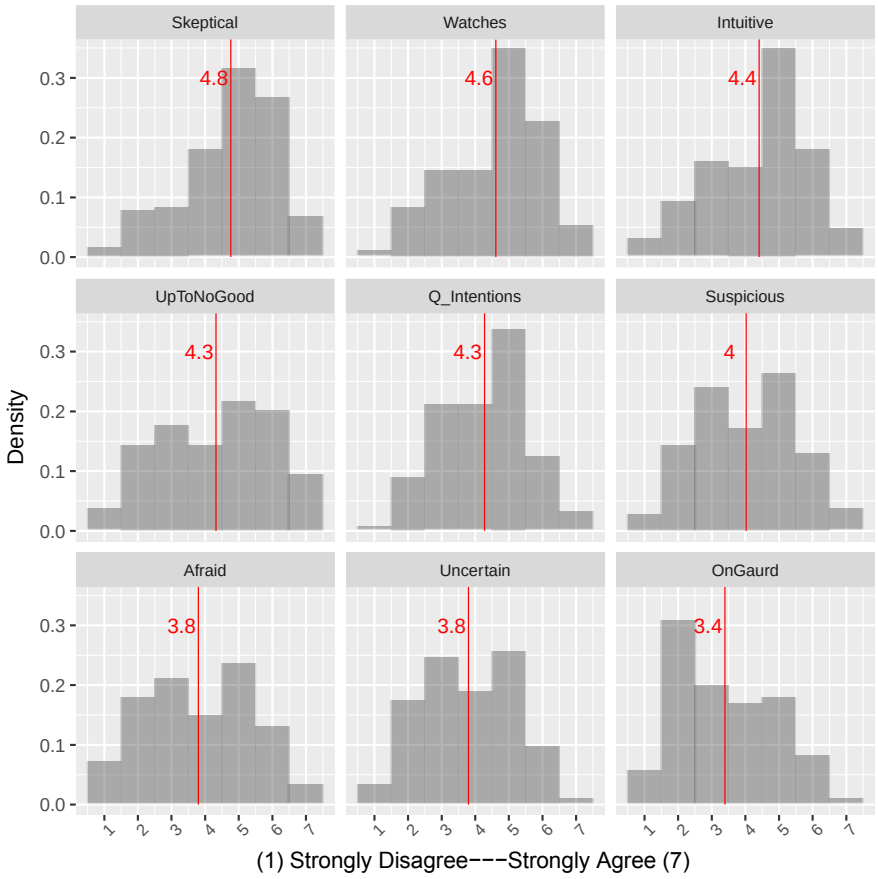

Figure 28. Responses to nine dispositional interpersonal suspicion items, n = 196.

Table 27. Tau Correlation Matrix for all Items in Study 2, Regarding Situational Interpersonal Suspicion

	S1_Suspicious	S2_Hunch	S3_Intuition	S4_Distrust	S5_Predict	S6_QIntent	S7_Attention	S8_StrFeel	S9_Doubts	S10_Watch	S11_Unusual	S12_MkSense	S13_Wary	S14_Afraid	S15_OnGaurd	S16_Uncomfortable	S17_Angry	S18_Disgust	S19_Surprise	S20_Contempt	B1_Learn	
S1_Suspicious	1	0.39	0.33	0.55	0.34	0.57	0.41	0.52	0.56	0.44	0.43	0.32	0.56	0.04	0.54	0.44	0.05	0.11	0.09	0.11	0.02	0.32
S2_Hunch	0.39	1	0.52	0.41	0.38	0.4	0.32	0.41	0.44	0.37	0.36	0.24	0.41	0.05	0.38	0.32	0.21	0.28	0.12	0.24	0.09	0.26
S3_Intuition	0.33	0.52	1	0.35	0.35	0.34	0.28	0.42	0.39	0.32	0.37	0.22	0.34	0.08	0.33	0.31	0.2	0.26	0.09	0.26	0.08	0.25
S4_Distrust	0.55	0.41	0.35	1	0.34	0.54	0.38	0.47	0.55	0.4	0.4	0.29	0.57	0.09	0.51	0.42	0.16	0.22	0.11	0.2	0.02	0.33
S5_Predict	0.34	0.38	0.35	0.34	1	0.36	0.34	0.33	0.34	0.38	0.32	0.3	0.37	0.14	0.33	0.26	0.16	0.15	0.14	0.21	0.07	0.33
S6_QIntent	0.57	0.4	0.34	0.54	0.36	1	0.39	0.5	0.5	0.41	0.41	0.35	0.51	0.05	0.53	0.43	0.08	0.13	0.14	0.15	0.03	0.36
S7_Attention	0.41	0.32	0.28	0.38	0.34	0.39	1	0.39	0.38	0.52	0.36	0.36	0.43	0.15	0.44	0.32	0.08	0.03	0.19	0.11	0.09	0.42
S8_StrFeel	0.52	0.41	0.42	0.47	0.33	0.5	0.39	1	0.51	0.41	0.5	0.31	0.52	0.16	0.49	0.46	0.09	0.17	0.16	0.19	0.05	0.32
S9_Doubts	0.56	0.44	0.39	0.55	0.34	0.5	0.38	0.51	1	0.39	0.44	0.31	0.55	0.07	0.52	0.43	0.11	0.18	0.15	0.18	0.05	0.32
S10_Watch	0.44	0.37	0.32	0.4	0.38	0.41	0.52	0.41	0.39	1	0.41	0.32	0.47	0.16	0.47	0.38	0.15	0.13	0.17	0.17	0.09	0.42
S11_Unusual	0.43	0.36	0.37	0.4	0.32	0.41	0.36	0.5	0.44	0.41	1	0.3	0.42	0.11	0.42	0.35	0.12	0.18	0.14	0.18	0.06	0.29
S12_MkSense	0.32	0.24	0.22	0.29	0.3	0.35	0.36	0.31	0.31	0.32	0.3	1	0.34	0.12	0.3	0.22	0.05	-0.01	0.25	0.05	0.21	0.43
S13_Wary	0.56	0.41	0.34	0.57	0.37	0.51	0.43	0.52	0.55	0.47	0.42	0.34	1	0.13	0.6	0.51	0.09	0.16	0.16	0.16	0.02	0.35
S14_Afraid	0.04	0.05	0.08	0.09	0.14	0.05	0.15	0.16	0.07	0.16	0.11	0.12	0.13	1	0.12	0.26	0.1	0.13	0.2	0.13	0.03	0.2
S15_OnGaurd	0.54	0.38	0.33	0.51	0.33	0.53	0.44	0.49	0.52	0.47	0.42	0.3	0.6	0.12	1	0.52	0.09	0.13	0.16	0.15	-0.03	0.31
S16_Uncomfortable	0.44	0.32	0.31	0.42	0.26	0.43	0.32	0.46	0.43	0.38	0.35	0.22	0.51	0.26	0.52	1	0.16	0.22	0.18	0.21	-0.03	0.33
S17_Angry	0.05	0.21	0.2	0.16	0.16	0.08	0.08	0.09	0.11	0.15	0.12	0.05	0.09	0.1	0.09	0.16	1	0.52	0.13	0.48	0.11	0.09
S18_Disgust	0.11	0.28	0.26	0.22	0.15	0.13	0.03	0.17	0.18	0.13	0.18	-0.01	0.16	0.13	0.13	0.22	0.52	1	0.09	0.49	0.03	0.02
S19_Surprise	0.09	0.12	0.09	0.11	0.14	0.14	0.19	0.16	0.15	0.17	0.14	0.25	0.16	0.2	0.16	0.18	0.13	0.09	1	0.11	0.16	0.22
S20_Contempt	0.11	0.24	0.26	0.2	0.21	0.15	0.11	0.19	0.18	0.17	0.18	0.05	0.16	0.13	0.15	0.21	0.48	0.49	0.11	1	0.08	0.13
B1_Learn	0.02	0.09	0.08	0.02	0.07	0.03	0.09	0.05	0.05	0.09	0.06	0.21	0.02	0.03	-0.03	-0.03	0.11	0.03	0.16	0.08	1	0.27
B2_FigNext	0.32	0.26	0.25	0.33	0.33	0.36	0.42	0.32	0.32	0.42	0.29	0.43	0.35	0.2	0.31	0.33	0.09	0.02	0.22	0.13	0.27	1
B3_AskQ	-0.12	0	-0.01	-0.1	-0.03	-0.05	-0.02	-0.11	-0.07	-0.03	-0.05	0.06	-0.14	-0.07	-0.16	-0.17	0.16	0.09	0.09	0.09	0.32	0.05
B4_Avoid	0.17	0.16	0.14	0.25	0.14	0.19	0.1	0.22	0.18	0.18	0.18	0.11	0.23	0.29	0.22	0.35	0.13	0.2	0.11	0.13	-0.15	0.11
B5_Confront	-0.16	0.03	0.03	-0.1	-0.02	-0.11	-0.06	-0.11	-0.09	-0.05	-0.03	0	-0.16	-0.03	-0.16	-0.15	0.28	0.18	0.1	0.17	0.25	0.01
B6_Report	-0.08	0.02	0.03	-0.05	0.04	-0.09	0.01	-0.01	-0.09	0.07	0.02	-0.02	-0.07	0.19	-0.07	-0.02	0.21	0.17	0.07	0.12	0.14	0.06
B7_Protect	0.21	0.2	0.18	0.26	0.17	0.26	0.23	0.24	0.27	0.25	0.25	0.16	0.3	0.29	0.32	0.36	0.11	0.14	0.2	0.19	0	0.29
F1_Harm	0.22	0.22	0.19	0.22	0.17	0.17	0.18	0.24	0.23	0.24	0.25	0.09	0.24	0.26	0.24	0.26	0.17	0.21	0.09	0.18	0.07	0.18
F2_Crime	0.13	0.15	0.13	0.15	0.16	0.09	0.15	0.14	0.12	0.19	0.19	0.1	0.15	0.24	0.14	0.15	0.13	0.14	0.07	0.11	0.08	0.14
F3_Unusual	0.4	0.27	0.26	0.36	0.23	0.37	0.35	0.42	0.4	0.35	0.44	0.33	0.41	0.15	0.37	0.37	0.08	0.11	0.18	0.1	0.08	0.37
F4_Danger	0.19	0.14	0.17	0.2	0.19	0.17	0.2	0.26	0.17	0.27	0.23	0.12	0.26	0.46	0.26	0.32	0.12	0.15	0.16	0.15	0.03	0.25
F5_Lie	0.21	0.26	0.17	0.21	0.12	0.2	0.08	0.11	0.24	0.13	0.16	0.11	0.15	-0.12	0.16	0.08	0.19	0.19	0.02	0.18	0.11	0.06
F6_Hide	0.32	0.34	0.27	0.33	0.24	0.32	0.23	0.29	0.34	0.27	0.31	0.24	0.28	0	0.27	0.24	0.16	0.16	0.11	0.15	0.12	0.24
F7_Place	0.29	0.23	0.22	0.25	0.22	0.29	0.23	0.33	0.3	0.28	0.36	0.26	0.32	0.15	0.27	0.33	0.09	0.12	0.19	0.11	0.17	0.28
F8_Positive	-0.44	-0.26	-0.19	-0.4	-0.2	-0.37	-0.26	-0.34	-0.35	-0.27	-0.28	-0.12	-0.38	0.04	-0.36	-0.29	-0.03	-0.1	0.01	-0.11	0.1	-0.18
Certainty	0.28	0.35	0.34	0.32	0.23	0.25	0.16	0.25	0.3	0.24	0.28	0.06	0.24	-0.06	0.21	0.2	0.27	0.31	0.05	0.26	0.01	0.09
T1_Familiar	-0.35	-0.12	-0.08	-0.25	-0.14	-0.3	-0.22	-0.24	-0.24	-0.22	-0.19	-0.15	-0.32	-0.05	-0.29	-0.24	0.18	0.12	-0.03	0.1	0.12	-0.14

	B2_FigNext	B3_AskQ	B4_Avoid	B5_Confront	B6_Report	B7_Protect	F1_Harm	F2_Crime	F3_Unusual	F4_Danger	F5_Lie	F6_Hide	F7_Place	F8_Positive	Certainty	T1_Familiar
S1_Suspicious	-0.12	0.17	-0.16	-0.08	0.21	0.22	0.13	0.4	0.19	0.21	0.32	0.29	-0.44	0.28	-0.35	
S2_Hunch	0	0.16	0.03	0.02	0.2	0.22	0.15	0.27	0.14	0.26	0.34	0.23	-0.26	0.35	-0.12	
S3_Intuition	-0.01	0.14	0.03	0.03	0.18	0.19	0.13	0.26	0.17	0.17	0.27	0.22	-0.19	0.34	-0.08	
S4_Distrust	-0.1	0.25	-0.1	-0.05	0.26	0.22	0.15	0.36	0.2	0.21	0.33	0.25	-0.4	0.32	-0.25	
S5_Predict	-0.03	0.14	-0.02	0.04	0.17	0.17	0.16	0.23	0.19	0.12	0.24	0.22	-0.2	0.23	-0.14	
S6_QIntent	-0.05	0.19	-0.11	-0.09	0.26	0.17	0.09	0.37	0.17	0.2	0.32	0.29	-0.37	0.25	-0.3	
S7_Attention	-0.02	0.1	-0.06	0.01	0.23	0.18	0.15	0.35	0.2	0.08	0.23	0.23	-0.26	0.16	-0.22	
S8_StrFeel	-0.11	0.22	-0.11	-0.01	0.24	0.24	0.14	0.42	0.26	0.11	0.29	0.33	-0.34	0.25	-0.24	
S9_Doubts	-0.07	0.18	-0.09	-0.09	0.27	0.23	0.12	0.4	0.17	0.24	0.34	0.3	-0.35	0.3	-0.24	
S10_Watch	-0.03	0.18	-0.05	0.07	0.25	0.24	0.19	0.35	0.27	0.13	0.27	0.28	-0.27	0.24	-0.22	
S11_Unusual	-0.05	0.18	-0.03	0.02	0.25	0.25	0.19	0.44	0.23	0.16	0.31	0.36	-0.28	0.28	-0.19	
S12_MkSense	0.06	0.11	0	-0.02	0.16	0.09	0.1	0.33	0.12	0.11	0.24	0.26	-0.12	0.06	-0.15	
S13_Wary	-0.14	0.23	-0.16	-0.07	0.3	0.24	0.15	0.41	0.26	0.15	0.28	0.32	-0.38	0.24	-0.32	
S14_Afraid	-0.07	0.29	-0.03	0.19	0.29	0.26	0.24	0.15	0.46	-0.12	0	0.15	0.04	-0.06	-0.05	
S15_OnGaurd	-0.16	0.22	-0.16	-0.07	0.32	0.24	0.14	0.37	0.26	0.16	0.27	0.27	-0.36	0.21	-0.29	
S16_Uncomfortable	-0.17	0.35	-0.15	-0.02	0.36	0.26	0.15	0.37	0.32	0.08	0.24	0.33	-0.29	0.2	-0.24	
S17_Angry	0.16	0.13	0.28	0.21	0.11	0.17	0.13	0.08	0.12	0.19	0.16	0.09	-0.03	0.27	0.18	
S18_Disgust	0.09	0.2	0.18	0.17	0.14	0.21	0.14	0.11	0.15	0.19	0.16	0.12	-0.1	0.31	0.12	
S19_Surprise	0.09	0.11	0.1	0.07	0.2	0.09	0.07	0.18	0.16	0.02	0.11	0.19	0.01	0.05	-0.03	
S20_Contempt	0.09	0.13	0.17	0.12	0.19	0.18	0.11	0.1	0.15	0.18	0.15	0.11	-0.11	0.26	0.1	
B1_Learn	0.32	-0.15	0.25	0.14	0	0.07	0.08	0.08	0.03	0.11	0.12	0.17	0.1	0.01	0.12	
B2_FigNext	0.05	0.11	0.01	0.06	0.29	0.18	0.14	0.37	0.25	0.06	0.24	0.28	-0.18	0.09	-0.14	
B3_AskQ	1	-0.2	0.52	0.17	-0.07	-0.01	-0.03	-0.08	-0.11	0.21	0.03	-0.02	0.18	0.04	0.25	
B4_Avoid	-0.2	1	-0.15	0.03	0.35	0.18	0.12	0.14	0.24	0.01	0.13	0.14	-0.13	0.13	-0.07	
B5_Confront	0.52	-0.15	1	0.28	-0.06	0.03	0.02	-0.08	-0.05	0.19	0.04	0.01	0.18	0.09	0.35	
B6_Report	0.17	0.03	0.28	1	0.11	0.21	0.32	0.05	0.19	-0.01	0.03	0.1	0.1	0.09	0.16	
B7_Protect	-0.07	0.35	-0.06	0.11	1	0.38	0.25	0.24	0.39	0.09	0.22	0.22	-0.15	0.16	-0.12	
F1_Harm	-0.01	0.18	0.03	0.21	0.38	1	0.5	0.29	0.47	0.16	0.3	0.28	-0.21	0.2	-0.08	
F2_Crime	-0.03	0.12	0.02	0.32	0.25	0.5	1	0.26	0.42	0.13	0.28	0.28	-0.16	0.17	-0.05	
F3_Unusual	-0.08	0.14	-0.08	0.05	0.24	0.29	0.26	1	0.31	0.14	0.34	0.5	-0.33	0.21	-0.23	
F4_Danger	-0.11	0.24	-0.05	0.19	0.39	0.47	0.42	0.31	1	-0.02	0.15	0.31	-0.12	0.12	-0.14	
F5_Lie	0.21	0.01	0.19	-0.01	0.09	0.16	0.13	0.14	-0.02	1	0.42	0.13	-0.16	0.29	0.05	
F6_Hide	0.03	0.13	0.04	0.03	0.22	0.3	0.28	0.34	0.15	0.42	1	0.31	-0.29	0.29	-0.07	
F7_Place	-0.02	0.14	0.01	0.1	0.22	0.28	0.28	0.5	0.31	0.13	0.31	1	-0.21	0.18	-0.15	
F8_Positive	0.18	-0.13	0.18	0.1	-0.15	-0.21	-0.16	-0.33	-0.12	-0.16	-0.29	-0.21	1	-0.26	0.35	
Certainty	0.04	0.13	0.09	0.09	0.16	0.2	0.17	0.21	0.12	0.29	0.29	0.18	-0.26	1	-0.03	
T1_Familiar	0.25	-0.07	0.35	0.16	-0.12	-0.08	-0.05	-0.23	-0.14	0.05	-0.07	-0.15	0.35	-0.03	1	

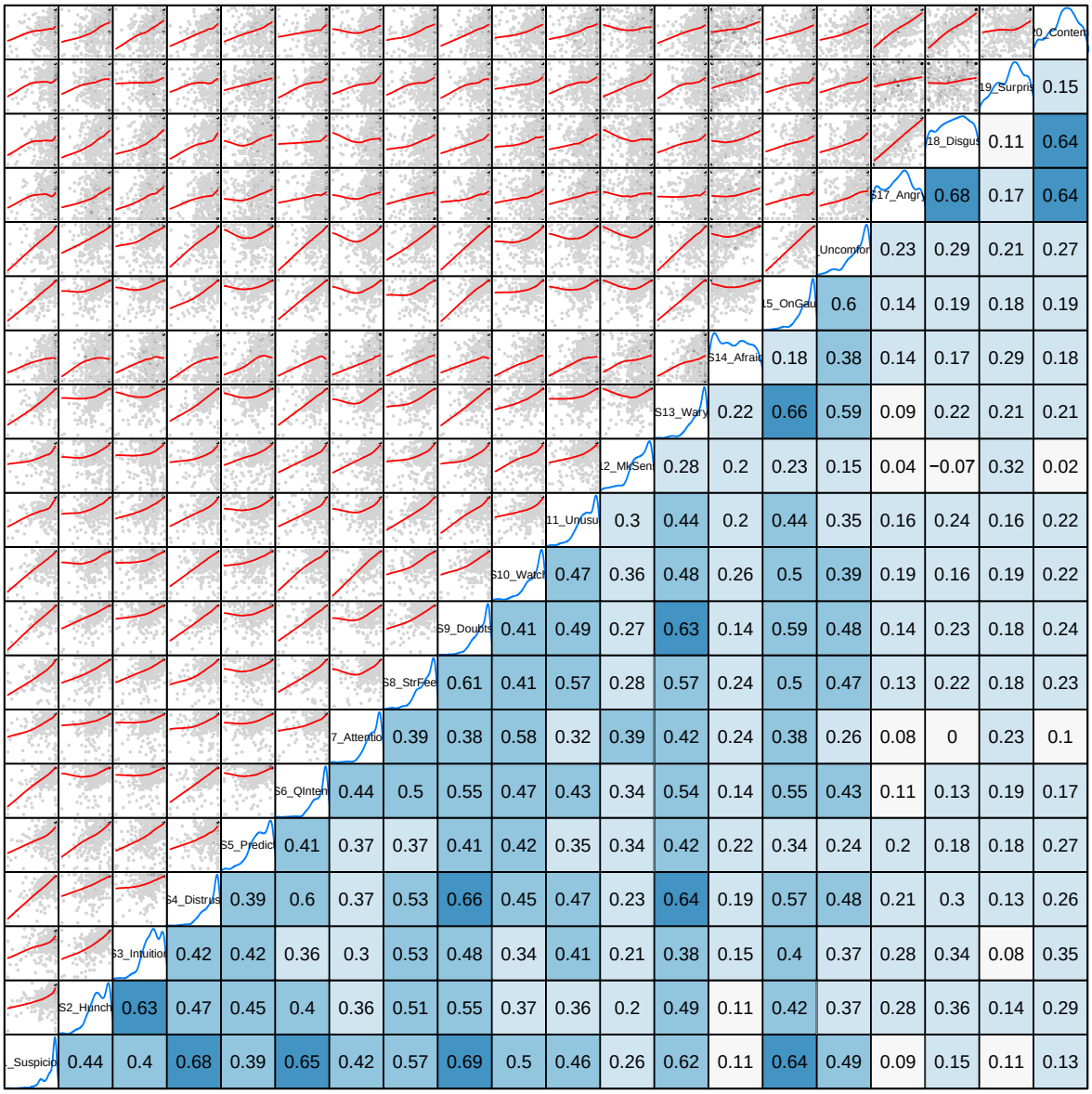

Figure 29. Scatterplot and Pearson correlation coefficients for the first set of 20 items regarding psychological states in Study 2.

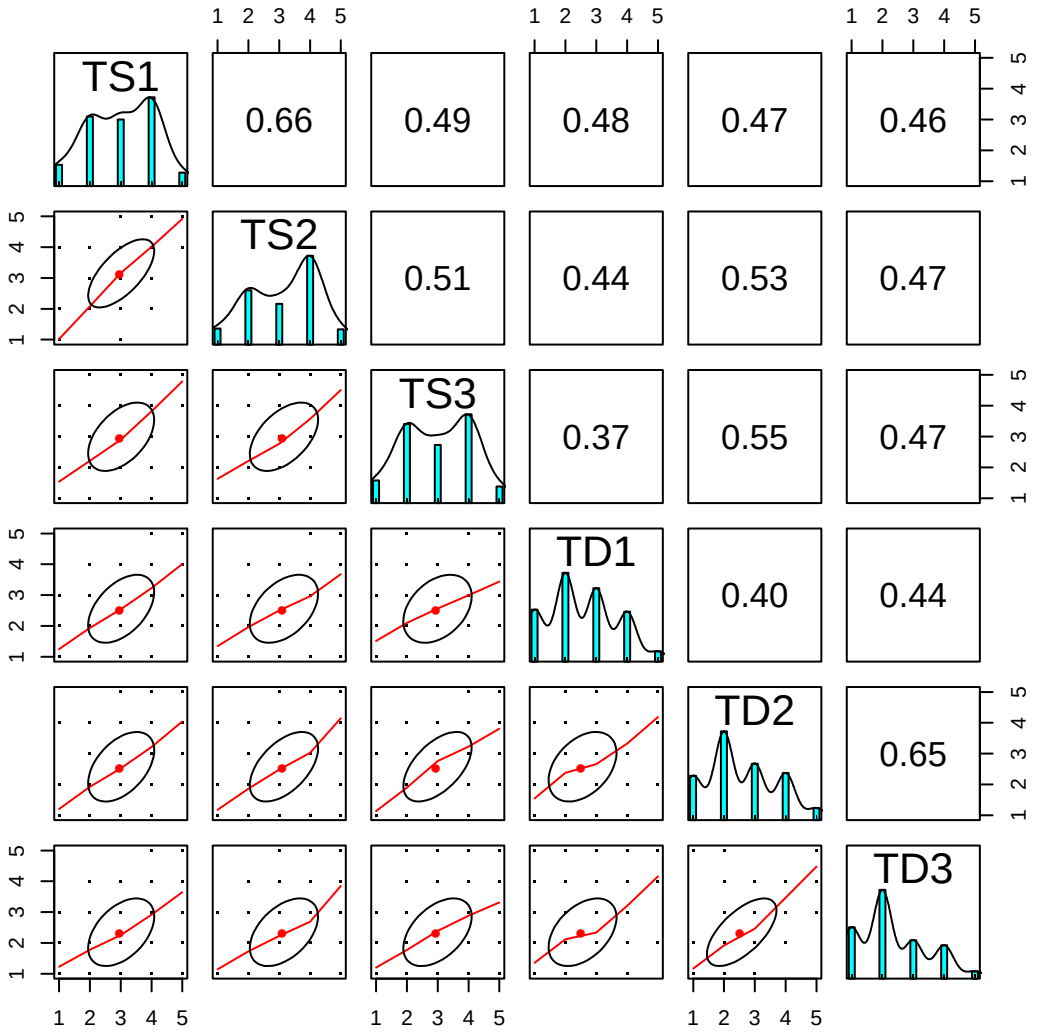

Figure 30. Scatterplots and Pearson correlation coefficients for three dispositional suspicion items and three dispositional distrust items.

Item Key

I am someone who…
Tends to be suspicious of others' behaviors (TS1)
Has doubts about other people's intentions (TS2)
Is on guard when I'm around other people (TS3)
Usually assumes the best about people [R] (TD1)
Experiences distrust often (TD2)
Believes that most people are untrustworthy (TD3)

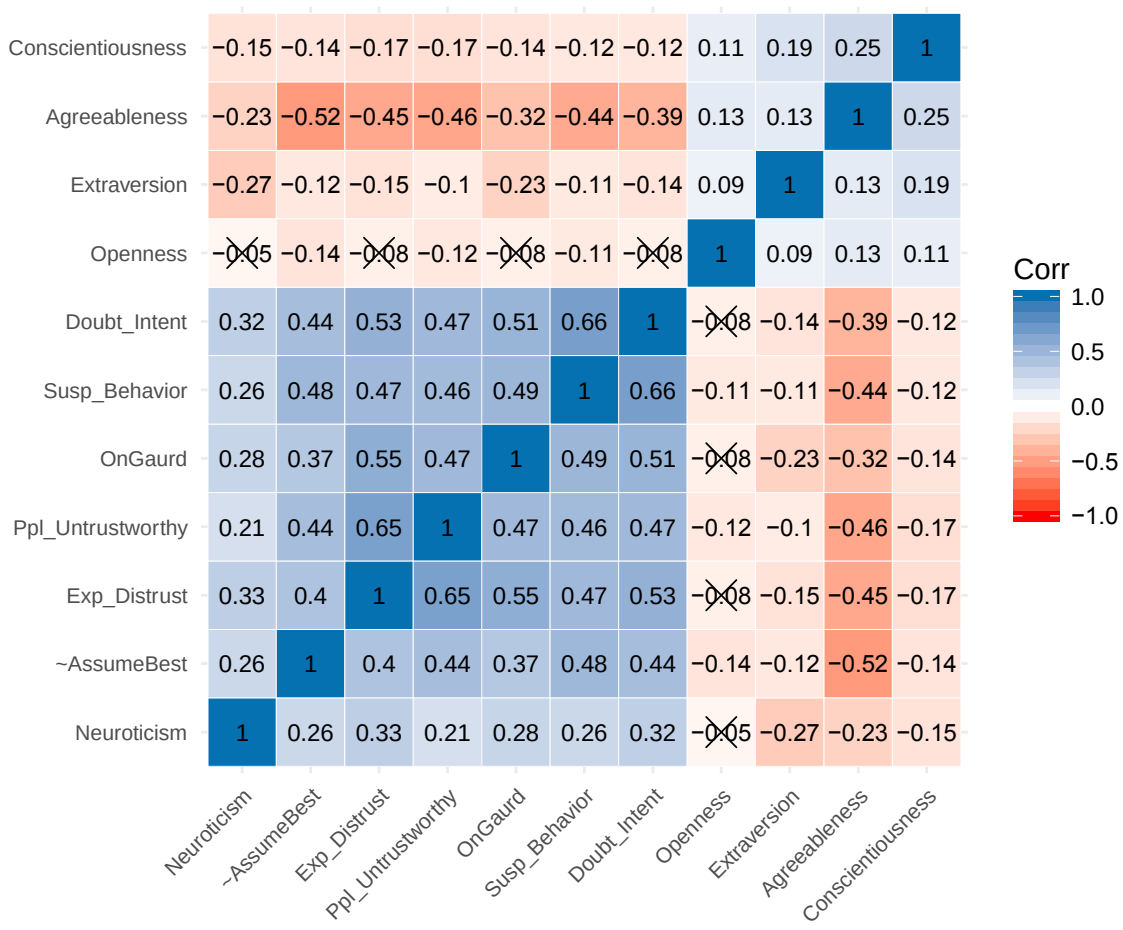

Figure 31. Rank-based correlations: Individual dispositional suspicion and distrust items and the Big Five personality traits (Study 3A).

Figure 32. Pearson correlation coefficients for nine dispositional interpersonal suspicion items (Study 3B).