

SOCIAL JUDGMENT RELUCTANCE: INDIVIDUAL DIFFERENCES IN  
IMPRESSION FORMATION MOTIVATIONS AND BEHAVIORS

By

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## ABSTRACT OF THE DISSERTATION

Social judgment reluctance:

Individual differences in impression formation motivations and behaviors

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Impression formation theories propose that perceivers effortfully update their automatic impressions of others when they have sufficient time, cognitive ability, and motivation. In this dissertation, I propose a novel impression formation motive, social judgment reluctance (SJR), which accounts for perceivers' reluctance to trust their initial impressions of others and their desire to learn more about others to form accurate impressions. Across six studies, I developed and refined a measure of SJR (Pilot Studies 1 and 2). Results revealed two SJR factors (SJR-information seeking and SJR-gut distrust) that have distinct relationships to existing individual difference measures (Studies 1 and 2). The present research established valid and reliable SJR factors (Studies 1 and 2). Across two studies, I examined the predictive utility of the SJR factors in impression formation and behavioral attribution contexts (Studies 3 and 4). Higher SJR-information seeking related to providing more "no opinion" responses when asked about impressions of others, and attributing blame to external factors more and dispositional factors less for negative outcomes with ambiguous causes. Higher SJR-gut distrust

related to providing more neutral responses when asked about impressions of others, attributing blame to external factors more for negative outcomes with ambiguous causes, and being less confident in impressions and attributions. These SJR factors are thus expected to provide useful insight into perceivers' impressions and attributions in many areas of research, including in future research on person perception, intergroup relations, close relationships, and identity threat.

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## Introduction

In Jane Austen's literary classic *Pride & Prejudice*, Elizabeth Bennett and Fitzwilliam Darcy are quick to judge one another. Both characters admit to forming strong opinions of others and being reluctant to revise their impressions. It is only with ample effort, opportunity, and motivation that Elizabeth Bennett and Fitzwilliam Darcy make amends for their past behavior, update their impressions of each other, and ultimately end up together. *Pride & Prejudice* was neither the first nor last work of fiction to center impression formation in its plot.

Popular movies, television shows, and books commonly portray characters who quickly form impressions of others and rely on gut instincts to determine if someone is trustworthy. These same shows, movies, and books also portray characters who give others the "benefit of the doubt" following a negative first impression. From a young age, people are taught conflicting information about making judgments of others. People learn they should not judge others based on minimal information (e.g., appearance), but also learn they should trust their gut instincts, including when meeting new people.

Theorists have proposed that when perceivers meet or are exposed to someone new, they initially form automatic impressions based on the information available to them (Brewer, 1988; Chaiken & Ledgerwood, 2012; Fiske & Neuberg, 1990). Perceivers can effortfully adjust their impressions and integrate additional information into their impressions when they have sufficient time, ability, and motivation (Devine, 1989; Fiske & Neuberg, 1990). In situations where people have ample time and cognitive capacity, their motivations determine whether they reflect and think critically about their impressions of others.

Perceivers' motivation to think effortfully about their impressions of others can be influenced by situational factors. When a perceiver is interested in getting to know someone or someone is personally relevant to a perceiver, the perceiver could have heightened motivation to effortfully integrate information into an impression that is specific to the target (Brewer, 1988; Fiske & Neuberg, 1990). For example, a perceiver may care more about forming an accurate impression of someone while they are on a date, interviewing for a job, or meeting a friend's new partner than when they are running errands, commuting to work, or watching a commercial.

Personal factors, such as people's values, can also influence their motivation to effortfully update impressions of others. Individual perceivers may differ from one another in how motivated they are, on average, to effortfully update their impressions. Devine (1989) proposed that stereotypes activate automatically when perceivers encounter someone from a particular identity group, but that egalitarian perceivers are more motivated than prejudiced perceivers to consciously disregard these activated stereotypes in favor of their non-prejudiced personal beliefs. In the present work, beyond avoiding prejudices in impressions, I propose that perceivers more broadly differ in their motivations when forming impressions of other people. Specifically, I posit that perceivers differ in their reluctance to judge others based on minimal information and in their motivation to learn more about others to form accurate impressions. To capture these differences, I propose a new individual difference variable called social judgment reluctance.

## Models of Judgment and Impression Formation

Researchers have proposed that people have two systems of thought, one which is automatic, unconscious, and fast, and another which is slow, effortful, and conscious (Evans, 2008; Kahneman & Frederick, 2002). The dual process model of impression formation proposes that the first step of impression formation involves automatically and unconsciously categorizing someone into easily accessible social categories, such as those based on gender, age, and race (Brewer, 1988). Brewer (1988) argues that perceivers only move beyond this initial, automatic stage if the target person is in some way relevant to the goals and needs of the perceiver. Perceivers who engage in the next, effortful stage of impression formation will either assess the target on a person-specific level if the perceiver feels invested in or related to the target in some way, or they will effortfully sort the target into social categories subtypes (e.g., Black woman doctor; Brewer, 1988). The dual process model of impression formation proposes that personal features of perceivers are important in determining the effortful processes they may use when forming impressions of others.

The continuum model of impression formation similarly proposes that perceivers automatically socially categorize others and determine whether to pay additional attention to a target if the target is interesting or relevant to the perceiver (Fiske & Neuberg, 1990). This model suggests that perceivers then form their impression of a target along a continuum of processes that involve further evaluation of a target in relation to social categories and individual characteristics (Fiske & Neuberg, 1990). Devine's (1989) model of stereotype activation and application proposes that egalitarian perceivers are motivated to *ignore* group-based stereotypes that are activated automatically in their

minds and instead focus on their personal, non-prejudicial beliefs when they encounter a member of a social group. Researchers have also proposed that perceivers make assumptions about a person's character based on their behaviors, and only consider situational factors that could prompt those behaviors when perceivers have sufficient cognitive resources to adjust their impressions (Gilbert et al., 1988). Broadly, impression formation theories, including dual-process models, posit that perceivers require sufficient motivation and resources to effortfully adjust their impressions of others.

While people's motivation, time, and ability to effortfully update their automatic impressions of others can differ based on situational factors (Chaiken & Ledgerwood, 2012; Fiske & Neuberg, 1990), people's general motivation to learn more about others to update their impressions may also differ between perceivers. I propose a novel individual difference factor, *social judgment reluctance* (hereafter SJR), which aims to capture people's reluctance to judge others based on limited information and their differing motivations to seek information to form accurate impressions of others. When perceivers have sufficient time and ability to adjust their automatic impressions of others, I posit that perceivers' SJR will impact the impressions perceivers form of others and their confidence in their impressions. In essence, SJR complements existing dual-process models by adding a different motive – one that depends on a person-level variable for the perceiver, rather than a situational factor.

In contrast to dual-process models of impression formation, the social judgeability model suggests that perceivers generally feel less confident judging people based on social category membership (e.g., race, sexual orientation) due to social norms, and feel more confident judging people based on information specific to those people (i.e.,

individuating information; Schadron & Yzerbyt, 1991). The social judgeability model argues that societal rules dictate that people should not rely on social category-based stereotypes when forming impressions of others, and thus the type of information perceivers know about someone (individuating vs. social category) impact perceivers' comfort and confidence in their impressions (Schadron & Yzerbyt, 1991).

While the social judgeability model argues that people are universally more comfortable judging others based on individuating rather than social category information (Leyens & Schadron, 1992), I propose instead that SJR as an individual difference variable can provide insight into differences *between* perceivers in their reluctance to judge others based on *any type* of minimal information. For example, I expect that people high in SJR would hesitate to form an impression based exclusively on someone's gender (social category information), which the social judgeability model would also predict, but people high in SJR would also avoid judging someone based exclusively on their favorite food (individuating information), as they would not feel confident forming an impression based on minimal individuating *or* social category information. Thus, in this dissertation, I aimed to develop a measure of SJR that would help differentiate between perceivers who are 1) relatively confident in their initial impressions of others based on minimal information and 2) those who are reluctant to judge others based on limited information and are motivated to learn a lot about others to form accurate impressions.

### **Validation of SJR**

There are several individual difference factors that I propose are distinct from, yet related to, SJR. These individual difference variables fall within the broader categories of perceivers' cognitive styles, egalitarian motives, and comfort in person perception.

Among the variables accounting for cognitive styles, I predicted that need for cognition (Cacioppo & Petty, 1982) and attributional complexity (Fletcher et al., 1986) would positively correlate with SJR, while need for closure (Webster & Kruglanski, 1994) and need to evaluate (Jarvis & Petty, 1996) would negatively correlate with SJR. For the variables pertaining to egalitarian motives, I predicted that internal motivation to respond without prejudice (IMS; Plant & Devine, 1998) would positively correlate with SJR, while stigma consciousness (Pinel, 1999) would negatively correlate with SJR. As for variables pertaining to comfort in person perception, I predicted that faith in intuition (Epstein et al., 1996) and the perceived diagnosticity of visual cues of sexual orientation (diagnosticity beliefs; Lick & Johnson, 2014) would negatively correlate with SJR. I also expected SJR to be unrelated to a measure of social desirability (Crowne & Marlowe, 1960; Fischer & Fick, 1993), as I sought to limit response pressure when developing the SJR measure.

Within the broader category of cognitive styles, need for cognition distinguishes people based on their “tendency to engage in and enjoy thinking” (Cacioppo & Petty, 1982, p. 116). Attributional complexity (Fletcher et al., 1986) accounts for a tendency to consider complex rather than simple explanations for people’s behaviors and attitudes. SJR explicitly focuses on impression formation processes rather than a broader tendency to think effortfully about stimuli but is expected to relate to need for cognition and attributional complexity. Perceivers high in need for cognition or attributional complexity may be more likely than perceivers low in these traits to think carefully about their impressions of others and rely on a greater amount of information when forming impressions. I thus expected to find small to moderate positive correlations between SJR



and need for cognition and attributional complexity, providing support for the construct validity of SJR.

Need for closure is a cognitive style accounting for people's desire for any answer over ambiguity (Webster & Kruglanski, 1994). Individuals high in need for closure desire final answers and will typically rely on the initial information they learn when forming judgments (Webster & Kruglanski, 1994). Need to evaluate is an individual difference factor accounting for people's desire to form strong attitudes about things (Jarvis & Petty, 1996). Though these constructs are distinct, perceivers high in need for closure or need to evaluate may be more likely than perceivers low in these traits to want to form a fixed opinion of others even when knowing little about them. As such, in the proposed studies, I predicted that SJR would have small to moderate negative correlations with need for closure and need to evaluate.

In the broader category of egalitarian motives, internal motivation to respond without prejudice (IMS; Plant & Devine, 1998) reflects people's personal concerns to not be prejudicial and could impact the impressions people form of others when presented with information about someone that is or is not stereotype-relevant. Perceivers high in IMS would likely be motivated to seek individuating information about others. I thus expected to find a small to moderate positive correlation between SJR and IMS. Stigma consciousness is an individual difference factor defined as the "extent to which [targets of stereotypes] expect to be stereotyped" (Pineal, 1999, p. 115). Because individuals high in stigma consciousness are more sensitive to signals of identity threat, including those that come from people, they may be more comfortable judging someone to be prejudiced or unprejudiced than those low in stigma consciousness. I therefore expected to find a small,

negative relationship between stigma consciousness and SJR among perceivers with one or more stigmatized identities.

Falling in the category of comfort in person perception, faith in intuition accounts for people's trust in their initial feelings and judgments (Epstein et al., 1996). People who are high in faith in intuition tend to rely on heuristics in their judgments and make decisions based on affect over logic (Alós-Ferrer & Hügelschäfer, 2012; Epstein et al., 1996). I therefore predicted that faith in intuition would have a moderate negative correlation with SJR. Lick and Johnson (2014) proposed that people differ in their perceptions that visual cues (i.e., appearance) signal someone's identity. They found that many perceivers generally believe visual information is not highly diagnostic of sexual orientation (Lick & Johnson, 2014). Given that perceivers who are low in these diagnosticity beliefs do not believe that minimal information from appearance can be used to determine sexual orientation, individuals who are low in diagnosticity beliefs of sexual orientation may be likely to be high in SJR. In the present research, I expected to find a small to moderate negative relationship between diagnosticity beliefs and SJR.

Egalitarian, low-prejudiced perceivers avoid relying on automatically activated stereotypes of minoritized racial groups in their impressions, and instead report positive beliefs about these groups when they can engage in effortful cognition (Devine, 1989). Several variables associated with prejudice (e.g., social dominance orientation, right-wing authoritarianism; Akrami et al., 2011; Pratto et al., 1994; Sibley & Duckitt, 2008) have been found to relate to politically conservative ideology (Jost et al., 2003; Pratto et al., 1997). Additionally, researchers have found that politically conservative people tend to report greater need for closure and lower need for cognition than politically liberal

people (Jost et al., 2003, 2017; Kruglanski et al., 2006; Stern & Axt, 2020). I expected that SJR would positively correlate with need for cognition and negatively correlate with need for closure. Thus, in the proposed work, I predicted that politically conservative people would report lower SJR than politically liberal people.

### **The Present Research**

In the present work, I sought to develop a valid and reliable measure of social judgment reluctance. I proposed that perceivers' social judgment reluctance would account for their motivation to learn a lot of information about others to form accurate impressions of them, and for their reluctance to trust their initial impressions and gut instincts about other people. I developed the initial items for the social judgment reluctance measure based on an *information seeking* motive and *gut distrust* tendency. Items developed based on the *information seeking* motive account for perceivers' desire to learn a lot about others to form accurate impressions. Items developed based on the *gut distrust* tendency account for perceivers' hesitance to rely on their initial impressions of others. The main aims of Pilot Studies 1 and 2 were to refine a measure of SJR, assess the factor structure of the refined measure, and begin assessing validity and reliability of the measure. The primary goals of Studies 1 and 2 were to confirm the factor structure of the SJR measure and ensure the measure is valid and reliable. The core aims of Studies 3 and 4 were to assess the predictive utility of SJR in impression formation and behavioral attribution contexts.

In Pilot Study 1, I expected that layperson judges would identify features of the initial SJR items that could be used to determine several items to drop from the measure. In Pilot Study 2, I expected to refine the SJR measure and identify a single-factor solution

for the refined measure. I also expected to find a small to moderate positive correlation ( $r < .65$ ) between SJR and attributional complexity, providing initial evidence for construct validity.

In Study 1, I predicted that SJR would have good test-retest reliability over one to two weeks, with responses to SJR being highly correlated between these time points. In support of known groups validity of SJR, I expected politically liberal participants to be higher in SJR than politically conservative participants. I also predicted that SJR would have strong internal consistency reliability and that I would confirm the factor structure identified in Pilot Study 2. Because I ultimately identified a two-factor solution for SJR in the present research, I will refer to these two factors through this manuscript as SJR-gut distrust and SJR-information seeking. In Study 2, I expected to find small to moderate ( $|rs| < .65$ ) correlations between SJR and a series of individual difference variables, supporting the construct validity of the SJR measure. I designed these studies in accordance with standards of scale development and validation in psychology (Boateng et al., 2018; Tabachnick et al., 2019; Worthington & Whittaker, 2006).

Study 3 included a person judgment task in which participants learned minimal, ambiguous information about a target. I predicted that higher SJR would relate to having lower confidence in impressions and providing more “no opinion” and neutral midpoint responses to a perceived hostility measure. I also examined the link between SJR, additional impression measures, and reaction times. Study 4 included an impressions and attributions task in which participants read about the events of a target person’s day at work. I predicted that higher SJR-gut distrust would relate to having lower confidence in impressions and attribution, and to providing more “no opinion” and neutral midpoint

responses to a perceived personality measure. I examined whether SJR-information seeking would relate to confidence and a similar response pattern to the perceived personality measure. I also examined whether the SJR factors would relate to making external and dispositional attributions for negative outcomes.

## **Pilot Study 1**

I developed 27 items designed to measure SJR. In this pilot study, participants evaluated each SJR item on clarity, ease of understanding, and perceived response pressure. They also provided feedback on face validity and ways to improve the measure. Participant responses were used to refine the SJR measure.

### **Method**

#### **Participants**

I recruited 85 participants from the Rutgers Psychology Human Subject Pool to participate in this study for course credit (1 RPU). I excluded participants who attempted to complete the study more than once ( $n = 1$ ) and who completed the study in less than 1/3 of the median study completion time ( $n = 5$ ). The final sample included 79 students (53.2% women, 46.8% men; 43.0% White, 31.6% Asian/Pacific Islander, 13.9% Latinx/Hispanic, 12.7% Black, 6.3% Multiracial, 5.1% Middle Eastern, 1.3% another race/ethnicity; 82.3% heterosexual, 12.7% bisexual, 2.5% gay/lesbian, 2.5% another sexual orientation;  $M_{\text{age}} = 18.87$ ,  $SD_{\text{age}} = 1.90$ ).

#### **Procedure and Materials**

Participants completed an online survey after providing informed consent. At the start of the study, participants learned that they would evaluate statements related to forming impressions of people and were provided with information about SJR. For each SJR items, participants reported item clarity on a scale from 1 (*very unclear*) to 5 (*very clear*), the ease of understanding of each item on a scale from 1 (*very difficult*) to 5 (*very easy*), and the amount of pressure they expected people would feel to respond to each item in a specific way on a scale from 1 (*no pressure*) to 5 (*a lot of pressure*). Participants

responded to two open ended questions focused on the face validity of the measure (i.e., whether the statements effectively measure SJR as it was described to participants) and possible ways to improve the measure. Participants reported their demographics and were then debriefed and awarded credit for their participation. All study measures can be found in Appendix A.

### **Results and Discussion**

For each SJR item, I examined means for the three scale evaluation measures (i.e., clarity, ease of understanding, response pressure). I had planned to eliminate any items with mean clarity and ease of understanding scores below three and with mean response pressure scores exceeding four. For all 27 items, the mean ease of understanding and clarity scores were above four, and the mean response pressure scores were below three. Thus, I did not identify items to eliminate based on these scale evaluation measures.

I examined participants' responses to the two open ended questions to assess their perceptions of the face validity of the measure as a whole and to identify ways to improve the measure. Most participants (71%) reported perceptions that the SJR items measure what they were intended to measure. When asked how to improve the measure, multiple participants suggested reducing the number of items, reducing redundancy in the measure, and avoiding confusing item wording (e.g., negatively framed items, long items). Given the responses to the open-ended questions, I identified seven items with wording and redundancy concerns that could be eliminated from the final SJR measure. Because I ran Pilot Studies 1 and 2 concurrently, I included and assessed the 27 SJR items in both studies.

## Pilot Study 2

In this pilot study, participants responded to the 27 items designed to assess SJR. In this study, I aimed to reduce the number of SJR items to include in the measure, identify the factor structure of SJR, and begin assessing the validity and reliability of the SJR measure.

## Method

### Participants

I recruited 302 participants residing in the United States for the study through Prolific, an online survey recruitment platform. I excluded participants who failed both attention checks ( $n = 1$ ), who completed the survey in less than 1/3 of the median survey completion time ( $n = 4$ ), who had ReCaptcha scores below .5 ( $n = 0$ ), who did not complete the survey ( $n = 0$ ), and who attempted to participate in the study more than once ( $n = 0$ ). The final sample included 297 adults (48.5% women, 47.8% men, 2.4% non-binary, 0.7% agender, 0.6% another gender; 69.7% White, 15.2% Asian/Pacific Islander, 11.8% Latinx/Hispanic, 5.1% Black, 3.4% Middle Eastern, 2.4% Multiracial, 0.7% Native American, 1.3% another race/ethnicity; 77.1% heterosexual, 12.8% bisexual, 5.1% gay/lesbian, 2.7% queer, 2.4% another sexual orientation;  $M_{\text{age}} = 31.56$ ,  $SD_{\text{age}} = 11.54$ ). Participants received \$0.90 for their completion of the survey.

### Procedure and Materials

Participants signed up for the study on the Prolific website. After providing informed consent, they completed the online survey. Participants responded to the 27-item SJR measure on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items include “I try to learn a lot about other people to have accurate impressions of



them” and “I rely on my gut feelings to determine what I think of someone” (reverse coded). Participants responded to a 28-item measure of attributional complexity on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). They indicated their level of agreement with items such as “I really enjoy analyzing the reasons or causes for people’s behavior.” They also completed two attention checks and responded to demographic questions, including single-item measures of gender, race/ethnicity, age, sexual orientation, and political ideology. All measures can be found in Appendix A. Participants were then thanked, debriefed, and compensated for their participation.

### **Results and Discussion**

To identify the factor structure of the SJR measure and reduce the number of SJR items to include in subsequent studies, I conducted a series of exploratory factor analyses using principal axis factoring with oblique (direct oblimin) rotations (Tabachnick et al., 2019; Worthington & Whittaker, 2006). I examined eigenvalues, communalities, and factor loadings in each factor analysis. I planned to drop items with communalities below .2, factor loadings below .4, and loadings on multiple factors above .3 in the pattern matrix (Child, 2006; Worthington & Whittaker, 2006). I also planned to drop redundant items with low factor loadings and items with wording concerns (e.g., confusing, negatively framed, inconsistent with SJR definition). Using these criteria, I gradually reduced the 27 items down to 14 items. The eliminated items include the seven items that I identified in Pilot Study 1 as items to cut from the measure.

The EFA of the 14-item SJR measure had a Kaiser-Meyer-Olkin measure of sampling adequacy value of .92 and a significant Bartlett’s test of sphericity,  $\chi^2(91) = 2699.44, p < .001$ , both of which fall within advisable ranges (Tabachnick et al., 2019).

The final EFA suggested a 2-factor solution, with seven reverse-coded items falling on the first factor (eigenvalue 6.11, accounting for 43.67% of the variance) and seven items falling on the second factor (eigenvalue 3.05, accounting for 21.82% of the variance). See Table 1 for items and factor loadings. I named the first factor SJR-gut distrust, as higher scores correspond to greater reluctance to trust one's first impressions of others. I named the second factor SJR-information seeking, as higher scores correspond to greater interest in seeking out and learning information about others to form accurate impressions. The factors were positively correlated at  $r = .30$ .

Descriptive statistics for the SJR factors and attributional complexity can be found in Table 2. I calculated Cronbach's alpha for the 14 items measuring SJR, as well as for each factor. The 14-item SJR measure demonstrated good internal consistency,  $\alpha = .90$ . SJR-gut distrust also demonstrated good internal consistency,  $\alpha = .94$ , as did SJR-information seeking,  $\alpha = .86$ . To begin assessing construct validity, I conducted bivariate correlations among the SJR factors and the attributional complexity measure. I found a small, positive correlation between SJR-information seeking and attributional complexity,  $r = .36, p < .001$ , and a non-significant correlation between SJR-gut distrust and attributional complexity,  $r = .03, p = .624$ .

Table 1

*Pilot Study 2 Social Judgment Reluctance EFA*

	<b>Factor 1 SJR- Gut Distrust</b>	<b>Factor 2 SJR- Information Seeking</b>
1. I prefer to know a lot about someone before deciding on an impression of their character.	.29	<b>.58</b>
2. I usually try to learn a lot about someone to get a sense of who they really are.	.02	<b>.72</b>
3. I wait to decide what I really think of someone until I know a lot about them.	.28	<b>.48</b>
4. I try to learn a lot about other people to have accurate impressions of them.	-.07	<b>.81</b>
5. When meeting someone, I try to learn a lot about them to make sure my impression of them is accurate.	-.14	<b>.85</b>
6. I like to learn a lot about someone to make sure my impressions of them are as accurate as possible.	-.05	<b>.81</b>
7. I feel more confident in my impressions of others when I know a lot about them.	.001	<b>.50</b>
8. I trust my gut instincts about other people. (R)	<b>.88</b>	-.06
9. I can typically tell what I think of someone soon after meeting them. (R)	<b>.75</b>	.04
10. I generally expect my first impressions of others to be correct. (R)	<b>.79</b>	-.02
11. I rely on my gut feelings to determine what I think of someone. (R)	<b>.75</b>	.03
12. I feel confident in my initial impressions of people. (R)	<b>.84</b>	.01
13. I trust my initial impressions of others. (R)	<b>.90</b>	.001
14. I am confident in my gut feelings about people. (R)	<b>.89</b>	-.03

*Note.* Factor loadings from EFA using principal axis factoring with Oblimin rotation.

Reverse coded items are marked with “(R).”

Table 2

*Pilot Study 2 Descriptive Statistics of Measures*

Variable	<i>M</i>	<i>SD</i>	$\alpha$
14-Item SJR Measure	4.26	0.80	.90
SJR Information Seeking	5.30	0.84	.86
SJR Gut Distrust	3.22	1.11	.94
Attributional Complexity	5.05	0.88	.94

In Pilot Study 2, I refined SJR and assessed the factor structure of the measure. I reduced the number of items in the SJR measure from 27 to 14 and identified two, seven-item factors that make up SJR. SJR-information seeking accounts for perceivers' desire to learn a lot about others to form accurate impressions of them, while SJR-gut distrust accounts for perceivers' reluctance to trust their initial impressions of others. The SJR factors have good internal consistency reliability. The relationship between SJR-information seeking and attributional complexity suggests that individuals who have a greater tendency to seek information to form accurate impressions of others are also likely to consider complex explanations for people's behavior. SJR-information seeking is related to, but distinct from attributional complexity. These findings provide initial support for the construct validity of the SJR factors.

## Study 1

The main goal of Study 1 was to examine the reliability and factor structure of the SJR measure. In this two-part study, I assessed whether responses to the SJR measure were temporally consistent and thus demonstrate good test-retest reliability. I also assessed the internal consistency and factor structure of the SJR measure and examined differences in SJR based on participant demographics. I predicted that participants' responses to the SJR measure at two time points approximately 7-14 days apart would be highly correlated, showing high test-retest reliability. I predicted that the SJR measure would demonstrate at least adequate internal consistency with a Cronbach's alpha value of 0.70 or higher (Boateng et al., 2018). I expected to replicate the factor structure of SJR identified in Pilot Study 2. Finally, I predicted that politically conservative participants would be lower in SJR than politically liberal participants. A pre-registration for this study can be found on OSF at <https://osf.io/ur8xy>.

## Method

### Participants

I recruited 300 participants residing in the United States for the Time 1 (T1) survey through Prolific, as a sample size of 300 is appropriate for achieving moderate to high power in a confirmatory factor analysis (Kline, 2011). After excluding those who tried to participate more than once ( $n = 3$ ) and who were suspected of being a bot ( $n = 1$ ), 296 participants remained (49.7% men, 47.0% women, 2.7% non-binary or agender; 76.0% White, 16.6% Asian, 7.8% Hispanic/Latinx, 5.7% Black, 1.7% Native American, 1.7% Multiracial, 1.4% Middle Eastern; 83.4% heterosexual, 10.1% bisexual, 2.0% queer, 1.4% gay, 1.0% lesbian, 2.0% another sexual orientation;  $M_{age} = 36.55$ ,  $SD_{age} =$

13.21). Participants received \$0.70 for their participation in the T1 survey. Among those who completed the T1 survey, 202 people participated at Time 2 (T2). On average, participants completed the T2 survey 8.28 days after completing the T1 survey.

Participants received \$0.60 for their participation in the T2 survey.

### **Procedure and Materials**

Adults located in the United States signed up to participate in the T1 survey on Prolific. Prospective participants learned that the T1 survey was the first part of a two-part study, and that participants would be able to participate in the T2 survey 7-14 days later. After providing informed consent for the T1 survey, participants responded to the 14-item measure of SJR on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The SJR measure can be found in Appendix B. They also completed single-item measures of their age, gender identity, sexual orientation, race/ethnicity, and political ideology, which can be found in Appendix A. After completing these measures, participants were thanked, compensated, and reminded to participate in the T2 survey 7-14 days later.

Only participants who completed the T1 survey were eligible to participate in the T2 survey on Prolific. After providing informed consent for the T2 survey, participants responded to the 14-item SJR measure and demographic questions that had been included in the T1 survey. Participants were thanked and compensated for their participation.

### **Results**

As pre-registered, I first conducted a confirmatory factor analysis (CFA) of the T1 SJR measure in Amos to confirm the factor structure identified in Pilot Study 2. I created two correlated factors, with seven reverse-coded items on one latent factor, and seven non-reverse-coded items on the other latent factor. The reverse-coded items correspond to

SJR-gut distrust, while the non-reverse-coded items correspond to SJR-information seeking. I examined model fit indices to determine whether the factor structure fit the data well. Indicators of good model fit include a non-significant  $\chi^2$  value, a Root Mean Square Error of Approximation (RMSEA) value  $\leq .08$ , a Comparative Fit Index (CFI)  $\geq .95$ , and a Tucker-Lewis Index (TLI)  $> .90$  (Hu & Bentler, 1999).

I found mixed results with the model fit indices,  $\chi^2(76) = 299.48, p < .001$ , RMSEA = .10, CFI = .93, TLI = .91, AIC = 385.48, BCC = 390.09. While the TLI value indicates good fit, the RMSEA and CFI values are outside of the ranges for good fit and the chi square value is significant. I examined the factor loadings for each item and decided to drop the third item from SJR-information seeking, as the coefficient was below .60. Given the low correlation between the two SJR factors,  $r = .21$ , I conducted exploratory CFAs of each factor separately.

I conducted a CFA of SJR-information seeking without item three. Although the chi square value is significant, the remaining model fit indices are indicative of good model fit,  $\chi^2(9) = 18.89, p = .026$ , RMSEA = .06, CFI = .99, TLI = .98, AIC = 54.89, BCC = 55.76. The factor loadings for all items have  $Bs \geq .60$  (see Figure 1). I then conducted a CFA of SJR-gut distrust. The model fit indices suggest adequate model fit,  $\chi^2(14) = 104.14, p < .001$ , RMSEA = .15, CFI = .95, TLI = .93, AIC = 146.14, BCC = 147.31. The TLI and CFI values indicate good fit, while the RMSEA value is outside of the good fit range and the chi square value is significant. Factor loadings for all items have  $Bs \geq .73$  (see Figure 2).

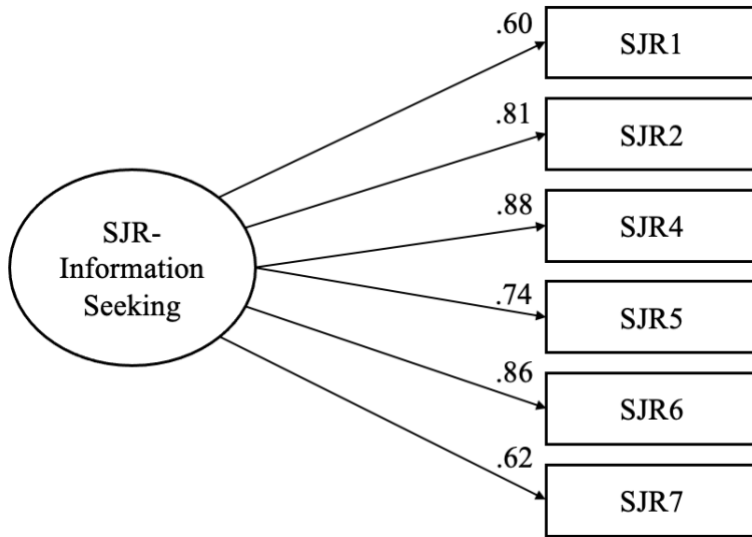


Figure 1. Study 1 CFA of the SJR-information seeking factor with standardized regression weights shown.

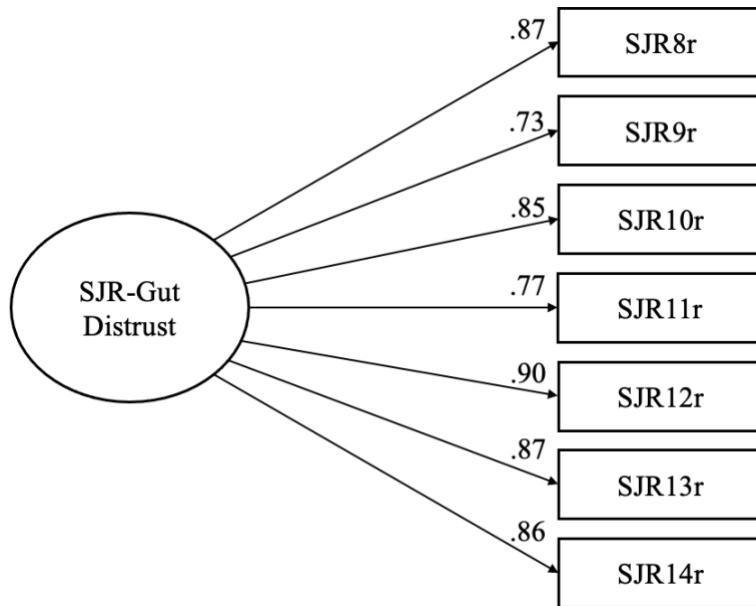


Figure 2. Study 1 CFA of the SJR-gut distrust factor with standardized regression weights shown.



Given the results of the confirmatory factor analyses, I deviated from the pre-registered analysis plan. I created separate composites for SJR-information seeking (without item three) and SJR-gut distrust at both T1 and T2. For the T1 measures, I winsorized four outliers in SJR-information seeking and one outlier in SJR-gut distrust by replacing the outliers with the closest value within three SD of the mean. For the T2 measures, I winsorized two outliers in SJR-information seeking. I conducted bivariate correlations between the SJR factors. The two SJR factors were significantly correlated with each other at T1,  $r = .16, p = .024$ , and at T2,  $r = .16, p = .023$ . To effectively account for the unique predictive utility of the SJR factors, subsequent analyses include the two SJR factors rather than a combined SJR measure. Descriptive statistics for the SJR factors at T1 and T2 can be found in Table 3.

Table 3

*Study 1 SJR Factors Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>	$\alpha$
SJR-Information Seeking (T1)	5.33	0.88	.89
SJR-Gut Distrust (T1)	3.17	1.13	.94
SJR-Information Seeking (T2)	5.31	0.89	.89
SJR-Gut Distrust (T2)	3.15	1.13	.95

I calculated Cronbach's alpha of SJR-information seeking at T1 and T2 ( $\alpha$ s = .89), and of SJR-gut distrust at T1 ( $\alpha = .94$ ) and T2 ( $\alpha = .95$ ). These findings demonstrate that the SJR factors have good internal consistency reliability. I calculated bivariate correlations among the two SJR factors at T1 and T2. Responses to SJR-information seeking at T1 and T2 were positively correlated,  $r = .64, p < .001$ . Responses to SJR-gut

distrust at T1 and T2 were highly positively correlated,  $r = .82, p < .001$ . These positive correlations indicate that the SJR factors have adequate test-retest reliability.

I examined the relationship among the SJR factors and political ideology at T1. Political ideology had small, positive correlations with SJR-information seeking,  $r = .12, p = .040$ , and SJR-gut distrust,  $r = .19, p = .001$ . These small, positive correlations suggest that participants who are more liberal, as opposed to more conservative, tend to be reluctant to trust their initial impressions of others and tend to want to know a lot about others to form accurate impressions. These relationships provide support for known groups validity of the SJR factors.

I conducted analyses of variance to assess differences in the SJR factors at T1 based on participants' gender and sexual orientation. There were no significant differences in SJR-information seeking and SJR-gut distrust based on participant gender,  $F_s(4, 291) < 2.27, p_s > .062$ . Similarly, there were no significant differences in SJR-information seeking and SJR-gut distrust based on participant sexual orientation,  $F_s(5, 290) < 1.64, p_s > .151$ .

## Discussion

The CFAs in Study 1 had better model fit when dropping item three from SJR-information seeking than when retaining this item. I therefore dropped item three to improve the factor structure of SJR-information seeking. The CFAs also had better model fit when assessing SJR-information seeking and SJR-gut distrust separately. Given the results of the CFAs and the small correlation between the SJR factors, subsequent analyses focused on the two separate SJR factors. The SJR factors demonstrated strong internal consistency reliability, as expected. SJR-gut distrust displayed good test-retest

reliability. While the correlation between SJR-information seeking at T1 and T2 was lower than the correlation between SJR-gut distrust at T1 and T2, research on the psychometric evaluation of the motivation to respond without prejudice scales indicated that the EMS measure had reasonable test-retest reliability with  $r = .60$  between two time points (Plant & Devine, 1998). SJR-information seeking can therefore be considered to have reasonable test-retest reliability. The SJR factors were unrelated to gender and sexual orientation. Additionally, participants who are higher in SJR reported being more politically liberal than participants who are lower in SJR, providing support for known groups validity of SJR.

## Study 2

The goal of Study 2 was to establish the construct validity of the SJR measure by examining correlations between SJR and a series of measures that are expected to relate to SJR. To demonstrate the construct validity of SJR, I predicted that SJR would have small, positive correlations with theoretically similar constructs (i.e., need for cognition, internal motivation to respond without prejudice), and small, negative correlations with theoretically dissimilar constructs (i.e., stigma consciousness, diagnosticity beliefs, need for closure, faith in intuition, need to evaluate). I expected these correlations to be lower than  $|r| = .65$ . Because participants in Pilot Study 1 indicated expecting low response pressure for the SJR items, I did not expect to find a significant relationship between SJR and a measure of social desirability. Based on the CFAs in Study 1 and the low correlation between the two SJR factors, I assessed the relationships among the individual difference measures and the two SJR factors in the present study. This study aimed to demonstrate that the SJR factors are related to, yet distinct from several existing individual difference constructs, including those that have been examined within impression formation and judgment contexts. The pre-registration for this study can be found on OSF at <https://osf.io/zjrym>.

## Method

### Participants

I recruited 303 adult participants for the present correlational study through the Rutgers Psychology Human Subject Pool for course credit (1 RPU). To determine sample size, I conducted an a priori power analysis using G\*Power (Faul et al., 2009) for correlation analysis with a bivariate normal model. The power analysis included a two-

tailed test,  $\alpha = .05$ , power = .80, null hypothesis correlation = 0, and alternative hypothesis correlation = .25. The power analysis suggested a need for  $N = 123$  to achieve power of .80. Because the correlation analyses between the SJR factors and stigma consciousness measures include only a subset of the sample, I recruited 303 participants for this study to ensure sufficient power for these analyses.

After excluding participants with reCAPTCHA scores below .5 ( $n = 1$ ), those who failed three or more attention checks ( $n = 9$ ), those who completed the survey in under 1/3 of the median completion time ( $n = 2$ ), and those who attempted to take the survey more than once ( $n = 5$ ), 286 participants remained in the sample (62.9% women, 34.6% men, 2.4% non-binary; 38.8% White, 30.4% Asian, 17.5% Hispanic/Latinx, 15.0% Black, 4.2% Multiracial, 2.4% Middle Eastern, 0.3% Native American, 0.7% another race/ethnicity; 76.2% heterosexual, 17.1% bisexual, 3.1% queer, 1.7% gay, 0.7% lesbian, 1.0% another sexual orientation;  $M_{age} = 19.05$  years old,  $SD_{age} = 1.25$  years).

### **Procedure and Materials**

Prospective participants joined the Rutgers Psychology Human Subject Pool to participate in studies for course credit. Participants provided informed consent prior to accessing the online survey. At the beginning of the survey, participants completed the same SJR measure (found in Appendix B) and same demographic measures (found in Appendix A) that were included in Study 1. They then responded to a series of individual difference measures in a randomized order. Participants indicated their level of agreement with a 15-item measure of *need for closure* (Roets & Van Hiel, 2011) on a seven-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). These items measure participants' desire for answers/decisions rather than ambiguity (e.g., "I don't like situations that are

uncertain”). Roets and Van Hiel (2011) created this shortened, 15-item version of need for closure scale (Webster & Kruglanski, 1994) and found that the shortened measure had sufficient reliability and validity to be used in place of the original need for closure scale. Participants also completed an 18-item measure of their *need for cognition* (Cacioppo et al., 1984) on a seven-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). This measure includes items such as, “I would prefer complex to simple problems.”

To assess *faith in intuition*, participants reported whether they tend to trust their intuition (e.g., “I believe in trusting my hunches”) with 12 items (Epstein et al., 1996) measured on a scale from 1 (*completely false*) to 5 (*completely true*). Participants also responded to a modified five-item measure of *internal motivation to respond without prejudice* (IMS; Plant & Devine, 1998) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The original IMS items focus on a motivation to be non-prejudiced toward Black people. I modified this measure to focus on being non-prejudiced toward people with any marginalized identity. I thus included items such as “I am personally motivated by my beliefs to be nonprejudiced toward marginalized people” in the measure of IMS. Participants reported *diagnosticity beliefs* of sexual orientation with an eight-item Diagnosticity scale (Lick & Johnson, 2014) measured on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items include “a person’s sexual orientation can largely be determined by their physical appearance.”

Participants responded to a 16-item *need to evaluate* measure (Jarvis & Petty, 1996) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). For this measure, participants reported their tendency to hold strong opinions (e.g., “I form opinions about everything”). Participants also completed an adapted, 10-item version of the Marlowe-

Crowne *social desirability* scale (Crowne & Marlowe, 1960; Fischer & Fick, 1993). Fischer and Fick (1993) identified this 10-item version of the measure to be highly correlated with the original Marlowe-Crowne measure and high in internal consistency. Participants reported their level of agreement with statements such as “I’m always willing to admit it when I make a mistake” on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), as has been done in previous research using this social desirability scale (e.g., Stöber et al., 2002; Tan et al., 2021).

Additionally, participants who identify as women completed a five-item measure of *gender-based stigma consciousness* (Pietri et al., 2018; Pinel, 1999) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Women participants indicated their level of agreement with statements such as “being a woman does not influence how people act with me” (reverse coded), which were included in work from Pietri and colleagues (2018). Participants who identify as members of racial/ethnic minority groups responded to a five-item measures of *race/ethnicity-based stigma consciousness* (Pietri et al., 2018; Pinel, 1999) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Participants with racial/ethnic minority identities reported their level of agreement with statements such as “when interacting with people, I feel like they interpret all of my behaviors in terms of my race/ethnicity,” which were included in work from Pietri and colleagues (2018). These measures can be found in Appendix B. After responding to the survey, participants were thanked and awarded credit for their participation.

## Results

I deviated slightly from the pre-registered analysis plan by assessing the two SJR factors separately. As in Study 1, I created individual composites for SJR-information

seeking (without item 3) and SJR-gut distrust. I winsorized three outliers in SJR-information seeking and four outliers in SJR-gut distrust. I examined the correlation between the two SJR factors. SJR-information seeking and SJR-gut distrust were not significantly correlated in this study,  $r = -.09$ ,  $p = .153$ . As pre-registered, for each of the individual difference measures, I reverse-coded items as needed and created measure composites. I winsorized one outlier in the need for closure measure, three in the need for cognition measure, one in the faith in intuition measure, one in the need to evaluate measure, and one in the social desirability measure. Descriptive statistics, correlations, and Cronbach's alpha for the SJR factors and individual difference measures can be found in Table 4.

Table 4

*Study 2 Measure Descriptive Statistics and Correlations with SJR Factors*

Variable	<i>M</i>	<i>SD</i>	$\alpha$	Correlation to SJR-IS	Correlation to SJR-GD
SJR-Information Seeking	5.54	0.81	.82	n/a	-.09
SJR-Gut Distrust	2.94	0.88	.87	-.09	n/a
Need for Closure	4.70	0.75	.82	.09	-.06
Need for Cognition	4.26	0.79	.87	.11	.002
Faith in Intuition	3.68	0.56	.82	.29**	-.62**
IMS	5.97	0.91	.85	.28**	-.07
Diagnosticity Beliefs	3.57	1.06	.84	-.11	-.08
Need to Evaluate	4.25	0.78	.83	.18*	-.21**
Gender Stigma Consciousness	5.08	1.09	.75	.05	-.04
Race/Ethnicity Stigma Consciousness	4.60	1.31	.82	-.03	-.13
Social Desirability	4.02	0.72	.60	.19*	-.01

Note: \*\*  $p < .001$ ; \*  $p < .01$



I assessed the relationships among SJR-information seeking and the individual difference measures. SJR-information seeking was significantly positively correlated with IMS,  $r = .28, p < .001$ , faith in intuition,  $r = .29, p < .001$ , and need to evaluate,  $r = .18, p = .002$ . Perceivers who tend to be motivated to learn more about others to form accurate impressions also tend to be internally motivated to be unprejudiced, to trust their intuition, and to want to form strong opinions about things. SJR-information seeking also positively correlates with social desirability,  $r = .19, p = .001$ . These small, positive correlations demonstrate SJR-information seeking relates to but is distinguishable from IMS, faith in intuition, need to evaluate, and social desirability. SJR-information seeking was not significantly correlated with need for cognition,  $r = .11, p = .074$ , need for closure,  $r = .09, p = .129$ , diagnosticity beliefs,  $r = -.11, p = .054$ , gender-based stigma consciousness,  $r = .05, p = .521$ , nor race/ethnicity-based stigma consciousness,  $r = -.03, p = .657$ . These non-significant relationships suggest that these constructs are distinct from SJR-information seeking.

SJR-gut distrust was significantly negatively correlated with faith in intuition,  $r = -.62, p < .001$ . As predicted, need to evaluate was also significantly negatively correlated with SJR-gut distrust,  $r = -.21, p < .001$ . These relationships provide support for the construct validity of SJR-gut distrust. SJR-gut distrust was not significantly correlated with social desirability,  $r = -.01, p = .846$ , IMS,  $r = -.07, p = .274$ , need for cognition,  $r = .002, p = .973$ , need for closure  $r = -.06, p = .278$ , diagnosticity beliefs,  $r = -.08, p = .188$ , gender stigma consciousness,  $r = -.04, p = .584$ , nor race/ethnicity stigma consciousness,

$r = -.13, p = .058$ . These non-significant relationships suggest that these constructs are distinct from SJR-gut distrust.

### **Discussion**

The aim of the present study was to establish the construct validity of the SJR measure. Given that the two SJR factors separately account for perceivers' desire to learn more about others to form accurate impressions and their reluctance to rely on their first impressions, I examined the relationships among the individual difference measures and the two SJR factors. While the individual difference measures differed in their relationships to the two SJR factors, some relationships were consistent with my pre-registered predictions.

As predicted, SJR-information seeking was significantly positively correlated with IMS, suggesting that perceivers who tend to want to learn a lot about others to form accurate impressions also tend to be intrinsically motivated to be unprejudiced. Consistent with my pre-registered hypotheses, SJR-gut distrust was negatively correlated with faith in intuition, suggesting that perceivers' reluctance to trust their initial impressions of others is related to lower faith in their intuitions more broadly. Given that many of the reverse-coded items in SJR-gut distrust relate to trusting one's gut instincts and impressions of others, the correlation between faith in intuition and SJR-gut distrust demonstrates convergent validity of this SJR factor. SJR-gut distrust was unrelated to social desirability, suggesting that responses to SJR-gut distrust were unlikely to be prompted by a desire to present oneself in a positive manner. Need to evaluate was significantly negatively correlated with SJR-gut distrust, suggesting that perceivers'

reluctance to trust their initial impressions of others was distinct from but associated with a low need to form strong opinions.

Counter to my original predictions, SJR-information seeking was significantly positively correlated with faith in intuition and social desirability. These relationships suggest that perceivers who like to learn a lot about others to form accurate impressions tend to trust their intuitions broadly and provide socially desirable responses to questions. These small relationships suggest that these constructs are related to but distinct from SJR-information seeking, providing support for the discriminant validity of the factor. Need to evaluate was negatively related to SJR-gut distrust, as expected, and positively associated with SJR-information seeking. Given that SJR-gut distrust involves a lack of trust for initial opinions and SJR-information seeking involves a desire to learn information about others, these small correlations with need to evaluate, which involves a desire to form strong opinions about things, are conceptually logical.

SJR-gut distrust and SJR-information seeking were not significantly related to need for cognition, need for closure, stigma consciousness, and diagnosticity beliefs. Perceivers' enjoyment of complex thinking, desire for quick decisions, attention to signals of bias, and beliefs about sexual orientation based on appearance are thus unassociated with perceivers' desire to seek information about others to form accurate impressions and with perceivers' reluctance to trust their initial impressions of others. These findings further support the discriminant validity of SJR-information seeking and SJR-gut distrust, as they measure impression formation tendencies that are distinct from existing measures. SJR-gut distrust was also not significantly related to IMS, providing further support for the discriminant validity of the measure. Collectively, these findings

offer support for the convergent and discriminant validity of the two SJR factors. These factors share some similarities with related factors but are sufficiently distinct from theoretically similar constructs.

### Study 3

The goal of Study 3 was to examine the predictive utility of SJR within the context of a person judgment task. In this study, I examined whether participants' responses to the SJR factors related to their behaviors and impressions of others. Specifically, I assessed the relationships between the SJR factors and participants' response times, impressions of a target person, and confidence in impressions. I predicted that higher SJR would be related to lower confidence in impressions. As minimal target information was present in the judgment task, I expected that participants who are high in SJR would be reluctant to make and report strong judgments of the target. Specifically, I predicted that higher SJR would be related to a greater number of "no opinion" and neutral midpoint responses on the perceived hostility measure. Additionally, I explored whether SJR would relate to longer reaction times and the number of "no opinion" and neutral midpoint responses on the perceived personality traits and perceived prejudice measures. Although my pre-registered analysis plan included both analyses with the full SJR measure and the two SJR factors, the present results focus entirely on analyses with the separate SJR factors (as the scales were not consistently correlated). The pre-registration for this study can be found on OSF at <https://osf.io/ade96>.

### Method

#### Participants

I recruited 250 adult participants located in the United States for the present study through Prolific Academic. I determined sample size based on an a priori power analysis in G\*Power for linear regression. The power analysis included the following parameters: alpha = .05, power = .80,  $f^2 = .05$ , number of predictors = 2. The power analysis

suggested a minimum sample size of 196 participants. In anticipation of participant exclusions, I recruited 250 participants to ensure sufficient power. I excluded those with reCAPTCHA scores below .5 ( $n = 0$ ), those who failed two or more attention checks ( $n = 5$ ), those who did not complete the survey ( $n = 1$ ), those who completed the survey in under one-third of the median completion time ( $n = 0$ ), and those who attempted to take the survey more than once ( $n = 10$ ). The final sample included 234 participants (48.7% men, 47.9% women, 2.5% non-binary/agender; 78.4% White, 10.7% Black, 9.8% Hispanic/Latinx, 6.8% Asian, 3.0% Multiracial, 1.7% Native American, 0.9% Middle Eastern; 75.2% heterosexual, 14.5% bisexual, 3.8% gay, 2.1% queer, 1.7% lesbian, 2.1% another sexual orientation;  $M_{age} = 34.33$  years old,  $SD_{age} = 11.34$  years). Participants received \$1.75 for their participation in the study.

### **Procedure and Materials**

Prospective participants signed up for the study on the Prolific platform and provided informed consent prior to accessing the online survey. Participants learned that they would read a passage about a man named James, share their impression of James, and answer questions about how they typically form impressions of other people. Participants were then randomly assigned to either respond to the SJR measure before completing the judgment task, or to complete the judgment task before responding to the SJR measure. Participants responded to the updated 13-item SJR measure in the present study (found in Appendix C).

For the judgment task, participants first read a passage about a man named James. The passage is a modified version of the “Donald paragraph” (Srull & Wyer, 1979). The original “Donald paragraph” describes a man who engages in several behaviors that could

be interpreted as hostile but are somewhat ambiguous. This passage has been used in past studies focused on priming and impression formation (e.g., Devine, 1989; Rudman & Lee, 2002; Srull & Wyer, 1979). The minor modifications to this passage include changing the name of the target from Donald to James and adjusting a sentence about a salesman knocking on the target's door. The original passage indicated that when a salesman knocked on the door, the target "refused to let him enter." As it is no longer common for salespeople to enter people's homes, I adjusted this language, indicating the target "refused to answer the door." The modified version of the passage used in the present study can be found in Appendix D.

After reading the passage about James, participants responded to two questions about the passage that served as attention checks. Participants then completed three impression measures in a randomized order. To measure *perceived hostility* of the target, participants responded to six items (adapted, Srull & Wyer, 1979) on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Participants also had the option of indicating they had "no opinion" for the perceived hostility measure, which included statements such as "James is dislikeable." I modified the perceived hostility items to include the target's name and to use a 7-point level of agreement scale with a "no opinion" option rather than the original 10-point level of extremeness scale.

To measure *perceived personality* of the target, participants indicated how likely it is that the target has certain personality traits with 15 items adapted from the Big Five Inventory-2-XS (Soto & John, 2017) measured on a scale from 1 (*extremely unlikely*) to 7 (*extremely likely*). I adapted the original items to include the target's name and modified the instructions for the measure such that participants indicated how likely it is that the

target has each trait listed in the measure, rather than indicating whether the trait is characteristic of themselves. For example, participants were asked how likely it is that the target “tends to be disorganized” and “worries a lot.” Participants also had the option to indicate having “no opinion” for each of the items in the perceived personality measure.

To measure *perceived prejudice* of the target, participants indicated their level of agreement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*) with five statements pertaining to expected prejudice and discrimination. Participants were able to indicate they had “no opinion” for the perceived prejudice measure. Statements such as “I would expect James to feel negatively about minority groups” were developed to be similar to other perceived prejudice questions (e.g., Cottrell et al., 2010; Sanchez et al., 2017). For example, Cottrell and colleagues (2010) measured general negative prejudice by asking participants the extent to which they “felt negative” toward and “disliked” a variety of different identity groups. To measure anticipated prejudice, Sanchez and colleagues (2017) asked participants how worried they were about being judged negatively based on their gender identity and whether they anticipated being treated fairly. These two measures guided the development of the five perceived prejudice items.

The three impression measures were included on separate pages of the survey. I included response timers on each page containing an impression measure to record *reaction times* for participants’ impressions. Participants reported their *impression confidence* on a scale from 1 (*not at all confident*) to 7 (*extremely confident*). The impression and confidence measures can be found in Appendix C. After completing the SJR measure and judgment task, participants responded to the same demographic



questions from the previous studies (included in Appendix A). Finally, participants were thanked and compensated for their participation.

## **Results**

I pre-registered a plan to conduct analyses using the SJR factors as well as the full SJR measure. However, as noted in Studies 1 and 2, the two SJR factors measure distinct aspects of SJR and should be treated as such in analyses involving SJR. In the previous studies, I identified either a small, positive correlation or no correlation between the SJR factors, providing statistical rationale for examining these factors separately in relation to variables of interest. Thus, I focused on the analysis of the SJR factors, rather than the full SJR measure, for the present project.

As pre-registered, I made individual composites of SJR-information seeking and SJR-gut distrust. I winsorized one outlier in SJR-information seeking ( $\alpha = .90$ ) and one outlier in SJR-gut distrust ( $\alpha = .92$ ). For the perceived hostility measure, I summed the number of “no opinion” responses participants provided for each item in the measure to create a perceived hostility “no opinion” composite variable. I also summed the number of neutral midpoint responses participants provided for the items in the perceived hostility measure to create a perceived hostility “neutral” composite variable. I repeated this process for the perceived personality and perceived prejudice measures, creating a perceived personality “no opinion” composite variable, perceived personality “neutral” composite variable, perceived prejudice “no opinion” composite variable, and perceived prejudice “neutral” composite variable. I also created a composite reaction time measure by averaging the reaction times for the three impression measures. I winsorized one

outlier in the impression confidence measure. Descriptive statistics for the measures of interest can be found in Table 5.

Table 5

*Study 3 Measure Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>
SJR-Information Seeking	5.43	0.92
SJR-Gut Distrust	3.09	0.94
Impression Confidence	5.07	1.13
Reaction Time	35.23	20.17
Perceived Hostility – Neutral Percentage	11%	20%
Perceived Hostility – “No Opinion” Percentage	1%	6%
Perceived Personality – Neutral Percentage	23%	21%
Perceived Personality – “No Opinion” Percentage	2%	8%
Perceived Prejudice – Neutral Percentage	33%	38%
Perceived Prejudice – “No Opinion” Percentage	3%	15%

### Main Regression Analyses

As pre-registered, I conducted a linear regression analysis to examine whether participants’ responses to the SJR factors related to their confidence in their impressions. I regressed participants’ reported impression confidence on the two SJR factors. The regression model significantly predicted impression confidence,  $F(2, 231) = 19.54, p < .001$ , explaining 14.5% of the variance in impression confidence. SJR-gut distrust was associated with lower impression confidence,  $B = -.46, t = -6.25, p < .001$ , while SJR-information seeking was not associated with impression confidence,  $B = -.01, t = -0.09, p$

= .927. Thus, the less that participants trust their gut instincts about others, the less confident they felt in their impressions of James.

I initially pre-registered a plan to analyze the summed number of “no opinion” and neutral midpoint responses to each impression measure using linear regression analyses. However, to effectively account for common distributions of count data, scholars advise the use of Poisson regression to assess relationships among categorical and continuous predictors with count outcome variables (Coxe et al., 2009). I deviated from the pre-registration and conducted Poisson regression analyses for the “no opinion” and neutral midpoint responses.

I regressed the summed “no opinion” responses to the perceived hostility measure on the two SJR factors. SJR-gut distrust significantly related to the number of “no opinion” responses to the perceived hostility measure, Wald  $X^2(1) = 7.23, p = .007$ . SJR-information seeking did not significantly relate to these responses, Wald  $X^2(1) = 0.69, p = .408$ . For every one-point increase in participants’ responses to SJR-gut distrust, the number of “no opinion” responses to the perceived hostility measure increased by 123% (95% CI = [1.24, 4.01]),  $p = .007$ . I then regressed the summed neutral midpoint responses to the perceived hostility measure on the two SJR factors. SJR-gut distrust significantly related to the number of neutral midpoint responses to the perceived hostility measure, Wald  $X^2(1) = 6.67, p = .010$ . SJR-information seeking did not significantly relate to these responses, Wald  $X^2(1) = 2.22, p = .136$ . For every one-point increase in participants’ responses to SJR-gut distrust, the number of neutral midpoint responses to the perceived hostility measure increased by 24% (95% CI = [1.05, 1.45]),  $p = .010$ .

## Exploratory Regression Analyses

As pre-registered, I conducted a linear regression analysis to examine whether participants' responses to the SJR factors related to reaction times to the impression measures. I regressed participants' average reaction times on the two SJR factors. The regression model did not significantly predict reaction times,  $F(2, 231) = 1.03, p = .361$ .

I again deviated from the pre-registration and conducted Poisson regression analyses in which I regressed the number of “no opinion” and neutral midpoint responses to the perceived personality and perceived prejudice impression measures on the two SJR factors<sup>1</sup>. I regressed the sum of participants' “no opinion” responses to the perceived prejudice measure on the SJR factors. Although SJR-gut distrust did not significantly relate to these responses, Wald  $X^2(1) < 0.01, p = .958$ , SJR-information seeking was significantly associated with the “no opinion” responses to the perceived prejudice measure, Wald  $X^2(1) = 5.56, p = .018$ . Indeed, a one-point increase in SJR-information seeking corresponds to a 58% increase (95% CI = [1.08, 2.31]) in the number of “no opinion” responses to the perceived prejudice measure,  $p = .018$ .

I regressed the summed neutral midpoint responses to the perceived prejudice measure on the SJR factors. While SJR-information seeking was unrelated to these neutral midpoint responses, Wald  $X^2(1) = 0.01, p = .932$ , SJR-gut distrust significantly related to the summed neutral midpoint responses to the perceived prejudice measure, Wald  $X^2(1) = 12.70, p < .001$ . With every one-point increase in SJR-gut distrust, the

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<sup>1</sup> Several of the poisson regression analyses were overdispersed, meaning there was a violation of the assumption that the mean and variance of the outcome variable are the same. I conducted more conservative analyses accounting for overdispersion and found the same pattern of results.

number of neutral midpoint responses to the perceived prejudice measure increases by 20% (95% CI = [1.09, 1.33]),  $p < .001$ .

Next, I conducted a Poisson regression in which I regressed the sum of participants' "no opinion" responses to the perceived personality measure on the two SJR factors. Both SJR-gut distrust, Wald  $X^2(1) = 25.51$ ,  $p < .001$ , and SJR-information seeking, Wald  $X^2(1) = 8.46$ ,  $p = .004$ , significantly related to the number of "no opinion" responses to the perceived personality measure. For every one-point increase in SJR-gut distrust, the number of "no opinion" responses to the perceived personality measure increases by 82% (95% CI = [1.44, 2.29]),  $p < .001$ . For every one-point increase in SJR-information seeking, the number of "no opinion" responses to the perceived personality measure increases by 54% (95% CI = [1.15, 2.07]),  $p = .004$ .

In a subsequent Poisson regression, I regressed the number of neutral midpoint responses to the perceived personality measure on the two SJR factors. Both SJR-gut distrust, Wald  $X^2(1) = 16.76$ ,  $p < .001$ , and SJR-information seeking, Wald  $X^2(1) = 5.46$ ,  $p = .019$ , significantly related to the number of neutral midpoint responses to perceived personality. The number of neutral midpoint responses to the perceived personality measure increases by 16% (95% CI = [1.08, 1.24]) with every one-point increase in SJR-gut distrust,  $p < .001$ . Unexpectedly, a one-point increase in the information seeking factor corresponds to an 8% decrease (95% CI = [0.85, 0.99]) in the number of neutral midpoint responses to the perceived personality measure,  $p = .019$ .

## **Discussion**

The aim of Study 3 was to assess how SJR relates to perceivers' first impressions of others, their confidence in the impressions, and the time taken to form and report

impressions. I examined the relationships between SJR and participants' response times, impressions of a target, and confidence in impressions. I predicted that higher SJR would relate to lower impression confidence among perceivers. While SJR-information seeking was not significantly related to impression confidence, higher SJR-gut distrust was significantly related to lower confidence in impressions. Thus, perceivers who are reluctant to trust their initial impressions and gut instincts about others felt less confident in their impressions of the target than perceivers who rely on their first impressions. Participants' desire to learn more about others to form accurate impressions was unrelated to their confidence in their impressions of the target in the present study. It is possible that some participants felt they had sufficient information to form an accurate impression of the target and thus felt confident in their impressions or felt confident in sharing "no opinion" for the impression measures. To further assess the relationship between confidence and SJR, Study 4 includes a measure of confidence in impressions and attributions.

Counter to my predictions, participants' reaction times to the impression measures were not significantly related to either SJR factor. It is possible that SJR would relate to response times in a situation with higher stakes, such as when being asked to make a hiring or voting decision based on an impression. Participants' SJR may have been unrelated to reaction times because participants were able to report neutral impressions and indicate having no opinion for the impression measures, enabling participants high in SJR to respond quickly to these impression measures. I expect reaction times would relate to SJR in higher stakes scenarios and in studies where participants are able to request additional information about targets prior to sharing their impressions.

Because the passage in the study had minimal information about the target, I expected participants who are higher in SJR to be more reluctant to form and report strong impressions of the target than participants who are lower in SJR. I examined the relationship between the SJR factors and the number of “no opinion” and neutral midpoint responses to the three impression measures. Participants who were higher in SJR-gut distrust responded to the perceived hostility measure with a greater number of “no opinion” and neutral midpoint responses than participants who were lower in SJR-gut distrust, providing partial support for my hypothesis. SJR-information seeking did not significantly relate to the responses to the perceived hostility measure. Although the passage was designed to provide ambiguous information about the target, James, many of the target’s behaviors could be interpreted as hostile. It is thus possible that SJR-information seeking was unrelated to neutral midpoint and “no opinion” responses to the hostility measure because participants felt they had sufficient information to form and report an “accurate” impression of the target’s level of hostility. To better understand how perceivers interpret and make attributions for ambiguous behaviors and outcomes, I assess dispositional and external attributions in Study 4.

Participants who were higher in SJR-gut distrust responded to the perceived prejudice measure with a greater number of neutral midpoint responses than participants who were lower in SJR-gut distrust. Participants who were higher in SJR-information seeking provided a greater number of “no opinion” responses to the perceived prejudice measure than participants who were lower in SJR-information seeking. SJR-gut distrust was unrelated to the number of “no opinion” perceived prejudice responses, and SJR-information seeking was unrelated to the number of neutral midpoint perceived prejudice

responses. These findings provide partial support for my prediction. Participants can only provide one response to each item in the impression measures, and thus would not be able to report both “no opinion” and a neutral midpoint response to each item in the perceived prejudice measure. The perceived prejudice findings suggest that perceivers who are more reluctant to trust their initial impressions of others reported more neutral attitudes regarding the prejudice of the target than perceivers who trust their first impressions of others. Additionally, perceivers who desire a lot of information about others to form accurate impressions more frequently reported having no opinion regarding the target’s level of prejudice than perceivers who do not aim to learn more about others when forming impressions.

As predicted, participants’ SJR-gut distrust was positively related to the number of “no opinion” and neutral midpoint responses to perceived personality. Specifically, participants who tend to be reluctant to rely on their gut instincts about other people were more likely than perceivers who trust their initial impressions of others to provide “no opinion” and neutral midpoint responses to the perceived personality measure. Consistent with my hypothesis, SJR-information seeking was also positively related to the number of “no opinion” responses to the perceived personality measure. Participants who like to learn a lot about others to form accurate impressions gave more “no opinion” responses than perceivers who are low in SJR-information seeking.

Unexpectedly, participants who were high in SJR-information seeking were less likely to report neutral midpoint responses to the perceived personality measure than those who were low in SJR-information seeking. As previously indicated, one possible explanation for these findings is that participants cannot report both “no opinion” and a



neutral midpoint response to each item in the perceived personality measure. To test this explanation, I regressed the neutral midpoint responses to the perceived personality measure on both the SJR factors and the “no opinion” responses in a Poisson regression and found that SJR-information seeking was no longer a significant predictor of the neutral midpoint responses. I also found a negative relationship between the “no opinion” and neutral midpoint responses to the personality measure, such that participants who provided more “no opinion” responses also provided fewer neutral midpoint responses.

## Study 4

In Study 4, I examined the role of SJR in a behavioral attribution and impression formation study design. I assessed whether lower SJR is associated with a bias toward making dispositional attributions for behaviors and outcomes with ambiguous causes. Participants read about a target's "bad day" that ended with the target being fired from his job. Participants made attributions for the events of the day and shared their impressions of the target. I predicted that higher SJR-gut distrust would relate to a greater number of "no opinion" and neutral midpoint responses on the perceived personality measure and to lower confidence in impressions and attributions. I explored whether SJR-information seeking would relate to the number of "no opinion" and neutral midpoint responses on the perceived personality measure and to lower confidence in impressions and attributions. I also explored whether the two SJR factors would relate to making dispositional and external behavioral attributions. Finally, I explored whether the two SJR factors would relate to the amount of information participants would report needing to determine if the target should have been fired from his job. The pre-registration for this study can be found on OSF at <https://osf.io/hrwsy>.

## Method

### Participants

I recruited 350 adult participants residing in the United States for the present study via Prolific. I determined sample size based on an a priori power analysis in G\*Power for linear regression (Faul et al., 2009). The power analysis included the following parameters:  $\alpha = .05$ , power = .80,  $f^2 = .03$ , number of predictors = 2. The power analysis suggested a minimum sample size of 325 participants. In anticipation of

participant exclusions, I recruited 350 participants to ensure sufficient power. I excluded those with reCAPTCHA scores below .5 ( $n = 0$ ), those who failed 2 or more attention checks ( $n = 2$ ), those who did not complete the survey ( $n = 0$ ), those who completed the survey in under 1/3 of the median completion time ( $n = 0$ ), and those who attempted to take the survey more than once ( $n = 0$ ).

The final sample included 348 participants (49.7% men, 47.1% women, 2.3% non-binary/agender; 73.3% White, 10.3% Asian, 10.1% Hispanic/Latinx, 9.5% Black, 3.4% Multiracial, 0.6% Native American, 0.3% Middle Eastern, 1.1% another race/ethnicity; 76.1% heterosexual, 14.7% bisexual, 2.6% lesbian, 2.3% gay, 2.0% queer, 2.3% another sexual orientation;  $M_{age} = 35.16$  years old,  $SD_{age} = 12.42$  years).

Participants received \$1.35 for their participation in the study.

### **Procedure and Materials**

Prospective participants signed up for the study on Prolific and provided informed consent prior to accessing the online survey. Participants learned that they would read a passage about a man named Ron, share their impression of Ron, assess aspects of Ron's day, and answer questions about how they typically form impressions of other people. Participants were randomly assigned to respond to the 13-item SJR measure either before or after reading and answering questions about Ron in the impression attribution task. The SJR measure can be found in Appendix C.

During the impression attribution task, participants read a passage about a man named Ron from a past study on behavioral attribution (Riggio & Garcia, 2009). The passage (found in Appendix D) details several hardships that Ron faced over the course of a day, which ended with Ron being fired. After reading the passage, participants

responded to two questions about the passage that served as attention checks. Participants also responded to two behavioral attribution questions, one focused on *dispositional attribution* and one focused on *external attribution*. On a 7-point Likert scale from 1 (*none of the blame*) to 7 (*all the blame*), participants indicated how much they blame Ron personally for being fired (a dispositional attribution) and how much they blame outside causes for Ron being fired (an external attribution). Next, participants reported their *confidence* in their responses to the attribution questions with two confidence items measured on a 7-point Likert scale from 1 (*not at all confident*) to 7 (*extremely confident*).

Participants were asked to consider the impression they formed of Ron based on the passage they read. They completed the same 15-item *perceived personality* measure that was included in Study 3 (BFI-2-XS; adapted from Soto & John, 2017). Participants were asked how likely it is that the target “tends to be quiet” and “is full of energy” on a scale from 1 (*extremely unlikely*) to 7 (*extremely likely*). Participants had the option to indicate having “no opinion” for each item in the perceived personality measure. Next, participants responded to the three remaining *confidence* items, indicating on a scale from 1 (*not at all confident*) to 7 (*extremely confident*) how confident they were in their impressions of Ron and in their responses to questions about Ron. In an open-ended question, participants indicated what other information they would need to “confidently determine that Ron should have been fired from his job” using a large text box. The attribution items, confidence measure, perceived personality measure, and open-ended question can be found in Appendix C. After completing both the impression attribution task and the SJR measure, participants responded to the same demographic questions

from the previous studies (included in Appendix A). Finally, participants were thanked and compensated for their participation.

### **Results**

As pre-registered, I made individual composites of SJR-information seeking ( $\alpha = .88$ ) and SJR-gut distrust factor ( $\alpha = .94$ ). I winsorized three outliers in SJR-information seeking and one outlier in SJR-gut distrust. I created a composite of the confidence measure, which demonstrated good internal consistency ( $\alpha = .90$ ). For the open-ended question, I created a count variable that summed the number of pieces of information participants indicated they would need to determine whether Ron should have been fired. As in Study 3, I summed the number of “no opinion” responses participants provided for the perceived personality measure to create a perceived personality “no opinion” composite variable. I also summed the number of neutral midpoint responses participants provided for the perceived personality measure to create a perceived personality “neutral” composite variable. Descriptive statistics for the SJR factors and other measures can be found in Table 6.

Table 6

*Study 4 Measure Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>
SJR-Information Seeking	5.48	0.83
SJR-Gut Distrust	3.14	1.05
Confidence	4.61	1.19
Perceived Personality – Neutral Percentage	36%	28%
Perceived Personality – “No Opinion” Percentage	4%	15%
Dispositional Attribution	3.25	1.39
External Attribution	4.32	1.56
Open Ended – Needed Information Count	2.26	1.59

**Main Regression Analyses**

As pre-registered, I conducted Poisson regression analyses to assess the relationships among the SJR factors and the number of “no opinion” and neutral midpoint responses participants gave to the perceived personality measure<sup>2</sup>. I first regressed the sum of participants’ “no opinion” responses to the perceived personality measure on the two SJR factors. Both SJR-gut distrust, Wald  $X^2(1) = 23.45$ ,  $p < .001$ , and SJR-information seeking, Wald  $X^2(1) = 22.22$ ,  $p < .001$ , significantly related to the number of “no opinion” responses to the perceived personality measure. The number of “no opinion” responses to the perceived personality measure increases by 56% (95% CI = [1.30, 1.88]), for every one-point increase in SJR-information seeking,  $p < .001$ . Counter to my prediction, for every one-point increase in SJR-gut distrust, the number of “no opinion” responses decreases by 30% (95% CI = [0.60, 0.81]),  $p < .001$ .

<sup>2</sup> As in Study 3, the poisson regression analyses displayed overdispersion. I conducted additional analyses accounting for overdispersion and found the same pattern of results.

Next, I regressed the number of neutral midpoint responses to the perceived personality measure on the two SJR factors. As predicted, SJR-gut distrust significantly related to the number of neutral midpoint responses to the perceived personality measure, Wald  $X^2(1) = 29.05, p < .001$ . SJR-information seeking did not significantly relate to the number of neutral midpoint responses given to the perceived personality measure, Wald  $X^2(1) = 3.60, p = .058$ . The number of neutral midpoint responses to the perceived personality measure increases by 12% (95% CI = [1.08, 1.17]) for every one-point increase in SJR-gut distrust,  $p < .001$ .

I conducted a linear regression analysis in which I regressed participants' reported confidence in their impressions and attributions on the two SJR factors. The regression model significantly predicted confidence,  $F(2, 345) = 22.05, p < .001$ , explaining 11.3% of the variance in confidence. While SJR-information seeking was unrelated to confidence,  $B = .08, t = 1.09, p = .276$ , SJR-gut distrust was significantly associated with confidence,  $B = -0.38, t = -6.54, p < .001$ . Thus, as predicted, the more reluctant participants are to trust their gut instincts about others, the less confident they felt in the impressions they reported and the attributions they made for Ron being fired.

### **Exploratory Analyses**

As pre-registered, I conducted two linear regression analyses to examine whether participants' dispositional and external attributions relate to the two SJR factors. I first regressed participants' dispositional attribution on the SJR factors. The regression model significantly predicted dispositional attribution,  $F(2, 345) = 7.05, p < .001$ , explaining 3.9% of the variance in dispositional attribution. Both SJR-gut distrust,  $B = -0.17, t = -2.47, p = .014$ , and SJR-information seeking,  $B = -.25, t = -2.86, p = .005$ , were

associated with a less dispositional attribution. Thus, the more reluctant participants are to trust their gut instincts about others and the more they seek information about others to form accurate impressions, the less they made a dispositional attribution (i.e., blaming Ron himself) for Ron being fired.

Next, I regressed participants' external attribution on the SJR factors. The regression model significantly predicted external attribution,  $F(2, 345) = 5.12, p = .006$ , explaining 2.9% of the variance in external attribution. While SJR-gut distrust was unrelated to external attribution,  $B = .14, t = 1.78, p = .075$ , SJR-information seeking was significantly associated with external attribution,  $B = .27, t = 2.67, p = .008$ . These findings suggest that the more interested perceivers are in learning a lot about others to form accurate impressions, the more they made an external attribution (i.e., blaming causes outside of Ron's control) for Ron being fired.

As pre-registered, I examined the relationship between the SJR factors and participants' responses to the open-ended question. I conducted a Poisson regression in which I regressed the amount of information participants mentioned in their open responses on the two SJR factors. Neither SJR-gut distrust, Wald  $X^2(1) = 0.49, p = .486$ , nor SJR-information seeking, Wald  $X^2(1) < 0.01, p = .987$ , were significant predictors of participants' responses to the open-ended question. Thus, the SJR factors were not related to the amount of information participants indicated that they would need to determine whether Ron should have been fired.

## Discussion

The aim of the present study was to assess how SJR relates to perceivers' reported impressions of others, their tendencies to make dispositional and external attributions,



and their confidence in their impressions and attributions. I predicted that higher SJR-gut distrust would relate to a greater number of “no opinion” and neutral midpoint responses on the perceived personality measure and explored the link between SJR-information seeking and the “no opinion” and neutral midpoint responses to the perceived personality measure. Consistent with the Study 3 findings, participants who were higher in SJR-information seeking provided a higher number of “no opinion” responses to the perceived personality measure than participants who were lower in SJR-information seeking. SJR-information seeking was unrelated to the number of neutral midpoint responses to the perceived personality measure.

As predicted, participants’ SJR-gut distrust was positively related to the number of neutral midpoint responses to perceived personality. Thus, participants who tend to be reluctant to rely on their gut instincts about other people were more likely than perceivers who trust their initial impressions of others to provide neutral responses to the perceived personality measure. Counter to my predictions, participants provided fewer “no opinion” responses to the perceived personality measure when they were high rather than low in SJR-gut distrust. As discussed in relation to the Study 3 findings, one possible explanation for these findings is that participants can only provide one response to each item in the perceived personality measure and would thus be unable to report both neutral midpoint and “no opinion” responses to each item in the measure. I again tested for this explanation by regressing the “no opinion” responses to the perceived personality measure on the neutral midpoint responses and the SJR factors in a Poisson regression. While SJR-gut distrust was still associated with providing fewer “no opinion” responses,

I did find that participants who provided more neutral midpoint responses provided fewer “no opinion” responses to the perceived personality measure.

I explored the relationship between the two SJR factors and participants’ confidence in their impressions of Ron and the attributions they made for him losing his job. As I found in Study 3, SJR-information seeking was unrelated to participants’ confidence. I predicted and found that higher SJR-gut distrust related to lower confidence. Thus, the more reluctant participants are to trust their gut instincts about others, the less confident they felt in the impressions they reported and the attributions they made for Ron being fired.

I examined the relationship between the two SJR factors and the dispositional and external attributions participants made for the target, Ron, being fired from his job. I found a significant relationship between SJR-information seeking and participants’ tendency to make an external attribution. The more that participants want to seek information about others to form accurate impressions, the more they blamed external factors for Ron being fired. SJR-gut distrust was unrelated to participants’ external attribution tendencies. Both SJR factors were significantly negatively associated with participants’ dispositional attribution tendencies. Specifically, the more reluctant participants are to trust their initial impressions of others and the more they desire a lot of information about others to form accurate impressions, the less they blamed Ron himself for getting fired. These findings do indeed suggest that perceivers low in SJR are more likely than perceivers high in SJR to have a bias toward making dispositional attributions for ambiguous behaviors and outcomes.

Lastly, I examined the relationship between SJR and the amount of information participants indicated needing to determine whether Ron should have been fired from his job. SJR-gut distrust and SJR-information seeking were unrelated to the quantity of information participants reported needing to determine whether Ron should have lost his job. It is possible that the way the open-ended question was coded contributed to these results. Participants were asked what additional information they would need to determine if Ron should have been fired. While some participants reported a list of specific pieces of information they needed, others mentioned broader pieces of information (e.g., “his past performance”) that could in fact encompass a large quantity of information. It is possible that no relationship was found between participants’ responses and the SJR factors due to the limitations of the coding scheme. In future research, I will further explore the relationship between SJR and requests for additional information about people.

## **General Discussion**

In the present work, I proposed a novel impression formation motive, social judgment reluctance, which is intended to account for perceivers' general reluctance to trust their initial impressions of others and their general motivation to seek information to form accurate impressions of others. I aimed to develop an SJR measure that would provide insight into how perceivers form and discuss their impressions of others. The SJR measure may improve our understanding of response patterns in research on person perception, intergroup relations, identity threat and discrimination, and interpersonal relationships.

Across six studies in the present research, I developed and refined an SJR measure (Pilot Studies 1 and 2), identified and confirmed the factor structure of SJR (Pilot Study 2, Study 1), and assessed the reliability and validity of the measure (Studies 1 and 2). I then assessed the predictive utility of SJR in impression formation and attribution tasks (Studies 3 and 4). The final SJR measure is valid and reliable, includes 13 items, and is comprised of two distinct factors, SJR-information seeking and SJR-gut distrust. SJR-information seeking accounts for perceivers' self-reported desire to learn a lot about others to form accurate impressions, while SJR-gut distrust accounts for perceivers' self-reported reluctance to rely on their initial impressions of others. Across two studies (Studies 3 and 4), SJR related to perceivers impressions, behavioral attributions, and response confidence.

### **Refining the SJR Measure**

Given standards of scale development and the guidance of experts in social cognition (Boateng et al., 2018; Worthington & Whittaker, 2006), I initially developed 27

items intended to measure SJR. Based on the feedback of layperson judges in Pilot Study 1 and EFAs in Pilot Study 2, I reduced the length of the SJR measure to include 14 items. The EFA of the 14-item SJR measure suggested that SJR is composed of two related factors, SJR-information seeking and SJR-gut distrust. Using confirmatory factor analyses in Study 1, I further refined the SJR measure to include 13 items and confirmed the two SJR factors were a good fit for the data. The SJR information seeking factor is composed of six items and the SJR gut distrust factor is composed of seven reverse-coded items. Counter to my expectations, I found small, positive correlations and, at times, non-significant correlations between the two SJR factors across multiple studies. Thus, to effectively account for the unique predictive utility of the two SJR factors, I conducted analyses in the present work with the two SJR factors separately rather than with a combined SJR measure.

### **Assessing Reliability and Validity of SJR**

To effectively assess the psychometric properties of the SJR factors, I examined the internal consistency reliability, test-retest reliability, construct validity, and known groups validity of the SJR measure in the present research. Across Pilot Study 2 and Studies 1-4, the two SJR factors repeatedly demonstrated good internal consistency reliability. Responses to SJR-gut distrust were highly correlated across two time points approximately 1-2 weeks apart, demonstrating that SJR-gut distrust has good test-retest reliability. Responses to SJR-information seeking were moderately to highly correlated across two time points, demonstrating that SJR-information seeking has reasonable test-retest reliability. The test-retest reliability of the SJR-factors demonstrates that SJR is relatively stable across time, as has been found with other individual difference measures

(e.g., Chaney & Sanchez, 2022; Jarvis & Petty, 1996; Plant & Devine, 1998; Webster & Kruglanski, 1994). In future research, I aim to assess whether responses to SJR remain stable over longer time periods (e.g., two months, one year) and whether an impression-related manipulation could shift SJR. For example, I could explore whether participants responses to the SJR factors would change if they were exposed to information claiming that first impressions tend to be either accurate or inaccurate.

To assess known groups validity of the SJR measure, in Study 1, I predicted and found that politically conservative participants reported lower SJR-gut distrust and SJR-information seeking than politically liberal participants. Research suggests that low-prejudiced perceivers are more likely than high-prejudiced perceivers to effortfully consider their impressions of others and avoid relying on stereotypes for person judgements (Devine, 1989). Given the links found between constructs known to relate to prejudice (e.g., social dominance orientation) and politically conservative views (Jost et al., 2003; Pratto et al., 1994, 1997), I predicted that the SJR factors would be associated with political ideology in the present work. The significant relationships found among political ideology and the SJR factors provide support for known groups validity of the SJR measure.

As a means of assessing the construct validity of the SJR measure, I examined the relationships between the SJR factors and individual difference constructs that can be separated into three main categories: cognitive styles, egalitarian motives, and comfort in person perception. I also examined the relationships among the SJR factors and a measure of social desirability. SJR-information seeking was significantly positively correlated with attributional complexity, need to evaluate, IMS, faith in intuition, and

social desirability, and was unrelated to need for cognition, need for closure, stigma consciousness, and diagnosticity beliefs. SJR-information seeking was therefore significantly related to at least one construct within the categories of cognitive styles, egalitarian motives, and comfort in person perception, as expected.

SJR-gut distrust was significantly negatively correlated with need to evaluate and faith in intuition, and was unrelated to need for cognition, need for closure, attributional complexity, IMS, stigma consciousness, diagnosticity beliefs, and social desirability. SJR-gut distrust was thus unrelated to constructs pertaining to egalitarian motives. As SJR-information seeking had a small positive correlation with social desirability and SJR-gut distrust was unrelated to social desirability, it would be beneficial for future research to investigate whether perceivers believe the SJR factors are related to or driven by their morals.

The moderate, negative correlation between SJR-gut distrust and faith in intuition provides support for the convergent validity of SJR-gut distrust, as SJR-gut distrust focuses on a reluctance to trust one's initial judgments of others and faith in intuition focuses on a confidence in one's general intuitions and gut feelings. All other significant relationships identified between the SJR factors and the individual difference measures were small, thus providing support for the discriminant validity of the SJR factors. Additionally, although some of the non-significant relationships were unexpected, these findings demonstrate that the SJR factors are capturing tendencies and motives that are distinct from these established constructs.

## **The Role of SJR in Impressions and Attributions**

A core goal of the present work was to assess the predictive utility of the SJR measure in impression formation and attribution contexts. I expected that SJR would influence the impressions perceivers report when presented with minimal information about a target, the attributions perceivers make for ambiguous behaviors and outcomes, the time taken to form impressions, and perceivers' confidence in their impressions and attributions.

In Study 3, the two SJR factors were unrelated to reaction times for forming impressions. Future work should explore whether the SJR factors relate to reaction times in studies where participants are asked to make an important decision based on their impression of a target (e.g., hiring decisions, jury simulations). In Study 4, the two SJR factors were unrelated to the amount of information perceivers indicated needing to determine whether the target in the study should have lost his job. Future person perception research should give participants an opportunity to request additional pieces of information about a target and assess whether the SJR factors relate to the quantity of information perceivers request.

In Studies 3 and 4, I found significant relationships between SJR-gut distrust and perceivers' confidence in their impressions and attributions. SJR-information seeking was unrelated to confidence. These findings suggest that SJR-gut distrust does indeed correspond to a distrust or lack of confidence in the initial impressions that perceivers form of others. Further, these findings suggest that perceivers high in SJR-gut distrust are more likely than perceivers low in SJR-gut distrust to lack confidence in both impressions *and* attributions perceivers make after learning minimal information about



another person. This low confidence does not, however, correspond to a greater desire to learn a lot about others and effortfully update impressions.

The SJR factors were associated with providing more neutral midpoint and “no opinion” responses to a series of impression measures in Studies 3 and 4. SJR-information seeking was most frequently associated with providing a greater number of “no opinion” responses to the impression measures, while SJR-gut distrust was most frequently associated with providing a greater number of neutral midpoint responses to the impression measures. These findings suggest that perceivers who want to learn a lot about others to form accurate impressions may prefer to indicate having no opinion at all about someone when they only have minimal information about them. Additionally, perceivers who are hesitant to trust their initial impressions of others may prefer to indicate a milder or more neutral impression of someone when they know little about them. Thus, future research interested in the strength of impressions would benefit from the inclusion of the SJR-gut distrust measure.

I examined the relationship between the SJR factors and the attributions perceivers make for outcomes that have ambiguous causes in Study 4. I found that perceivers who were high in SJR-information seeking were more likely to blame external factors for someone being fired than perceivers who were low in SJR-information seeking. Additionally, perceivers were less likely to blame dispositional factors for someone being fired when they were high in either SJR-information seeking or SJR-gut distrust than when they were low in either SJR factor. A meta-analysis on attribution found that perceivers tend to blame negative events on dispositional rather than external factors (Malle, 2006). The present research suggests that a bias toward blaming

dispositional factors is more common among perceivers who are low in SJR than among perceivers who are high in SJR. Future research on behavioral attribution and attributional biases would benefit from the inclusion of SJR-information seeking and SJR-gut distrust, as they can provide insight into the attributions perceivers make.

### **Limitations and Future Directions**

The present research has many strengths along with some limitations that can be addressed in future research. When developing and refining the SJR measure, I expected to have one cohesive measure that would account for a reluctance to trust initial impressions of others and a motive to seek information about others to form accurate impressions. Factor analyses and bivariate correlations not only revealed two distinct factors (SJR-gut distrust and SJR-information seeking), but two distinct factors with small and, at times, non-significant correlations. A question that remains is whether SJR-gut distrust and SJR-information seeking should both be retained as a two-factor measure of social judgment reluctance.

To effectively determine whether to retain both SJR factors, future research should investigate how perceivers interpret the SJR statements. For example, several SJR-gut distrust items mention first impressions and initial impressions. These phrases may be perceived differently and influence how participants respond to the measure. While impression formation theories argue that initial impressions are formed automatically and unconsciously (e.g., Brewer, 1988), laypeople may perceive their own initial impressions of others to include effortful adjustments they make to automatic impressions. Understanding what laypeople consider a first or initial impression would provide greater insight into the patterns of responses participants give to the SJR items

and aid in the determination of whether to retain both SJR factors as a single construct. Several SJR-information seeking items also focus on perceivers needing or wanting “a lot” of information about others. Asking perceivers how they quantify or determine what constitutes “a lot” of information would also be useful for understanding how participants are interpreting and responding to the SJR items.

SJR-gut distrust and SJR-information seeking both have distinct relationships with other individual difference constructs, uniquely predict response patterns to impression measures, and have implications for making behavioral attributions. Given the moderate, negative correlation between faith in intuition and SJR-gut distrust, future research examining the role of SJR in impression formation should assess whether faith in intuition and SJR-gut distrust each account for unique variance in perceivers’ impressions. The findings in the present research suggest that both SJR factors could provide insight into perceivers’ responses in research on impression formation and behavioral attribution. However, the present work did not include experimental studies. In future research, I plan to conduct an experimental impression formation study in which I measure participants’ SJR. As part of research on signals of identity threat, I would manipulate the personality of a target, have participants report their impressions of the target, and include the SJR factors in analyses of the manipulation. Including SJR in an experimental impression formation study could offer further support for the assertion that SJR can help to explain perceivers’ first impressions of others.

The present research demonstrates that perceivers’ SJR-gut distrust and SJR-information seeking are associated with their tendency to report having no opinion or neutral impressions of a person about whom they know very little. While the present

research focused on the role of SJR in contexts where perceivers learn minimal target information, future research on SJR should examine the role of SJR in contexts where perceivers know a lot about a target. As SJR-gut distrust focuses on initial impressions and SJR-information seeking focuses on requiring a lot of information for forming impressions, the SJR factors should not influence the impressions that perceivers have of people they know very well. For example, in a future study, participants could complete the SJR measure and answer questions about their impression of their closest friend. I would expect both SJR factors to be unrelated to participants' impressions of close others.

In Studies 3 and 4 which focus on impression formation and behavioral attribution, both targets that participants read about and evaluated were depicted as men. I elected to include these two depictions of men because the two passages were used in past research that focused on male targets (Riggio & Garcia, 2009; Srull & Wyer, 1979). Future research should examine the SJR factors in relation to impressions perceivers form of women and people who belong to a variety of identity groups (e.g., based on race, ethnicity, gender identity, sexual orientation, age) to demonstrate the present findings will replicate with a diverse array of targets. Relatedly, several of the samples in the present studies were majority White and heterosexual. Future research on SJR should prioritize the recruitment of LGBTQIA+ participants and racially and ethnically diverse samples.

In my future research, I intend to further assess the SJR factors and their role in impression formation processes in several ways. The present studies provide valuable insight into the predictive utility of the SJR factors in online impression formation contexts. To address the ecological validity of the measure for impression formation that

takes place in person, I aim to conduct an in-lab study in which participants interact with and share their impression of a student confederate. Perceivers' automatic initial impressions of others are typically informed by social category information taken from visual cues (e.g., skin color, gender expression; Brewer, 1988; Chaiken & Ledgerwood, 2012; Fiske & Neuberg, 1990). Thus, future research on impression formation and the SJR factors should account for the influence of target appearance in the impression formation process.

To further investigate how SJR-gut distrust and SJR-information seeking relate to different behaviors and values in impression formation contexts, I aim to explore the link between the SJR factors and perceivers' requests for additional information about targets. For example, using a paradigm in which participants are asked to evaluate job candidates and select a candidate to hire, participants would be provided with minimal information about candidates and given the opportunity to request as many additional pieces of information as they desire. I would expect SJR-information seeking to be positively associated with the number of pieces of information participants request. I would also seek to replicate these findings using other decision-making scenarios (e.g., voting, assessing dating profiles). These findings would demonstrate that SJR-information seeking does indeed correspond to a tendency to seek out more information about others when forming impressions.

## **Conclusion**

In the present research, I proposed a novel impression formation motive, social judgment reluctance, that complements existing theories of impression formation and judgment (e.g., Brewer, 1988; Fiske & Neuberg, 1990; Schadron & Yzerbyt, 1991). I

developed, refined, validated, and assessed a measure of SJR that could be used in many areas of research, including research on person perception, intergroup relations, discrimination and identity threat, and close relationships. The present research revealed two SJR factors. SJR-information seeking accounts for perceivers' self-reported desire to learn a lot of information about others to form accurate impressions. Higher SJR-information seeking is associated with providing "no opinion" to impression questions and making more external attributions and fewer dispositional attributions for negative outcomes. SJR-gut distrust accounts for perceivers' self-reported reluctance to trust their initial impressions of other people. Higher SJR-gut distrust is associated with expressing more neutral impressions of others, being less confident in first impressions and attributions, and making fewer dispositional attributions for negative outcomes. Thus, as predicted, perceivers SJR has relevance to their initial impressions of others and their interpretation of the behaviors of others. Future research should continue to investigate the individual contributions that the two SJR factors can make to the person perception literature and examine the predictive utility of the SJR factors in experimental research.

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Table 1

*Pilot Study 2 Social Judgment Reluctance EFA*

	<b>Factor 1</b> SJR- Gut Distrust	<b>Factor 2</b> SJR- Information Seeking
15. I prefer to know a lot about someone before deciding on an impression of their character.	.29	<b>.58</b>
16. I usually try to learn a lot about someone to get a sense of who they really are.	.02	<b>.72</b>
17. I wait to decide what I really think of someone until I know a lot about them.	.28	<b>.48</b>
18. I try to learn a lot about other people to have accurate impressions of them.	-.07	<b>.81</b>
19. When meeting someone, I try to learn a lot about them to make sure my impression of them is accurate.	-.14	<b>.85</b>
20. I like to learn a lot about someone to make sure my impressions of them are as accurate as possible.	-.05	<b>.81</b>
21. I feel more confident in my impressions of others when I know a lot about them.	.001	<b>.50</b>
22. I trust my gut instincts about other people. (R)	<b>.88</b>	-.06
23. I can typically tell what I think of someone soon after meeting them. (R)	<b>.75</b>	.04
24. I generally expect my first impressions of others to be correct. (R)	<b>.79</b>	-.02
25. I rely on my gut feelings to determine what I think of someone. (R)	<b>.75</b>	.03
26. I feel confident in my initial impressions of people. (R)	<b>.84</b>	.01
27. I trust my initial impressions of others. (R)	<b>.90</b>	.001
28. I am confident in my gut feelings about people. (R)	<b>.89</b>	-.03

*Note.* Factor loadings from EFA using principal axis factoring with Oblimin rotation.

Reverse coded items are marked with “(R).”

Table 2

*Pilot Study 2 Descriptive Statistics of Measures*

Variable	<i>M</i>	<i>SD</i>	$\alpha$
14-Item SJR Measure	4.26	0.80	.90
SJR Information Seeking	5.30	0.84	.86
SJR Gut Distrust	3.22	1.11	.94
Attributional Complexity	5.05	0.88	.94

Table 3

*Study 1 SJR Factors Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>	$\alpha$
SJR Information Seeking (T1)	5.33	0.88	.89
SJR Gut Distrust (T1)	3.17	1.13	.94
SJR Information Seeking (T2)	5.31	0.89	.89
SJR Gut Distrust (T2)	3.15	1.13	.95

Table 4

*Study 2 Measure Descriptive Statistics and Correlations with SJR Factors*

Variable	<i>M</i>	<i>SD</i>	$\alpha$	Correlation to SJR-IS	Correlation to SJR-GD
SJR-Information Seeking	5.54	0.81	.82	n/a	-.09
SJR-Gut Distrust	2.94	0.88	.87	-.09	n/a
Need for Closure	4.70	0.75	.82	.09	-.06
Need for Cognition	4.26	0.79	.87	.11	.002
Faith in Intuition	3.68	0.56	.82	.29**	-.62**
IMS	5.97	0.91	.85	.28**	-.07
Diagnosticity Beliefs	3.57	1.06	.84	-.11	-.08
Need to Evaluate	4.25	0.78	.83	.18*	-.21**
Gender Stigma Consciousness	5.08	1.09	.75	.05	-.04
Race/Ethnicity Stigma Consciousness	4.60	1.31	.82	-.03	-.13
Social Desirability	4.02	0.72	.60	.19*	-.01

Note: \*\*  $p < .001$ ; \*  $p < .01$

Table 5

*Study 3 Measure Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>
SJR-Information Seeking	5.43	0.92
SJR-Gut Distrust	3.09	0.94
Impression Confidence	5.07	1.13
Reaction Time	35.23	20.17
Perceived Hostility – Neutral Percentage	11%	20%
Perceived Hostility – “No Opinion” Percentage	1%	6%
Perceived Personality – Neutral Percentage	23%	21%
Perceived Personality – “No Opinion” Percentage	2%	8%
Perceived Prejudice – Neutral Percentage	33%	38%
Perceived Prejudice – “No Opinion” Percentage	3%	15%

Table 6

*Study 4 Measure Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>
SJR-Information Seeking	5.48	0.83
SJR-Gut Distrust	3.14	1.05
Confidence	4.61	1.19
Perceived Personality – Neutral Percentage	36%	28%
Perceived Personality – “No Opinion” Percentage	4%	15%
Dispositional Attribution	3.25	1.39
External Attribution	4.32	1.56
Open Ended – Needed Information Count	2.26	1.59

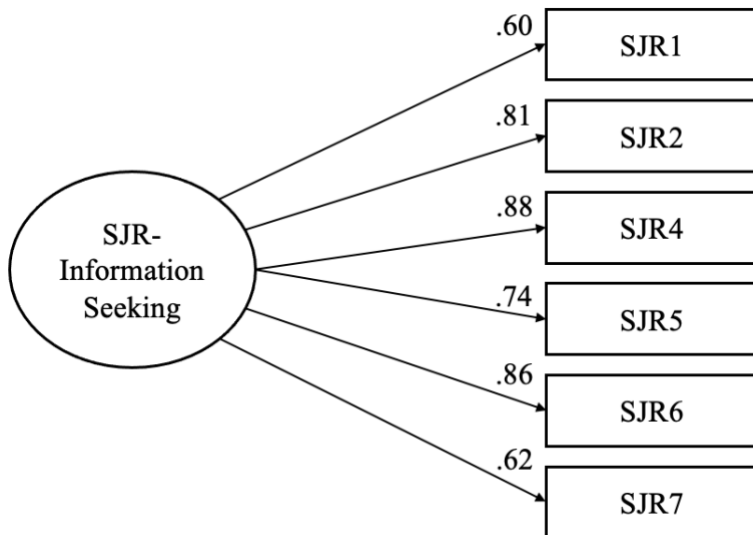


Figure 1. Study 1 CFA of the SJR-information seeking factor with standardized regression weights shown.

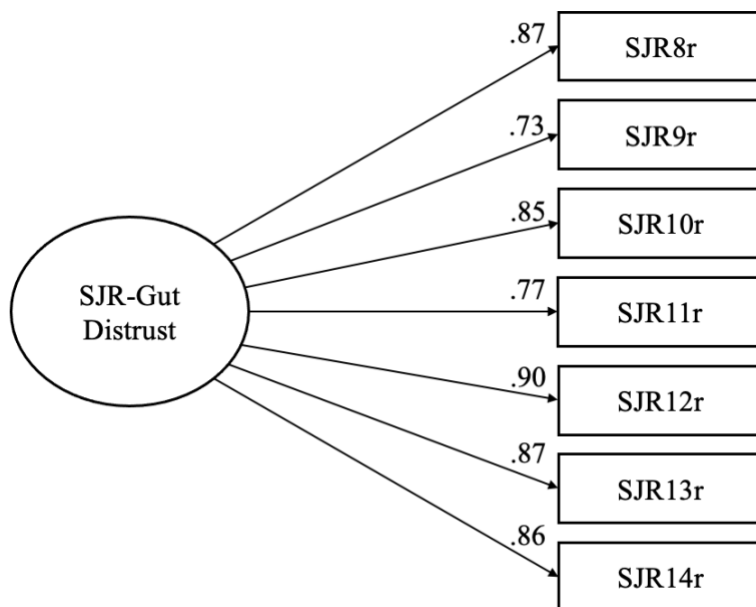


Figure 2. Study 1 CFA of the SJR-gut distrust factor with standardized regression weights shown.

## Appendix A: Demographic and Pilot Study Measures

What is your gender identity?

- Man
- Woman
- Non-binary
- Agender
- Do not know
- Choose not to answer
- Another identity not listed: \_\_\_\_\_

What is your racial/ethnic background? (choose all that apply)

- White/Caucasian
- Black/African American
- Hispanic/Latino
- Asian
- Biracial/Multiracial
- Native American/American Indian
- Middle Eastern
- Not listed: \_\_\_\_\_

What is your sexual orientation?

- Straight
- Gay



- Lesbian
- Bisexual
- Queer
- Not listed: \_\_\_\_\_

On the following scale, ranging from very conservative to very liberal, how would you categorize your political beliefs?

1. Very conservative
2. Conservative
3. Somewhat conservative
4. Moderate/middle of the road
5. Somewhat liberal
6. Liberal
7. Very liberal

How old are you? \_\_\_\_\_

### **Item Clarity**

How **clear** is this statement?

*Scale: 1 (very unclear) to 5 (very clear)*

### **Item Ease of Understanding**

How easy is it to **understand** this statement?

*Scale: 1 (very difficult) to 5 (very easy)*

### **Response Pressure**

How much **pressure** do you think people would feel to respond to this statement in a particular way?

*Scale: 1 (no pressure) to 5 (a lot of pressure)*

### **Attention Checks**

Please select “Strongly disagree” for this question.

Please select “Agree” for this question.

### **Social Judgment Reluctance (27-item)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with “(R).”

*Please indicate how much you agree or disagree with each of the statements below:*

- I prefer to know a lot about someone before deciding on an impression of their character.
- I do not usually feel confident in my initial impressions of others.
- I generally feel certain of my opinion of someone once I know a lot about them.
- I like to learn a lot about someone before I feel confident in my impression of them.
- I often find my initial impressions of others change over time.

- I only form a strong opinion of someone after learning a lot about them.
- I usually try to learn a lot about someone to get a sense of who they really are.
- I wait to decide what I really think of someone until I know a lot about them.
- I try to learn a lot about other people to have accurate impressions of them.
- When it comes to forming opinions of people, I hesitate to rely on my initial feelings.
- When meeting someone, I try to learn a lot about them to make sure my impression of them is accurate.
- I like to learn a lot about someone to make sure my impressions of them are as accurate as possible.
- My initial opinions of other people often change as I learn new things about them.
- I feel more confident in my impressions of others when I know a lot about them.
- I avoid forming strong opinions of others based on a first impression.
- I do not like to make assumptions about other people unless I know a lot about them.
- I usually need to learn a lot about someone before I feel confident in my opinion of them.
- I trust my gut instincts about other people. (R)
- I can usually tell a lot about someone from a first impression. (R)
- I can typically tell what I think of someone soon after meeting them. (R)
- I generally expect my first impressions of others to be correct. (R)
- I can often rely on my first impression of someone. (R)
- I rely on my gut feelings to determine what I think of someone. (R)

- I feel confident in my initial impressions of people. (R)
- I generally find my first impressions to be accurate. (R)
- I trust my initial impressions of others. (R)
- I am confident in my gut feelings about people. (R)

### **Attributional Complexity (Fletcher et al., 1986)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with “(R).”

*Please indicate your level of agreement with the following statements.*

- I don't usually bother to analyze and explain people's behavior. (R)
- Once I have figured out a single cause for a person's behavior, I don't usually go any further. (R)
- I believe it is important to analyze and understand our own thinking processes.
- I think a lot about the influence that I have on other people's behavior
- I have found that the relationships between a person's attitudes, beliefs, and character traits are usually simple and straightforward. (R)
- If I see people behaving in a really strange or unusual manner I usually put it down to the fact that they are strange or unusual people and don't bother to explain it any further. (R)
- I have thought a lot about the family background and personal history of people who are close to me, in order to understand why they are the sort of people they are.

- I don't enjoy getting into discussions where the causes for people's behavior are being talked over. (R)
- I have found that the causes for people's behavior are usually complex rather than simple.
- I am very interested in understanding how my own thinking works when I make judgments about people or attach causes to their behavior.
- I think very little about the different ways that people influence each other. (R)
- To understand a person's personality/behavior I have found it is important to know how that person's attitudes, beliefs, and character traits fit together.
- When I try to explain other people's behavior I concentrate on the person and don't worry too much about all the existing external factors that might be affecting them. (R)
- I have often found that the basic cause for a person's behavior is located far back in time.
- I really enjoy analyzing the reasons or causes for people's behavior.
- I usually find that complicated explanations for people's behavior are confusing rather than helpful. (R)
- I give little thought to how my thinking works in the process of understanding or explaining people's behavior. (R)
- I think very little about the influence that other people have on my behavior. (R)
- I have thought a lot about the way that different parts of my personality influence other parts (e.g., beliefs affecting attitudes or attitudes affecting character traits).
- I think a lot about the influence that society has on other people.

- When I analyze a person's behavior, I often find the causes form a chain that goes back in time, sometimes for years.
- I am not really curious about human behavior. (R)
- I prefer simple rather than complex explanations for people's behavior. (R)
- When the reasons I give for my own behavior are different from someone else's, this often makes me think about the thinking processes that lead to my explanations.
- I believe that to understand a person, you need to understand the people who that person has close contact with.
- I tend to take people's behavior at face value and not worry about the inner causes for their behavior (e.g., attitudes, beliefs, etc). (R)
- I think a lot about the influence that society has on my behavior and personality.
- I have thought very little about my own family background and personal history in order to understand why I am the sort of person I am. (R)

## Appendix B: Study 1 and 2 Measures

### Social Judgment Reluctance (14-item)

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with “(R).”

*Please indicate how much you agree or disagree with each of the statements below:*

- I prefer to know a lot about someone before deciding on an impression of their character.
- I usually try to learn a lot about someone to get a sense of who they really are.
- I wait to decide what I really think of someone until I know a lot about them.
- I try to learn a lot about other people to have accurate impressions of them.
- When meeting someone, I try to learn a lot about them to make sure my impression of them is accurate.
- I like to learn a lot about someone to make sure my impressions of them are as accurate as possible.
- I feel more confident in my impressions of others when I know a lot about them.
- I trust my gut instincts about other people. (R)
- I can typically tell what I think of someone soon after meeting them. (R)
- I generally expect my first impressions of others to be correct. (R)
- I rely on my gut feelings to determine what I think of someone. (R)
- I feel confident in my initial impressions of people. (R)
- I trust my initial impressions of others. (R)
- I am confident in my gut feelings about people. (R)

**Faith in Intuition (Epstein et al., 1996)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*completely false*) to 5 (*completely true*).

*Please indicate how true the following statements are for you.*

- My initial impressions of people are almost always right.
- I trust my initial feelings about people.
- When it comes to trusting people, I can usually rely on my "gut feelings."
- I believe in trusting my hunches.
- I can usually feel when a person is right or wrong even if I can't explain how I know.
- I am a very intuitive person.
- I can typically sense right away when a person is lying.
- I am quick to form impressions about people.
- I believe I can judge character pretty well from a person's appearance.
- I often have clear visual images of things.
- I have a very good sense of rhythm.
- I am good at visualizing things.

**Need for Closure (Roets & Van Hiel, 2011)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*).

*Please indicate your level of agreement with the following statements.*



- I don't like situations that are uncertain.
- I dislike questions which could be answered in many different ways.
- I find that a well-ordered life with regular hours suits my temperament.
- I feel uncomfortable when I don't understand the reason why an event occurred in my life.
- I feel irritated when one person disagrees with what everyone else in a group believes.
- I don't like to go into a situation without knowing what I can expect from it.
- When I have made a decision, I feel relieved.
- When I am confronted with a problem, I'm dying to reach a solution very quickly.
- I would quickly become impatient and irritated if I would not find a solution to a problem immediately.
- I don't like to be with people who are capable of unexpected actions.
- I dislike it when a person's statement could mean many different things.
- I find that establishing a consistent routine enables me to enjoy life more.
- I enjoy having a clear and structured mode of life.
- I do not usually consult many different opinions before forming my own view.
- I dislike unpredictable situations.

### **Need for Cognition (Cacioppo et al., 1984)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with "(R)."

*Please indicate your level of agreement with the following statements.*

- I would prefer complex to simple problems.
- I like to have the responsibility of handling a situation that requires a lot of thinking.
- Thinking is not my idea of fun. (R)
- I would rather do something that requires little thought than something that is sure to challenge my thinking abilities (R).
- I try to anticipate and avoid situations where there is likely chance I will have to think in depth about something. (R)
- I find satisfaction in deliberating hard and for long hours.
- I only think as hard as I have to. (R)
- I prefer to think about small, daily projects to long-term ones. (R)
- I like tasks that require little thought once I've learned them. (R)
- The idea of relying on thought to make my way to the top appeals to me.
- I really enjoy a task that involves coming up with new solutions to problems.
- Learning new ways to think doesn't excite me very much. (R)
- I prefer my life to be filled with puzzles that I must solve.
- The notion of thinking abstractly is appealing to me.
- I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
- I feel relief rather than satisfaction after completing a task that required a lot of mental effort. (R)

- It's enough for me that something gets the job done; I don't care how or why it works. (R)
- I usually end up deliberating about issues even when they do not affect me personally.

**Internal Motivation to Respond Without Prejudice (IMS; adapted from Plant & Devine, 1998)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with "(R)."

*Please indicate your level of agreement with the following statements about members of marginalized groups.*

*NOTE: People with marginalized identities are those whose identities are perceived as lesser within society, and can be based on factors such as gender, race, ethnicity, religion, sexual orientation, weight, ability, and more.*

- I attempt to act in nonprejudiced ways toward marginalized groups because it is personally important to me.
- According to my personal values, using stereotypes about marginalized people is OK. (R)
- I am personally motivated by my beliefs to be nonprejudiced toward marginalized groups.
- Because of my personal values, I believe that using stereotypes about marginalized people is wrong.

- Being nonprejudiced toward marginalized people is important to my self-concept.

**Perceived Diagnosticity of Visual Cues of Sexual Orientation (Lick & Johnson, 2014)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with “(R).”

*Please indicate your level of agreement with the following statements.*

- A person’s sexual orientation can largely be determined by their physical appearance.
- No matter how a person looks, their sexual orientation is always indefinite and difficult to categorize. (R)
- When getting to know a person, it is possible to determine their sexual orientation very quickly based upon their looks alone.
- It is possible to know a person’s sexual orientation once you take a look at them.
- A person’s appearance can never tell you about their sexual orientation. (R)
- Although a person may have some basic identifiable traits, it is never easy to make accurate judgments about their sexual orientation. (R)
- Generally speaking, once you see someone it is possible to predict their sexual orientation.
- It is never possible to accurately judge someone’s sexual orientation without them telling you. (R)

**Social Desirability Scale - 10 item (Crowne & Marlowe, 1960; Fischer & Fick, 1993)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with “(R).”

*Please indicate your level of agreement with the following statements.*

- I like to gossip at times. (R)
- There have been occasions when I took advantage of someone. (R)
- I’m always willing to admit it when I make a mistake.
- I always try to practice what I preach.
- I sometimes try to get even rather than forgive and forget. (R)
- At times I have really insisted on having things my own way. (R)
- There have been occasions when I felt like smashing things. (R)
- I never resent being asked to return a favor.
- I have never been irked when people expressed ideas very different from my own.
- I have never deliberately said something that hurt someone’s feelings.

**Gender-based Stigma Consciousness (adapted from Pietri et al., 2018)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Only women will complete this measure. Reverse coded items are marked with “(R).”

*Please indicate your level of agreement with the following statements.*

- Stereotypes about women have not affected me personally. (R)
- I never worry that my behaviors will be viewed as stereotypical of women. (R)

- When interacting with people, I feel like they interpret all of my behaviors in terms of my gender.
- Most people do not judge other people on the basis of their gender. (R)
- Being a woman does not influence how people act with me. (R)

**Race/Ethnicity-based Stigma Consciousness (adapted from Pietri et al., 2018)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Only participants who identify as having a racial or ethnic minority background completed this measure. Reverse coded items are marked with “(R).”

*Please indicate your level of agreement with the following statements.*

- Stereotypes about [participant race/ethnicity] people have not affected me personally. (R)
- I never worry that my behaviors will be viewed as stereotypical of [participant race/ethnicity] people. (R)
- When interacting with people, I feel like they interpret all of my behaviors in terms of my race/ethnicity.
- Most people do not judge other people on the basis of their race/ethnicity. (R)
- Being a(n) [participant race/ethnicity] individual does not influence how people act with me. (R)

## Appendix C: Study 3 and 4 Measures

### Social Judgment Reluctance (13-item)

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse coded items are marked with “(R).”

*Please indicate how much you agree or disagree with each of the statements below:*

#### SJR-Information Seeking Factor

- I prefer to know a lot about someone before deciding on an impression of their character.
- I usually try to learn a lot about someone to get a sense of who they really are.
- I try to learn a lot about other people to have accurate impressions of them.
- When meeting someone, I try to learn a lot about them to make sure my impression of them is accurate.
- I like to learn a lot about someone to make sure my impressions of them are as accurate as possible.
- I feel more confident in my impressions of others when I know a lot about them.

#### SJR-Gut Distrust Factor

- I trust my gut instincts about other people. (R)
- I can typically tell what I think of someone soon after meeting them. (R)
- I generally expect my first impressions of others to be correct. (R)
- I rely on my gut feelings to determine what I think of someone. (R)
- I feel confident in my initial impressions of people. (R)
- I trust my initial impressions of others. (R)

- I am confident in my gut feelings about people. (R)

**Perceived Prejudice (adapted loosely from Cottrell et al., 2010; Sanchez et al., 2017)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*strongly disagree*) to 7 (*strongly agree*). Participants had the option to respond “no opinion” for each item. Reverse coded items are marked with “(R).”

*Please indicate how much you agree with the following statements about James based on your impression of him:*

- James seems like he would dislike minority groups.
- James seems prejudiced.
- I would expect James to feel negatively about minority groups.
- I think James would discriminate against minority groups.
- James seems like he treats all people fairly. (R)

**Perceived Target Personality Characteristics (adapted from Soto & John, 2017)**

Items were presented in a randomized order and completed using Likert-scale response options from 1 (*extremely unlikely*) to 7 (*extremely likely*). Participants had the option to respond “no opinion” for each item. Reverse coded items are marked with “(R).”

[Instructions for Study 3] *Based on what you learned about James, how likely is it that:*

[Instructions for Study 4] *Based on what you learned about Ron, how likely is it that:*

- [James/Ron] tends to be quiet. (R)
- [James/Ron] is dominant, acts as a leader.
- [James/Ron] is full of energy.



- [James/Ron] is compassionate, has a soft heart.
- [James/Ron] is sometimes rude to others. (R)
- [James/Ron] assumes the best about people.
- [James/Ron] tends to be disorganized. (R)
- [James/Ron] has difficulty getting started on tasks. (R)
- [James/Ron] is reliable, can always be counted on.
- [James/Ron] worries a lot.
- [James/Ron] tends to feel depressed, blue.
- [James/Ron] is emotionally stable, not easily upset. (R)
- [James/Ron] is fascinated by art, music, or literature.
- [James/Ron] has little interest in abstract ideas. (R)
- [James/Ron] is original, comes up with new ideas.

### **Impression Confidence (PI Created)**

Participants responded to this measure following the impression measures. Participants responded on a Likert-scale with response options ranging from 1 (*not at all confident*) to 7 (*extremely confident*).

- On a scale from 1-7, how confident are you in the impressions you reported about James?

### **Behavioral Attribution (PI created)**

Participants completed the two items in a randomized order. Participants responded on a Likert-scale with response options ranging from 1 (*None of the blame*) to 7 (*All the blame*).

*As explained in the passage, Ron was fired from his job at the end of a bad day.*

- How much blame do you place on Ron himself (e.g., his behaviors, skills, personality) for him being fired?
- How much blame do you place on causes outside of Ron's control (e.g., traffic, technology, coworker actions) for him being fired?

### **Confidence in Attributions and Impressions**

Participants responded to the first two confidence items following the attribution items and the remaining three confidence items following the perceiver personality measure.

Participants responded on a Likert-scale with response options ranging from 1 (*not at all confident*) to 7 (*extremely confident*).

- How confident do you feel in your responses to the previous questions about Ron being fired?
- You reported the amount of blame you place on Ron and outside causes for Ron being fired from his job. How confident are you that your responses are accurate?
- How confident do you feel about your impressions of Ron's personality?
- How confident are you that your impressions of Ron are accurate?
- Overall, how confident are you in your responses to all the questions about Ron?

### **Open Ended Question (PI Created)**

Participants responded to the following question in a large text box.

- At the end of Ron’s bad day, he was fired from his job. What **additional information** would you need to confidently determine that Ron **should** have been fired from his job?

### Attention Checks

Passage Specific (Study 3):

Based on the passage you read, which of the following statements about James is **true**?

- James purchased a new tool box at the hardware store
- James avoided giving blood by lying about having diabetes
- James works as a mechanic
- James lives in a house in the countryside

Based on the passage you read, which of the following **activities** did James do with his acquaintance?

- Watch a movie
- Have dinner at a restaurant
- Go to the park
- Shop at a clothing store

Passage Specific (Study 4):

Based on the passage you read, which of the following statements about Ron is **true**?

- Ron was fired from his job
- Ron arrived at work early
- Ron had lunch with coworkers

- Ron stopped for coffee on his way to work

Based on the passage you read, which of the following statements about Ron is **true**?

- Three of Ron's clients cancelled their contracts with Ron's company
- Ron had coffee with two of his clients
- Ron was sick with food poisoning
- Ron left work for a dentist appointment

General (both studies):

Please select "Strongly disagree" for this question.

Please select "extremely unlikely" to show you are paying attention.

### Appendix D: Study 3 and 4 Passages

Study 3:

**Below you will read a passage about a man named James that was written by one of his acquaintances. In the passage, the acquaintance discusses their experiences when visiting with James.**

"I ran into my old acquaintance James the other day, and I decided to go over and visit him, since by coincidence we took our vacations at the same time. Soon after I arrived, a salesman knocked at the door, but James refused to answer the door. He also told me that he was refusing to pay his rent until the landlord repaints his apartment. We talked for a while, had lunch, and then went out for a ride. We used my car, since James' car had broken down that morning, and he told the garage mechanic that he would have to go somewhere else if he couldn't fix his car that same day. We went to the park for about an hour and then stopped at a hardware store. I was sort of preoccupied, but James bought some small gadget, and then I heard him demand his money back from the sales clerk. I couldn't find what I was looking for, so we left and walked a few blocks to another store. The Red Cross had set up a stand by the door and asked us to donate blood. James lied by saying he had diabetes and therefore could not give blood. It's funny that I hadn't noticed it before, but when we got to the store, we found that it had gone out of business. It was getting kind of late, so I took James to pick up his car and we agreed to meet again as soon as possible."

Study 4:

**Below you will read a passage about a man named Ron that details the events of a bad day at work.**

Ron was a bit late to work on Monday morning because there was a bad traffic jam.

When he arrived at work he didn't feel very well and got a slow start on his work for the day. He made it to his 10:00 a.m. staff meeting, but because that meeting ran 10 minutes late, he arrived late at his 11:30 a.m. sales team meeting. At that meeting Ron and three of his coworkers were supposed to present a new production line to the Director, but the presentation wasn't finished and the laptop projector wasn't functioning properly. At 2:30 p.m. when Ron was back at his desk, three clients called and cancelled their long-standing monthly supply contracts with Ron's firm. At 4:00 p.m. Ron was called in to the Director's office and fired.