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Adverse Inferences: The Impact of Suspect Silence on Lay Perceptions

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Abstract

Objectives: We conducted three studies that examined how pre-interrogation rights decisions could impact lay people's perceptions of suspects. **Hypotheses:** Grounded in the literature on attribution errors and biases, we proposed that suspects who remained silent would be viewed and treated more negatively, generally, and especially when formal invocations were offered, compared to suspects who waived their rights. **Method:** Participants in Studies 1 and 2 acted as the lead detective in the investigation of an online murder simulation. Participants were randomly assigned to a 2 (informal silence: waived vs. exercised) X 2 (formal silence: waived vs. exercised) between-subjects design. Study 3 used an online vignette (adopted from previous research) where participants were randomly assigned to one of three levels in a between-subjects design: informed that the defendant had either waived or exercised their pre-interrogation rights or were not informed of the defendant's decision. In all three studies, participants then judged the suspect's guilt and the interrogation procedures. **Results:** Overall, we found that suspects who remained silent were viewed and treated more negatively than those who waived their rights. Exploratory mediation analyses across all three studies suggest that the formal decision to remain silent negatively impacted perceptions of the suspect, which, in turn, increased guilt judgments. **Conclusions:** The results of the current studies suggest that pre-interrogation decisions negatively impact judgments of guilt—*not* based on relevant legal factors, but assumptions arising from suspects' behavior.

Keywords: adverse inferences, perceptions of guilt, pre-interrogation rights, Miranda rights

Public Significance Statement: Legal precedent in the United States has implied it may be appropriate for triers-of-fact to use a suspects' invocation of their rights as indicators of guilt. In three experiments conducted in both the United States and Canada, laypeople judged suspects who invoked silence as more guilty despite the same evidence existing against suspects who waived their rights. We suggest that reforms to suspect rights and interrogation practices may be necessary to protect suspects from adverse inferences associated with silence.

Adverse Inferences: The Impact of Suspect Silence on Lay Perceptions

In many legal systems across the world, suspects are afforded rights during their interrogation (see Kassin et al., 2019). In the US, for example, suspects make pre-interrogation decisions to waive or exercise their Miranda rights, which include rights to have an attorney present and to remain silent. Suspects who waive their right to silence forgo critical protections against self-incrimination during the likely coercive custodial interrogation. As a result, suspects who waive their right to silence are more likely to offer incriminating evidence than their counterparts who exercise their rights (e.g., Gillard et al., 2014). Waivers of the right to silence can have implications for suspects' legal fate (Leo, 1996), such as an increased likelihood of offering a full-fledged confession (Pearse et al., 1998). The potential consequences are particularly concerning for innocent suspects, who are more likely than others to waive their right to silence (Kassin & Norwick, 2004), and this can prompt a process of accumulating disadvantages leading to a wrongful conviction (Scherr et al., 2020).

Yet, the alternative—to exercise their right to remain silent—may still have negative consequences by engendering adverse inferences. Adverse inferences, when an individual making a legal judgment infers something negative because of an absence of evidence, have been demonstrated across multiple areas of the legal process. In trial, for example, suspects who do not take the stand are more often judged guilty compared to suspects who do take the stand (Shaffer & Case, 1982). DeCelles and colleagues (2021) found a similar effect across a series of experiments. Specifically, they found that both individuals who are silent in the face of an accusation and those who do not take the stand at trial are seen as more guilty compared to someone who calmly denies their guilt. DeCelles and colleagues (2021) suggest that silence leads to guilt judgments because people who withhold information are seen as not trustworthy.

Other research has found prosecutors can successfully induce guilt inferences in mock jurors based on missing testimony, even when the missing testimony is not that of the suspect (Webster et al., 1991). In this case, participants read a transcript from a prosecutor who suggested that the testimony was missing because it would be unfavorable to the defendant, implying his guilt.

Adverse inferences can also influence judgments related to interrogations. For example, Snow et al. (2023) conducted an experimental, vignette survey with Canadian university students who read about a missing college woman and the questioning of the lead suspect. When making judgments on a Likert scale about a suspect who admitted guilt, denied guilt, or remained silent during the interrogation, participants rated the defendant who remained silent as less cooperative (compared to both the admission and denial conditions) and less rational (compared to the denial condition). Finally, there were no differences in guilt or trustworthiness ratings between the individual who denied guilt and the individual who remained silent. It is important to note that the silent suspect exercised their pre-interrogation rights because of the Canadian context of the study (Snow et al., 2023). In the U.S., however, simply remaining silent would not be considered an invocation of the right to silence.

To this point, there are dramatic differences in the degree of protection that pre-interrogation rights provide suspects in the US compared to Canada. First, Canadian police officers do NOT need to stop asking questions once the right of silence is invoked (*R. v. Hebert*, 1990; *R. v. Singh*, 2007; Ross, 2007). Canadians have the right to remain silent, meaning that they do not need to answer police questions, but police are allowed to continue asking said questions. In fact, as has been discussed in multiple key cases in Canada, and decided by the Supreme Court of Canada: “police persuasion, short of denying the suspect the right to choose or depriving him of an operating mind, does not breach the right to silence” (*R. v. Hebert*, 1990, p.

184) and when police officers keep interrogating individuals who exercise their right to silence "the police had not abused their right to interview the appellant and to persuade him to break his silence" (*R. vs. Singh*, 2007, p.12).

Second, the right to counsel in Canada is different from that of many other democratic countries (*R. v. Sinclair*, 2010; Snyder, 2021). When a detainee invokes the right to counsel in Canada, they have the right to "a reasonable opportunity to contact counsel" (Canadian Charter of Rights and Freedoms, Section 10b), which is typically a single conversation—usually by phone from the police station (Snyder, 2021). Canadians do NOT have the right to have their lawyers present during interrogations, even when explicitly requested and/or the right to counsel is invoked (*R. v. Sinclair*, 2010; Snyder, 2021)—unless they are minors (Youth Criminal Justice Act; https://www.ontario.ca/page/what-do-when-youth-arrested).

To our knowledge, the only other studies to compare adverse inferences derived from the decision to waive or invoke pre-interrogation rights were conducted by Sukumar and Kassin (2017; see also Lawrence et al., 2024 which was published during our review process). Across two vignette studies, participants read about a hypothetical suspect being questioned by police. When the suspect was asked directly about the stolen items, half the participants read that the suspect waived their rights and denied involvement in the crime, but the other half read that the suspect exercised their rights and refused to answer any further questions, simply responding with "no comment." Participants, across both studies, perceived the suspect who exercised their rights as more likely to be guilty (Sukumar & Kassin, 2017). Hence, experimental research suggests that suspects who remain silent—even in countries where the right to silence is guaranteed—may prompt adverse inferences about their culpability.

Field observations of Miranda decisions and subsequent case outcomes have also demonstrated that remaining silent is associated with adverse inferences, such as a greater chance of being formally charged with a crime and harsher sentences upon conviction (Leo, 1996). In fact, research has found that between 20-36% of university students, laypeople, and defendants believe that silence can be used as incriminating evidence (Rogers et al., 2010; 2013). Not surprisingly then, jury eligible laypeople endorse the idea that people will waive their rights for fear that invocation will make the police think they are guilty ("extremely likely"; 66.5-75.0%) and/or will make the judge and jury think they are guilty ("extremely likely"; 57.8-64.5%). Again, of particular concern is that laypeople were more likely to endorse these sentiments when thinking about an innocent suspect compared to a guilty one (Mindthoff et al., 2018). The power of adverse inferences based on silence are aptly illustrated by US Supreme Court Justice Scalia stating: "If I ask my son whether he saw a movie that I had forbidden him to watch, and he remains silent, the import of his silence is clear" (*Mitchell v. United States,* 1999).

In sum, experimental findings and field observations converge to suggest that remaining silent induces an expectation of suspect culpability. Hence, suspects face a catch-22 when deciding to waive or exercise their right to silence. That is, suspects have to weigh the risk of foregoing an effective prophylactic against the psychological persuasiveness of police interrogation in which people may face more coercive tactics during the interrogation or incur the adverse inferences of remaining silent.

Silence and Attribution Theory

On a theoretical level, adverse inferences derived from decisions to remain silent may be explained by attribution theory. First, the fundamental attribution error is a theoretical framework that early social psychologists proposed to understand how observers evaluate behaviors

exhibited by social actors. The fundamental attribution error reflects the tendency to "overestimate the importance of personal or dispositional factors relative to environmental influences" (Ross, 1977, p. 184). Recent research highlights the continued relevance of the fundamental attribution error to perceptions of blame: in a study where participants were asked to judge a crash that occurred in either good or poor driving conditions, participants did not consider the possibility that poor driving conditions (i.e., situational influence) led to the crash, instead judging the hypothetical driver as more negligent (i.e., dispositional factor; Flick & Schweitzer, 2021). In the same way, people may not consider the possibility that the stress of a police interrogation (i.e., situational influence) might lead to suspect silence, instead judging the hypothetical suspect as guilty (i.e., dispositional factor). In fact, research has demonstrated that people tend to ignore the situational influences present during a police interrogation (Kassin & Sukel, 1997) and view criminality as a trait or dispositional factor (e.g., Avery et al., 2021). Police officers (Vanderhallen et al., 2019) and judges (Pivaty et al., 2021) also tend to view silent suspects as guilty. Specifically, these presumed guilty suspects are assumed to be waiting to see what evidence has been gathered against them (Pivaty et al., 2022) and seen as not being cooperative (Gilleir et al., 2021). Therefore, in the current studies, we asked how suspects' decision to remain silent impact perceptions of suspect cooperation and helpfulness.

Second, alongside the fundamental attribution error, the false consensus bias could also help explain why the decision to remain silent could result in adverse inferences about suspect guilt. The false consensus bias is the tendency for social actors to "see their own behavioral choices and judgments as relatively common and appropriate to existing circumstances while viewing alternative responses as uncommon, deviant, and inappropriate" (Ross, 1977, p. 188). Thus, to the extent that people view waivers of pre-interrogation rights as normative and

common, they may view an invocation of rights as indicative of deviant behavior. Therefore, in the current studies, we asked how suspects' decision to remain silent impact perceptions of suspect trustworthiness and suspiciousness. In fact, research has found that mock suspects tend to waive their rights (e.g., Scherr & Madon, 2013) and field research has overwhelmingly demonstrated that actual suspects virtually always waive their rights (Kassin et al., 2019). And, despite acknowledging that suspects probably do not understand their Miranda rights and that police will use manipulative tactics to obtain a Miranda waiver, jury eligible participants still believe that people largely waive their rights because they are innocent (Mindthoff et al., 2018). Hence, there is truth to the idea that most suspects—guilty or innocent—waive their rights, and unless the vast majority of suspects interrogated by police are innocent, pre-interrogation decisions are not a reliable indication of guilt, and thus should not be considered legal evidence of guilt.

Attribution theory—specifically the fundamental attribution error and false consensus bias—suggests that an invocation of pre-interrogation rights could result in adverse inferences about a suspect's guilt. To our knowledge, Sukumar and Kassin (2017) and Lawrence et al. (2024) are the only researchers to have tested these theoretical mechanisms in the context of pre-interrogation rights. To address this gap in the literature, we conducted three studies investigating the potential catch-22 of suspects' choice by examining how pre-interrogation rights decisions could impact lay people's perceptions of the suspect. Studies 1 and 3 were run concurrently, and independently, by different subgroups of the research team. As the research questions and variables were very similar (though measured differently), we decided to write them up together. In hindsight, this allowed for greater method sampling and conceptual replication of our work.

Overview

Our first study examined the influence of a suspect's decision to remain silent during the course of an investigation. Importantly, we expand on previous research by examining how adverse inferences related to suspect decisions could occur during an informal interaction with law enforcement, as well as a formal pre-interrogation decision. In our second study, we extended Study 1 by addressing how the decision to remain silent could impact laypeople's perceptions of the subsequent interrogation. Study 3 builds on the previous studies by exploring how the decision to remain silent could impact negative perceptions of a suspect and subsequent guilt decisions using a different case (i.e., stimulus generalizability), different measures (i.e., outcome generalizability), and adding a control group. All survey materials, data (excluding demographics and/or potentially identifiable information, as requested by REB agreements for Studies 1 and 2 and IRB instructions for Study 3), syntax, and additional analyses are available on the Open Science Framework (https://osf.io/4ek97/?view_only=58c39f70c41f48458556c7ee2d3782cd).

Study 1

Similar to the US, police in Canada are required to inform suspects of their rights who are undergoing custodial interrogation. One such right is outlined in Section 7 of the Charter, which states that everyone has the right to life, liberty, and security of person. Section 7 is also concerned with principals of fundamental justice, which in subsequent Canadian case law (i.e., *R v. Hebert*, 1990) has been interpreted as meaning suspects have the right to withhold self-incriminating information from the police. Notably, this right applies to any interaction with police officers, not just interactions that take place in a formal custodial setting. Thus, it is possible that individuals may refuse to talk to police earlier in the investigative process, and that

choice could impact the direction police officers take later on in the investigation. Yet, most research to date has focused on the formal decision to speak with law enforcement (i.e., immediately prior to interrogation). Here, we fill this gap by examining the decision to speak with police in both formal (interrogation) and informal (early requests to speak about an event) settings, and the potential consequences of such decisions.

Based on the literature surrounding attributions, we propose the *adverse inferences* hypothesis: (1) suspects who remain silent will be viewed more negatively than suspects who waive their right to silence, and (2) suspects who remain silent will be judged as more likely to be guilty than suspects who do not remain silent. We also test an exploratory mediation model that expands beyond the main effects predicted by the *adverse inferences* hypothesis. Specifically, we explore whether a suspect's decision to remain silent increases negative perceptions of that suspect, which in turn increase guilt judgments.

Method

Participants and Design

We recruited participants ($N = 281$) from a participant pool at a Canadian university, with 57 participants removed for failing attention (i.e., not selecting a specific response option) and manipulation (i.e., incorrectly identifying assigned condition) checks. The final analytic sample included 224 undergraduate students who were 19.78 ($SD = 3.09$) years old on average, with the majority identifying as female (68.7%). Most participants identified as Asian (39.9%), with fewer identifying as White (32.7%), Black (8.5%), or various other ethnic identities (17.1%). Participants were randomly assigned to a 2 (informal silence: waived vs. exercised) x 2 (formal silence: waived vs. exercised) between-subjects design.

Sensitivity Analysis. Because we did not conduct *a priori* power analyses, we carried out sensitivity analyses to assess the power associated with the observed effects detected in our main analyses. Sensitivity analyses are often preferred over sample size estimates because they provide an estimate of the power our achieved sample provides to detect effects across a range of power estimates and parameters. To this end, we used the pwr2pll package (Aberson, 2022) in R (v12.1) to conduct a sensitivity analysis for the negative perception and continuous guilt judgment outcomes. With the sample of participants in Study 1, and the sample distribution across levels of our factors, the sensitivity analysis indicated that we could detect Cohen's *d* effect sizes as small as .34 and still achieve 70% power. Note that our significant effects had effect sizes larger than .34 and were associated with power above 80% and close to 100%. Thus, we are confident in the significant effects we observed across the main analyses.

Materials

Investigative Stimulus. We told participants they would be playing the lead detective in a fictional murder investigation and would be trying to solve the rape and murder of Gail Moore. To encourage participants in this perspective-taking endeavor, participants chose which information they viewed about the crime and suspect as part of a choose-your-own-adventure model. Upon giving consent, participants read about the crime scene and initial investigation efforts. As they progressed through the investigation, participants learned that canvassing the area of the crime scene did not reveal any leads, that Gail's roommates and ex-boyfriend had been cleared, and that the man who dropped Gail off at home the night before the murder had been cleared as well. Through a tip line, participants were informed that citizens reported seeing a blue 1970's sedan in the area near the crime, and following that lead, participants discover that the car belongs to a man named David Johnson. When participants go to Mr. Johnson's house in

the hopes of casually asking him some questions, he is on his way out the door to get to work. This initial point of contact was where informal silence was manipulated (waived vs. exercised).

Participants in the informal waived condition were told that Mr. Johnson was on his way to work when approached by the lead investigator but agreed to answer a few questions before leaving. Specifically, Mr. Johnson explained he owned a blue sedan and was picking up a friend who lived close to the crime scene for a road trip they had both taken time off work for. In the informal exercised condition, however, participants were told that "*Unfortunately, [Mr. Johnson] did not agree to answer any questions before leaving for work.*"

After the encounter, all participants rated their impressions of Mr. Johnson and how much of their time they felt should be invested into investigating him further. Participants were then able to view information (personal information, police records, and more information from a public tip line) gathered on Mr. Johnson as part of the choose-your-own-adventure. Later on, with no obvious suspects, the police captain suggests that Mr. Johnson be brought in for formal questioning. It is at this point that formal silence was manipulated (waived vs. exercised).

When Mr. Johnson was brought into the police station, participants in the formal waived condition were told that Mr. Johnson happily waived his rights and would answer any questions. Mr. Johnson told the lead investigator that "*[he] wants to cooperate to clear things up so [he] can go back home and get on with [his] life*." In the formal exercised condition, however, Mr. Johnson said he was happy to exercise his rights and not answer any questions.

Negative Perceptions of the Suspect. Participants answered several questions, at two time-points, concerning their perceptions of the suspect: once immediately after each silence manipulation. Specifically, participants rated whether they found Mr. Johnson aggressive, competent, emotionally stable, friendly, guilty, helpful, honest, intelligent, suspicious, rude,

trustworthy, and violent on a Likert-type scale (1 = *"Not at all"* to 5 = *"Extremely"*). The items for competence, conscientiousness, stability, friendliness, honest, intelligent, and trustworthy were reverse coded before averaging together the 12 items at time 1 (M = 2.88, SD = 0.61) and time 2 (M = 2.75, SD = 0.61), with higher scores indicating more negative perceptions of Mr. Johnson. The composites demonstrated good reliability at time 1, McDonald's ω = .83, 95% CI [.79, .86], and at time 2, McDonald's ω = .84, 95% CI [.80, .87]. Reliability of the scales are reported with McDonald's Omega (see Hayes & Coutts, 2020 for more information about McDonald's Omega) using Version 0.16.3 of the JASP statistical program (JASP Team, 2022).

In addition, after participants offered their negative perceptions of Mr. Johnson's character at time 2, we asked participants *'How has your view of David Johnson changed?'* on a 1 (*"More Extremely Negative"*) to 4 ("*No Change*") to 7 (*"More Extremely Positive"*) scale. This item allowed us to examine if participants were consciously aware that their perceptions of the suspect had changed. On average, participants responses were around the "no change" midpoint, but on the negative side of the scale (M = 3.79, SD = 1.24; see https://osf.io/4ek97/?view_only=58c39f70c41f48458556c7ee2d3782cd for these supplemental, exploratory analyses).

Guilt Judgments. Guilt judgments were measured several ways. Participants indicated whether they would choose to arrest Mr. Johnson based on the evidence gathered (0 = yes, 1 = no; 20.73% chose to arrest). In addition, we asked participants after each encounter with Mr. Johnson (i.e., silence manipulations), and after their arrest decision, how much more time they felt should be spent investigating Mr. Johnson (0-100%). Participants also indicated how confident they were that Mr. Johnson committed the crimes (0-100%), or was at least somehow involved (0-100%). The 0-100 items were averaged to create a composite guilt variable, with

higher scores indicating greater guilt (M = 43.64, SD = 23.60). For the composite variable, only the last time participants were asked about investigating Mr. Johnson (i.e., after the arrest decision) was included to avoid multicollinearity issues. McDonald's Omega was calculated and indicated good reliability for the guilt variable, McDonald's ω = .88, 95% CI [.86, .91].

Procedure

We directed participants to a Qualtrics link where we obtained informed consent. Then, participants worked through the interactive investigative stimulus described above, which introduced both invocation manipulations. After both manipulations, participants rated their impressions of Mr. Johnson, and again indicated how much of their time they wanted to invest investigating him. After Mr. Johnson was interrogated, participants learned that physical evidence was done being processed. They were given a choice to view all, some, or none of the evidence (i.e., blood type information, fiber sample, security footage, shoe print; part of the choose-your-own-adventure). Finally, the study ended with the guilt judgment questions, demographic questionnaire, and debriefing.

Results

Preliminary Analyses

Manipulation Checks. When asked about Mr. Johnson's informal decision to remain silent, less than half of participants (45%) correctly identified whether Mr. Johnson waived or exercised his rights. However, the vast majority of participants correctly identified whether Mr. Johnson formally waived or exercised his rights during the interrogation (80%). This implies that participants largely do not interpret unofficial requests for speaking with law enforcement as a decision about rights. Furthermore, all of the participants (n = 52) who failed the second manipulation check (i.e., formal silence) also failed the first manipulation check (i.e., informal

silence). To ensure the integrity of our data, any participant who did not complete the survey (n = 5) or failed both manipulation checks (n = 52) were excluded from analyses. The other participants who "failed" only the informal silence manipulation check were included in analyses. All subsequent analyses for Study 1 were conducted with the remaining 224 participants. Instances in which degrees of freedom do not reflect 224 participants are the rare result of some participants skipping questions.

Main Analyses

Negative Perceptions of the Suspect. A repeated measures Analysis of Variance (ANOVA) was conducted to see if participants' negative perceptions of Mr. Johnson changed as a function of time. The informal and formal silence manipulations were included as between-subjects factors, while time served as the within-subjects factor. Results indicated a statistically significant effect of the informal silence manipulation, F (1, 202) = 55.87, $p < .001$, $\eta_p^2 = .217$. As predicted, when participants read that Mr. Johnson remained silent, he was viewed more negatively (M = 3.03, SD = .0.48) than when he waived his right to silence (M = 2.55, SD = 0.45), Cohen's d = 1.04, 95% CI [0.75, 1.33]. In addition, there was a significant main effect of the formal silence manipulation, F (1, 202) = 25.26, $p < .001$, $\eta_p^2 = .111$. As predicted, participants who read that Mr. Johnson remained silent viewed him more negatively (M = 2.95, SD = 0.45) than participants who read that Mr. Johnson waived his rights (M = 2.62, SD = 0.46), Cohen's d = 0.72, 95% CI [0.43, 1.01]. There was also a significant main effect of time, F (1, 202) = 41.73, $p < .001$, $\eta_p^2 = .171$, such that participants had more overall negative views of Mr. Johnson immediately after the informal silence manipulation (M = 2.89, SD = 0.49) compared to their views after the formal silence manipulation (M = 2.68, SD = 0.54), Cohen's d = 0.40, 95% CI [0.20, 0.59]. These main effects were qualified by the statistically significant interactions

between time and informal silence, F (1, 202) = 53.68, $p < .001$, $\eta_p^2 = .210$, and time and formal silence, F (1, 202) = 69.93, $p < .001$, $\eta_p^2 = .257$ (see Table 1 for simple effects and https://osf.io/4ek97/?view_only=58c39f70c41f48458556c7ee2d3782cd for graphic representations of interactions).

Table 1. Simple Effects for Significant Silence by Time Interactions on Negative Perceptions of Suspect in Study 1

Informal Silence x Time Interaction					
Condition	**Time**	***M***	***SD***	***F***	***p***
Exercise Rights	Time 1	3.24	0.38		
	Time 2	2.91	0.55	$F(1, 202) = 79.13$	$p < .001$
Waive Rights	Time 1	2.54	0.53		
	Time 2	2.59	0.63	$F(1, 202) = .46$	$p = .50$
Formal Silence x Time Interaction					
Condition	**Time**	***M***	***SD***	***F***	***p***
Exercise Rights	Time 1	2.93	0.57		
	Time 2	2.98	0.50	$F(1, 202) = 2.50$	$p = .12$
Waive Rights	Time 1	2.78	0.61		
	Time 2	2.36	0.58	$F(1, 202) = 83.22$	$p < .001$

Guilt Judgments. We first tested whether the suspect's informal and formal silence, as well as the interaction between the two, impacted participants' binary arrest judgments using a binary logistic regression with 5000 bootstrapped samples. The main predictors were entered into the model first, which was not statistically significant, $\chi^2(2) = 2.65$, $p = .265$, Nagelkerke $R^2 = .020$. Furthermore, the model with the interaction added did not significantly improve the model, $\chi^2(1) = 1.43$, $p = .232$, Nagelkerke $R^2 = .031$.

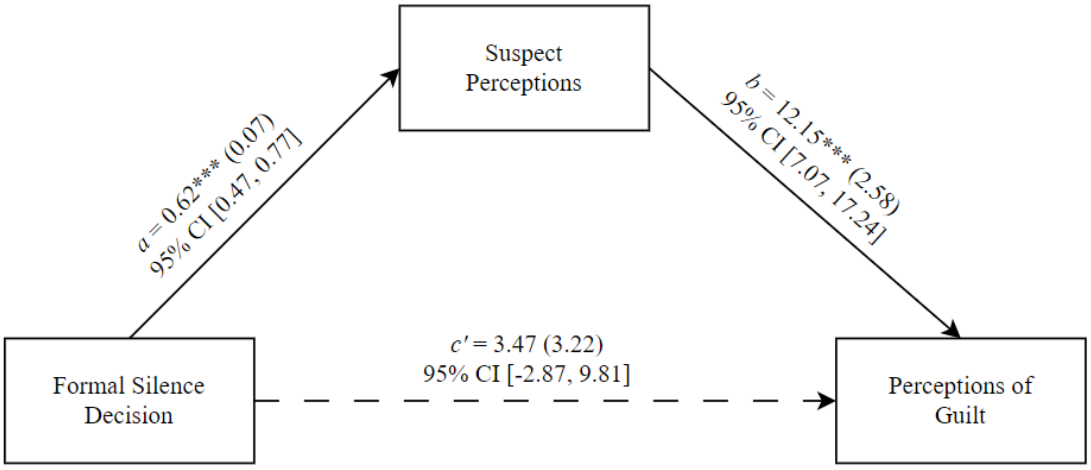
We then used a 2 x 2 between-subjects ANOVA to examine the influence of informal and formal silence on participants' continuous guilt judgments. Results indicated that Mr. Johnson's informal decision to talk to the police ($M = 43.32$, $SD = 20.56$) or not ($M = 46.35$, SD

= 21.85) did not significantly impact participants' continuous guilt judgments, $F(1, 220) = 1.14$, $p = .288$, $d = 0.14$, 95% CI of d [-0.12, 0.41]. However, there was a statistically significant influence of Mr. Johnson's formal silence decision on judgments of Mr. Johnson's guilt, $F(1, 220) = 14.83$, $p < .001$, $d = 0.53$, 95% CI of d [0.26, 0.80]. Specifically, participants who read that Mr. Johnson exercised his right to silence for the interrogation ($M = 50.31$, $SD = 20.54$) more strongly believed in Mr. Johnson's guilt than participants who read that Mr. Johnson waived his right to silence ($M = 39.37$, $SD = 20.98$). The interaction between informal and formal silence, however, did not significantly influence participants' judgments of Mr. Johnson's guilt, $F(1, 220) = 0.04$, $p = .852$, $\eta_p^2 < .001$.

Exploratory Mediation Analysis

As informal silence did not impact judgments of guilt, we explored possible mediational analyses involving formal silence only. Specifically, we tested whether the effect of suspects' silence on guilt judgments was mediated by perceptions of the suspect using model 4 in PROCESS V.3.5 in SPSS (Hayes, 2017). The model explained approximately 15% of the variance in participants' judgments of Mr. Johnson's guilt, $F(2, 208) = 18.86$, $p < .001$, $R^2 = .154$. Results based on 5000 bootstrapped samples indicated no direct relationship between formal silence and judgments of Mr. Johnson's guilt (see Figure 1). However, there was a significant indirect effect, $b = -7.53$, 95% CI of b [-11.19, -4.29]. When participants were informed that Mr. Johnson exercised his right to silence, he was perceived more negatively than if they were told he waived his right. Moreover, the more negatively the participants perceived Mr. Johnson, the stronger their judgments of Mr. Johnson's guilt. In other words, the negative perceptions indirectly mediated the impact of formal silence decisions on judgments of guilt.

Figure 1. Simple Mediation Model for the Effect of Formal Silence on Guilt Mediated by Suspect Perceptions



Notes. Formal silence decision (0 = Waived, 1 = Exercised). Higher scores for suspect perception indicated more negative feelings towards Mr. Johnson. Dotted lines indicate a non-significant relationship between variables.

Discussion

Results from Study 1 offered support for the *adverse inferences hypothesis*. Specifically, participants endorsed more negative perceptions of Mr. Johnson when he remained silent in both the informal and formal settings. In terms of guilt, participants' judgments were significantly stronger when Mr. Johnson remained silent in the formal setting. Finally, we found evidence in the exploratory mediation analysis that participants consider extralegal factors—their negative perceptions of the suspect caused by the suspect's refusal to speak with them—when judging guilt.

Study 2

Study 1 offered evidence that suspects' decisions to remain silent influences negative perceptions of the suspect and guilt judgments. Study 2 attempted to replicate and expand on

Study 1 by investigating not only how the decision to remain silent could influence perceptions of a suspect, but also the subsequent interrogation of a suspect.

Thus, as part of our replication of Study 1, we again propose the *adverse inferences* hypothesis. Further, we expand on Study 1 by offering the *silence allowance* hypothesis: suspects who exercise their right to silence prior to a formal interrogation will face an investigator who is more willing to condone coercive interrogation tactics as interrogations in Canada, and other parts of the world, can continue even if a suspect is attempting to remain silent. Thus, in addition to preserving experimental design to test the *silence allowance* hypothesis, there is a practical reason to ask participants to imagine such a situation—it is a viable situation in Canada.

Finally, we tested two alternative exploratory mediation models that could provide valuable insight into the mechanisms associated with inferences related to suspects' pre-interrogation decision-making. The first exploratory model is a parallel mediation wherein a suspects' pre-interrogation decision influences perceptions of the suspect and people's willingness to condone the use of coercion against the suspect, ultimately affecting guilt judgments. Specifically, this exploratory model examined the idea that a silent suspect could simultaneously be perceived more negatively and also be subjected to a more coercive interrogation leading to stronger judgments of the suspect's guilt (see Figure 2).

The potential relationships in the parallel mediation model could emerge because people engaged in motivated reasoning wherein they reasoned their way to conclusions they favored or preferred (Epley & Gilovich, 2016). Based on research showing that when people are confronted with requests to cooperate with authority figures generally (Sommers & Bohns, 2024), and law enforcement specifically (e.g., consent to search; Simmons, 2005), they overwhelming comply

with the requests, when participants read about Mr. Johnson's norm violating behavior of remaining silent and not complying, it could trigger beliefs that Mr. Johnson deserves more intimidation from law enforcement. To convince themselves that endorsing coercion and subjecting someone to a high-pressure filled confrontation is appropriate, participants may calibrate their guilt judgments accordingly. Hence, participants who read about Mr. Johnson invoking his right to silence may have higher guilt judgments because they reason their way to judgments that they preferred and convinced themselves were appropriate.

The second exploratory model—suggested to us by a reviewer as a plausible alternative—examines the possibility of a serial mediation process wherein suspects' pre-interrogation decision influences perceptions of the suspect, which in turn impacts guilt judgments, and ultimately willingness to condone coercion during an interrogation. Specifically testing the idea that a silent suspect would be viewed more negatively, which in turn would lead to higher guilt judgments, and those guilt judgments would ultimately lead to greater willingness to condone coercion.

The fundamental attribution error (Ross, 1977) provides a theoretical framework that could be used to understand the sequence of perceptions and judgment of the exploratory serial model. Participants who read about Mr. Johnson remaining silent may arrive at a dispositional attribution to understand his interaction with law enforcement (e.g., Mr. Johnson is rude and disrespectful) rather than entertain the possibility of situational factors (e.g., Mr. Johnson was late for work). Similar to the motivated reasoning rationale, reading about an instance in which someone violated an expected norm may increase the likelihood of a dispositional attribution and a negatively valanced attribution at that. Furthermore, based on research showing people often perceive those involved with wrongdoing as cold, untrustworthy, and angry (e.g., Côté-Lussier,

2016), the simple fact that law enforcement were interested in talking with Mr. Johnson can arouse negative stereotypes associated with criminal involvement. The negative dispositional attributions and prompting of stereotypes associating Mr. Johnson with criminality may then, in turn, increase their belief in Mr. Johnson's guilt.

Method

Participants and Design

Participants (N = 372) were recruited from a participant pool at a Canadian University with 126 participants removed for failing attention (i.e., not selecting a specific response option) and manipulation (i.e., incorrectly identifying assigned condition) checks. The final analytic sample included 246 undergraduate students who were 22.04 (SD = 5.73) years old on average, with the majority identifying as female (59.3%). Most participants identified as Asian (42.3%) and fewer identifying as White (33.7%), other (10.2%), and Black (6.9%) respectively. Study 2 used the same design as Study 1.

Sensitivity Analysis. Because we did not conduct *a priori* power analyses, we conducted sensitivity analyses (using pwr2pll in R; Aberson, 2022) to assess the power associated with our observed effects for negative perceptions, guilt judgments, and willingness to condone coercion. With our sample size, and the distribution of the sample across levels of our factors, the sensitivity analysis indicated that, similar to Study 1, we could detect Cohen's d effect sizes as small as .32 and still achieve 70% power. Again, our obtained effects had larger effect sizes and were associated with power above 80%. Thus, we are confident in the significant effects we observed across these analyses.

Materials and Procedure

All of the procedures and materials from Study 1 were used in Study 2, with the exception that Study 2 was run online due to the Covid-19 pandemic. In addition, to expand on Study 1, we incorporated a measure of participants' willingness to condone coercion during the interrogation. Specifically, after the formal silence manipulation, participants were asked (as the lead investigator) to think about their upcoming interrogation with Mr. Johnson (as the interrogation would routinely occur in Canada, even if a suspect invoked their right to silence). In particular, participants were asked to what extent they should (0 = *Should NOT Do This* to 100 = *Should DO This*) engage in 9 different tactics:

- Research the sports and hobbies David enjoys to help build rapport with him so he is more likely to open up,
- Pretend to have strong forensic evidence being processed that will confirm who committed the crime,
- Wear David down by questioning him for hours on end,
- Question David when he is in a vulnerable state (e.g., sleep deprived),
- Question David when he is in an altered state (e.g., drunk),
- Withhold luxuries (e.g., cigarettes) from David,
- Withhold social support (e.g., contact with family) from David,
- Make the actions of the crime seem normal to reduce David's feelings of guilt, and
- Exaggerate the seriousness of the crime to scare David into thinking about the consequences should he refuse to confess.

We then created a composite by averaging the 9 items, with higher scores representing greater acceptance of coercive approaches, McDonald's $\omega = .77$, 95% CI [.73, .81]. Overall, participants were generally unwilling to condone using these tactics ($M = 30.67$, $SD = 17.37$).

We selected these 9 items to represent interrogation tactics that are commonly used in the U.S. and other Western jurisdictions that rely on accusatorial interrogation approaches. To that end, we focused on tactics that could build rapport, remove psychological comfort, or are based in minimization and maximization techniques. These items, to varying degrees, could be considered coercive because they reflect the "use of power to constrain an individual's situation, to impose one's will on that individual via the use of force or conditional proposals (to include both threats and offers)" (Luna, 2022, p. 7). According to Luna's (2022) novel theoretical definition of coercion, items 2 and 9 would be considered a conditional threat; items 3 through 7 would be considered constraints; and item 8 would be a conditional offer. Though not explicitly listed in Luna's (2022) framework, we included rapport as potentially coercive as rapport on its own has been conceptualized as a form of minimization by other researchers (see Vallano et al., 2022).

Results

Preliminary Analyses

Manipulation Checks. Of the 372 participants, when asked if Mr. Johnson waived or exercised his right to silence during law enforcement's initial attempt to interview him, less than half of participants (39%) answered correctly, but the majority of participants correctly identified whether Mr. Johnson waived or exercised his rights during the formal interaction (66%). Although correct responses were lower than Study 1, it is consistent with the general trend research has found, specifically greater numbers of participants missing checks like this during the pandemic (Peyton et al., 2021). As in Study 1, all of the participants (n = 70) who failed the second manipulation check (i.e., formal silence) also failed the first manipulation check (i.e., informal silence). To ensure the integrity of our data, participants who did not complete the

survey (n = 56) or failed both manipulation checks (n = 70) were excluded from analyses. All subsequent analyses for Study 2 were conducted with the remaining 246 participants. Instances in which degrees of freedom do not reflect 246 participants are the rare result of some participants skipping questions.

Correlations. We first ran simple Pearson correlations to investigate the potential relationships between participants' negative perceptions of the suspect, willingness to condone coercion, and overall guilt judgments. Results indicated significant, positive correlations amongst each variable. Specifically, more negative perceptions of the suspect was associated with more willingness to condone coercion (r = 0.21, p = .001) and overall perceptions of guilt (r = 0.43, p < .001). Likewise, an increase in willingness to condone coercion was associated with an increase in overall guilt perceptions (r = 0.41, p < .001).

Main Analyses

Negative Perceptions of the Suspect. A repeated measures ANOVA was conducted on participants' perceptions of Mr. Johnson, with Mr. Johnson's informal and formal silence decisions serving as between-subjects factors and time as the within-subjects factor. All the Study 1 findings replicated, as predicted: Mr. Johnson was viewed more negatively when he stayed silent, in both informal and formal situations and the effect was stronger immediately after the informal manipulation. That is, when participants read that Mr. Johnson remained silent during informal questioning, he was viewed more negatively (M = 3.11, SD = 0.41) than when he talked (M = 2.56, SD = 0.40), Cohen's d = 1.34, 95% CI of d [1.06, 1.62], F(1, 242) = 112.27, p < .001, η_p^2 = .317. Further, participants who read that Mr. Johnson exercised his right to silence during formal questioning viewed Mr. Johnson more negatively (M = 2.95, SD = 0.40) than participants who read that Mr. Johnson waived his right (M = 2.72, SD = 0.40), Cohen's d =

0.59, 95% CI [0.34, 0.85], F (1, 242) = 21.30, $p < .001$, $\eta_p^2 = .081$. And participants had more overall negative views of Mr. Johnson immediately after the informal silence manipulation (M = 2.96, SD = 0.45) compared to their views after the formal silence manipulation (M = 2.71, SD = 0.45), Cohen's d = 0.57, 95% CI [0.38, 0.76], F (1, 242) = 83.65, $p < .001$, $\eta_p^2 = .257$. Again, these main effects were qualified by statistically significant interactions between time and informal silence, F (1, 24) 2= 94.85, $p < .001$, $\eta_p^2 = .282$, and time and formal silence, F (1, 242) = 46.88, $p < .001$, $\eta_p^2 = .162$ (see Table 2 for simple effects and https://osf.io/4ek97/?view_only=58c39f70c41f48458556c7ee2d3782cd for graphical representations of interactions).

Table 2. Simple Effects for Significant Silence by Time Interactions on Negative Perceptions of Suspect in Study 2

Informal Silence x Time Interaction					
Condition	**Time**	***M***	***SD***	***F***	***p***
Exercise Rights	Time 1	3.36	0.46		
	Time 2	2.88	0.45	$F(1, 242) = 146.95$	$p < .001$
Waive Rights	Time 1	2.55	0.44		
	Time 2	2.54	0.54	$F(1, 242) = .22$	$p = .64$
Formal Silence x Time Interaction					
Condition	**Time**	***M***	***SD***	***F***	***p***
Exercise Rights	Time 1	3.04	0.58		
	Time 2	2.94	0.42	$F(1, 242) = 2.84$	$p = .09$
Waive Rights	Time 1	2.85	0.63		
	Time 2	2.46	0.52	$F(1, 242) = 119.58$	$p < .001$

Willingness to Condone Coercion. New to Study 2, we were interested in the effects of informal and formal silence decisions on participants' willingness to condone the use of coercive tactics as interrogators. We ran a 2 x 2 between-subjects factorial ANOVA with informal and formal silence as independent variables and willingness to condone coercion as the dependent

variable. Results revealed a statistically significant effect of the formal silence decision, $F(1, 242) = 6.63$, $p = .011$, $\eta_p^2 = .027$. More specifically, those who read that Mr. Johnson exercised his right to silence were more willing to condone coercion ($M = 33.65$, $SD = 17.39$) than those who read that Mr. Johnson waived his right ($M = 27.91$, $SD = 17.51$). However, there was no statistically significant effect of informal silence decision—there was no difference in condoning coercion between those who read that Mr. Johnson informally refused to speak to the police ($M = 30.61$, $SD = 17.71$) and those who read that he did speak to the police ($M = 30.95$, $SD = 17.27$), Cohen's $d = 0.02$, 95% CI d [-0.23, 0.27], $F(1, 242) = 0.02$, $p = .881$, $\eta_p^2 < .001$. Furthermore, there was no statistically significant interaction, $F(1, 242) = 2.19$, $p = .140$, $\eta_p^2 = .009$.

Guilt Judgments. As in Study 1, we tested whether the suspect's informal and formal silence, as well as the interaction between the two, impacted participants' guilt judgments using a binary logistic regression with 5000 bootstrapped samples. Unlike Study 1, the first block (containing just the main effects) was statistically significant, χ^2 (2) = 9.59, $p = .008$, Nagelkerke $R^2 = .060$. Participants who read that Mr. Johnson formally exercised his rights (27.49%) were more likely to find Mr. Johnson guilty than those who read that Mr. Johnson waived his rights (13.04%), $b = -1.01$, $p = .004$, $OR = 2.74$, 95% CI of OR [1.39, 5.40]. As in Study 1, the informal silence decision, $b = -0.41$, $p = .209$, $OR = 0.66$, 95% CI of OR [0.35, 1.26] and interaction were not significant, χ^2 (1) = 0.76, $p = .384$, Nagelkerke $R^2 = .064$.

We then conducted a 2 (informal silence) x 2 (formal silence) between-subjects ANOVA on participants' continuous guilt judgments. The findings from Study 1 replicated: there was a statistically significant effect of the formal silence decision, $F(1, 242) = 13.96$, $p < .001$, $\eta_p^2 = .055$, whereby participants who read that Mr. Johnson exercised his right to silence believed Mr. Johnson was more likely to be guilty ($M = 48.97$, $SD = 23.25$) than those who read that Mr.

Johnson waived his right to silence (M = 37.83, SD = 23.42), Cohen's d = 0.48, 95% CI of d [0.22, 0.73], but not for the informal silence decision, $F(1, 242) = 1.09$, $p = .298$, $\eta_p^2 = .004$, nor an interaction, $F(1, 242) = 0.19$, $p = .666$, $\eta_p^2 = .001$. Thus, in Study 2, the results from the continuous guilt judgment mirrored those of the binary arrest decisions.

Exploratory Mediation Analyses

As we wished to explore the possible mediation of two different variables (negative perceptions of Mr. Johnson and willingness to condone coercion) on the relationship between formal silence and guilt judgments, we used a parallel mediation analysis. The analysis was performed using model 4 in PROCESS V.3.5 in SPSS (Hayes, 2017). The model explained approximately 29% of the variance in participants' judgments of Mr. Johnson's guilt, $F(3, 242) = 33.16$, $p < .001$, $R^2 = .291$ (see Table 3).

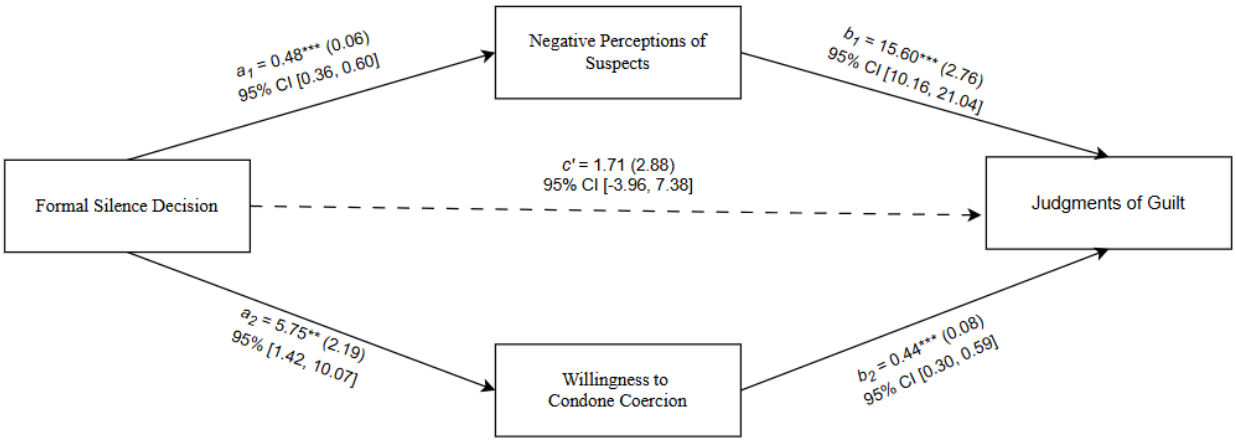
Mirroring Study 1, based on 5000 bootstrapped samples, there was a significant overall indirect effect of formal silence decision on guilt through negative perceptions of Mr. Johnson, b = 7.47, 95% CI of b [4.34, 10.82]. When participants read that Mr. Johnson exercised his right to silence, he was viewed more negatively than if he waived his right, which in turn led to stronger guilt judgments. Moreover, there was a significant overall indirect effect of formal silence decision on guilt as mediated by willingness to condone coercion as well, b = 2.56, 95% CI of b [0.64, 4.74]. When participants read that Mr. Johnson exercised his right to silence, they were more likely to condone the use of coercive interrogations tactics, which in turn led to stronger guilt judgments. However, results indicated no direct relationship between formal silence and judgments of Mr. Johnson's guilt (see Figure 2).

Table 3. Results of Parallel Mediation of Formal Silence Decision on Guilt Judgments

	Consequent								
	Perception			Coercion			Guilt		
Antecedent	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*
Decision	0.48 [0.36, 0.60]	0.06	< .001	5.75 [1.42, 10.07]	2.19	.009	1.71 [-3.96, 7.38]	2.88	.553
Perceptions	—	—	—	—	—	—	15.60 [10.16, 21.04]	2.76	< .001
Coercion	—	—	—	—	—	—	0.44 [0.30, 0.59]	0.08	< .001
Constant	2.46	0.04	< .001	27.61	1.60	< .001	-13.23	7.05	.062
	R^2 = .2073 $F(1, 244) = 63.80$, $p <$ .001			R^2 = .0273 $F(1, 244) = 6.86$, $p = .009$			R^2 = .2913 $F(3, 242) = 33.16$, $p <$ .001		

Notes. Decision is coded such that waived = 0 and exercised = 1. Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Coefficients are unstandardized *b*-weights. Numbers in brackets indicate 95% confidence intervals for unstandardized *b*-weights.

Figure 2. Parallel Mediation Model for the Effect of Formal Decision on Judgments of Guilt Mediated by Suspect Perceptions and Willingness to Condone Coercion



Notes. Formal Silence Decision (0 = Waived, 1 = Invoked). Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Dotted lines indicate a non-significant relationship between variables.
** $p < .01$*** $p < .001$

We conducted an alternative mediation model that took a serial indirect approach to examine the potential for formal silence to predict negative perceptions of Mr. Johnson, which in turn would predict guilt judgments, which would subsequently predict participants' willingness to condone coercion. Such an alternative model is a valuable complementary way to look at these relationships. Beyond changing the mediation from a parallel to serial model, this alternative exploratory mediation tests a theoretically plausible alternative that guilt judgments precede willingness to endorse coercion as opposed to being the result of coercion judgments. But, again to be candid, this model was suggested by a reviewer and, because it violates the temporal order in which participants responded to these questions, was not initially included as a model.

To explore the serial mediation model, model 6 in PROCESS V.3.5 in SPSS was used. The model explained approximately 17% of the variance in participants' willingness to condone coercion judgments, $F(3, 242) = 16.34$, $p < .001$, $R^2 = .169$ (see Figure 3). Bootstrapped analyses with 5000 samples revealed that the relationship between formal silence decision and willingness to condone coercion was serially mediated by negative perceptions of Mr. Johnson and participant guilt judgments, $b = 2.44$, 95% CI [1.33, 3.92]. Specifically, participants in the

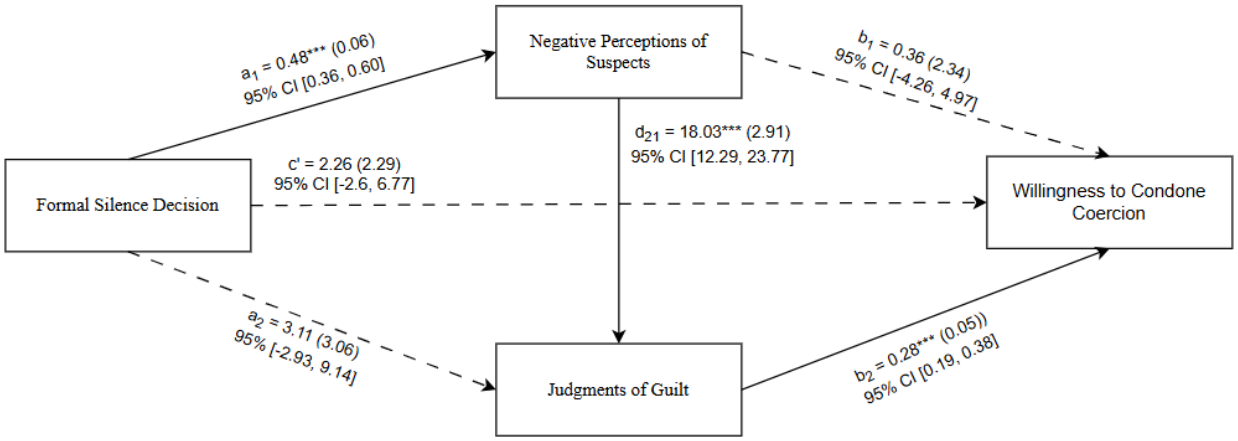
invoke group had more negative perceptions of Mr. Johnson, $b = 0.48$, $p < .001$, 95% CI of b [0.36, 0.60]. Moreover, the more negative perceptions that participant had, the more likely they were to believe Mr. Johnson was guilty, $b = 18.03$, $p < .001$, 95% CI of b [12.29, 23.77]. In turn, higher guilt judgments led to more willingness to condone coercion during the interrogation, $b = 0.28$, $p < .001$, 95% CI of b [0.19, 0.38] (see Table 4).

Table 4. Results of Serial Mediation of Formal Silence Decision on Willingness to Condone Coercion

	Consequent								
	Perception			Guilt			Coercion		
Antecedent	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*
Decision	0.48 [0.36, 0.60]	0.06	< .001	3.11 [-2.93, 9.14]	3.06	.312	2.26 [-2.26, 6.77]	2.29	.325
Perceptions	—	—	—	18.03 [12.29, 23.77]	2.91	< .001	0.36 [-4.26, 4.97]	2.34	.879
Guilt	—	—	—	—	—	—	0.28 [0.19, 0.38]	0.05	< .001
Constant	2.46	0.04	< .001	-6.91	7.43	.354	16.17	5.56	.004
	$R^2 = .2073$ $F(1, 244) = 63.80$, $p < .001$			$R^2 = .1894$ $F(2, 243) = 28.39$, $p < .001$			$R^2 = .1685$ $F(3, 242) = 16.34$, $p < .001$		

Notes. Decision is coded such that waived = 0 and exercised = 1. Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Coefficients are unstandardized *b*-weights. Numbers in brackets indicate 95% confidence intervals for unstandardized *b*-weights.

Figure 3. Serial Mediation Model for the Effect of Formal Decision on Willingness to Condone Coercion Mediated by Suspect Perceptions and Judgments of Guilt



Notes. Formal Silence Decision (0 = Waived, 1 = Invoked). Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Dotted lines indicate a non-significant relationship between variables.
*** $p < .001$

Discussion

All the findings from Study 1 replicated in Study 2. Like Study 1, our *adverse inferences* hypothesis was supported. Participants endorsed more negative perceptions of Mr. Johnson when he remained silent in both the informal and formal settings, and remaining silent in the formal pre-interrogation setting led to greater guilt judgments. We also found support for the mediating effect of negative perceptions of the suspect on guilt judgments. New to Study 2, we found that support for the *silence allowance* hypothesis in that participants who read that a suspect formally exercised their right to silent were willing to condone more coercive interrogation tactics.

The results of the exploratory mediation analyses offer potentially valuable insight into the mechanisms associated with inferences related to suspects' pre-interrogation decision-making. Although we briefly return to some these mechanisms later in the General Discussion, we focus on highlighting the insights here and the discussion of Study 3. Applying the

fundamental attribution error framework helps to understand that consistent perception related paths across both models whereby participants who read about Mr. Johnson remaining silent may have arrived at a dispositional attribution to understand his interaction with law enforcement (e.g., Mr. Johnson is rude and disrespectful) rather than entertaining the possibility of situational factors (e.g., Mr. Johnson was late for work). The negative dispositional attributions and prompting of stereotypes associating Mr. Johnson with criminality may have then, in turn, increased their belief in Mr. Johnson's guilt.

However, these ideas do not explain the parallel mediation results showing that participants were more willing to condone the use of coercion on those who invoked their rights which subsequently increased their beliefs in Mr. Johnson's guilt. Here, using a motivated reasoning lens helps to offer some explanation for the observed relationships. Similar to the initiation of the fundamental attribution error, when participants read about Mr. Johnson's norm violating behavior, it could have triggered beliefs that Mr. Johnson deserved more intimidation from law enforcement. To convince themselves that endorsing coercion and subjecting someone to a high-pressure filled confrontation was appropriate, participants may have calibrated their guilt judgments accordingly. Hence, participants who read about Mr. Johnson invoking his right to silence may have had higher guilt judgments because they reasoned their way to judgments that they preferred and convinced themselves were appropriate.

Yet, although the serial model does not comport to the temporal sequence in which participants responded to the questions, it is statistically better fitted to the data than the parallel mediation model and can also be understood using a motivated reasoning lens. Specifically, reading about Mr. Johnson remaining silent may have engendered negative attributions (e.g., Mr. Johnson is rude and disrespectful) and the interactions with law enforcement may have triggered

negative stereotypes associated with criminality (e.g., cold, untrustworthy) that increased the negative perceptions of Mr. Johnson. The negative perceptions subsequently could have inflated their judgments of Mr. Johnson's guilt. At this point, participants who read about Mr. Johnson remaining silent had negative perceptions of him and believed he was guilty. The series of attributions, beliefs, and judgments may have motivated participants to subsequently reason that Mr. Johnson should be subjected to coercion. That is, participants who read about Mr. Johnson invoking his right to silence may have reasoned their way to condoning coercion because it was consistent with their preceding negative attributions, perceptions, and judgments. Nonetheless, because this project did not aim to test any of these theoretical mechanisms and processes, further research is needed before any strong conclusions can be made.

Both Studies 1 and 2 included additional information when Mr. Johnson waived his right to silence (as would happen in real world contexts). Nonetheless, it is possible that the effects we observed were a function of this additional information, as opposed to the waiver decision on its own. Thus, Study 3 offers another examination of the adverse inferences associated with pre-interrogation decisions without this additional information and moves to a different paradigm to explore the generalizability of the findings.

Study 3

To avoid the potential of adverse inferences on juror decision-making, the US Supreme Court, in their landmark 1966 *Miranda* ruling, explicitly guaranteed that suspects' silence during questioning could not be used against them. Views on this issue, however, may be shifting. For example, in *Salinas v. Texas* (2013) the prosecution closed by arguing that silence **does** suggest guilt. Signaling their agreement with this idea, the Court wrote: "Statements against interest are regularly admitted into evidence at criminal trials...and there is no good reason to approach a

defendant's silence any differently" (*Salinas v. Texas*, 2013). Though *Salinas* (2013) currently only applies to non-custodial interviews (i.e., pre-Miranda), on a practical level, such precedent has the potential to completely remove the guarantee noted in the original *Miranda* ruling whereby suspects' silence could not be used against them. Specifically, Justice Thomas argues that allowing a jury to draw an adverse inference from suspects' silence does not force the suspect to self-incriminate and therefore should not be considered a violation of the 5th Amendment. Theoretically, literature on adverse inferences suggests—and our first two studies confirm—that when suspects remain silent, it will have downstream consequences.

Study 3 builds on the previous studies in several ways: (1) using a different paradigm, we explore how the decision to remain silent could impact negative perceptions of a suspect and subsequent guilt decisions without any additional information being provided to law enforcement in the waiver conditions (i.e., removing this natural issue), (2) we increase stimulus generalizability by using different materials (a different case, different measures), (3) we increase the generalizability of the findings by using different samples (US undergraduates, MTurk workers), and (4) we add a control group to determine whether waiving rights improves perceptions of a suspect and/or if exercising rights deteriorates perceptions of the suspect.

In line with the findings from Studies 1 and 2, the attribution literature, and inspired by the *Salinas* (2013) ruling, we expand the *adverse inferences* hypothesis, whereby participants who read about a suspect who exercised their rights would (1) perceive that suspect more negatively and (2) be more confident of that suspect's guilt compared to participants in a waived condition and control condition (who received no information about the suspect's Miranda decision). Second, we again offer the *silence allowance* hypothesis, testing whether participants will be more accepting of coercive interrogation tactics when a suspect has exercised their rights.

It is worth noting that one might expect all interrogation tactics to stop when a suspect invokes their right to silence in a formal interrogation in the US, and it may seem like a contradiction to ask participants what coercive interrogation tactics should be used in conditions where the interrogation does not theoretically occur. However, field observations of Miranda administrations in the US have found that interrogators will sometimes continue talking to a suspect even if they have invoked their rights—particularly in instances in which interrogators delay contacting the attorney or outright deny access to counsel (Leo, 1996). Third, we again explore two mediation models consistent with a motivated reasoning approach or the fundamental attribution error that can help to understand the relationships among suspects' decisions to exercise, perceptions of said suspects, willingness to condone coercion, and guilt.

Method

Participants and Design

Participants (N = 552) were recruited from an undergraduate participant pool (n = 219) at a large, Midwest university in the US and from Amazon's Mechanical Turk (MTurk; n = 333). A total of 35 participants were excluded from analyses because they did not finish the survey and/or failed attention (i.e., not selecting a specific response option) or manipulation checks (i.e., incorrectly identifying assigned condition). The final analytic sample, therefore, consisted of 517 participants. The students were younger (M = 20.44, SD = 3.97) than the MTurk workers (M = 37.63, SD = 19.71), and the majority identified as female (69.7%) whereas the majority of MTurk workers identified as male (56.7%). Participants, across samples, had similar racial profiles, with most identifying as White (79.2%; 77.7%) and fewer identifying as Black (12.1%; 10.3%), and other (8.7%; 11.7%) respectively. There were no statistically significant differences between the two samples on relevant judgments.

Participants were randomly assigned to one of three between-subjects conditions (Miranda decision: exercised vs. control vs. waived). Participants read one of three vignettes, depending on Miranda condition, about the initial portion of a police interview. After reading the vignette, each participant provided their perceptions of the suspect and what they perceived as acceptable for the interrogator to engage in while questioning the suspect, followed by their guilt judgments.

Sensitivity Analysis. Because we did not conduct *a priori* power analyses, we again used sensitivity analyses (pwr2pll in R; Aberson, 2022) to assess the power associated with our observed effects. Similar to Studies 1 and 2, the sensitivity analysis indicated that we could detect Cohen's *d* effect sizes as small as .30 and still achieve 78% power, whereas our obtained effect sizes were larger and demonstrated greater power. Thus, we are confident in the significant effects we reported.

Materials

Vignettes. Participants read about a double murder (~258 words leading up to manipulation) adapted from previous research (Kassin & Sukel, 1997). The murder victims are Mrs. Kathleen Wilson, who was strangled, and Mr. Maddox, who was stabbed. Participants read there was an initial investigation and the prime suspect is Charles Wilson, Mrs. Wilson's estranged husband who has not lived with her for "some time." Across all three scenarios, participants were informed that the suspect, Mr. Wilson, was being questioned but denied having any knowledge of the crime. The final portion of each vignette indicated that Mr. Wilson had just been arrested and detailed the Miranda decision.

In the exercised condition, Mr. Wilson stated to the interrogator "*I don't want to talk to you*" and "*I want my lawyer now.*" The participants were then explicitly told that Mr. Wilson had

exercised his Miranda rights. In the waived condition, Mr. Wilson stated to the interrogator "*I am fine talking with you*" and "*There's no reason I need a lawyer.*" Participants were then explicitly told that Mr. Wilson had waived his Miranda rights. Finally, participants in the control condition were not presented with any information detailing Mr. Wilson's decision to exercise or waive his rights. In this version of the scenario, Mr. Wilson stated: "*So basically I get to choose whether I talk or not right now?*" and "*And I can ask for a lawyer, but don't have to have one?*".

Negative Perceptions of the Suspect. Participants were asked several questions concerning their perceptions of the suspect. Specifically, participants were asked the following five questions: "To what extent do you believe Mr. Wilson is [dangerous, deceptive, open, disrespectful, cooperative]?". Each question was assessed using a sliding bar ranging from 0 to 100 with anchors of "*not at all*" (0) and "*entirely*" (100). Openness and cooperativeness were reverse scored, and then all five items were averaged together to create a composite negative perceptions variable, with higher values indicating more negative judgments about the suspect (M = 32.75; SD = 18.10). The scale demonstrated an acceptable degree of reliability, McDonald's ω = .71, 95% CI [.66, .76].

Willingness to Condone Coercion. Participants were asked five questions to assess the degree to which they condoned the use of coercive approaches during the interrogation of Mr. Wilson. The first question asked, "To what extent do you believe the police officer should do whatever necessary to get Mr. Wilson to talk about the crime?" The second question asked, "To what extent do you believe the police officer should do whatever necessary to put pressure on Mr. Wilson to start and continue talking about the crime?" The third-fifth questions asked, "To what extent do you believe the police officers should withhold luxuries (e.g., cigarettes)/social support (e.g., contact with family)/necessities (e.g., bathroom breaks) from Mr. Wilson?" Each

question was assessed using a sliding bar ranging from 0 to 100 with anchors of "*Should not do anything*" (0) and *"Should do absolutely anything necessary"* (100). A composite was created averaging perceptions across the five questions, with higher values indicating more willingness to condone coercive tactics during the interrogation (M = 30.68; SD = 23.13). The composite demonstrated a good degree of reliability, McDonald's ω = .85, 95% CI [.82, .87].

Guilt Judgments. Participants were asked two questions to assess their judgments of Mr. Wilson's guilt. The first was a dichotomous question that assessed whether participants thought the suspect was guilty or not guilty (32.07% selected guilty). Participants also provided a continuous measure by indicating how confident they were in Mr. Wilson's guilt using a sliding bar ranging from 0 to 100 with anchors of entirely innocent (i.e., 0) and entirely guilty (i.e., 100). On average, participants responses were closer to not guilty (M = 42.24, SD = 21.57).

Procedure

Participants read a vignette about a double murder. After reading the vignette, participants were asked about their perceptions of the suspect and their willingness to condone the use of coercive interrogation tactics. All questions about perceptions and the interrogation were presented in a random order for each participant, but always before the guilt judgments. Then, participants offered their two guilt judgments, in random order.

Results

Preliminary Analyses

Attention and Manipulation Checks. After reading the vignette, participants were asked (with a multiple-choice question) whether Mr. Wilson exercised his Miranda rights, waived his rights, or if his decision was not presented in the scenario (i.e., manipulation check), and if Mr. Wilson was on trial for murder (correct), robbery, or sexual assault (i.e., attention

check). Participants who answered both questions incorrectly were removed from the rest of the analyses. Results indicated that, of the original 552 participants, 517 (93.66%) accurately completed both questions. Therefore, the rest of the analyses are based on a sample of 517 participants. Instances in which degrees of freedom do not reflect 517 participants are the rare result of some participants skipping questions.

Correlations. We first ran simple Pearson correlations to investigate the potential relationships between participants' negative perceptions of the suspect, willingness to condone coercion, and overall guilt judgments. Mirroring Study 2, results indicated significant, positive correlations amongst each variable. Specifically, more negative perceptions of the suspect were associated with more willingness to condone coercion ($r = 0.34$, $p < .001$) and overall perceptions of guilt ($r = 0.44$, $p < .001$). Likewise, an increase in willingness to condone coercion was associated with an increase in overall guilt perceptions ($r = 0.28$, $p < .001$).

Main Analyses

Negative Perceptions of the Suspect. A one-way between-subjects ANOVA was conducted to examine the influence of Miranda decision on participants' negative perceptions of the defendant. Results indicated a significant main effect, $F(2, 514) = 50.01$, $p < .001$, $n^2 = .163$. Tukey's post hoc tests were then used to see which groups differed from one another. Results revealed that participants who read that Mr. Wilson exercised his rights ($M = 41.01$, $SD = 17.43$) reported more negative perceptions of the suspect compared to participants in the control condition who were not told anything about Mr. Wilson's Miranda decision ($M = 32.16$, $SD = 16.50$), $t(359) = -5.02$, $p < .001$, Cohen's $d = -0.53$, 95% CI of d [-0.78, -0.27]. However, participants in the control condition had more negative perceptions of Mr. Wilson than participants in the waived condition ($M = 22.64$, $SD = 16.26$), $t(337) = 5.21$, $p < .001$, Cohen's d

= 0.57, 95% CI of *d* [0.30, 0.83]. Therefore, participants who read that Mr. Wilson exercised his rights reported the most negative perceptions while participants who read that he waived his rights reported the most positive perceptions of the suspect—participants in the control condition who were not informed of Mr. Wilson's Miranda decision fell squarely in the middle.

Willingness to Condone Coercion. We then ran a one-way between-subjects ANOVA with Miranda decision as the independent variable and willingness to condone coercion as the dependent variable. Results revealed a significant effect, $F(2, 509) = 15.28$, $p < .001$, $n^2 = .057$. Tukey's post hoc tests showed no significant difference between participants in the control condition ($M = 33.69$, $SD = 21.54$) and waived condition ($M = 35.69$, $SD = 21.88$), $t(334) = -0.83$, $p = .685$, Cohen's $d = -0.09$, 95% CI of d [-0.35, 0.17). However, those in the control group reported higher willingness to condone coercion scores than participants in the exercised group ($M = 23.39$, $SD = 22.76$), $t(355) = 4.41$, $p < .001$, Cohen's $d = 0.47$, 95% CI of d [0.21, 0.72]. In addition, when participants read that Mr. Wilson waived his rights, they were more likely to condone the use of coercive tactics than participants who read that he exercised his rights, $t(329) = 5.06$, $p < .001$, Cohen's $d = 0.56$, 95% CI of d [0.29, 0.83]. Overall, it appeared that, when participants read that Mr. Wilson waived his rights—or did not receive any information regarding his Miranda decision—they were more likely to support the use of coercive tactics during the interrogation than participants who read that Mr. Wilson exercised his rights.

Guilt Judgments. A logistic regression was conducted to investigate the influence of condition on participants' binary guilt judgments with the control group serving as the referent group. Results from a 5000 bootstrapped sample revealed a model that was statistically significant, $\chi 2$ (514) = 9.74, $p = .008$, Nagelkerke $R^2 = .026$. When looking at the coefficients themselves, participants in the waived condition were less likely to find the defendant guilty

(21.15%) than participants in the control group (34.97%), $b = 0.69$, $p = .005$, OR = 2.00, 95% CI of OR [1.25, 3.45]. However, there was no difference in binary guilt judgments between those in the control group and those in the exercised group (34.27%), $b = 0.03$, $p = .888$, OR = 1.03, 95% CI of OR [0.68, 1.62].

A one-way between-subjects ANOVA was also conducted to investigate the effect of Miranda decision on the continuous guilt measure. Results revealed a significant effect, $F(2, 512) = 6.04$, $p = .003$, $n^2 = .023$. Tukey's post hoc tests mirrored the results from the binary logistic regression: participants in the control condition ($M = 43.93$, $SD = 20.83$), $t(337) = 3.22$, $p = .004$, Cohen's $d = 0.35$, 95% CI of d [0.09, 0.62] and exercised condition ($M = 43.08$, $SD = 20.40$), $t(331) = 2.83$, $p = .013$, Cohen's $d = 0.31$, 95% CI of d [0.05, 0.58], were significantly more likely to think Mr. Wilson was guilty than participants in the waived condition ($M = 36.61$, $SD = 21.14$), and there was no significant difference in judgments of Mr. Wilson's guilt for those in the control group and those in the exercised group, $t(358) = 0.39$, $p = .920$, Cohen's $d = 0.04$, 95% CI of d [-0.21, 0.29]. Taken together, participants who read that Mr. Wilson exercised his rights reported he was more likely to be guilty than participants who read that waived his rights.

Exploratory Mediation Analyses

Again, a parallel mediation analysis was used to examine negative perceptions and degree of condoning coercion as potential mediators of the relationship between Miranda decision and continuous guilt ratings. As our focus was on delineating the disparities in juror judgments of guilt based on whether they were told Mr. Wilson waived or exercised his rights, in addition to only including participants who passed the manipulation check questions, we removed the control group from analysis, reducing our sample size to $N = 330$. The analysis was

performed using model 4 in PROCESS V.3.5 in SPSS (Hayes, 2017). The results of the model, explained approximately 25% of the variance in continuous guilt judgments, $F(3, 326) = 36.29$, $p < .001$, $R^2 = .250$ (see Table 5).

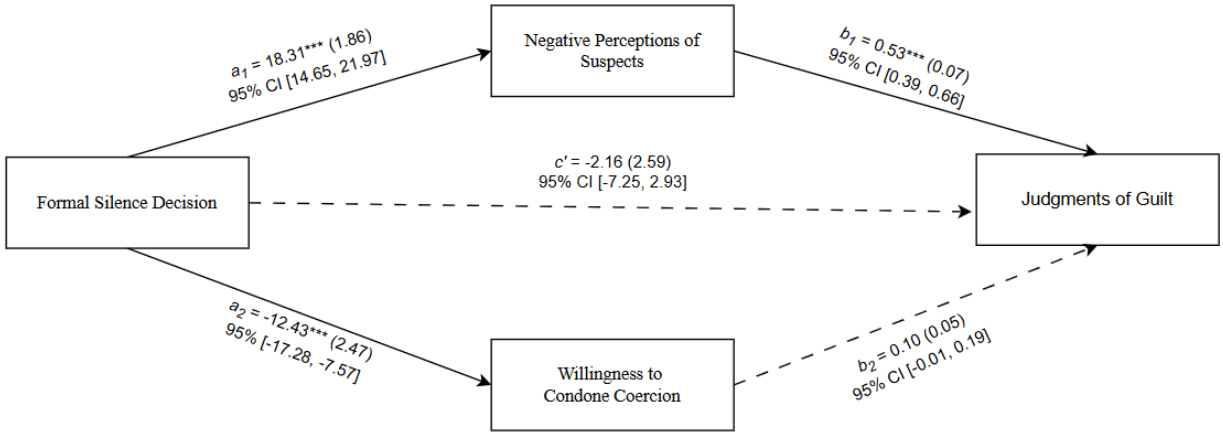
Mirroring Studies 1 and 2, based on 5000 bootstrapped samples there was a significant overall indirect effect of Miranda decision on guilt through negative perceptions of Mr. Wilson, $b = 9.65$ 95% CI for b [6.79, 12.90] (see Figure 4). When participants read that Mr. Wilson exercised his right to silence, he was viewed more negatively than if he waived his rights, which in turn led to stronger guilt judgments. However, the effect of Mr. Wilson's Miranda decision on guilt judgments was not mediated by participants' willingness to condone coercion during the interrogation $b = -1.18$, 95% CI for b [-2.82, 0.24]. In addition, results indicated no direct relationship between Miranda decision and continuous guilt judgments (similar to Studies 1 and 2).

Table 5. Results of Parallel Mediation from Miranda Decision to Continuous Guilt Judgments

	Perceptions			Coercion			Guilt		
Antecedent	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*
Miranda	18.31 [14.65, 21.97]	1.86	< .001	-12.43 [-17.28, -7.57]	2.47	< .001	-2.16 [-7.25, 2.93]	2.59	.4044041
Perceptions	—	—	—	—	—	—	0.53 [0.39, 0.66]	0.07	< .001
Coercion	—	—	—	—	—	—	0.10 [-0.01005, 0.19]	0.05	.0620615
Constant	22.86	4.98	<.001	35.82	1.80	< .001	21.32	2.30	<.001
	$R^2 = .2281$ $F(1, 328) = 96.94$, $p < .001$			$R^2 = .0718$ $F(1, 328) = 25.37$, $p < .001$			$R^2 = .2756$ $F(3, 360) = 45.65$, $p < .001$		

Notes. Miranda decision is coded such that waived = 0 and exercised = 1. Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Coefficients are unstandardized *b*-weights. Numbers in brackets are 95% confidence intervals for unstandardized *b*-weights.

Figure 4. Parallel Mediation Model for the Effect of Formal Decision on Judgments of Guilt Mediated by Suspect Perceptions and Willingness to Condone Coercion



Notes. Formal Silence Decision (0 = Waived, 1 = Invoked). Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Dotted lines indicate a non-significant relationship between variables.
*** $p < .001$

Similar to the exploratory mediation analyses for Study 2, we conducted a suggested, alternative serial mediation model that examined the potential for formal silence to predict negative perceptions of Mr. Wilson, which in turn would predict guilt judgments, which would subsequently predict participants' willingness to condone coercion. Like in Study 2, this model was not originally included as it violates the temporal order in which participants responded to questions.

To explore the serial mediation model, model 6 in PROCESS V.3.5 in SPSS was used. The model explained approximately 27% of the variance in participants' willingness to condone coercion judgments, $F(3, 326) = 40.99$, $p < .001$, $R^2 = .274$ (see Figure 5). Bootstrapped analyses with 5000 samples revealed that the relationship between formal silence decision and willingness to condone coercion was not serially mediated by negative perceptions of Mr. Johnson and participant guilt judgments, $b = 1.20$, 95% CI [-0.27, 3.00]. Specifically, although participants in

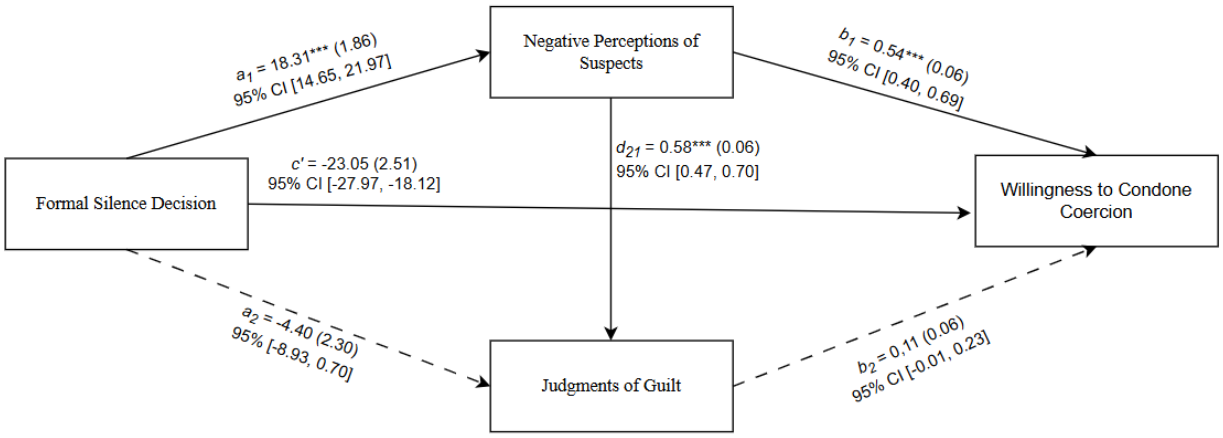
the invoke group had more negative perceptions of Mr. Johnson, $b = 18.31$, $p < .001$, 95% CI of b [14.65, 21.97], and the more negative perceptions the participant had, the more likely they were to believe Mr. Johnson was guilty, $b = 0.58$, $p < .001$, 95% CI of b [0.47, 0.70], the relationship between guilt judgments and willingness to condone coercion was not statistically significant, $b = 0.11$, $p = .062$, 95% CI of b [-0.01, 0.23] (see Table 6).

Table 6. Results of Serial Mediation of Formal Silence Decision on Guilt Judgments

	Consequent								
	Perception			Guilt			Coercion		
Antecedent	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*	Coeff.	*SE*	*p*
Decision	18.31 [14.65, 21.97]	1.86	< .001	-4.40 [-8.93, 0.70]	2.30	.057	-23.05 [-27.97, -18.12]	2.51	< .001
Perceptions	—	—	—	0.58 [0.47, 0.70]	0.06	< .001	0.54 [0.40, 0.69]	0.06	< .001
Guilt	—	—	—	—	—	—	0.11 [-0.005, 0.23]	0.06	.062
Constant	22.86	1.36	< .001	23.41	2.02	< .001	19.31	2.59	< .001
	$R^2 = .2281$ $F(1, 328) = 96.94$, $p < .001$			$R^2 = .2422$ $F(2, 327) = 52.27$, $p < .001$			$R^2 = .2739$ $F(3, 326) = 40.99$, $p < .001$		

Notes. Decision is coded such that waived = 0 and exercised = 1. Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Coefficients are unstandardized *b*-weights. Numbers in brackets indicate 95% confidence intervals for unstandardized *b*-weights.

Figure 5. Serial Mediation Model for the Effect of Formal Decision on Willingness to Condone Coercion Mediated by Suspect Perceptions and Judgments of Guilt



Notes. Formal Silence Decision (0 = Waived, 1 = Invoked). Higher values indicate more negative views toward the suspect and greater willingness to condone coercion during interrogation. Dotted lines indicate a non-significant relationship between variables.
*** $p < .001$

Discussion

The results from Study 3 indicate that informing participants about suspects' Miranda decisions can influence their perceptions of the suspect, and, through these perceptions, their ultimate confidence in the suspect's guilt. Replicating what was found in Studies 1 and 2, participants reported the most negative perceptions of the suspect when they were told the suspect had remained silent (whereas participants who waived their rights were viewed significantly more positively than those in the control condition). Moreover, similar to Studies 1 and 2, when the suspect exercised their rights, they were judged as guiltier (on the continuous measure) than when the suspect waived their rights, thereby offering additional support for the *adverse inferences* hypothesis. The replication of the *adverse inferences* hypothesis is important

because it offers initial evidence that the adverse inference is based in the pre-interrogation decision as opposed to the influence of any additional information possibly offered when a waiver is given. Furthermore, the replication of this main finding is notable given the use of a different case and materials (i.e., stimulus generalizability), as well as different samples (US students and MTurk workers).

The findings of Study 3 related to negative perceptions associated with invoking one's rights reinforce the potential role of the fundamental attribution error in the adverse inference process. Similar to Study 2, participants who read about Mr. Wilson remaining silent may have arrived at a dispositional attribution rather than a situational one and, because such behavior violates norms, a negatively valanced attribution. Relatedly, the fact that Mr. Wilson was being sought after to talk with law enforcement may have aroused negative stereotypes associated with criminal involvement. In the end, the negative dispositional attributions and prompting of stereotypes associating Mr. Wilson with criminality may have then, in turn, increased participants' belief in Mr. Wilson's guilt when they read that Mr. Wilson exercised his right to silence.

The coercion findings, however, suggested the opposite of the *silence as allowance* hypothesis and our previous findings. That is, when Mr. Wilson waived his pre-interrogation rights, participants seemed to interpret that waiver as allowing investigators to use more coercive interrogation tactics (rather than treating silent suspects more harshly). Thus, unlike the consistent pattern of effects related to participants' perceptions of the suspects across studies, the effects related to participants' willingness to condone coercion were inconsistent in both the significance and direction of the relationships.

One potential explanation for these differences relates to a methodological difference. Study 3 involved the suspect, Mr. Wilson, deciding on both the right to be silent and the right to an attorney. Compared to Canada, where suspects are not guaranteed the right to an attorney present during an interrogation, participants may have assumed in the US context there was no need to condone coercion because an attorney would be present, making attempts to coerce useless. Thus, participants may have believed that when Mr. Wilson waived his rights in Study 3, an interrogator could get away with coercion. Indeed, it may be the case that in the US the baseline is to condone the use of coercion, but when the possibility of a suspect invoking their rights is in play, the willingness diminishes (i.e., participants in the control condition with no mention of a waiver decision were more willing to condone coercion than those in the invoked condition). However, when suspects in the US waive their rights, people may be particularly willing to condone the use of coercion.

The findings of Study 3 suggest the possibility that Miranda creates a paradox wherein suspects will suffer negative consequences regardless of their Miranda choice. Specifically, participants who read about a suspect who exercised their rights held more negative perceptions of the suspect, which led to greater confidence in the suspect's guilt. Yet, unlike in Study 2, participants who read about a suspect who waived their rights condoned more coercive interrogation tactics—they indicated a willingness for investigators to do whatever was necessary to get information and agreed that various supports should be withheld.

General Discussion

Results from all three studies suggest that suspects' decision to remain silent can engender adverse biases that influence perceptions of interrogations, suspects, and ultimate guilt judgments. Studies 1 and 2 demonstrated that remaining silent engenders negative perceptions,

greater willingness to engage in coercive interrogation techniques, and increases perceptions of guilt among two Canadian undergraduate samples. Study 3 extended these effects to a US lay sample and a *Miranda* context, whereby exercising one's Miranda rights undermined perceptions of the defendant and strengthened confidence in the suspect's guilt. Unexpectedly, however, waiving one's rights appeared to lead Study 3 participants to view the waiver as license for interrogators to engage in more manipulative and coercive tactics during the interrogation. This might reflect interrogation law in participants' home countries as, in the US, police arguably do use more coercion on suspects who waive their rights—as participants who exercise their rights either are not questioned further or are only questioned in the presence of defense counsel, which likely limits the police persuasion they are subjected to. Perhaps explaining why US participants endorsed more coercive interrogation tactics when pre-interrogation rights are waived, but the opposite was found with the Canadian participants where the interrogation continues regardless of pre-interrogation decisions.

Face Adverse Inferences or Experience Police Intimidation?

Very little empirical work has examined whether remaining silent and exercising one's rights can induce adverse inferences (see Lawrence et al., 2024; Sukumar & Kassin, 2017). Our results demonstrate that a suspect who exercises their rights is consistently viewed more negatively by laypeople—in line with research that has found silence can lead to perceptions that a suspect is not being cooperative or rational (Snow et al., 2023). Importantly, the adverse inferences from silence can start early in an investigation during informal interactions with individuals during knowledge gathering, which could subsequently influence who becomes a suspect and how the investigator continues their investigative work. Furthermore, the exploratory mediation models reveal that participants gained confidence in these suspects' guilt via these

negative perceptions, triggered by the individual's silence. Hence, perceptions of suspects' overall character is undermined by rights invocations—facilitating and reinforcing perceptions of guilt. This confirms an observation made by one of the original *Miranda* Justices: "It is not just the subnormal or woefully ignorant who succumb to an interrogator's imprecations, whether implied or expressly stated, that the interrogation will continue until a confession is obtained or that silence in the face of accusation is itself damning and will bode ill when presented to a jury" (1966, p. 5).

Suspects who waive their rights also face a damning process. The colloquial reasoning that innocent people are willing to talk (i.e., waive their rights; see comments from Justice Scalia in *Mitchell v. United States,* 1999) has been expressed by mock suspects in interrogation studies (Kassin & Norwick, 2004). Researchers have already speculated that this colloquial reasoning can prompt a series of disadvantageous events, which could lead to wrongful conviction (Scherr et al., 2020). Because of a belief in their own innocence (i.e., phenomenology of innocence; Kassin, 2005), innocent individuals are more likely to waive their rights and offer information to investigators—information that is often interpreted as incriminatory by law enforcement (Hartwig et al., 2007; Olson & Charman, 2012) and accept plea deals (Perillo & Kassin, 2011). Furthermore, innocent suspects are less likely to exhibit psychological arousal, which may undermine their ability to resist interrogative pressures (Guyll et al., 2019; Madon et al., 2017; Normile & Scherr, 2018). Thus, because innocence is accompanied by a naïve mindset, expecting innocent suspects to protect themselves from police assumptions and coercion is unreasonable and, based on empirical evidence, simply not feasible (see Kassin, 2005; 2017; Scherr et al., 2020 for reviews).

Theoretical and Applied Implications

Across our studies, we found that attribution theory, specifically the fundamental attribution error (Ross, 1977), could apply to perceptions of suspects' legal decisions. Specifically, although suspects were described the same way across conditions in the studies, participants judged the suspect who invoked their rights more negatively and as more likely to be guilty. It is as if they are attributing the suspect's behavior (invoking silence) to an internal or dispositional cause such as criminality, and failing to consider the rather unique—and sometimes extreme—external pressure and social influence present during the suspect's interaction with law enforcement. Buttressing the idea that people will make a dispositional attribution is research highlighting people's lack of appreciation for the power of the situation—in this case, law enforcement interactions—in which people generally cannot see themselves at risk of falsely confessing (e.g., Leo, 2009; Mindthoff et al., 2018), and may assume, therefore, that typically others are not at risk either (false consensus bias), and thus only the type of person (internal attribution) that has something to hide, like a guilty person, would need to invoke their rights.

By offering a theoretical mechanism associated with the adverse inferences induced by silence, we add to the literature that has focused primarily on pragmatic inferences (e.g., Snow et al., 2023). Moreover, our findings may suggest that suspect decisions prior to interrogation invoke adverse inferences, via attributions, that lead to a guilt presumption that actives the series of events outlined in the Cumulative Disadvantage Framework (Scherr et al., 2020) that ultimately ends with an innocent person being wrongly convicted. Beyond the theoretical contribution, our piece is also suited to speak to the practical implications of adverse inferences associated with pre-interrogation decisions.

Although the US Supreme Court noted the potential for pre-interrogation decisions to have diagnostic information regarding innocence and guilt (*Salinas v. Texas*, 2013), there are

reasons to cast doubt on the assumption that cooperation decisions are diagnostic of guilt. Indeed, the vast majority of suspects waive their pre-interrogation rights (Kassin et al., 2018; Leo, 1996; Wald et al., 1967). However, although innocent suspects often waive their rights, undoubtedly some innocent suspects *exercise* their rights. Moreover, certainly some guilty suspects waive their rights, perhaps as a strategy to appear innocent (e.g., "I would've looked suspicious if I chose not to talk"; Kassin & Norwick, 2004, p. 216). In the end, given that naturalistic data derived from actual police interrogations have shown incredibly high waiver rates, the assumption that pre-interrogation decisions are diagnostic of guilt or innocence lacks precision.

This research highlights, especially for innocent suspects, the potential costs associated with either a decision to waive or exercise their rights. The question, then, is what can be done to ensure suspects are afforded their due process rights and the prophylactics intended in both the original *Miranda* ruling and the Canadian charter? We offer three straightforward suggestions for reform. The first is to preclude introducing suspects' pre-interrogation decision to triers-of-fact. The observed effects show the adverse inferences derived from invoking interrogation rights and a robust body of research has shown that the beliefs and attitudes jurors bring to the courtroom influence their ultimate verdict decisions. Hence, informing jurors about the accused's decision to invoke or waive their right to silence can meaningfully influence suspect perceptions, despite the noted evidence that cooperation decisions are not diagnostic of guilt or innocence. Indeed, prematurely introducing cooperation decisions into the courtroom subverts the notion of being presumed innocent until proven guilty. These ideas are not new. In 1930, a 30-year-old physician, Samuel Sheppard, was convicted of killing his wife. Part of the initial assumption of guilt was based on the fact that Sheppard did not talk to police immediately and also retained a

lawyer. After serving nearly 10 years in prison, Sheppard was released and eventually exonerated (Schechter, 2020).

Our second suggestion, joining other researchers (Kassin et al., 2020; Scherr et al., 2020; Smalarz, et al., 2016), is to require the entire interview and interrogation be recorded. Note that in Canada, formal statements are becoming routinely videotaped. In addition to minimizing interrogators' use of manipulative and coercive tactics during the interrogation process (Kassin et al., 2014), an objective memorialization such as a recording can allow for jurors to base their ultimate verdict on a genuine account of the interactions instead of relying on misconceptions and beliefs associated with the idea that silence means a suspect is guilty. Critically, a recording can contextualize the dynamics and instances in which suspects waive their right to silence and instances in which suspects invoked their right to silence (e.g., because investigators are not listening to what they say). Hence, video recording allows for a more genuine account of the interactions for jurors to use rather than relying on their commonsense beliefs and attitudes of suspect behavior.

Although these types of reforms are vital for our criminal legal system, they will not remove the negative implications made when someone waives or exercises their rights. Thus, our final policy suggestion is to automate suspect protections in custodial settings. Specifically, to avoid non-empirical and damaging implications of pre-interrogation decisions, we suggest that suspects should automatically be afforded a lawyer and the interrogation should not begin until that lawyer arrives, at least in the US. Although some may argue that such an automated requirement is not feasible, multiple states already have requirements in place for interrogations involving juveniles to have automatic representation (Jeffs & Brian, 2021). It may be premature to speak to the right to counsel being present in Canadian interrogations, though our findings

suggest more protections could be provided surrounding suspects' rights to speak with an attorney prior to questioning given the adverse inferences that might be drawn from silence. That is, removing the requirement to self-invoke eliminates any adverse inference that can be made from a pre-interrogation decision (i.e., there is no decision because all suspects are given counsel).

Limitations and Future Directions

A dearth of research has investigated perceptions of suspects' invocation of their right to silence when confronted by law enforcement in either informal or formal settings. As such, the current studies offer an important step towards understanding not just why suspects waive or exercise their rights, but also what this decision means for subsequent perceptions of the investigation and suspect. There are, however, limitations to the current studies that are worth noting.

First, Studies 1 and 2 found a large manipulation check failure rate regarding the informal waiver decision. It is possible that participants were not paying attention – particularly for Study 2 which was conducted during the COVID-19 pandemic where inattentive participants were more common (Peyton et al., 2022). It is worth noting that if the pandemic and inattention were the cause of our high manipulation check failure rates, Peyton and colleagues (2022) found that research conducted prior to the pandemic generally replicated during the pandemic, though with smaller effects. However, we believe this to be an unlikely explanation as most participants correctly answered the later formal manipulation check. Instead, we believe that participants did not see an informal interaction with law enforcement as a decision about rights, possibly because the vignette described the interaction occurring as the suspect was on his way to work.

Second, in a trial, a suspect's pre-interrogation decision would only be one piece of information the jurors receive over the course of the case—and this would not be in every trial. Future research should investigate (a) how cooperation in the form of waiving one's rights impacts subsequent investigative decisions; (b) how cooperation information is used in conjunction with other evidence presented in a criminal case, and (c) if jurors can appreciate how a pre-interrogation decision could have impacted the investigation itself.

Third, we had planned to analyze whether the informal and formal silence decisions in Studies 1 and 2 influenced which forms of evidence, and how much evidence, participants chose to view about the case in the choose-your-own-adventure portion of those experiments. Unfortunately, a technical issue (the program only recorded the last information participants viewed, with no indication of how much information participants chose prior to that information) precluded the use of that data for both studies. Future researchers may wish to investigate how pre-interrogation decisions could influence the unfolding of the investigation, including seeking out and/or evaluating other evidence.

Finally, Studies 1 and 2 offered participants additional information about Mr. Johnson's responses when he waived his rights. Study 3, however, eliminated this issue and still replicated the main findings of Studies 1 and 2, minimizing this concern. That said, in a naturalistic context, the issue of more or less information often organically exists where a suspect who waives their rights will also provide additional information a suspect who invokes their rights will not. Though we found evidence that the adverse inference is largely driven by the decision to stay silent in-and-of-itself, future research should attempt to disentangle these effects.

Conclusion

Across three studies, we demonstrated that suspects who remained silent induced adverse inferences about their character, leading to greater perceptions of guilt, during both the investigation (Studies 1 and 2) and criminal trial (Study 3). Thus, suspects who worry that staying silent may make them look guilty are correct: it does. As researchers frequently suggest to the public that their best protection against a wrongful conviction—particularly from the perspective of false confessions—is to stay silent and not talk to the police, individuals are trapped in a situation that they cannot win. The increased confidence in silent suspects' guilt demonstrates a bias based on a non-diagnostic factor that should have no bearing on individuals' legal fate.

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