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## Why Blame the Ostrich? Understanding Culpability for Willful Ignorance

Lara Kirfel\*

Stanford University

Ivar R. Hannikainen

University of Granada

### Abstract

Willful Ignorance (WI) is a term in Anglo-American law to refer to circumstances in which a defendant remains intentionally unaware of a fact that would render them liable. These cases pose a unique problem for the law, as it is uncertain whether deliberate ignorance can be viewed as a form of knowledge and, therefore, whether they satisfy the mens rea requirement for culpability. In this chapter, we report two experimental studies modeled on *United States vs. Jewell*, a case in which Jewell aided an international drug trafficking operation by transporting a suitcase which he deliberately avoided inspecting. We manipulated various features of the defendant's epistemic state, relating to their suspicion, its reasonableness and its specificity. Our results showed that WI partially satisfies the mens rea requirement, though not to the extent of genuine knowledge. Participants considered willful ignorance incriminating, as long as the defendant suspected that they were involved in criminal activity, and regardless of whether their suspicion was reasonable or even true. Additionally, our studies suggested that judgments of culpability are related to broader inferences about the defendant's antisocial tendencies—in line with theories that conceptualise WI as a demonstration of 'ill will'. In closing, we elaborate on the implications of our findings for the broader legal-theoretical debate around the normative propriety of the willful ignorance doctrine.

*Keywords:* willful ignorance, willful blindness, equal culpability thesis, blame, social inference

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\*Corresponding author: Lara Kirfel, l.kirfel@stanford.edu, Stanford University, 450 Jane Stanford Way, Stanford, CA 94305

## Introduction

Imagine the following scenario: John Ostrich tests positive for Covid-19 and isolates for five days, the mandatory period established by the Center for Disease Control and Prevention (CDC). During this period, his symptoms are mild, and by day 6 John feels perfectly fine. His friend Anne is hosting a birthday party which John is eager to attend. He could take one of the rapid antigen tests he has at home to find out whether he is still positive and therefore could infect others. But he's not *obligated* to: The CDC has eliminated this requirement for leaving isolation. John prefers not to know whether he is still infectious, so he leaves the house without taking a test and heads to the party. Sure enough, a couple of days later, Anne texts John that she has tested positive for Covid-19 along with several other attendees at the party.

As it happens, John was still positive and was the cause of the outbreak at Anne's party. How blameworthy is John for spreading Covid, even though he did not technically *know* that he still was infectious? In ordinary legal contexts, a defendant's ignorance is treated as grounds for reduced culpability relative to knowledge. Meanwhile, in cases like Mr. Ostrich's, legal theorists have advocated for a specific "willful ignorance" doctrine to apply. According to this doctrine, deliberate ignorance of certain incriminating facts suffices to satisfy the knowledge element of crime. Furthermore, jury instructions often specifically request that a jury equate deliberate ignorance with knowledge of the incriminating facts. As a result, a defendant who deliberately avoids gathering knowledge of their own misconduct is *as culpable* as a defendant who knows about the illegal status of their behaviour (Charlow, 1991). However, within legal theory, there have been ongoing debates about when to apply the willful ignorance doctrine and whether the substitution of knowledge can be legally justified. In this study, we approximate the legal concept of willful ignorance by empirically investigating people's judgments of culpability, their knowledge attributions and even broader character inferences from willfully ignorant misconduct. Finally, we aim to situate our findings in the broader legal-theoretical debate around the normative status of the willful ignorance doctrine.

## United States vs. Jewell or: The Ostrich Instruction

The legal concept of "Willful Ignorance" (also referred to as "Willful blindness", "Deliberate Ignorance" or "Intentional Ignorance") (Sarch, 2014) prevents a person from evading civil or criminal liability by intentionally remaining unaware of facts that would otherwise render them liable. The so-called "Ostrich instruction" was first given to a jury in 1967 in *United States vs. Jewell*, when the concept of willful ignorance was invoked for the first time to uphold a conviction. In this criminal case, defendant Jewell was arrested after driving a car in which packs of marijuana had been concealed in a secret compartment between the trunk and rear seat. Beforehand, Jewell had been approached at a bar in northern Mexico. After being offered marijuana (which he declined to buy), Jewell was asked to drive a car across the US-Mexican border for \$100. On a narrow view of liability, the defendant would need to have knowingly (i.e., the element of *mens rea*) brought the drugs into the country (i.e., the element of *actus reus*). So, Jewell contested he did not in fact know that the car contained contraband.

The court however ratified the defendant’s conviction, and upheld the following jury instruction:

“The Government can complete their burden of proof [of knowledge] by proving, beyond a reasonable doubt, that if the defendant was not actually aware that there was marijuana in the vehicle he was driving when he entered the United States his ignorance in that regard was solely and entirely a result of his having made a conscious purpose to disregard the nature of that which was in the vehicle, with a conscious purpose to avoid learning the truth.” (Kaplan, Weisberg, & Binder, 2014, p. 229)

In this regard, willful ignorance constitutes a striking departure from the ordinary way in which criminal conviction is established. Criminal liability usually rests on some form of *knowledge* of one’s misconduct, but the “Willful Ignorance Doctrine” establishes that courts may treat self-inflicted ignorance as satisfying the knowledge requirement of criminal conviction (Edwards, 1954). The rationale for this doctrine is that willfully ignorant misconduct is just as culpable as intentional misconduct (“Equal Culpability Thesis”) (Hellman, 2009; Luban, 1998; Sarch, 2016). But under what circumstances is ignorance willful? What exactly qualifies as willful ignorance? Notwithstanding ongoing debates among legal theorists about the legal notion of willful ignorance, two basic requirements are widely agreed upon: A willfully ignorant defendant must be sufficiently suspicious of the illegal status of their action and at the same time fail to learn about it (Sarch, 2018; Williams, 1961).

Following Sarch (2018)’s definition of a basic legal account of willful ignorance, a defendant is willfully ignorant of an incriminating fact  $p$  if ...

*Basic Legal Account of Willful Ignorance:* (Sarch, 2018)

- (i) they have sufficiently serious suspicions of  $p$ , and
- (ii) they deliberately fail to take reasonably available steps to ascertain whether  $p$  actually is true.

Among legal theorists, there has been some discussion about whether this two-part definition of willful ignorance is adequate, or calls for further refinement (Sarch, 2017). For instance, in addition to (i) and (ii), it has been suggested that the defendant is required to remain willfully ignorant with the specific *motive* of supporting their defense in case of prosecution (Hellman, 2009; Husak & Callender, 2019; Wieland, 2019). Other scholars have advocated limiting criterion (ii) to ignorance-preserving *actions* but not omissions: The defendant must undertake affirmative steps to avoid learning about  $p$  (e.g. actively rejecting an offer to be informed about the content of the suitcase), rather than simply omitting or failing to investigate  $p$  (Husak & Callender, 2019; Sarch, 2019).

In this paper, we approach the WI concept by adopting the basic, two-part account. The ongoing discussion regarding its use in the law, however, highlights unresolved legal and theoretical issues (Husak & Callender, 2019): namely, whether and why deliberately ignorant perpetrators should be seen as satisfying the mens rea requirement for conviction.

### Substituting Knowledge: What does a willfully ignorant person ‘know’?

What is Jewell’s culpable mental state in *Unites States vs. Jewell*? Or, put differently, what did Jewell know about the nature of his actions? While knowledge is notoriously difficult to define (Gettier, 1963), the Model Penal Code requires that a defendant “[...] is aware that his conduct is of that [illegal] nature or that the circumstances exist [...], or practically certain that the result will occur” (Marcus, 1993). A reasonable person in Jewell’s shoes would have been suspicious of their involvement in illegal conduct. As such, Jewell—and, by extension, willfully ignorant agents in general—qualify at least as “reckless”. However, given the availability of incriminating information that they deliberately ignore (Alexander & Ferzan, 2009), the mens rea state of willfully ignorant defendants might be thought of as *exceeding* the level of recklessness. They are not merely aware of a substantial risk, but also purposely avoid confirming the incriminating facts.

Yet, at the same time, willfully ignorant agents arguably fall short of the knowledge requirement for criminal conviction. That is, by most definitions, it cannot be established that they really knew what they were doing. So what exactly is the culpable mental state in WI? Why are willfully ignorant agents treated in court as though they had acted knowingly? Below we elaborate on two qualitatively distinct explanations that legal theorists have advanced on this question (Husak & Callender, 2019).

**Suspicion as a Knowledge State.** Some theorists claim that the mental state of a willfully ignorant person is indeed a species or *kind* of genuine knowledge (Ashworth & Horder, 2013; Williams, 1978). This view, however, raises complex questions about how to conceptualize willful ignorance as knowledge (Husak & Callender, 2019): Which of the elements traditionally taken to indicate knowledge, i.e. “justified true belief”, does a willfully ignorant agent need to meet in order to possess some kind of knowledge? Is being suspicious of  $p$  akin to believing that  $p$ ? Would Jewell be justified in believing that the car contains drugs even without inspecting it? Or does the fact that he intentionally refrained from searching the car indicate that he had sufficient evidence of the illegal substance in his vehicle? And, moreover, how specific must his suspicion be in order to qualify as equivalent to *knowledge* of the presence of marijuana in his car? There is a prolific disagreement among moral philosophers about whether moral responsibility requires a detailed understanding of one’s involvement (e.g., of aiding an international marijuana trafficking operation in the role of a courier) (Vargas, 2005), or whether a broader knowledge state (such as a non-specific recognition of one’s wrongdoing) suffices (Nelkin & Rickless, 2017).

We will not go into this discussion in great detail, but legal commentators have raised the concern that the mental state of many defendants who allege willful ignorance does not amount to genuine knowledge (Husak & Callender, 2019). Legal texts do not specify how strongly and how specifically a defendant must suspect that the incriminating fact exists. While some make references to beliefs with “high probability” of  $p$ , the exact threshold remains vague or underspecified in legal scholarship (Simons, 2021).

**Deliberate Ignorance as Ill Will.** Alternatively, WI has been argued to be equivalent to a knowing offense on the grounds that both epistemic states reflect the same degree of antisociality or ill will. According to Yaffe (2018), willful ignorance manifests the agent’s failure to grant sufficient weight to other people’s interests. In this regard, Yaffe argues that it shows a quality of “ill will” (Strawson, 2018) in much the same way as a knowing agent. By remaining ignorant, the willfully ignorant perpetrator puts his own interests first. An

inquiry into the nature of their actions might lead to a bad conscience, e.g. learning about the harmful effect on others, and this as a result might interfere with their plan to proceed with that action. Sarch (2018) argues that willful ignorance involves a breach of the pro tanto duty to inform oneself, and therefore manifests a disregard to values and interests protected by the law (Alexander & Ferzan, 2009). Husak and Callender (2019) have, however, raised the concern that such an argument might risk violating the “principle of legality”: i.e., the principle that, when a statute clearly requires the mental state of knowledge, the ordinary moral disapproval of knowing and willfully ignorant wrongdoers cannot form the basis for their equal conviction.

### **Willful Ignorance: An empirical approximation**

Despite the fact that the “Willful Ignorance” doctrine is frequently employed in courts, the concept of willful ignorance continues to be heavily debated among legal theorists (Child, 2021; Sarch, 2019; Simons, 2021). The vague definition of what kind of behavior counts as deliberate ignorance has led to discrepancies in jury instructions and reasoning in judicial opinions. As a consequence, some have argued in favor of lowering the mens rea standard to recklessness in cases that require proof of willful ignorance (Husak & Callender, 2019; Sherrin, 2014). Others have concluded that courts should refrain from employing the WI doctrine until agreement on a more precise and palatable definition of WI is reached (Simons, 2021). As Husak and Callender (2019) note, unlike other legal or mens rea terms, the concept of willful ignorance is not commonly used in ordinary language: “[...] It is more of a technical, stipulative term of legal art with no precise analogue in everyday speech. [...] attributions of willful ignorance are extremely rare outside of legal contexts.” (p. 205).

How to resolve the theoretical and—in consequence—practical problems around the WI doctrine in court? As a way forward, Simons (2021) suggests that “[...] an empirical analysis of how ordinary people and legal actors understand the mens rea term (here, knowledge) would go some way towards addressing the concern, especially if we were to employ that analysis to improve the comprehensibility of jury instructions explaining the mens rea term.” (p. 22-23). Assessing ordinary judgments might shed light on the question whether the definitional decoupling of this term from mens rea like ‘knowledge’ and ‘recklessness’ maps onto people’s ordinary judgments about WI behavior (see Kneer & Skoczen, 2021; Mikhail, 2009). In particular, empirical research may advance the debate around WI in two important respects. First, experimental evidence can uncover whether willfully ignorant and knowing perpetrators are considered equally culpable, in line with the Equal Culpability Hypothesis. Second, empirical studies can, in principle, identify the factors that promote people’s judgments of culpability in the context of WI. Are people’s assessments of the culpability of WI driven by the degree of knowledge they attribute to a WI defendants? If so, is it the same degree and kind of knowledge as in the case of ‘true’ knowledge? What inferences do people make from wilfully ignorant behaviour?

### **Study 1**

Empirical studies show that people’s categorization of legal mental states roughly corresponds to the Model Penal Code’s hierarchy of mens rea (Ginther et al., 2014; Jones et al., 2018; Jones, Montague, & Yaffe, 2020; Shen, Hoffman, Jones, & Greene, 2011). The

present study aims to extend this line of research on mens rea to the concept of willful ignorance. Following the basic account of WI, we will assess people’s perception of WI by decomposing it into its two main components: i) the state of suspicion, and ii) the opportunity for inquiry.

First, we vary whether an agent is suspicious of the harmful consequences of their action or not. Suspicion constitutes a key component of willful ignorance. Without suspicion, the fact that an agent does not pursue further investigation of a certain matter is not culpable. In order to link WI to the mens rea of *recklessness* and *negligence*, we included an additional manipulation of “suspicion”: whether a *reasonable person* would suspect or not. Recklessness is loosely defined as “willingly taking an initial action that a reasonable person would know will likely lead to the actus reus being committed” (Stark, 2016; Williams, 1981). If a reasonable person would not believe their action may yield harmful consequences, the defendant should not be considered reckless (Stark, 2020). In Study 1, we therefore manipulated whether a reasonable person would be wary of the action they were about to engage in, as well as whether the agent in question in fact held suspicion. While there is a current legal debate around what actually constitutes *reasonableness* (Alicke & Weigel, 2021; Jaeger, 2020; Tobia, 2018), we instrumentalised the reasonableness of suspicion in terms of ‘common knowledge’. In other words, suspicion would be reasonable when most fellow citizens in the defendant’s position would have suspected, and unreasonable otherwise (Valverde, 2009).

We also experimentally manipulated the second component in the basic account of WI: namely, the opportunity to acquire incriminating knowledge about one’s action. Sarch (2018) argues that the difficulty or risk involved in acquiring knowledge determines whether WI agents are required to pursue it. When acquiring the incriminating knowledge is too burdensome, costly, or potentially harmful, the WI doctrine might be justifiably waived (Sarch, 2017). In our study, we vary the defendant’s opportunity to inquire about the suspicious state of affairs, i.e., whether there are “reasonably available steps” toward acquiring knowledge. By varying the ease of inquiry, we ask whether people take the difficulty or ease with which knowledge could have been acquired into account (Kirfel & Lagnado, 2021).

Crossing these two factors, suspicion and opportunity for inquiry, formed the basis for Study 1. As our primary dependent measure, we assessed people’s judgments of culpability. To evaluate the Equal Culpability thesis, we will compare these variations on WI to a standard case of intentional illegal conduct (in which we stipulate the defendant’s knowledge). In addition, we examined participants’ attributions of knowledge as well as their inferences regarding the defendant’s social preferences. These additional measures provided the opportunity to evaluate the two primary accounts of WI laid out in the introduction.

## Participants & Design

406 (162 women) participants ( $M_{\text{age}} = 40.61$ ,  $SD_{\text{age}} = 11.95$ ) took part in Study 1. Participants were assigned to one of seven conditions, in a  $3$  (“Suspicion”, “Reasonable”, “Unreasonable”)  $\times$   $2$  (Inquiry: “Possible”, “Impossible”)  $+ 1$  (Knowledge) between-subjects design. Condition *ns* ranged between 55 and 61 participants.

Table 1

**Experimental conditions of Study 1.** People were allocated to either a ‘Knowledge’ or a ‘Willful Ignorance’ condition. In the ‘Willful Ignorance’ condition, we varied whether the agent actually suspected of the illegal nature of their action or not. When the agent had no suspicion (in the ‘No Suspicion’ condition), we also varied whether it would be reasonable for the defendant to entertain this suspicion, or whether such a suspicion would have been unreasonable according to the reasonable person standard. In the ‘Willful Ignorance’ condition, the defendant never undertakes the effort to inquire about the circumstances that they are in (No inquiry). We manipulated whether the relevant inquiry would have been easy or difficult to carry out.

Knowledge			Willful Ignorance			
Knowledge	Ignorance					
	Suspicion		No suspicion			
<i>(Suspicion reasonable)</i>	<i>Suspicion reasonable</i>		<i>Suspicion reasonable</i>		<i>Suspicion unreasonable</i>	
Inquiry	No Inquiry					
<i>(Easy inquiry)</i>	<i>Easy inquiry</i>	<i>Difficult inquiry</i>	<i>Easy inquiry</i>	<i>Difficult inquiry</i>	<i>Easy inquiry</i>	<i>Difficult inquiry</i>

## Materials & Procedure

**Scenario: Part I.** We employed a variation on the original “United States v. Jewell” (1967) criminal case as the experimental scenario in our study. In this scenario, John is crossing a national border that is frequently used for drug trafficking. Drug trafficking over the border causes instability and crime in both neighbouring countries.

First, we varied whether the illegal activities over the border crossing are common knowledge or not. In the *reasonable* vs. *unreasonable* condition, the fact that the route is a drug trafficking route is either widely known or unknown to most people. Varying the commonality of this knowledge allows us to manipulate how reasonable it would be for someone to be concerned when asked to transport a suitcase on that route.

**Reasonable vs. Unreasonable:** “[...] He plans to travel to a border crossing that is commonly known for being a drug trafficking route [*unbeknownst to everyone, is being used as a drug trafficking route*]. In fact, the route is known to be one of the major trafficking routes in Europe [... *is assumed to be one of the safest travel routes in Europe*]. Travel brochures and media have often [*never*] reported the criminal trafficking activities along this route such that they are common knowledge among [*completely unknown to*] locals as well as travellers.”

Next, we manipulated what John actually knows. More precisely, we manipulated whether John’s background knowledge would inspire suspicion when asked to transport a

suitcase across the border. To this end, we stated that John either knows or does not know about the drug trafficking on his travel route.

**Suspicion vs. No Suspicion** “[...] John knows [*does not know*] that the route he is about to take is frequently used for drug trafficking.”

At a gas station near the border, John is approached by a group of travellers who ask him if he would do them a favour and transport some luggage to a friend across the border. John would be rewarded with \$100 for his help. Here, the “Knowledge” condition differed from the “Willful Ignorance” condition. In the Knowledge condition, John agrees to transport the luggage and knows about its illegal content. John acquires this knowledge through various means: The group tells him about the content of the suitcase; but it is also easy to open the suitcase (“Easy inquiry”) so John looks inside and ascertain that there are drugs (“Inquiry”).

### “Knowledge” Scenario

“[...] The group also tells him that the luggage contains illegal drugs. [**Knowledge**]

John agrees to transport the luggage.

The suitcase contains white powder packed into transparent plastic bags. The suitcase is not locked so John could easily open the suitcase to see what is inside. In fact, the suitcase is closed only with a simple zipper [**Easy Inquiry**]. Knowing how easy it would be to open the suitcase, John takes a look into the suitcase and sees that the suitcase indeed contains illegal drugs. [**Inquires**”

In the “Willful Ignorance” condition however, John is not informed by the group that the suitcase contains drugs (“Ignorance”), and he agrees to transport the suitcase. Here, his epistemic state regarding the content of the suitcase (at the time of his decision to cooperate) depends to some extent on his background knowledge about the illegal activities along the route (i.e., on our experimental manipulations; *Suspicion Reasonable, vs. No suspicion Reasonable, vs. No suspicion Unreasonable*). In the “Willful Ignorance” condition, John does not inspect the suitcase (“No Inquiry”). We manipulated whether it would have been easy for him to do so (“Easy Inquiry”, see section in the scenario above) or whether opening the suitcase would have been extremely effortful (“Difficult Inquiry”, see scenario below).

### “Willful Ignorance” Scenario: Difficult Inquiry

“However, the group does not tell him that the luggage contains illegal drugs [**Ignorance**]. John agrees to transport the luggage.

The suitcase contains white powder packed into transparent plastic bags. The suitcase is sealed such that it is impossible for John to open it himself and see what’s inside. In fact, he would have to drive two hours back to the nearest mechanic who could saw the suitcase open for him [**Difficult Inquiry**]. Knowing



how difficult it would be to open the suitcase, John deliberately decides not to take the steps that would allow him to check what’s inside the suitcase. [No Inquiry]”

For an overview of the 3 (“Suspicion”, “Reasonable”, “Unreasonable”)  $\times$  2 (Inquiry: “Possible”, “Impossible”) + 1 (Knowledge) design, see Table 1. After having read up to this point of the scenario, participants were asked a series of comprehension check questions (see Appendix A).

**Scenario: Part II & Dependent Measures.** The middle part of the scenario describes the outcome of John’s actions. A few hours later John is at the border control. The transport police patrols across the cars and their detection dog starts to bark when they approach John’s car. After searching the car and breaking up the suitcase, the police finds that the suitcase contains illegal drugs. This part was the same for all scenario conditions. Participants were then asked to indicate their agreement with three different statements on a 7-point Likert scale. One statement about the agent’s *liability*, “John is culpable of illegal drug smuggling.” (1-‘strongly disagree’, 7-‘strongly agree’), one statement about the agent’s *blameworthiness*, “How much blame does John deserve for illegally smuggling drugs?” (1-‘None at all’, 7-‘Very much’). We formed a single index of *culpability* by averaging the liability and blameworthiness items (Cronbach’s  $\alpha = .89$ ). Participants also rated a statement about the agent’s *knowledge* state, “John *knowingly* transported drugs across the border.” (1-‘strongly disagree’, 7-‘strongly agree’).

**Scenario: Part III & Social Preference.** The final part of the scenario jumps ahead to a situation in John’s life a few years later. In this scenario, John faces a real-life dictator game (Guala & Mittone, 2010) that would allow him to act prosocially (and share) or antisocially (and steal).

“A few years later, John is back in his hometown where he works as a graphic designer in a visual design studio. Over the past year, he has been working together with his colleague Brad on a huge ad campaign for an influential company. Both John and Brad have contributed an equal amount to this project.

The customer has been so pleased with their work that they have decided to pay the team an extra bonus of \$1000 for their work. Since John has been the point of contact for the team, the cheque of \$1000 has been issued on his name, and only he can cash it in. Brad was on holiday at that time and does not know about the bonus.

It would be easy for John to transfer money to Brad since John has access to all bank details of all employees.”

Based on what they had learned about John, participants were asked to predict the amount of money that John would allocate to Brad, on a sliding scale from 0 USD to 1000 USD. This measure enabled us to examine whether participants draw general inferences about an agent’s prosocial or antisocial orientation on the basis of their degree of involvement in crime. Predictions on the lower half of the scale (i.e., stealing) indicate an antisocial impression of John, while values at or above the midpoint (i.e., sharing) would indicate a prosocial impression.

## Results

The results are organised in four sections. In the first three sections, we examine each of three dependent variables in sequence. Lastly, in the fourth section, we propose a causal model according to which the effects of suspicion are causally mediated by the ascription of varying degrees of knowledge. In each section, we present a sequence of two analyses. The first analysis assesses the effect of suspicion and inquiry relative to knowledge through one-way ANOVAs. In the second analysis, we examine the effects of suspicion and inquiry relative to the absence of suspicion and the impossibility of inquiry in two-way ANOVAs.  $p$  values are adjusted using the Tukey method for the correction of family-wise error.

**Knowledge Attributions.** In the one-way ANOVA, condition affected knowledge attributions,  $F(2, 173) = 80.46, p < .001, \eta_p^2 = .93$ . Suspicion elicited lower knowledge attributions than did knowledge, whether inquiry was easy,  $B = -3.39, t = -10.91$ , Cohen's  $d = -2.33, 95\% CI[-1.86, -2.81]$ , or difficult,  $B = -3.33, t = -10.99$ , Cohen's  $d = -2.31, 95\% CI[-1.84, -2.77], ps < .001$ . The pairwise comparison between suspicion conditions revealed no effect of opportunity for inquiry,  $p = .98$ .

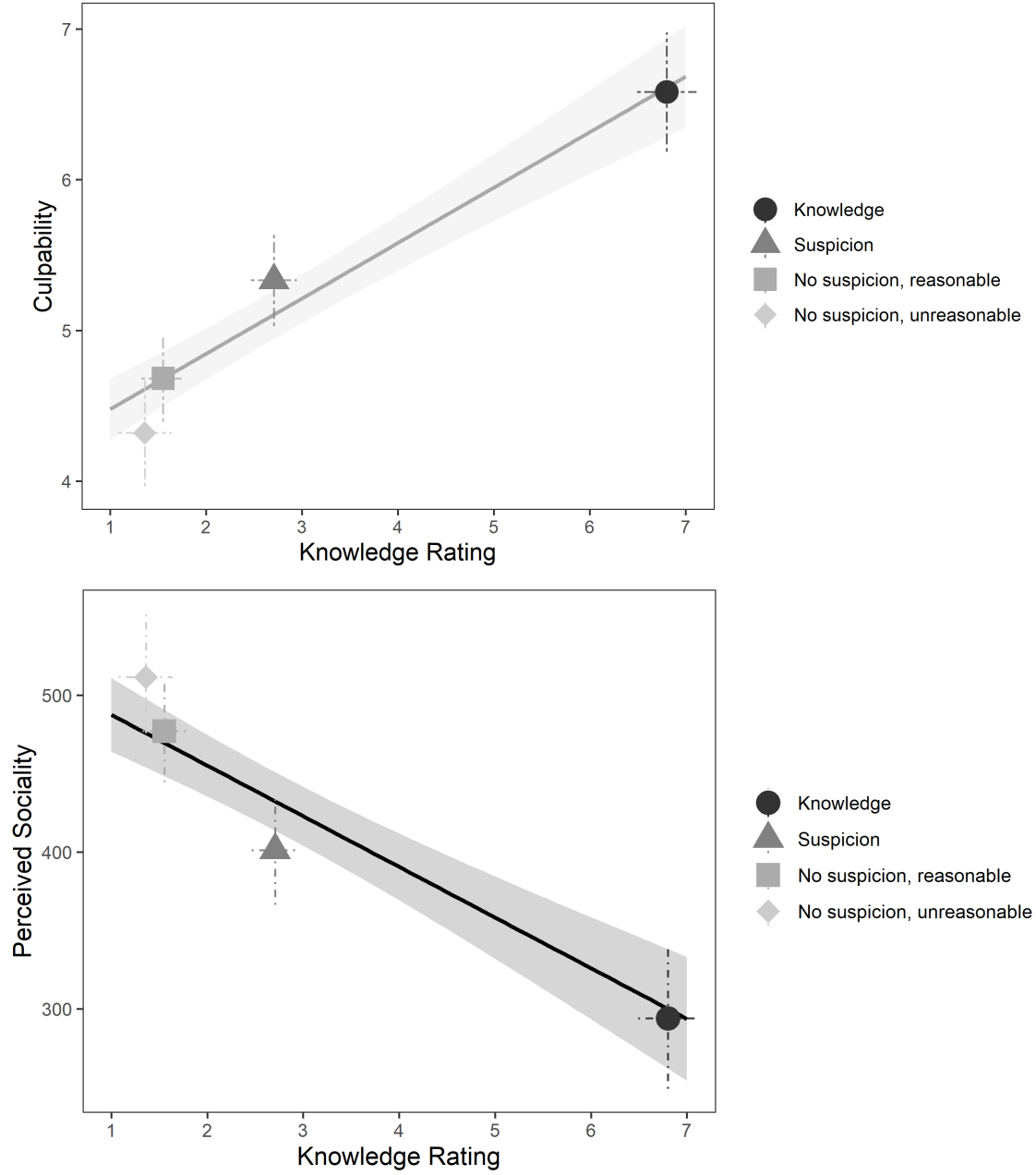
In the two-way ANOVA, suspicion affected knowledge attributions,  $F(2, 340) = 65.28, p < .001, \eta_p^2 = .38$ , while inquiry once again did not (Inquiry:  $F[1, 340] = 0.04, p = .86$ ; Suspicion  $\times$  Inquiry:  $F[2, 340] = 0.03, p = .97$ ). Suspecting agents were ascribed greater knowledge than were unsuspecting agents across various conditions: when inquiry was possible and impossible, and whether suspicion would have been reasonable or not,  $1.87 < Bs < 2.02, 6.70 < ts < 7.36, 1.11 < \text{Cohen's } ds < 1.26$ . Meanwhile, knowledge attributions to unsuspecting agents did not depend on whether suspicion was described as reasonable or not,  $ps > .89$ .

Paralleling the results with blame, suspicion also promoted knowledge attributions. Suspecting agents were ascribed some degree of knowledge, higher than unsuspecting agents yet lower than knowledgeable agents.

**Culpability.** Condition affected culpability judgments,  $F(2, 173) = 13.67, p < .001, \eta_p^2 = .16$ . Namely, suspecting agents were seen as less culpable than knowing agents, whether inquiry would have been easy,  $B = -1.04, t = -5.23$ , Cohen's  $d = -0.93, 95\% CI[-1.32, -0.54]$ , or difficult,  $B = -0.82, t = -3.73$ , Cohen's  $d = -0.91, 95\% CI[-1.28, -0.53], ps < .001$ . The pairwise comparison between suspicion conditions assessing the effect of inquiry was not significant,  $p = .57$ .

In the two-way ANOVA, suspicion affected culpability judgments,  $F(2, 340) = 22.13, p < .001, \eta_p^2 = .16$ , whereas inquiry did not (Inquiry:  $F[1, 340] = 0.04, p = .83$ ; Suspicion  $\times$  Inquiry:  $F[2, 340] = 1.50, p = .22$ ). The effect of suspicion indicated that, across various conditions, suspecting agents were more culpable than unsuspecting agents. This pattern held true when inquiry was easy, whether suspicion was normal,  $B = 1.63, t = 5.20$ , or abnormal,  $B = 1.20, t = 3.84, ps < .001$ . The pattern also held true when inquiry would have been difficult, whether suspicion was reasonable,  $B = 1.01, t = 3.20, p = .004$ , or not,  $B = 1.29, t = 4.03, p < .001$ . Meanwhile, the culpability of unsuspecting agents was unaffected by whether cognizance of the drug-trafficking operations was described as common or rare,  $ps > .36$ .

Thus, in both analyses, suspicion influenced culpability—promoting culpability relative to the absence of suspicion, but reducing it relative to knowledge. In contrast, we observed no effects of either inquiry or reasonableness (see Figure 1 top panel).



*Figure 1. Results of Study 1.* The figure displays culpability ratings (y-axis, top panel) and allocation predictions (y-axis, bottom panel) against knowledge ascriptions (x-axis). Mean ratings for each experimental condition are overlaid along with their 95% confidence intervals.

**Social Preference.** In the one-way ANOVA, condition affected predicted allocations in a dictator game,  $F(2, 173) = 5.41, p = .005, \eta_p^2 = .06$ . Suspecting agents were predicted to steal significantly less than knowing agents when inquiry was easy,  $B = -124.8, t =$

$-3.2$ , Cohen's  $d = -0.56$ , 95%  $CI[-0.92, -0.20]$ ,  $p = .004$ , and non-significantly less when inquiry was difficult,  $B = -85.9$ ,  $t = -2.16$ , Cohen's  $d = -0.37$ , 95%  $CI[-0.74, 0.00]$ ,  $p = .081$ . The pairwise comparison between suspicion conditions revealed no effect of the opportunity for inquiry,  $p = .59$ .

In the two-way ANOVA, suspicion affected predicted allocations in the dictator game,  $F(2, 340) = 5.45$ ,  $p = .005$ ,  $\eta_p^2 = .03$ , while inquiry once again did not (Inquiry:  $F[1, 340] = 1.80$ ,  $p = .18$ ; Suspicion  $\times$  Inquiry:  $F[2, 340] = 0.23$ ,  $p = .80$ ). Suspecting agents were predicted to steal a larger sum than unsuspecting agents whether suspicion was reasonable,  $B = 60.74$ ,  $t = 2.92$ , Cohen's  $d = 0.35$ , 95%  $CI[0.74, 0.61]$ ,  $p = .010$ , or unreasonable,  $B = 58.93$ ,  $t = 2.82$ , Cohen's  $d = 0.37$ , 95%  $CI[0.11, 0.63]$ ,  $p = .014$ . Meanwhile, predicted antisocial behaviour among unsuspecting agents did not depend on whether suspicion was described as reasonable,  $p = 1$ .

In line with the previous results, suspicion also affected the agent's perceived social preference. Suspecting agents were seen as more antisocial (i.e., likely to steal in a Dictator Game) than unsuspecting agents, yet more prosocial than knowing agents (see Figure 1 bottom panel).

**Multiple Regression Analyses.** Entering knowledge attributions into the culpability model substantially weakened the effect of suspicion relative to both knowledge,  $F(1, 172) = 0.54$ ,  $p = .58$ ,  $\eta_p^2 = .01$ , and the absence of suspicion,  $F(2, 339) = 4.04$ ,  $p = .018$ ,  $\eta_p^2 = .02$ . In those same models, the effects of knowledge attribution on culpability were strong:  $F(1, 172) = 37.15$ ,  $\eta_p^2 = .22$ ,  $F(1, 339) = 33.94$ ,  $\eta_p^2 = .10$ ,  $ps < .001$ .

Knowledge attributions also accounted for the effect of suspicion on participants' social inferences, both relative to knowledge,  $F(1, 172) = 0.60$ ,  $p = .55$ ,  $\eta_p^2 = .01$ , and the absence of suspicion,  $F(2, 339) = 0.82$ ,  $p = .44$ ,  $\eta_p^2 = .00$ . In those same models, the effect of knowledge attributions on allocation predictions was highly significant:  $F(1, 172) = 8.35$ ,  $\eta_p^2 = .05$ ,  $p = .004$ ;  $F(1, 339) = 8.77$ ,  $\eta_p^2 = .03$ ,  $p = .003$ .

Thus, the impact of our suspicion manipulation on the agent's culpability and perceived social preferences was partly accounted for by differences in the ascription of knowledge across conditions.

## Summary

In sum, a deliberately ignorant accomplice in a criminal offense is viewed as more innocent than another who knowingly commits the same crime. This pattern holds regardless of whether the course of action that could grant knowledge would have been easy or difficult to undertake. Willfully ignorant agents are, however, attributed a greater degree of knowledge than agents who lack any suspicion that they are involved in crime. Participants' knowledge ascriptions also supported a broader inference about the agent's moral character: Namely, willfully ignorant agents were perceived as more antisocial than unsuspecting agents, but not as antisocial as knowing agents. Crucially, however, the extent to which knowledge was ascribed to the perpetrator explained differences in culpability and social preference across conditions: i.e., why willfully ignorant agents are seen as both more culpable and generally more antisocial than unsuspecting agents, but less so than knowing agents.

## Study 2

The degree of knowledge ascribed to an agent proved to be a crucial factor in people’s verdicts of culpability, and even shaped broader inferences about their moral character. At the same time, Study 1 documented substantial variation in knowledge attributions in the context of willful ignorance (i.e., the ‘Suspicion’ condition). This inspired the prediction that people could have interpreted the knowledge prompt in disparate ways. Specifically, we reasoned that participants may have considered different epistemic states that vary in their precise *content*. For instance, participants could be asking themselves: Did John know that the suitcase contained drugs? Or, alternatively, did John know that he was complicit in an unlawful activity? These differences in scope could help explain variability in people’s knowledge attributions, and also yield insight into whether culpability is determined by a broader or narrower epistemic state.

Therefore, in Study 2, we examined the role of general versus specific knowledge (Nelkin & Rickless, 2017; Vargas, 2005; Wieland & Robichaud, 2017) in judgments about willfully ignorant misconduct. To this end, we drew on a comparison between two agents who, while sharing a general suspicion that they are involved in illicit activity, differ in whether their suspicion is true or false of their specific circumstances. In the ‘(True) Suspicion’ condition, John suspects that he might be aiding a drug-trafficking operation. Meanwhile, in the ‘False Suspicion’ condition, John suspects that he might be involved in the smuggling of gold. In reality, John is involved in drug-trafficking (just as in Study 1). Therefore, on the *specific* level, John’s suspicion is true in one condition and false in the other. At the same time, at a *general* level, they share a certain epistemic state: i.e., the suspicion that they are engaged in crime. A further ambition of Study 2 was to understand which of these epistemic states, the specific or the general, undergirds people’s verdicts of culpability. Lastly, since the opportunity for inquiry did not affect any of our results in Study 1, we dropped this manipulation in Study 2.

## Participants & Design

609 (243 women, 2 non-binary, 1 undisclosed) participants ( $M_{\text{age}} = 40.34$ ,  $SD_{\text{age}} = 12.03$ ) took part in the study. Participants were assigned to one of seven conditions, in a  $4$  (“Suspicion”, “False Suspicion”, “No Suspicion”)  $\times$   $2$  (Knowledge: “General”, “Specific”)  $\times$   $2$  (Knowledge Rating Condition: “Between-subject”, “Within-subject”) +  $1$  (Knowledge) mixed design. Condition *ns* ranged between 139 and 164 participants (aggregated over between/within condition).

## Materials & Procedure

We re-used the “Knowledge”, “Suspicion” and “No Suspicion” scenarios from Study 1 (in the “Easy Inquiry” condition). In the “Knowledge” condition, the agent carried out the inquiry (i.e., “Inquiry”) while in the “Suspicion” and “No Suspicion” conditions he did not (i.e., “No Inquiry”). Given that our manipulation of reasonableness did not reveal an effect in Study 1, we removed the description of the agent’s suspicion as either reasonable or unreasonable. In all three experimental conditions, the agent either knows, suspects or does not suspect that the route he is about to travel on is used for drug trafficking. The relevant content of the agent’s respective epistemic state hence concerns illegal drug trafficking, that

is, the agent is to a varying extent aware of both the immoral significance of the activities on his route (“unlawful trade”) as well as the exact nature of the activity (“trafficking of *drugs*”). In order to contrast the role of general knowledge of moral significance vs. more specific knowledge of the exact wrong-doing, we created a new condition. In this new condition (“False Suspicion”), the agent is aware of the illegal nature of the activities over the border-crossing, but is mistaken about the exact activity in which he could be involved: He believes, on reasonable grounds, that the route is used for gold-smuggling.

### Scenario: “False Suspicion”

“John is travelling with his camper across Europe. He plans to travel to a border crossing that is commonly used as a gold smuggling route. In fact, the route is one of the major gold smuggling routes in Europe. Gold smuggling generally leads to a significant increase in instability and crime in the affected areas.

John knows that the route he is about to take is frequently used for smuggling of gold.

When he stops at a gas station just before the border, he is approached by a group of travellers. They ask him whether he would do them a favour and transport some luggage over the border to a friend who is awaiting the luggage. John would be rewarded with \$100 for his help. However, the group does not tell him that the luggage contains illegal marijuana.

John agrees to transport the luggage.

The suitcase contains marijuana buds packed into transparent plastic bags. The suitcase is not locked such that John could easily open the suitcase to see what is inside. In fact, the suitcase is closed only by a simple zipper. Knowing how easy it would be to open the suitcase, John however deliberately decides not to take the steps that would allow him to check what’s inside the suitcase.”

### Measures

After reading the scenario and answering a series of comprehension questions (see Study 1), participants rated John’s *knowledge* on two separate matters: One rating concerned the agent’s general knowledge about the illegality of his actions, i.e., “John *knew* that he was aiding an unlawful activity” (1-‘strongly disagree’, 7-‘strongly agree’). Another rating concerned the agent’s specific knowledge of the circumstances, i.e., “John *knew* that there are drugs in the suitcase” (1-‘strongly disagree’, 7-‘strongly agree’). Depending on whether subjects participated in the between or within-subjects version of the study, they provided one of the knowledge ratings only, or both knowledge ratings.

In addition, participants evaluated the agent’s *culpability* (through the pair of items) and *social preference* (through the dictator game), just as in Study 1.

Table 2

*Means and SDs of all ratings in the four experimental conditions of Study 2*

	No Suspicion n = 139	False Suspicion n = 161	True Suspicion n = 146	Knowledge n = 164
<i>Specific Knowledge</i>	1.46 (0.99)	1.71 (1.25)	3.20 (2.04)	6.79 (0.49)
<i>General Knowledge</i>	2.20 (1.83)	3.53 (2.11)	4.14 (2.13)	6.72 (0.70)
<i>Culpability</i>	4.14 (2.03)	4.73 (1.77)	5.08 (1.66)	6.64 (0.71)
<i>Allocation</i>	515 (158)	445 (230)	430 (217)	338 (245)

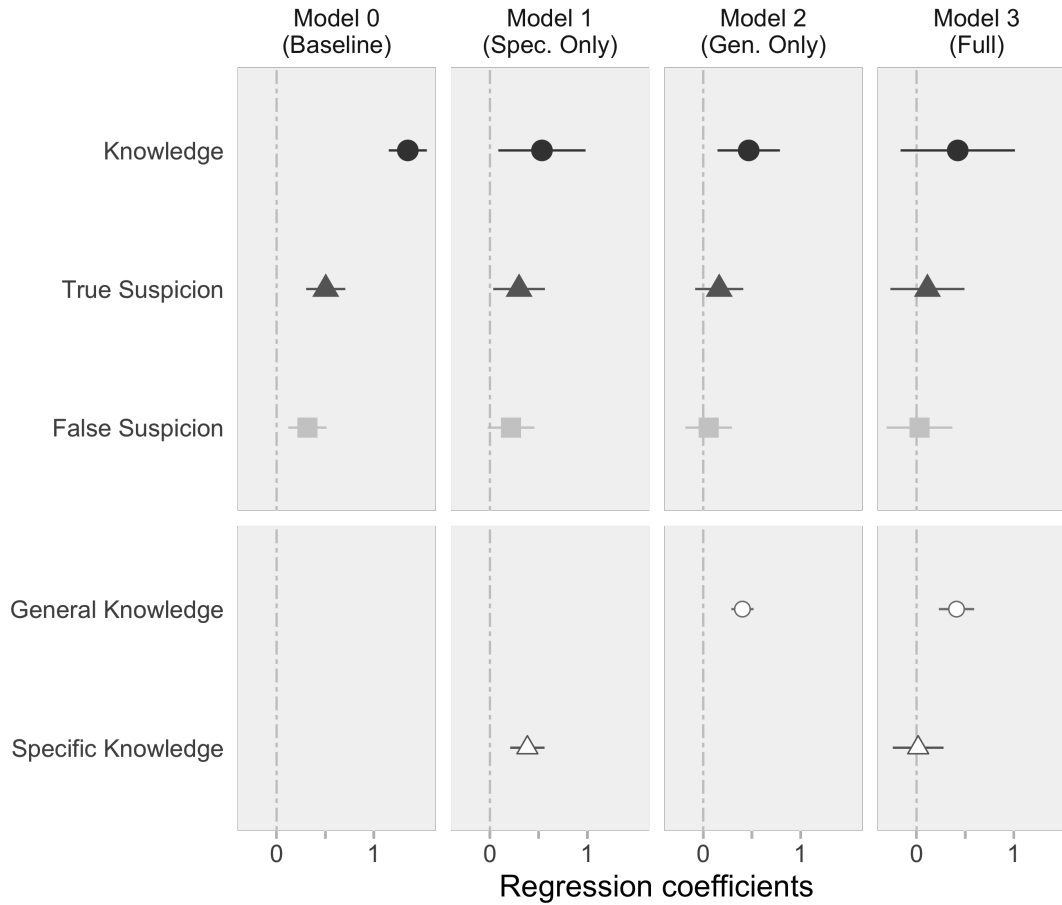
## Results

**General and Specific Knowledge Attributions.** In separate one-way ANOVAs, both specific,  $F(3, 412) = 465.0$ , and general,  $F(3, 409) = 145.8$ , knowledge ascriptions varied significantly across conditions,  $ps < .001$ . Participants ascribed both knowledge states in the Knowledge condition and denied both knowledge states in the No Suspicion condition (see Table 2).

Relative to the No Suspicion condition, in the False Suspicion condition John was ascribed more general knowledge of his involvement in an unlawful activity,  $B = 1.70, t = 7.18, p < .001$ , but no more specific knowledge about the contents of the suitcase,  $B = 0.30, t = 1.80, p = .28$ . Relative to the False Suspicion condition, in the True Suspicion condition John was ascribed more specific knowledge about the contents of the suitcase,  $B = 1.05, t = 6.27, p < .001$ , but no more knowledge of his involvement in illicit activities,  $B = 0.15, t = 0.67, p = .91$ .

**Culpability.** Next, we examined whether culpability (Cronbach's  $\alpha = .91$ ) varied across conditions. We were primarily interested in understanding whether a false suspicion (of one's involvement in gold smuggling instead of drug trafficking) would constitute grounds for absolution relative to true suspicion, and/or conviction relative to no suspicion at all. If specific knowledge about the circumstances of one's involvement (in this case, the actual content of the suitcase) promotes culpability, one would expect to find a difference in culpability ratings when comparing the True and False Suspicion conditions. Meanwhile, if culpability depends on a broader recognition of one's unlawful behavior, then even the misguided suspicion that one is engaged in a different illicit activity (e.g., smuggling gold instead of drugs) should incriminate the defendant relative to the lack of any suspicion whatsoever.

Condition assignment impacted culpability ratings in a one-way ANOVA,  $F(3, 606) = 69.29, p < .001$ . We turned our attention to the specific pairwise comparisons highlighted above: First, culpability did not differ in the comparison between False Suspicion and True Suspicion,  $B = 0.35, t = 1.91, p = .23$ . From the Bayesian perspective, this result provides merely anecdotal evidence in favor of the null (i.e., that specific knowledge does not elevate culpability),  $BF_{01} = 1.77$ . Second, culpability ratings were significantly higher in the False Suspicion condition than the No Suspicion condition,  $B = 0.59, t = 3.16, p = .009$ . This result constitutes moderate evidence in support of the alternative hypothesis: i.e., that



**Figure 2. Results of Study 2.** The figure displays the regression coefficients and 95% confidence intervals for each predictor in four separate regression models (Model 0, Model 1, Model 2 and Model 3) of culpability. **Model 0** functions as a comparison null model, without either knowledge rating as a predictor. **Model 1** includes *specific knowledge* ratings as a predictor, while **Model 2** includes *general knowledge* ratings as a predictor. **Model 3** includes both *specific and general knowledge* ratings as predictors. The top panel displays the effect of the knowledge and suspicion manipulations (dummy-coded), against the reference level (i.e., No Suspicion). The bottom panel displays the regression coefficients of participants' general and specific knowledge ratings. Culpability and knowledge ratings were scaled to one standard deviation, resulting in standardized coefficients in the bottom panel and semi-standardized coefficients in the top panel.

general knowledge does yield culpability,  $BF_{10} = 3.74$ . The remaining pairwise contrasts were all highly significant,  $ps < .001$  (see also Table 2). Thus, our preliminary analyses indicated that culpability in cases of willful ignorance is motivated by the perpetrator's broader recognition of their unlawful behavior—and not by a detailed understanding of the circumstances of their complicity.



**Social Preference.** Condition assignment also influenced perceived social preference,  $F(3, 606) = 17.00, p < .001$ . Social preferences did not differ in the comparison between agents with false and true suspicion,  $B = -15.1, t = -0.61, p = .93$ —which constituted substantial evidence in favor of the null,  $BF_{01} = 6.73$ . However, agents in the False Suspicion condition were seen as more antisocial than those in the No Suspicion condition,  $B = -69.7, t = -2.77, p = .029, BF_{10} = 9.23$ . The remaining pairwise contrasts were all statistically significant,  $ps < .006$ . In other words, the pattern of differences in culpability across conditions mirrored the pattern of broader inferences regarding the defendant’s social preference.

**Multiple Regression Analyses.** To understand whether and which knowledge state accounted for the effect of condition, we entered specific knowledge, general knowledge, and both knowledge ascriptions in three consecutive regression models (see Figure 2 top panel). Entering specific knowledge in the model (Model 1) weakened the effect of condition,  $F(3, 411) = 2.35, p = .072, \eta_p^2 = .017$ , and revealed a partial correlation between specific knowledge and culpability,  $r_p = .21, 95\% CI[.11, .30], p < .001$ . Entering general knowledge in the model (Model 2) also weakened the effect of condition,  $F(3, 408) = 3.54, p = .015, \eta_p^2 = .026$ , and revealed a partial correlation between general knowledge and culpability,  $r_p = .33, 95\% CI[.24, .41], p < .001$ .

With both knowledge ascriptions together in the model (Model 3; restricted to the within-subjects data,  $n = 219$ ), the effect of condition was rendered non-significant,  $F(3, 213) = 0.74, p = .53$ . Furthermore, there were no pairwise differences in culpability across conditions when conditioning on both knowledge ascriptions, all  $ps > .48$ . In this same model, the effect of general knowledge ascriptions was statistically significant,  $F(1, 213) = 51.53, p < .001, r_p = .29, 95\% CI[.17, .41]$ , whereas the effect of specific knowledge ascriptions was not,  $F(1, 213) = 0.04, p = .90, r_p = .01, 95\% CI[-.13, .14]$ . Taken together, these analyses suggest that general knowledge better accounts for the effect of condition on culpability than does specific knowledge.

## General Discussion

In some prominent legal cases, a person was aware of a substantial risk that they were involved in criminal activity, and then deliberately avoided confirming any of the incriminating facts. Through the doctrine of “Willful Ignorance”, most Anglo-American legal systems prevent individuals from eschewing responsibility in these circumstances by allegorically burying their heads in the sand. Specifically, according to the doctrine, deliberate ignorance satisfies the mens rea requirement of knowledge in a criminal offense; and, as a result, the law ought to impute the same degree of liability for willfully ignorant and intentional crimes. These provisions raise a host of empirical predictions about how people ordinarily reason in cases of willfully ignorant wrongdoing.

Drawing on the methods of experimental jurisprudence (Prochownik, 2021; Sommers, 2021; Tobia, 2020), we interrogated laypeople’s assessments of culpability and knowledge in a scenario resembling *United States v. Jewell*. By experimentally manipulating whether the defendant suspected certain incriminating facts, our studies revealed that willful ignorance does indeed constitute grounds for culpability. Though, contrary to the equal culpability thesis, people did *not* consider willfully ignorant agents as culpable as agents who knowingly committed the same crime.

A defining characteristic of willful ignorance is the fact that the defendant deliberately preserves their state of ignorance, often by avoiding any inquiry into the object of their suspicion. In our study, the defendant’s culpability was unaffected by whether the requisite inquiry would have been easy or difficult to carry out, or whether the circumstances would have raised suspicion in the average (or reasonable) person.

Finally, our studies also documented an influence of mens rea ascriptions on broader inferences about the agent’s moral character. People expected willfully ignorant defendants to steal, but unsuspecting defendants to share equitably, if presented with a future opportunity to divide monetary rewards in a dictator game style task. This result provides some support for theories of willful ignorance that emphasise the perpetrator’s ‘ill will’ as grounds for their culpability (Yaffe, 2018). The ‘ill will’ theory also dovetails with evidence in Study 2 that the accuracy of one’s suspicion—e.g., on the question of whether one was specifically aiding a drug trafficking operation—did not impact verdicts of culpability. What appears to matter for conviction, and for inferences about the agents’ antisocial character alike, is the broader suspicion that they were engaged in criminal wrongdoing.

### Unequal Culpability

Whether and under what circumstances defendants in a state of willful ignorance should be held liable as if they had acted knowingly constitutes ‘the problem of willful ignorance’. In our data, people radically distinguished between willfully ignorant and knowledgeable agents, hence violating the “Equal Culpability” assumption (Husak & Callender, 2019). Participants in our study were less inclined to say that the willfully ignorant defendant knew an incriminating fact  $p$  when compared to a defendant who unambiguously knew that  $p$ . Correspondingly, they were also less likely to convict the willfully ignorant agent.

To remain faithful to the ‘substitution principle’ for knowledge, it is argued that the willful ignorance doctrine should not be applied *indiscriminately*, but only when the defendant acted with a form of willful ignorance rendering their behavior as culpable as the corresponding intentional offense (cf. Husak & Callender, 2019). Willful ignorance of an incriminating fact should be taken to satisfy the knowledge element of crime *only* in those cases in which the willfully ignorant defendant really is considered as culpable as an agent with knowledge (Husak & Callender, 2019; Sarch, 2016). While our study can only be seen as a first step towards further investigating ordinary and expert judgments about WI, the data suggest that the scope of WI may need to be further restricted. On the basis of our data involving lay participants, willful ignorance and actual knowledge do not appear to be treated as equally culpable.

Uncovering the circumstances in which ordinary people and legal experts assign equal culpability may help legal theorists and authorities ascertain when WI instructions to juries are warranted. Empirical studies can, at a minimum, serve as evidence concerning the extent to which the existing WI doctrine accords with folk intuition. Of course, whether technical legal concepts should be modeled after “folk” or ordinary notions has been hotly contested in recent scholarship (Jiménez, 2021; Tobia, 2020). Proponents, such as Simons (2021), argue that “[empirical studies] have important implications for whether WB [Willfull Blindness; WI] is a useful and viable criterion of criminal culpability, either in general or in specific legal contexts.” For example, an empirically defensible definition of willful ignorance could involve the adoption of a third criterion, or the refinement of the existing criteria. In this

regard, further research is needed to identify the factors that shape people’s reasoning in cases of willful ignorance and the conditions under which the equal culpability assumption holds.

### **Mens Rea: Recklessness Plus?**

Under traditional common law, the guilt or innocence of a defendant depends on whether they committed the crime (“actus reus”) and also intended to commit the crime (“mens rea”) (but see Kneer & Skoczen, 2021). Many contemporary penal codes include various gradations within mens rea, depending on the surrounding elements of the crime. Recklessness and knowledge differ mainly along a cognitive dimension, that is, in the degree of conscious risk in which the defendant engages. In the taxonomy of mens rea states, WI could fall somewhere between knowledge and recklessness. In addition to recklessness, WI includes a non-cognitive, action-focused criterion: namely, the defendant’s decision not to carry out an inquiry that would settle their suspicion. This way, the law gives weight to a non-epistemic aspect accompanying the mental state of willful ignorance.

Accordingly, all deliberately ignorant agents are reckless, but not all reckless agents are deliberately ignorant (Sarch, 2018; Simons, 2021). The difference between both types of mens rea lies in the opportunity for inquiry, and more specifically, its reasonableness. Suppose that an agent has a suspicion regarding the incriminating proposition  $p$ , but they actually have a valid reason not to acquire more information about  $p$ . For example, it could be impossible or unreasonable for the agent to acquire such knowledge, perhaps because the attempt would put them in danger. Then, although qualifying as reckless for engaging in illicit activity, the defendant would not be willfully ignorant and could not be punished under the WI doctrine. What then counts as sufficient reason for the omission of inquiry? The law concedes that, in a number of situations, an agent’s decision not to act on their suspicion might not be justifiable, but “nearly justified”. Sarch (2018) describes a scenario in which a drug manufacturer decides to overlook the potential (albeit, rare) side effects of a new drug because doing so would postpone its distribution and needlessly extend the suffering of a large number of patients. Sarch (2018) argues that, in such a case, the manufacturer’s liability for any side effects of the drug would not be comparable to the liability derived from knowingly distributing a drug with those same side effects. If the omission of inquiry is almost justifiable, the agent might be considered reckless, but not deemed as culpable as a fully knowledgeable criminal.

In our study, we found evidence that the ease of inquiry, i.e., whether it was easy or virtually impossible for the defendant to inspect the suspicious suitcase, did not influence evaluations of their culpability. This result raises the question of what qualifies as ‘reasonable inquiry’ in the WI’s second element, i.e., the failure to “take reasonably available steps” to acquire knowledge. In the legal case *United States vs. Heredia*, the court provides a first clarification of this element. They argue that an omission of inquiry due to “coercion, exigent circumstances or lack of meaningful choice” may not fall under the second criterion of WI, and in consequence, WI may not apply in such a case (“United States v. Heredia, 483 F. 3d 913 (9 th Cir.)(en banc), cert. denied, 76 USLW 3303 (US Dec. 11, 2007)(No. 07-5762)”, 2008). In *United States vs. Heredia*, the defendant claimed that she could not allay her suspicion that the car might contain illegally smuggled drugs because it would have been unsafe for her to stop along the highway. While the manipulation in our study

focused on practical obstacles, rather than on personal or moral reasons, precluding inquiry, the reasons for not wanting to know might be more complex than the mere unavailability or impracticality of information retrieval. In order to clearly distinguish recklessness from WI, our data point to the need to elaborate on the second defining criterion of WI.

### Inferences from General Knowledge

In addition to potential legal-theoretical implications, our studies contribute empirical evidence towards the philosophical debate around the required *content* of knowledge for moral responsibility and legal culpability (Flanagan, de Almeida, Struchiner, & Hannikainen, 2022; Kirfel & Phillips, 2022; Levy, 2014; Sliwa, 2017; Talbert, 2017). What does an agent need to be aware of in order to qualify as responsible for the consequences of their actions? Philosophers have disputed the exact epistemic requirements of moral responsibility. Some argue that an agent must be aware of the exact consequences resulting from their actions in order to qualify as fully responsible (e.g., that littering will lead to an increase in mosquito populations in the area), while others argue that mere knowledge of its wrongness suffices (e.g., that littering causes harm) (Nelkin & Rickless, 2017; Sliwa, 2017; Vargas, 2005). Relatedly, whether *de re* or *de dicto* moral knowledge forms the basis for responsibility is likewise debated (Harman, 2011; Sliwa, 2017). The distinction between *de dicto* and *de re* awareness of moral significance (Harman, 2014; Sliwa, 2017) is often illustrated by circumstances in which an agent is aware (*de dicto*) of the general moral wrongness of their action, without being cognizant (*de re*) of its exact ‘wrong-making’ features.

Our results support the view that attributions of culpability in the legal domain are motivated by perceptions of *de dicto* knowledge, i.e., that the defendant possessed broadly (and not specifically) incriminating knowledge. This was reflected in people’s judgments in the ‘False Suspicion’ condition: An agent who suspected of the illegality of their behavior, but was mistaken about the details of their involvement (e.g., whether they were aiding a drug trafficking or a gold smuggling operation), was deemed as culpable as someone whose suspicion was correct about the details. Hence, specific knowledge about the precise manner of one’s involvement in crime is seemingly irrelevant for culpability. This perspective dovetails with courtroom evidence: There is a growing skepticism that defendants must know all the details of extant regulations and statutes (Ambos, 2003) as long as they are aware of their existence and, under certain circumstances, a growing admission that a defendant can be convicted without a detailed grasp of the incriminating elements of their conduct (Schabas, 2002; Singer & Husak, 1999). In certain contexts, such a requirement would render convictions “virtually impossible” (see Ambos, 2003).

Strikingly, the patterns in people’s judicial reasoning mirrored their broader inferences about the defendant’s social preferences: In other words, agents with general knowledge of their criminal wrongdoing are perceived as having broader antisocial tendencies, extending into the future, regardless of whether their suspicion is correct. This result opens up promising avenues for future research to explore the connections between social and character inference on the one hand (in particular, how we infer the dispositions of potential social partners), and legal and moral appraisal on the other (see Hannikainen, 2019).

## Conclusion

The court's decision in *United States v. Jewell* has been widely adopted throughout the United States and beyond as a framework for analysing and deciding cases of willful ignorance. Debate among legal theorists suggests that the WI doctrine, although appealing as a tool to expedite prosecution (e.g., of white-collar crime, see ("U.K. 'Actively Avoided' Investigating Russian Interference, Lawmakers Find", 2020, July 20)), violates key tenets of criminal law. Our results substantiated this concern in two ways: first, by showing that—in the eyes of lay judges—WI only partially satisfies the mens rea requirement, far below the level of genuine knowledge; and, second, by uncovering an intimate link between the cognitive processes that subserve judicial reasoning in criminal cases and those that support our extralegal everyday inferences about others' moral character. We therefore envision these studies as a contribution toward our understanding of this unique kind of "mens rea", but also as a vantage point from which to investigate the psychological basis of criminal conviction more generally.

## Appendix

### Comprehension Check Questions

(1) "The fact that the route John is about to travel is a major drug trafficking route ..."

- i) is commonly known amongst most people,
- ii) is completely unbeknownst to most people.

(2) "John ..."

- i) is aware of the drug trade on his travel route.,
- ii) is completely unbeknownst to most people.

(3) "When asked to transport the suitcase for the group of travellers, ...."

- i) John is informed about the content of the suitcase,
- ii) John is *not* informed about the content of the suitcase.

(4) Please fill in the statement such that it best described the scenario you just read:

"John \_ (1) what's inside the suitcase; opening the suitcase is actually (2) \_ . "

- i) (1) checks ; (2) extremely easy
- ii) (1) does not check ; (2) extremely easy
- iii) (1) does not check ; (2) extremely difficult

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