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Love, Money, and Blame: Effects of Emotional and Economic Hardship on Judgments of Criminal Behavior

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ABSTRACT

How do people judge criminal offenders whose early lives were marked by hardship? In three preregistered studies (total $N = 893$), we explored how emotional adversity (abuse and neglect) and economic disadvantage (poverty) shape judgments of criminal behavior. Participants evaluated fictional offenders after learning about their upbringing. Study 1 showed that both types of hardship independently reduced blame for criminal behavior, though neither reduced punishment. Mediation analyses indicated that the reduction of blame was driven by increased sympathy, diminished perceptions that the behavior expressed the offender's moral character, and reduced perceived control over moral self-formation. Study 2 replicated the mitigating effect of abuse and neglect on blame but again found no moderation by economic status. Study 3 showed that poverty reduced both blame and punishment, especially for crimes plausibly motivated by financial need. Together, the findings suggest that emotional and economic hardship independently mitigate moral judgment through overlapping psychological mechanisms.

1 | Introduction

Eva Khatchadourian, the fictional protagonist of the 2011 film *We Need to Talk About Kevin*, struggles to understand how her son, Kevin, became a mass murderer. The film traces Kevin's development from infancy to adolescence, revealing his persistent emotional coldness and manipulative behavior. Despite growing up in a warm, supportive home, Kevin remains detached and hostile. As a teenager, he plans and carries out a deadly crossbow attack at his school after killing his father and sister. In the aftermath, Eva wonders if Kevin was born to kill—a "bad seed" whose horrific crimes no amount of love and nurture could have prevented.

Contrary to what the plot of the film suggests, however, no one is destined from birth to become a criminal. Though genetic factors may increase the likelihood of criminal behavior by contributing to impulsivity, aggression, low arousal, and other traits linked to criminality, these factors do not act in isolation. Environmental factors such as socioeconomic status, peer influences, exposure to violence, and early childhood experiences can either exacerbate or mitigate genetic risk. For example, someone born with a genetic predisposition for aggression might commit violent crime only if they experienced abuse and neglect as a child. Conversely, a supportive social environment can buffer against these genetic risks. In general, whether a person becomes a criminal is not determined solely by nature or nurture but by the interaction between the two, with biological vulnerabilities and environmental triggers jointly influencing the likelihood of criminal behavior (Blankenstein et al. 2024; Raine 2019).

Environmental risk factors for criminality such as childhood abuse and neglect (Jung et al. 2015; Moreira et al. 2024) and childhood poverty (Galloway and Skardhamar 2010; Sariaslan et al. 2014; Wright et al. 1999) are well documented, but their significance for law, philosophy, and psychology is unclear. A

key normative question, debated by legal theorists and moral philosophers, is whether people whose adverse life histories increase their risk of offending bear less moral responsibility for their crimes (Dershowitz 2000; Litton 2005; Stocker 1999; Watson 1988). A related empirical question falls in the domain of moral and legal psychology: Are such offenders *perceived* as less responsible? The issue of perceived responsibility has direct practical relevance for the law, since judges and juries may be swayed by information about a defendant's background, such as the circumstances of their childhood.

2 | Effects of Childhood Hardship on Moral and Legal Judgment

Previous research suggests that people with a history of childhood abuse and neglect are often judged less harshly for immoral or criminal behavior than those who did not experience such adversity. Experimental studies indicate that when people learn about a wrongdoer's childhood trauma, they tend to assign less blame and to interpret the offender's actions in a more sympathetic light (Gill and Cerce 2017; Gill and Zungu 2023; Robbins and Alvear 2023). This tendency extends beyond lay judgments into legal contexts, where evidence of abuse and neglect has been shown to mitigate perceptions of culpability and reduce sentencing severity. For example, jurors and judges alike have been found to recommend lighter punishments for offenders with such backgrounds, reflecting a broader belief that a childhood history of socioemotional hardship undermines full moral responsibility (Barnett et al. 2004, 2007; Bell Holleran et al. 2016; Berryessa 2021; Robbins and Litton 2018; Sandys et al. 2009; Tetterton and Brodsky 2007). To be fair, some studies have found no evidence that information about an offender's childhood history of abuse and neglect reduces the severity of judgments of punishment (Appelbaum and Scurich 2014; Najdowski et al. 2009; Pfeffer et al. 2012; Stevenson 2009; Stevenson et al. 2010). But these findings are consistent with the hypothesis that judgments of blame are mitigated by such information—even if judgments of punishment, which are influenced by perceptions of future dangerousness (and potentially amplified in cases of abuse and neglect), are not.

A separate body of research suggests, albeit indirectly, that a history of childhood poverty may have the same effect on judgments of blame and punishment that a history of childhood abuse and neglect does. Across a range of studies, socioeconomic status has been shown to systematically shape moral evaluations of wrongdoing. Low-status wrongdoers are often judged less harshly than their high-status counterparts: their actions are seen as less wrong and less punishable (Álamo-Hernández et al. 2025; Fragale et al. 2009; Polman et al. 2013), and they are perceived as less immoral in character and as having better reasons for acting immorally (Weiner and Laurent 2021). Relatedly, people attribute the crimes of low-status people more to external circumstances than internal dispositions (Garcia-Molina and Rodríguez-Clavell 2023). High-status people tend to be evaluated more negatively: they evoke more contempt when they commit transgressions, elicit less sympathy as victims, inspire less admiration as heroes, and attract less positive empathy when benefiting from good fortune (Jiang et al. 2023).

Though multiple studies suggest that low-status people tend to be judged less harshly for wrongdoing than their high-status counterparts, other studies point in the opposite direction. According to one meta-analysis, for example, low-SES defendants are slightly more likely to be convicted than high-SES defendants (Devine and Caughlin 2014), though some studies have found no evidence that low-SES defendants receive longer prison sentences (Chiricos and Waldo 1975). Physical cues of high status have also been associated with moral favoritism, with unambiguous moral transgressions judged less negatively when committed by people wearing formal (vs. casual) attire (Dong et al. 2024). That said, the totality of evidence favors the hypothesis that wrongdoing by low-status people tends to be judged more leniently than wrongdoing by high-status people. On the plausible assumption that people tend to assume that poor children grow into poor adults, this in turn suggests the possibility that a childhood history of poverty reduces negative perceptions of an offender's criminal behavior just as a childhood history of abuse and neglect does. This is one of several hypotheses that we set out to test.

3 | Overview of the Present Research

Childhood hardship can take various forms, including emotional adversity (e.g., abuse and neglect) and economic disadvantage (e.g., poverty). Existing research suggests that learning that an offender has been abused and neglected as a child tends to reduce the severity of moral judgment. It also suggests that learning that an offender grew up in poverty may have the same effect. These findings raise important questions. Are the effects of these two types of hardship independent, or do they interact? Are the effects driven by the same underlying mechanism? In what follows, we present findings from a series of studies designed to answer these questions.

Our primary hypotheses were as follows:

Hypothesis 1 *(Socioemotional Mitigation).* A childhood history of abuse and neglect reduces blame and punishment for criminal behavior.

Hypothesis 2 *(Socioeconomic Mitigation).* A childhood history of poverty reduces blame and punishment for criminal behavior.

Hypothesis 3 *(Compounding).* A childhood history of abuse and neglect reduces blame and punishment for criminal behavior more when combined with a childhood history of poverty.

In addition to testing these hypotheses, we investigated possible causal mechanisms underlying the effects posited by Hypotheses 1 and 2, testing for mediation by a variety of variables, including sympathy (Álamo-Hernández et al. 2025; Polman et al. 2013), self-formative control (Gill and Cerce 2017), self-

expression (Robbins and Alvear 2023), and quality of character (Weiner and Laurent 2021).

Study 1 used a full factorial 2 × 2 design, with emotional security in childhood as one factor and economic security in childhood as the other. Each factor had two levels: emotional security was either low (abuse and neglect) or high (love and support), and economic security was either low (poverty) or high (affluence). Study 1 was designed to test whether a history of abuse and neglect reduces blame and punishment (Hypothesis 1), whether a history of poverty has the same effect (Hypothesis 2), and whether these effects interact (Hypothesis 3).

Study 2 used a mixed 3 × 2 design, with economic security varying between subjects from low (poor) to medium (middle class) to high (rich), emotional security held fixed at a low level (abuse and neglect), and repeated measures used to test for an effect of environmental information on judgments of blame and punishment. Study 2 was designed to test whether a history of emotional hardship in childhood mitigated judgments of blame and punishment more when combined with a history of economic hardship (Hypothesis 3).

Study 3 used a full factorial 3 × 2 design, with economic security as one factor with three levels (poor, middle class, rich) and type of crime as a second factor with two levels (shoplifting, vandalism). Study 3 was designed to isolate the economic factor further by taking emotional hardship out of the equation, and to see whether a history of economic hardship mitigates blame and punishment for criminal behavior (Hypothesis 2), and if it does, whether the effect is sensitive to whether the crime could be justified by economic hardship.

The first study and the pair of studies following it differed with respect to the age of the target of judgment: in Study 1 the target was an adult, whereas in both Study 2 and Study 3 the target was an adolescent. This change was intended to magnify the salience of the hardship experienced by the target by making it ongoing, rather than purely historical.

All measures, manipulations, and exclusions in the studies are reported below (see Supporting Information S1: Appendix for complete materials).

4 | Study 1

4.1 | Method

4.1.1 | Participants

Two hundred and seventy-nine participants (49.8% female; mean age 38.9 years; White 69.0%, Black 9.8%, Hispanic 6.9%, Asian 11.6%, Native American 1.1%, other 1.8%) were recruited on Prolific (www.prolific.co) and paid $0.50 to complete a survey of attitudes about morality. No additional participants were recruited based on initial results. Eligibility for participation was limited to people living in the U.S. Data from participants who failed an attention check were removed (n = 2), resulting in a sample size of N = 277.

4.1.2 | Power Analysis

The sample size for the study was determined by an a priori power analysis with G*Power 3 indicating a required minimum of N = 260 to detect main effects of medium size (f = 0.25) at a significance level of 0.05 with 80% power (Faul et al. 2007). A Monte Carlo simulated power analysis for a single mediator model determined that a minimum sample size of N = 250 was needed to detect the indirect effects of our mediation analyses with 80% power (Schoemann et al. 2017).

4.1.3 | Materials and Procedure

After reading an initial description of a fictional character ("Kevin is a 30-year-old man living in a large American city"), participants were randomly assigned to one of four conditions that described the circumstances of the character's upbringing. The conditions systematically varied along two dimensions. In half of the conditions, the character grew up poor (low economic security), and in the other half, he grew up rich (high economic security). Similarly, in half of the conditions, the character was abused and neglected by parents and caregivers (low emotional security), and in the other half, he was loved and supported by them (high emotional security). The four backstories were generated by mixing and matching two versions of the following paragraphs:

> Kevin grew up in a poor [*wealthy*] household. He lived with his family in a tiny, dark [*spacious, sunny*] apartment in the basement of a rundown building [*on the top floor of a luxury high-rise building*] in one of the worst [*best*] neighborhoods in the city, and he attended a series of failing public [*fancy private*] schools.

> To make matters worse [*At home*], Kevin's parents were abusive and neglectful [*loving and supportive*]. They yelled at him violently whenever [*never raised their voice when*] he misbehaved, and they never [*always*] treated him with respect. They often criticized [*praised*] his ideas and general attitude, telling him that he was ugly, boring, and stupid [*handsome, charming, and smart*], and that he would never amount to anything in life [*had a bright future ahead*]. At school, Kevin was shunned by [*popular with*] the other kids, and his teachers were inattentive and mean [*attentive and kind*] to him.

As a manipulation check, all participants indicated their agreement or disagreement with two claims about the character's childhood: first, that he had experienced material deprivation, and second, that he had experienced emotional deprivation (7-point scale; 0 = *strongly disagree*, 6 = *strongly agree*). They also estimated the character's likely socioeconomic status as an adult (two items). Participants then rated the adult Kevin on several markers of socioemotional dysfunction: aggression, uncontrolled anger, social anxiety, and mistrust. This four-item measure was intended to assess, in an indirect way, participants' perception of

the character's moral competence, based on the idea that perceived moral competence is negatively associated with perceived socioemotional dysfunction. After completing this measure, participants indicated the extent to which they felt sympathy for Kevin, given the kind of upbringing he had.

Following the sympathy probe, participants read a vignette describing Kevin's criminal arrest and conviction for assaulting, stalking, and harassing a co-worker. They then indicated the extent to which Kevin deserved blame for this behavior, and how much he should be punished. Participants were then asked how surprised they were by Kevin's criminal behavior, how much sympathy they felt for him, how much the behavior reflected his moral character (two items), how much it reflected the circumstances of his upbringing, and how much the formation of his moral character was under his control (four items). All response items were on a 7-point scale (0 = *not at all*, 6 = *extremely*).

4.2 | Results

4.2.1 | Reliability Analysis

The two-item measure of predicted socioeconomic status showed excellent reliability, Cronbach's α (standardized) = 0.93. The four-item measure of socioemotional impairment showed excellent reliability as well, Cronbach's α = 0.92. The reliability of the two-item measure of self-expression was excellent, Cronbach's α (standardized) = 0.92, and the reliability of the four-item measure of self-formative control was very good, Cronbach's α = 0.82. Hence, participants' responses to individual items were averaged to form a composite score for each multi-item measure (socioeconomic status, socioemotional impairment, self-expression, and self-formative control).

4.2.2 | Analysis of Variance

A two-way ANOVA showed an effect of emotional security on participants' attribution of emotional deprivation to Kevin in childhood, $F(1, 271) = 1808.61$, $p < 0.001$, partial $\eta^2 = 0.87$, 95% CI [0.85, 1], suggesting that this manipulation was effective. Participants tended to agree that Kevin experienced emotional deprivation when he was abused and neglected ($M = 5.66$, SD = 0.72), but they tended to disagree with this claim when he was loved and nurtured ($M = 0.75$, SD = 1.16). There was no effect of economic security on emotional deprivation, $p = 0.09$, and no interaction effect, $p = 0.05$.[1] Participants tended to be neutral on the question of whether Kevin experienced emotional deprivation as a child, regardless of whether he grew up poor ($M = 3.32$, SD = 2.57) or rich ($M = 3.10$, SD = 2.73)—suggesting that participants did not think poor children were more likely to suffer emotional hardship than rich ones. Regarding attributions of economic deprivation, participants tended to agree that Kevin experienced material deprivation in childhood when he grew up poor ($M = 4.54$, SD = 1.45) but tended to disagree with this claim when he grew up rich ($M = 1.02$, SD = 1.65), $F(1, 271) = 429.54$, $p < 0.001$, partial $\eta^2 = 0.61$, 95% CI [0.56, 1]. Participants were also more inclined to see him as materially deprived when he was abused and neglected ($M = 3.46$, SD = 2.33) than when he was loved and nurtured ($M = 2.12$, SD = 2.18), suggesting that participants did think abused and neglected children were more likely to experience economic hardship than children who were loved and supported. The effect of emotional security on material deprivation, however, was much less pronounced than the effect of economic security, $F(1, 271) = 61.05$, $p < 0.001$, partial $\eta^2 = 0.18$, 95% CI [0.12, 1]. There was no interaction effect, $p = 0.88$.

As expected, Kevin's economic circumstances as a child strongly predicted his socioeconomic status as an adult, $F(1, 271) = 393.06$, $p < 0.001$, partial $\eta^2 = 0.59$, 95% CI [0.53, 1]. Estimates of Kevin's socioeconomic status as an adult when he grew up poor ($M = 2.05$, SD = 1.17) were less than half what they were when he grew up rich ($M = 4.50$, SD = 2.54). The same pattern was observed for Kevin's emotional circumstances in childhood but to a lesser extent, $F(1, 271) = 111.80$, $p < 0.001$, partial $\eta^2 = 0.29$, 95% CI [0.22, 1]. Estimates of Kevin's socioeconomic status as an adult were lower when he was abused and neglected ($M = 2.61$, SD = 1.67) than when he was loved and nurtured ($M = 3.92$, SD = 1.53). There was no interaction effect, $p = 0.97$.

We found a large effect of emotional security on attributions of socioemotional impairment, $F(1, 271) = 570.96$, $p < 0.001$, partial $\eta^2 = 0.69$, 95% CI [0.65, 1]. Participants attributed more socioemotional impairment to Kevin when he grew up abused and neglected ($M = 4.48$, SD = 0.85) than when he grew up loved and nurtured ($M = 1.60$, SD = 1.07). There was no effect of economic security, $p = 0.42$, and no interaction effect, $p = 0.62$.

Results from Study 1 also provided further evidence that the perception of childhood hardship influences moral evaluation of criminal behavior. We found a medium-sized effect of emotional security on attribution of blame, $F(1, 271) = 16.33$, $p < 0.001$, partial $\eta^2 = 0.06$, 95% CI [0.02, 1], as well as a small effect of economic security, $F(1, 271) = 3.96$, $p = 0.048$, partial $\eta^2 = 0.01$, 95% CI [0, 1], but no interaction effect, $p = 0.85$.[2] As predicted, Kevin received less blame when he was abused and neglected ($M = 5.01$, SD = 1.08) than when he was loved and nurtured ($M = 5.52$, SD = 1.02), and less blame when he grew up poor ($M = 5.14$, SD = 1.10) than when he grew up rich ($M = 5.39$, SD = 1.05). No interaction effect was observed, $p = 0.85$, indicating that the effects of the two risk factors were independent. In contrast with judgments of blame, no effects of hardship were observed with judgments of punishment. Participants judged Kevin to deserve the same amount of punishment whether he was abused or loved, $p = 0.09$, and whether he grew up poor or rich, $p = 0.27$.

There was an effect of emotional security, but no effect of economic security, on how surprised participants were by Kevin's criminal behavior. Participants were less surprised at Kevin's behavior when he was abused and neglected ($M = 2.13$, SD = 1.86) than when he was loved and nurtured ($M = 4.72$, SD = 1.52), $F(1, 271) = 159.86$, $p < 0.001$, partial $\eta^2 = 0.37$, 95% CI [0.30, 1], but they were equally surprised by his behavior whether he grew up poor or rich, $p = 0.52$. No interaction effect was detected, $p = 0.20$.

Regarding the extent to which participants felt sympathy for Kevin, while there was an effect of both security conditions, the emotional security condition had a much larger effect than the economic security condition. Participants felt much more sympathy for Kevin when he was abused and neglected (M = 3.09, SD = 1.57) than when he was loved and nurtured (M = 1.64, SD = 1.55), $F(1, 271) = 61.01$, $p < 0.001$, partial $\eta^2 = 0.18$, 95% CI [0.12, 1], and slightly more sympathy for him when he grew up poor (M = 2.65, SD = 1.66) than when he grew up rich (M = 2.09, SD = 1.73), $F(1, 271) = 8.91$, $p < 0.001$, partial $\eta^2 = 0.03$, 95% CI [0.01, 1]. No interaction effect was detected, $p = 0.79$.

We found an effect of both emotional and economic security on self-expression (emotional, $F(1, 271) = 7.72$, $p = 0.006$, partial $\eta^2 = 0.03$, 95% CI [0, 1]; economic, $F(1, 271) = 6.25$, $p = 0.01$, partial $\eta^2 = 0.02$, 95% CI [0, 1]). Participants saw Kevin's criminal behavior as less expressive of his moral character when he grew up poor (M = 3.82, SD = 1.39) than when he grew up rich (M = 4.21, SD = 1.23), and less expressive of his moral character when he was abused and neglected (M = 3.79, SD = 1.23) than when he was loved and nurtured (M = 4.23, SD = 1.38). There was no interaction effect, $p = 0.41$.

Analysis of the data also showed an effect of emotional security and an effect of economic security on the extent to which Kevin's criminal behavior reflected his upbringing. Participants said that Kevin's criminal behavior was more reflective of his upbringing when he grew up abused and neglected (M = 4.47, SD = 1.16) than when he grew up loved and nurtured (M = 1.78, SD = 1.49), $F(1, 271) = 290.62$, $p < 0.001$, partial $\eta^2 = 0.52$, 95% CI [0.45, 1], and more reflective of his upbringing when he grew up poor (M = 3.40, SD = 1.65) than when he grew up rich (M = 2.85, SD = 2.09), $F(1, 271) = 11.74$, $p < 0.001$, partial $\eta^2 = 0.04$, 95% CI [0.01, 1]. An interaction effect fell just short of significance, $p = 0.051$.

Finally, there was an effect of emotional security on self-formative control. Participants attributed less control of self-formation to Kevin when he grew up abused and neglected (M = 3.23, SD = 1.01) than when he grew up loved and nurtured (M = 4.43, SD = 1.06), $F(1, 271) = 44.75$, $p < 0.001$, partial $\eta^2 = 0.14$, 95% CI [0.08, 1]. There was no effect of economic security, $p = 0.08$, and no interaction effect, $p = 0.88$. (See Figure 1.)

4.2.3 | Mediation Analysis: Blame

As noted above, emotional security showed a significant effect on blame. Because emotional security was also associated with each of the hypothesized mediators, we conducted mediation analyses to test these indirect pathways. Using PROCESS for R Version 4.1.1 (Model 4; Hayes 2022), we found significant

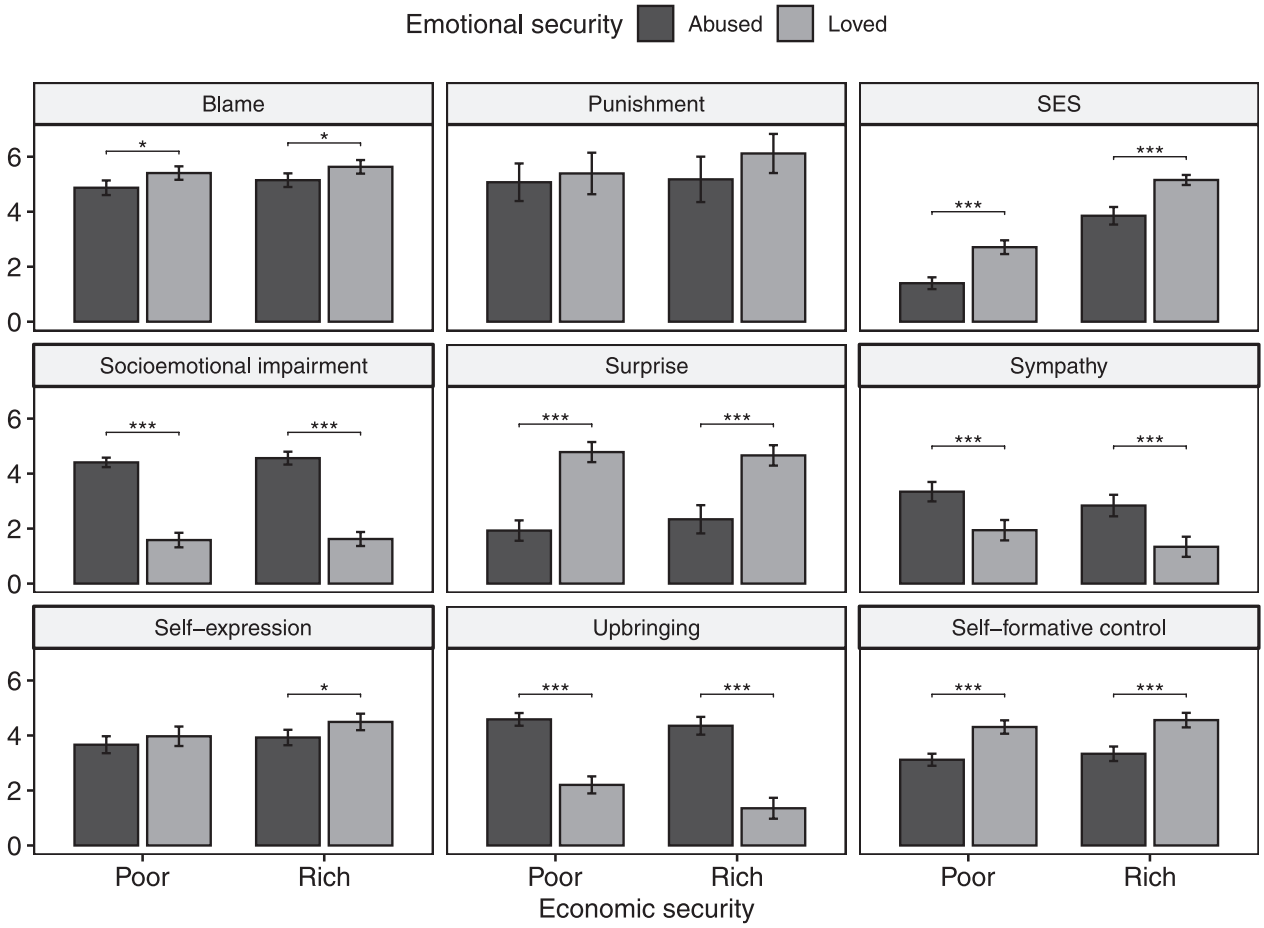

FIGURE 1 | Mean ratings by condition in Study 1. Error bars represent 95% confidence intervals. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

indirect effects of emotional security on blame through socioeconomic status ($ab = 0.16$, $p = 0.005$), sympathy ($ab = 0.34$, $p < 0.001$), self-expression ($ab = 0.14$, $p = 0.01$), self-formative control ($ab = 0.45$, $p < 0.001$), and upbringing ($ab = 0.37$, $p = 0.004$). In a follow-up parallel mediation analysis, only sympathy ($ab = 0.15$, $p = 0.02$), self-expression ($ab = 0.08$, $p = 0.04$), and self-formative control ($ab = 0.14$, $p = 0.02$) remained significant mediators, suggesting that these variables account for the mediation of blame by emotional hardship.

To further examine the role of emotional hardship on blame, we tested mediation models using emotional deprivation as a continuous predictor. Indeed, we again observed significant indirect effects on blame through socioeconomic status ($ab = -0.03$, $p = 0.007$), sympathy ($ab = -0.07$, $p < 0.001$), self-expression ($ab = -0.03$, $p = 0.002$), self-formative control ($ab = -0.09$, $p < 0.001$), and upbringing ($ab = -0.06$, $p = 0.01$). In the parallel model, and upbringing ($p = 0.99$) dropped out, leaving socioeconomic status ($ab = -0.02$, $p = 0.08$) but 95% CI [−0.03, −0.01], sympathy ($ab = -0.03$, $p = 0.02$), self-expression ($ab = -0.02$, $p = 0.01$), and self-formative control ($ab = -0.05$, $p = 0.01$) as significant mediators.

We conducted similar analyses with economic security and economic deprivation as predictors. Although the total effect of economic security on blame fell just short of significance,[3] mediation analyses revealed significant indirect effects through sympathy ($ab = 0.14$, $p = 0.01$), self-expression ($ab = 0.13$, $p = 0.02$), and upbringing ($ab = 0.09$, $p = 0.03$). The analysis also identified a significant indirect effect via socioeconomic status ($ab = 0.55$, $p < 0.001$). In this case, however, the direct effect of economic security on blame ($c' = -0.29$) reversed in sign relative to the total effect ($c = 0.25$), indicating a suppression effect, in which the indirect pathway reverses the direct association; hence, socioeconomic status was excluded from the analysis. In the parallel mediation model, upbringing dropped to non-significance ($p = 0.13$), leaving sympathy ($ab = 0.07$, $p = 0.05$) and self-expression ($ab = 0.09$, $p = 0.03$) as significant mediators.

Finally, in the case of economic deprivation, in contrast to economic security, we found a significant total effect on blame ($c = -0.09$, $p = 0.001$). Mediation analyses revealed indirect effects on blame through socioeconomic status ($ab = -0.09$, $p = 0.004$), sympathy ($ab = -0.04$, $p < 0.001$), self-expression ($ab = -0.04$, $p = 0.003$), self-formative control ($ab = -0.05$, $p < 0.001$), and upbringing ($ab = -0.04$, $p < 0.001$), as well as socioemotional impairment ($ab = -0.02$, $p = 0.02$) and surprise ($ab = -0.02$, $p = 0.02$). Because socioeconomic status showed evidence of suppression ($c = -0.09$, $c' = 0.0009$), it was set aside. In the parallel model, surprise ($p = 0.25$), and upbringing ($p = 0.75$) fell out of significance, leaving sympathy ($ab = -0.02$, $p = 0.040$), self-expression ($ab = -0.02$, $p = 0.02$), and self-formative control ($ab = -0.02$, $p = 0.03$) as the remaining significant mediators. (See Table 1 for summary of results of parallel mediation analysis for blame.)

4.2.4 | Mediation Analysis: Punishment

Although the ANOVA results did not reveal significant total effects of either emotional or economic security on punishment, mediation analyses uncovered several significant indirect pathways. For emotional security, we observed indirect effects on punishment through sympathy ($ab = 0.96$, $p < 0.001$), self-expression ($ab = 0.33$, $p = 0.02$), and self-formative control ($ab = 0.85$, $p < 0.001$). However, in the parallel mediation model, only sympathy remained significant ($ab = 0.66$, $p = 0.002$), while self-expression ($p = 0.052$) and self-formative control ($p = 0.56$) dropped out. When examining emotional deprivation, we again found significant indirect effects on punishment via sympathy ($ab = -0.20$, $p < 0.001$), self-expression ($ab = -0.08$, $p = 0.003$), and self-formative control

TABLE 1 | Parallel mediation analyses with *blame* as the outcome in Study 1.

Predictor and total effect (c)	Mediator	Indirect effect (ab)	Direct effect (c')
Emotional security: 0.51***	SES	0.09†	−0.003
	Sympathy	0.15*	
	Self-expression	0.08*	
	Self-formative control	0.22*	
Emotional deprivation: −0.10***	SES	−0.02†	0.01
	Sympathy	−0.03*	
	Self-expression	−0.02*	
	Self-formative control	−0.05*	
Economic security: 0.25	Sympathy	0.07*	0.05
	Self-expression	0.09*	
	Upbringing	0.04†	
Economic deprivation: −0.09**	Sympathy	−0.02*	0.02
	Self-expression	−0.02*	
	Self-formative control	−0.02*	

Note: Asterisks indicate p-value significance of the Sobel (normal theory) test for indirect effects, according to the scale: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Daggers (†) indicate that while the p-value was greater than 0.05, the Monte Carlo bootstrap interval did not include zero.

($ab = -0.18$, $p < 0.001$). In the parallel model, self-formative control was no longer significant ($p = 0.54$), leaving sympathy ($ab = -0.14$, $p = 0.002$) and self-expression ($ab = -0.05$, $p = 0.03$) as the key mediators.

In the case of economic security, mediation analyses showed indirect effects through sympathy ($ab = 0.35$, $p = 0.01$) and self-expression ($ab = 0.3$, $p = 0.03$). In the parallel model, self-expression was nonsignificant ($p = 0.053$), leaving sympathy ($ab = 0.25$, $p = 0.03$) as the sole mediator. Finally, for economic deprivation, the results showed significant indirect effects on punishment through sympathy ($ab = -0.11$, $p < 0.001$), self-expression ($ab = -0.08$, $p = 0.005$), and self-formative control ($ab = -0.08$, $p = 0.004$). Consistent with the findings for emotional deprivation, the parallel model showed that self-formative control was nonsignificant ($p = 0.86$), leaving sympathy ($ab = -0.08$, $p = 0.01$) and self-expression ($ab = -0.05$, $p = 0.03$) as the significant mediators of the relationship between economic deprivation and punishment. (See Table 2 for summary of results of parallel mediation analysis for punishment.)

4.3 | Discussion

A growing body of research suggests that a childhood history of abuse and neglect tends to mitigate blame for criminal behavior. Does a childhood history of poverty have the same effect? If it does, are these effects independent of one another? The results of Study 1 suggest that the answer to both questions is yes. While participants blamed an offender less when he was abused and neglected as a child than when he was loved and supported (consistent with Hypothesis 1), and less when he grew up poor than when he grew up rich (consistent with Hypothesis 2), they did not blame him less when he was abused and poor than when he was abused and rich. In other words, though both types of childhood hardship mitigated blame, no compounding of these effects was observed (contrary to Hypothesis 3).

As for why a childhood history of hardship mitigates judgments of blame for criminal behavior, our results suggest that this effect is due to a combination of factors. A history of socioemotional hardship appears to reduce blame in three ways: first, by increasing sympathy for the offender; second, by reducing the extent to which their criminal behavior seems to reflect their moral character; and third, by reducing the perceived ability of the offender to shape the development of their moral character. A history of socioeconomic hardship appears to mitigate blame for the same reasons, but to a lesser extent. A similar pattern was observed with judgments of punishment—the main difference being that, by contrast with the effects of childhood hardship on judgments of blame, the perceived ability of the offender to shape his character did not play a mediating role.

Some limitations of Study 1 are worth noting. The first limitation relates to a difference in level of detail and specificity between the two components of the backstory describing Kevin's childhood, with the description of the economic aspects of his upbringing relatively sparse compared to that of the emotional aspects. This difference may have contributed to the relatively weak effect of economic security on blame by making the economic aspects of Kevin's upbringing less salient than the emotional aspects. A second limitation was the lack of a control condition in which blame and punishment were assessed without information about the character's upbringing, to provide a baseline for determining whether this information had a mitigating (or aggravating) effect. A third limitation concerns potential mediators of the effect of emotional security on blame, which did not include factors such as the wrongness of Kevin's behavior, the quality of his moral character, the justifiability of his actions, or how much guilt he felt after the fact. These limitations were addressed in Study 2.

5 | Study 2

5.1 | Method

5.1.1 | Participants

Three hundred and one participants (66.1% female; mean age 42.0 years; White 71.8%, Black 16.3%, Hispanic 6.0%, Asian 3.7%, Native American 0.7%, other 1.7%) were recruited on Prolific (www.prolific.co) and paid $0.60 to complete a survey of attitudes about morality. No additional participants were recruited based on initial results. Eligibility for participation was limited to people living in the U.S. Data from participants who failed an attention check were removed ($n = 1$), resulting in a sample size of $N = 300$.

TABLE 2 | Parallel mediation analyses with *punishment* as the outcome in Study 1.

Predictor and total effect (*c*)	Mediator	Indirect effect (*ab*)	Direct effect (*c′*)
Emotional security: 0.63	Sympathy	0.66**	−0.37
	Self-expression	0.21†	
Emotional deprivation: −0.14*	Sympathy	−0.14**	0.07
	Self-expression	−0.05*	
Economic security: 0.42	Sympathy	0.25*	−0.03
	Self-expression	0.20†	
Economic deprivation: −0.19*	Sympathy	−0.08*	−0.05
	Self-expression	−0.05*	

Note: Asterisks indicate *p*-value significance of the Sobel (normal theory) test for indirect effects, according to the scale: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Daggers (†) indicate that while the *p*-value was greater than 0.05, the Monte Carlo bootstrap interval did not include zero.

5.1.2 | Power Analysis

The sample size for the study was arrived at by picking the larger of two estimates. The first estimate was based on an a priori power analysis using G*Power 3 indicating a required minimum of $N = 300$ to detect main effects of medium size ($f = 0.25$) at a significance level of 0.05 with 90% power, assuming 0.5 correlation between repeated measures (Faul et al. 2007). The second estimate was based on a Monte Carlo simulated power analysis for a single mediator model indicating a minimum of $N = 277$ to detect indirect effects with 95% power (Schoemann et al. 2017).

5.1.3 | Materials and Procedure

All participants read a brief description of a fictional character named David, a 17-year-old boy who struck and killed a pedestrian while driving home after a party and then left the scene of the accident. After reading this story, participants were asked how much blame David deserved for his actions and how much he should be punished. Participants were then randomly assigned to one of three conditions in which they were given detailed information about David's background. In all three conditions, David was described as a victim of parental abuse and neglect (low emotional security), but depending on condition, his family was either poor (low economic security), rich (high economic security), or middle class (moderate economic security). As a manipulation check, participants then assessed the financial condition of David's family. Following the manipulation check, participants were asked again how much blame David deserved for his criminal actions and how much he deserved to be punished, this time in light of the background information provided. They were then asked how surprised they were to learn of David's actions on the night of the accident (*surprise*), how morally good or bad a person he was (*character*), how morally wrong his actions on the night of the accident were (*wrongness*), how justifiable those actions were (*justification*), whether he had good reasons for those actions (*reasons*), how much guilt he felt after the fact (*guilt*), how much control he had over the formation of his character (*self-formative control*), how much his character was determined by the circumstances in which he grew up (*upbringing*), and how much his actions reflected his moral character (*self-expression*).[4]

5.2 | Results

5.2.1 | Analysis of Variance

Results of a one-way ANOVA showed an effect of condition on assessments of the financial condition of John and his family, $F(2, 297) = 1601.20$, $p < 0.001$, partial $\eta^2 = 0.92$, 95% CI [0.90, 1], suggesting that the intended manipulation was successful. Ratings of the financial condition of John and his family were lowest when the family was poor ($M = 0.11$, SD = 0.43), highest when they were rich ($M = 5.90$, SD = 0.46), and intermediate when they were middle class ($M = 3.85$, SD = 1.10). All pairwise contrasts were significant at alpha 0.001 (poor vs. rich, $d = -13.08$, 95% CI [−21.87, −9.74]; poor vs. middle class, $d = -4.46$, 95% CI [−5.64, −3.71]; middle class vs. rich, $d = -2.43$, 95% CI [−3.06, −1.99]).

Results of a mixed model ANOVA showed an effect of background information on blame for John's criminal behavior, $F(1, 297) = 98.24$, $p < 0.001$, generalized $\eta^2 = 0.09$, but no effect of condition, $p = 0.45$, and no interaction effect, $p = 0.37$. Across conditions, participants assigned more blame to John after receiving information about his background, but the same amount of blame regardless of whether his family was poor, middle class, or rich. Punishment ratings followed the same pattern, with an effect of information, $F(1, 297) = 71.10$, $p < 0.001$, generalized $\eta^2 = 0.04$, but no effect of condition, $p = 0.39$, and no interaction effect, $p = 0.21$. All participants made less harsh punishment judgments after learning about John's background, but the degree of mitigation was the same whether his family was poor, middle class, or rich.

A series of one-way ANOVAs revealed an effect of condition on character, $F(2, 297) = 4.31$, $p = 0.01$, partial $\eta^2 = 0.03$, 95% CI [0, 1], and guilt, $F(2, 297) = 9.01$, $p < 0.001$, partial eta $\eta^2 = 0.06$, 95% CI [0.02, 1.00]. Participants judged John's character to be less immoral when his family was poor ($M = 2.35$, SD = 1.26) than when they were rich ($M = 1.85$, SD = 1.25), $p = 0.01$, $d = 0.40$, 95% CI [0.13, 0.67]. They also attributed more feelings of guilt to him when his family was poor ($M = 4.25$, SD = 1.71) or middle class ($M = 4.47$, SD = 1.45) than when his family was rich ($M = 3.53$, SD = 1.79) (poor vs. rich, $p = 0.004$, $d = 0.42$, 95% CI [0.15, 0.71]; middle class vs. rich, $p < 0.001$, $d = 0.58$, 95% CI [0.31, 0.86]). No effects of condition on other variables were observed (surprise, $p = 0.63$; wrongness, $p = 0.22$; justifiability, $p = 0.28$; reasons, $p = 0.38$; upbringing, $p = 0.86$; self-expression, $p = 0.09$), though an effect of condition on self-formative control fell just short of significance, $p = 0.051$.

5.2.2 | Mediation Analysis

As noted above, analysis of the data from Study 2 revealed no effect of condition on judgments of blame or punishment. Because mediation does not require a non-zero total effect of the predictor variable on the outcome variable, a null effect of condition on blame and punishment is consistent with the existence of indirect effects of condition on blame and punishment through one or more of the dependent variables measured in the study. Mediation does require, however, an effect of the predictor variable on the hypothesized mediator. Since an effect of condition was found for only two dependent variables (character and guilt), testing for relative indirect effects of condition on blame and punishment was limited to those two variables. Indirect effects of condition were path relative because the predictor variable was categorical, not dichotomous.

Mediation analysis using PROCESS for R Version 4.1.1 (Model 4; Hayes 2022) revealed a relative indirect effect of condition on blame by character on one path (poor–rich, $b = 0.12$, $p = 0.02$; poor–middle class, $p = 0.43$) but no effect by guilt on either path (poor–rich, $p = 0.77$; poor–middle class, $p = 0.84$). The same

pattern was found for punishment: an indirect effect of condition by character on one path (poor–rich, $b = 0.17$, $p = 0.008$; poor–middle class, $p = 0.42$), but no indirect effect of condition by guilt on either path (poor–rich, $p = 0.08$, poor–middle class, $p = 0.43$). Further analysis with a continuous predictor revealed a small indirect effect of John's financial condition on blame and punishment by character (blame, $b = 0.02$, $p = 0.02$; punishment, $b = 0.03$, $p = 0.01$), but no indirect effect on either blame or punishment by guilt (blame, $p = 0.85$; punishment, $p = 0.14$).

5.3 | Discussion

The primary aims of Study 2 were twofold. First, we wanted to determine whether a history of parental abuse and neglect mitigates blame and punishment for criminal behavior by youth offenders. Second, we wanted to see if a history of abuse and neglect mitigates blame and punishment more when combined with a history of poverty. Results of Study 2 suggest that a history of abuse and neglect does have a mitigating effect on moral evaluation of criminal behavior by youth offenders (consistent with Hypothesis 1), but the mitigating effect of this information is not moderated by information about the offender's economic circumstances (contrary to Hypothesis 3). The results also suggest that youth offenders with a history of abuse and neglect who are poor tend to be seen as having a better moral character, and more likely to feel guilty about their crimes, than those who are rich.

6 | Study 3

6.1 | Method

6.1.1 | Participants

Three hundred and sixteen participants (60.8% female; mean age 39.9 years; White 69.6%, Black 12.0%, Hispanic 6.0%, Asian 7.9%, Native American 0.3%, other 4.1%) were recruited on Prolific (www.prolific.co) and paid $0.80 to complete a survey of attitudes about morality. No additional participants were recruited based on initial results. Eligibility for participation was limited to people living in the U.S. All participants passed an attention check, so all data collected was included in the analysis.

6.1.2 | Power Analysis

The sample size for the study was determined by interpolating between two estimates. The first estimate was based on an a priori power analysis using G*Power 3 indicating a required minimum of $N = 320$ to detect main effects of medium size ($f = 0.20$) at a significance level of 0.05 with 90% power (Faul et al. 2007). The second estimate was based on a Monte Carlo simulated power analysis for a single mediator model indicating a minimum of $N = 300$ to detect indirect effects with 80% power (Schoemann et al. 2017).

6.1.3 | Materials and Procedure

All participants read a brief description of a fictional character named John, a 15-year-old boy who committed a nonviolent crime. Participants were randomly assigned to one of three conditions in which they were given detailed information about John's economic circumstances. Depending on condition, John was described as growing up poor, rich, or middle class. After completing a manipulation check in which they indicated the extent to which they agreed that John experienced financial stress and anxiety, participants were randomly assigned to one of two conditions in which John committed a petty crime, either shoplifting (theft of property) or vandalizing his school (destruction of property). After reading about John's crime, participants were asked how much blame he deserved and how severely he should be punished. They were then asked how surprised they were to learn of John's crime (*surprise*), how much sympathy they felt for him (*sympathy*), how immoral his character was (*character*), how morally wrong his actions were (*wrongness*), how justified his actions were (*justification*; two items), how much guilt he felt about his actions after the fact (*guilt*), how well supported and loved by his family he felt (*socioemotional support*) and how likely it was that he was abused and neglected (*socioemotional hardship*). Finally, participants were asked how much control John had over the formation of his character (*self-formative control*), how much his actions reflected his moral character (*self-expression*), and how much his character was determined by the circumstances of his childhood (*upbringing*).

6.2 | Results

6.2.1 | Reliability Analysis

The two-item measure of justification showed very good reliability, Cronbach's α (standardized) = 0.83. Hence, participants' responses to the two items were averaged to form a composite score.

6.2.2 | Analysis of Variance

Results from a two-way ANOVA indicated an effect of economic security on ratings of the financial stress experienced by John and his family, $F(2, 310) = 590.49$, $p < 0.001$, partial $\eta^2 = 0.79$, 95% CI [0.76, 1], suggesting that the intended manipulation was successful. Participants strongly agreed that John experienced financial stress when his family was poor ($M = 5.58$, SD = 0.73), slightly disagreed with this claim when they were middle class ($M = 2.24$, SD = 1.45), and strongly disagreed when they were rich ($M = 0.40$, SD = 0.10), all ps < 0.001. There was no effect of crime type, $p = 0.11$, and no interaction effect, $p = 0.39$.

With respect to ratings of blame, we found an effect of economic security, $F(2, 310) = 26.93$, $p < 0.001$, partial $\eta^2 = 0.15$, 95% CI [0.09, 1], an effect of crime type, $F(1, 310) = 9.54$, $p < 0.01$, partial $\eta^2 = 0.03$, 95% CI [0.01, 1], and a small interaction effect, $F(2, 310) = 5.06$, $p < 0.01$, partial $\eta^2 = 0.03$, 95% CI [0.01, 1]. Regardless of which crime John committed, participants blamed

him less when his family was poor ($M = 4.57$, $SD = 1.58$) than when they were middle class ($M = 5.49$, $SD = 0.75$) or rich ($M = 5.61$, $SD = 0.98$). John also was blamed less for shoplifting than vandalism, but only when his family was poor (Shoplifting, $M = 4.08$, $SD = 1.61$; Vandalism, $M = 5.04$, $SD = 1.41$).

With respect to ratings of punishment, there was an effect of economic security, $F(2, 310) = 29.32$, $p < 0.001$, partial $\eta^2 = 0.16$, 95% CI [0.10, 1], and an effect of crime type, $F(1, 310) = 55.25$, $p < 0.001$, partial $\eta^2 = 0.15$, 95% CI [0.10, 1], but no interaction effect, $p = 0.87$. Regardless of which crime he committed, participants made less harsh punishment judgments about John when his family was poor ($M = 3.29$, SD = 1.44) than when they were middle class ($M = 4.19$, SD = 1.06) or rich ($M = 4.50$, SD = 1.35). John was also seen as deserving less punishment for shoplifting ($M = 3.49$, SD = 1.38) than vandalism ($M = 4.49$, SD = 1.22) regardless of his economic circumstances.

The pattern of effects with surprise was similar to the pattern with blame. We found an effect of economic security, $F(2, 310) = 37.92$, $p < 0.001$, partial $\eta^2 = 0.13$, 95% CI [0.13, 1], an effect of crime type, $F(1, 310) = 7.26$, $p = 0.007$, partial $\eta^2 = 0.02$, 95% CI [0, 1], and an interaction effect, $F(2, 310) = 9.04$, $p < 0.001$, partial $\eta^2 = 0.06$, 95% CI [0.02, 1]. In the shoplifting scenario, participants were less surprised when John was poor ($M = 1.61$, SD = 1.48) than when he was middle class ($M = 3.98$, SD = 1.51) or rich ($M = 4.08$, SD = 1.05), whereas in the vandalism scenario, they were less surprised when John was poor ($M = 3.06$, SD = 1.74) or rich ($M = 3.58$, SD = 1.90) than when he was middle class ($M = 4.56$, SD = 1.44). Participants were less surprised when John shoplifted than when he vandalized his school, but only when his family was poor or middle class.

With respect to sympathy for John, there was an effect of economic security, $F(2, 310) = 115.35$, $p < 0.001$, partial $\eta^2 = 0.43$, 95% CI [0.36, 1], an effect of crime type, $F(1, 310) = 6.41$, $p = 0.01$, partial $\eta^2 = 0.02$, 95% CI [0, 1], and a small interaction effect, $F(2, 310) = 3.48$, $p = 0.03$, partial $\eta^2 = 0.02$, 95% CI [0, 1]. Regardless of which crime John committed, participants felt twice as much sympathy for John when his family was poor ($M = 4.19$, SD = 1.60) as when they were middle class ($M = 2.15$, SD = 1.61), and twice as much sympathy when they were middle class as when they were rich ($M = 1.15$, SD = 1.28), all ps < 0.001. Participants also felt more sympathy for John when he shoplifted than when he vandalized his school, but only when his family was poor.

Perceptions of John's moral character also varied depending on his economic circumstances, $F(2, 310) = 18.38$, $p < 0.001$, partial $\eta^2 = 0.11$, 95% CI [0.06, 1], and the type of crime he committed, $F(1, 310) = 6.55$, $p = 0.01$, partial $\eta^2 = 0.02$, 95% CI [0, 1], but these effects were independent of one another, $p = 0.32$. Regardless of the crime he committed, judgments of John's character were less negative when he was poor ($M = 3.01$, SD = 0.94) than when he was middle class ($M = 2.53$, SD = 1.15) or rich ($M = 2.09$, SD = 1.22). Judgments of John's character were also less negative when he shoplifted ($M = 2.71$, SD = 1.62) than when he vandalized his school ($M = 2.38$, SD = 1.16), regardless of his economic circumstances.

Regarding the wrongness of John's behavior, there was an effect of economic security, $F(2, 310) = 9.22$, $p < 0.001$, partial $\eta^2 = 0.06$, 95% CI [0.02, 1], an effect of crime type, $F(1, 310) = 17.6$, $p < 0.001$, partial $\eta^2 = 0.05$, 95% CI [0.02, 1], and an interaction effect, $F(2, 310) = 4.27$, $p = 0.01$, partial $\eta^2 = 0.03$, 95% CI [0, 1]. Participants judged John's behavior to be least wrong when he was poor, most wrong when he was rich, and wrong to an intermediate degree when he was middle class, but only in the shoplifting scenario. John's shoplifting was seen as less wrong than his vandalism, but only when he was poor or middle class.

Perceptions of the extent to which John's behavior was justified followed a pattern similar to that of wrongness. There was an effect of economic security, $F(2, 310) = 27.74$, $p < 0.001$, partial $\eta^2 = 0.15$, 95% CI [0.09, 1], an effect of crime type, $F(1, 310) = 31.27$, $p < 0.001$, partial $\eta^2 = 0.09$, 95% CI [0.05, 1], and an interaction effect, $F(2, 310) = 30.25$, $p < 0.001$, partial $\eta^2 = 0.16$, 95% CI [0.10, 1]. Participants saw John's behavior as more justified when his family was poor than when they were middle class or rich, but only in the shoplifting scenario. Participants also saw John's behavior as more justified when he shoplifted than when he vandalized his school, but only when his family was poor.

With respect to perceptions of the extent to which John felt guilty about his criminal behavior, we found an effect of economic security, $F(2, 310) = 11.65$, $p < 0.001$, partial $\eta^2 = 0.07$, 95% CI [0.03, 1]. Participants attributed more guilty feelings to John when his family was poor ($M = 3.47$, SD = 1.24) than when they were middle class ($M = 2.91$, SD = 1.33) or rich ($M = 2.54$, SD = 1.62). There was no effect of crime type, $p = 0.06$, and no interaction effect, $p = 0.41$.

Analysis revealed an effect of economic security on ratings of self-formative control, $F(2, 310) = 5.81$, $p = 0.003$, partial $\eta^2 = 0.04$, 95% CI [0.01, 1], no effect of crime type, $p = 0.06$, and a small interaction effect, $F(2, 310) = 3.84$, $p = 0.02$, partial $\eta^2 = 0.02$, 95% CI [0, 1]. Participants saw John as having less control over the formation of his moral character when his family was poor than when they were middle class or rich, but only in the shoplifting scenario.

With respect to perceptions of the extent to which John's criminal behavior reflected his moral character, we found an effect of economic security, $F(2, 310) = 13.55$, $p < 0.001$, partial $\eta^2 = 0.08$, 95% CI [0.04, 1], and an effect of crime type, $F(1, 310) = 12.15$, $p < 0.001$, partial $\eta^2 = 0.04$, 95% CI [0, 1], but no interaction effect, $p = 0.38$. Participants saw John's behavior as less reflective of his moral character when he grew up poor than when he grew up middle class or rich, but only in the shoplifting scenario. John's behavior was also seen as less reflective of his moral character when he shoplifted than when he vandalized his school, but only when he was poor.

With respect to ratings of the extent to which John's behavior reflected the circumstances of his upbringing, we found an effect of economic security, $F(2, 310) = 20.38$, $p < 0.001$, partial $\eta^2 = 0.12$, 95% CI [0.06, 1]. Participants saw John's criminal behavior as more reflective of his upbringing when he was poor ($M = 4.20$, SD = 1.23) than when he was middle class ($M = 3.00$,

SD = 1.48) or rich (M = 3.39, SD = 1.48). There was no effect of crime type, p = 0.13, and no interaction effect, p = 0.92.

Finally, with respect to ratings of socioemotional support, there was an effect of economic security, $F(2, 310) = 23.87$, $p < 0.001$, partial $\eta^2 = 0.13$, 95% CI [0.08, 1], but no effect of crime type, p = 0.30, and no interaction effect, p = 0.31. Participants judged that John felt the least emotional support from his family when he was poor (M = 2.64, SD = 1.29), the most support when he was middle class (M = 3.92, SD = 1.33), and an intermediate amount of support when he was rich (M = 3.27, SD = 1.40). We also found an effect of economic security on estimates of the likelihood that John experienced socioemotional hardship, $F(2, 310) = 21.70$, $p < 0.001$, partial $\eta^2 = 0.12$, 95% CI [0.07, 1], but no effect of crime type, p = 0.49, and no interaction effect, p = 0.51. Participants judged that John was most likely to be abused or neglected when his family was poor (M = 3.49, SD = 1.36), least likely when they were middle class (M = 2.15, SD = 1.57), and likely to an intermediate degree when they were rich (M = 2.75, SD = 1.44). (See Figure 2.)

6.2.3 | Mediation Analysis

As noted above, socioeconomic hardship influenced judgments of both blame and punishment. To explore the mechanisms underlying these effects, we tested for indirect pathways using PROCESS for R Version 4.1.1 (Model 4; Hayes 2022). For clarity of exposition, full indirect effect estimates (ab and p-values) for each contrast are provided in the tables below.

For blame, significant indirect effects of socioeconomic hardship were observed through most mediators, with the exception of upbringing and socioemotional support. In the parallel mediation model, surprise, sympathy, and justification consistently emerged as mediators across both contrasts, while wrongness and guilt were significant only for the poor–rich comparison. Character did not remain significant in either contrast. The largest indirect effects were found via sympathy, which consistently mediated both contrasts (poor–middle path: ab = 0.23, p = 0.005; poor–rich path: ab = 0.34, p = 0.004), and justification (poor–middle path: ab = 0.21, p = 0.001; poor–rich path: ab = 0.34, $p < 0.001$).

When analyses were restricted to judgments of shoplifting, sympathy, justification, and self-expression emerged as mediators, with justification exhibiting the strongest effect (poor–middle path: ab = 0.83, $p < 0.001$; poor–rich path: ab = 1.04, $p < 0.001$), followed by sympathy (poor–middle path: ab = 0.32, p = 0.02; poor–rich path: ab = 0.44, p = 0.01). For judgments of vandalism, sympathy mediated both contrasts (poor–middle path: ab = 0.27, p = 0.01); poor–rich path (ab = 0.45, p = 0.004), while surprise (poor–middle path: ab = 0.21, p = 0.02) and self-expression (poor–rich path: ab = 0.14, p = 0.05) reached significance only in one path. (See Table 3.)

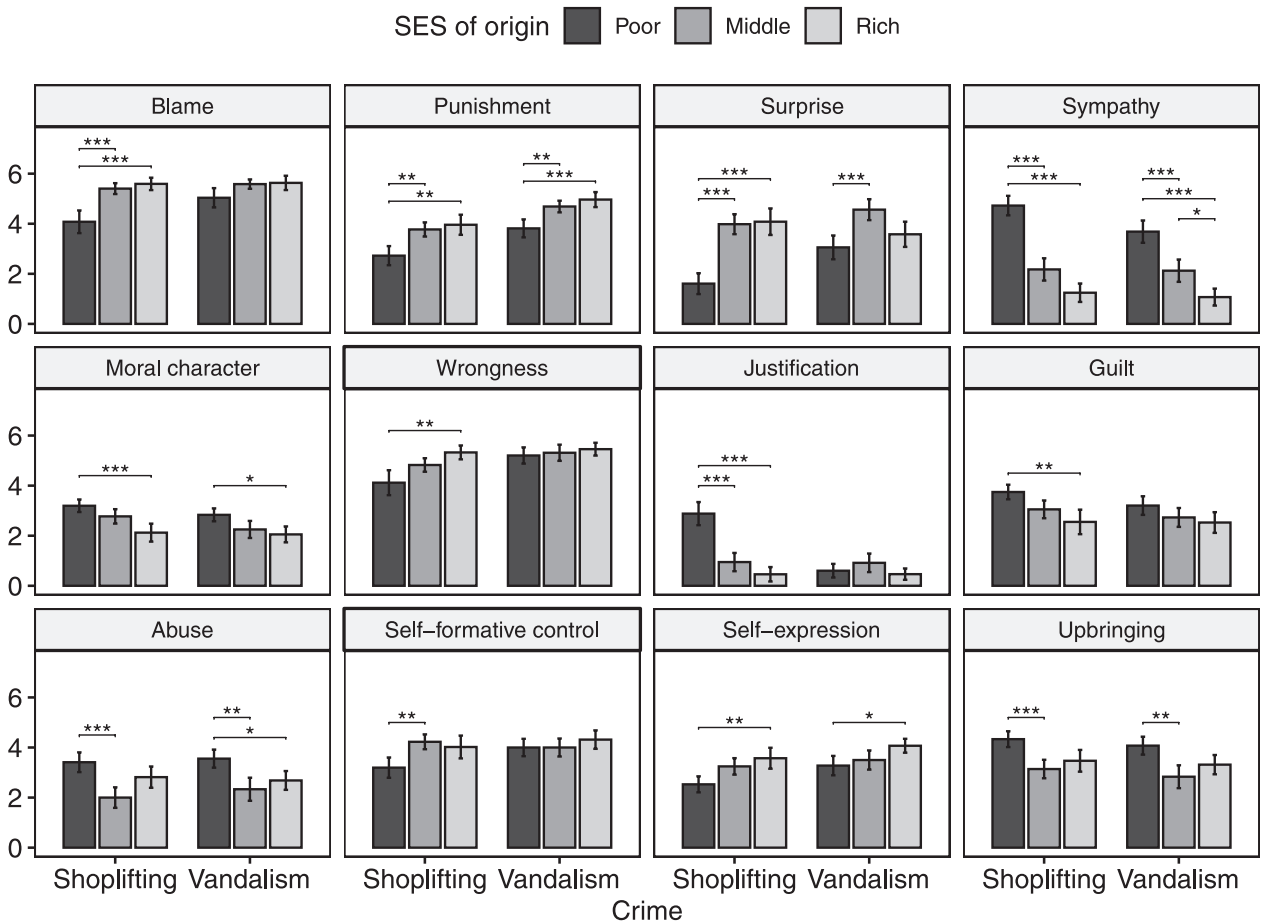

FIGURE 2 | Mean ratings by condition in Study 3. Error bars represent 95% confidence intervals. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

TABLE 3 | Parallel mediation analyses with *blame* as the outcome in Study 3.

Predictor and total effect (c)	Mediator	Indirect effect (ab)	Direct effect (c')
Both crimes x_1: 0.91*** x_2: 1.04***	Surprise	x_1: 0.14*	x_1: 0.17 x_2: −0.02
		x_2: 0.11*	
	Sympathy	x_1: 0.23**	
		x_2: 0.34**	
	Wrongness	x_1: 0.08†	
		x_2: 0.16**	
	Justification	x_1: 0.21**	
		x_2: 0.34***	
	Guilt	x_1: 0.04	
		x_2: 0.07*	
	Self-formative control	x_1: 0.05†	
		x_2: 0.06†	
Shoplifting only x_1: 1.33*** x_2: 1.51***	Sympathy	x_1: 0.32*	x_1: −0.18 x_2: −0.32
		x_2: 0.44*	
	Justification	x_1: 0.83***	
		x_2: 1.04***	
	Self-expression	x_1: 0.12*	
		x_2: 0.18*	
Vandalism only x_1: 0.55* x_2: 0.59*	Surprise	x_1: 0.21*	x_1: 0.03 x_2: −0.06
		x_2: 0.07	
	Sympathy	x_1: 0.27**	
		x_2: 0.45**	
	Self-expression	x_1: 0.04	
		x_2: 0.14*	

Note: Only mediators for which at least one path showed a significant indirect effect are shown. x_1 represents the contrast poor–middle, and x_2 represents the contrast poor–rich. Asterisks indicate p-value significance of the Sobel (normal theory) test for indirect effects, according to the scale: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Daggers (†) indicate that while the p-value was greater than 0.05, the Monte Carlo bootstrap interval did not include zero.

For punishment, indirect effects were observed through most mediators except upbringing, socioemotional support, and socioemotional hardship. In the parallel mediation model, surprise, sympathy, wrongness, self-formative control, and self-expression consistently emerged as mediators across at least one contrast. Again, the largest effects were carried by sympathy (poor–middle path: $ab = 0.37$, $p < 0.001$; poor–rich path: $ab = 0.55$, $p < 0.001$), followed by surprise (poor–middle path: $ab = 0.23$, $p = 0.001$; poor–rich path: $ab = 0.18$, $p = 0.003$), wrongness (poor–middle path: $ab = 0.13$, $p = 0.05$; poor–rich path: $ab = 0.26$, $p = 0.001$) and self-expression in one path (poor–rich path: $ab = 0.14$, $p = 0.01$). By contrast, character, justification, and guilt became nonsignificant.

When focusing on shoplifting judgments, sympathy, wrongness, and self-expression all mediated punishment judgments, with sympathy showing the largest indirect effect (poor–middle path: $ab = 0.63$, $p = 0.001$; poor–rich path: $ab = 0.86$, $p = 0.001$), followed by wrongness (poor–middle path: $ab = 0.25$, $p = 0.02$; poor–rich path: $ab = 0.43$, $p = 0.002$). For vandalism judgments, sympathy again mediated both contrasts (poor–middle path: $ab = 0.21$, $p = 0.04$; poor–rich path: $ab = 0.35$, $p = 0.03$), while surprise, guilt, and self-expression were significant in only one path. (See Table 4.)

6.3 | Discussion

In Study 1 and Study 2 we investigated the effects of both economic and emotional hardship on judgments of criminal behavior. In Study 3 we isolated the economic hardship factor, but with an eye to the possibility that its effects would vary depending on the crime. We found that socioeconomic hardship reduced the severity of blame and punishment judgments for two types of property crime, in addition to reducing negative perceptions of the agent's moral character and increasing the sympathy felt for them. More typically, however, the effects of economic hardship on participants' judgments were crime dependent, applying only in the case of a property crime involving theft. Effects of emotional hardship on judgments of the moral wrongness of the behavior and the extent to which it was justified—as well as judgments of the extent to which the behavior reflected the offender's moral character, the extent to which it reflected his upbringing, and the extent to which he

TABLE 4 | Parallel mediation analyses with *punishment* as the outcome in Study 3.

Predictor and total effect (*c*)	Mediator	Indirect effect (*ab*)	Direct effect (*c′*)
Both crimes x_1: 0.90*** x_2: 1.21***	Surprise	x_1: 0.23**	x_1: 0.06 x_2: 0.05
		x_2: 0.18**	
	Sympathy	x_1: 0.37***	
		x_2: 0.55***	
	Wrongness	x_1: 0.13*	
		x_2: 0.26**	
	Self-formative control	x_1: 0.06†	
		x_2: 0.07†	
	Self-expression	x_1: 0.07†	
		x_2: 0.14†	
Shoplifting only x_1: 1.05*** x_2: 1.23***	Sympathy	x_1: 0.63**	x_1: −0.08 x_2: −0.30
		x_2: 0.86**	
	Wrongness	x_1: 0.25*	
		x_2: 0.43**	
	Self-expression	x_1: 0.15*	
		x_2: 0.22*	
Vandalism only x_1: 0.87*** x_2: 1.15***	Surprise	x_1: 0.19*	x_1: 0.33 x_2: 0.44
		x_2: 0.07	
	Sympathy	x_1: 0.21*	
		x_2: 0.35*	
	Guilt	x_1: 0.08	
		x_2: 0.11†	
	Self-expression	x_1: 0.04	
		x_2: 0.15*	

Note: Only mediators for which at least one path showed a significant indirect effect are shown. x_1 represents the contrast poor–middle, and x_2 represents the contrast poor–rich. Asterisks indicate *p*-value significance of the Sobel (normal theory) test for indirect effects, according to the scale: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

was seen as having control over the formation of his character—were observed only when the offender committed an act of theft, not when he committed an act of vandalism. Our results also suggest that the mitigating effects of economic hardship on judgments of blame and punishment for nonviolent crimes are due to greater sympathy for youth offenders who are economically disadvantaged, together with the perception of their behavior as more justifiable, relative to youth offenders from more privileged backgrounds. Finally, our results suggest that economic hardship predicts less emotional support and more emotional hardship, contrary to the null finding in Study 1 regarding the effect of economic security on emotional deprivation.

7 | General Discussion

The goal of the research reported here was to investigate how different types of information about an offender's early life history influence judgments of their criminal behavior. We focused on the effect of information about the offender's experience of socioemotional hardship (abuse and neglect by caregivers) and their experience of socioeconomic hardship (poverty and financial stress) on judgments of blame and punishment. Across three studies, both forms of hardship reduced the severity of moral judgments, but through distinct mechanisms. Study 1 showed that childhood abuse and neglect mitigated blame independently of poverty, mainly by increasing sympathy and perceptions of diminished control over moral development. Study 2 replicated this effect for youth offenders, with abuse and neglect reducing blame regardless of economic background, though poor offenders were judged as having better moral character and feeling more guilt than wealthy ones. Study 3 found that economic disadvantage reduced blame, punishment, and negative character judgments for property crimes, especially theft, by increasing sympathy and perceived justifiability.

In terms of broad implications, our findings provide further support for the idea that moral judgment is influenced by information about the target's past experience, not just their past behavior (Robbins et al. 2021). As such, our studies strengthen the case for *historicism* about moral responsibility, according to which attributions of blame are sensitive to information about the target's life history (Gill and Cerce 2017; Gill and Ungson 2018; Taylor and Maranges 2020), especially when that history includes extended episodes of personal hardship. They

also illustrate how information about a person's social identity—for example, their socioeconomic background—can influence moral evaluation of their behavior (Hester and Gray 2020), and in the case of criminal behavior, how that influence may depend on the type of crime committed and the motivation behind it (e.g., whether economic need might have been a factor). This suggests that presenting evidence of socioeconomic hardship in the courtroom is more likely to be effective when the defendant's wrongdoing is justifiable on financial grounds.

Our studies also bear on the general issue of how to model blame attribution. Of particular relevance in this context is the *Path Model of Blame* (Malle et al. 2014), according to which blame for intentional wrongdoing is reduced when the behavior seems justified. This aspect of the model aligns with our finding that a youth offender from an impoverished background received less blame for shoplifting than his more fortunate peers because the crime seemed more defensible in his case (Study 3). According to the Path Model, however, justification is the only factor that moderates blame for intentional wrongdoing. Our studies, among others (e.g., Gill and Cerce 2017; Weiner and Laurent 2021), show that additional factors come into play, both on the target side (e.g., self-expression, self-formative control, guilt) of the equation and on the observer side (e.g., sympathy, surprise)—suggesting that a higher dimensional model of blame attribution may be needed. Indeed, the latter conclusion seems almost inescapable, given that the Path Model focuses exclusively on the cognitive state of the target of blame, whereas attributions of blame are also sensitive to the emotional state of the observer, as well as the emotional state of the target (Álamo-Hernández et al. 2025; Jiang et al. 2023; Polman et al. 2013; Roth and Kaspar 2023).

Some limitations of the research reported here are worth noting. First, the main character in the vignettes for two of the three studies (Studies 2 and 3) was an adolescent, rather than an adult (as in Study 1). Though this design choice was theoretically motivated, further studies would be needed to rule out the possibility that some of our findings would not generalize to adult offenders. Second, our vignettes involved a narrow range of crimes: harassment (Study 1), drunk driving and vehicular manslaughter (Study 2), and shoplifting and vandalism (Study 3). A fuller investigation of the effects of childhood hardship on moral judgment would require the addition of vignettes featuring a wider class of offenses, including more serious crimes (e.g., murder, rape). Third, in two of our three studies, the participants were disproportionately female (Study 2, 66.1%; Study 3, 60.8%). This limits the practical significance of our results for the law, since two of the three participant groups were not representative (with respect to sex) of the communities from which jurors are drawn. This concern is magnified by the fact that our samples on Prolific were not filtered to ensure that they were representative of the U.S. population with respect to age, sex, and ethnicity. Finally, all participants in the studies were from the U.S. It should not be assumed that our findings about the effects of offenders' early life history on judgments of their criminal behavior, and the psychological mechanisms underlying those effects, apply to other cultures, especially non-WEIRD ones (Henrich et al. 2010).

Author Contributions

Philip Robbins: conceptualization, formal analysis, investigation, methodology, writing – original draft (lead), writing – review and editing. **Fernando Alvear:** conceptualization, data curation, formal analysis (lead), investigation, methodology, visualization, writing – original draft, writing – review and editing.

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Ethics Statement

All studies were certified as exempt by the University of Missouri Institutional Review Board. The procedures used in the studies adhere to the tenets of the Declaration of Helsinki and the Belmont Report, and all participants gave their informed consent prior to data collection.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

All studies were preregistered. De-identified data, codebook, and R code for analyses are available on the Open Science Framework at https://osf.io/dwjkg.

Endnotes

[1] Though a small interaction effect was detected, $p = 0.047$, partial $\eta^2 = 0.01$, 95% CI [0, 1], the pairwise comparison indicative of this effect—slightly stronger agreement with the emotional deprivation claim when Kevin was poor than when he was rich, but only when he grew up in a loving home—was insignificant after the Bonferroni correction, $p = 0.06$.

[2] The effect of economic security on blame was not detected using one-way ANOVA, a less sensitive test than a two-way ANOVA, which controls for the effect of emotional security on blame. Likewise, results from a mediation analysis using economic security as a categorical predictor and blame as outcome did not reveal a significant total effect (see below for details).

[3] As noted earlier, a significant total effect of economic security on blame was detected using a two-way ANOVA ($p = 0.048$).

[4] A question about participants' sympathy for David, parallel to the question about Kevin in the survey for Study 1, was accidentally omitted from the survey for Study 2.

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