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# Adverse Childhood Experiences in Capital Sentencing: A Focal Concerns Approach to Understanding Capital Juror Leniency

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## ABSTRACT

This study examines the effect of defendant Adverse Childhood Experiences (ACEs) on sentencing decisions in death penalty cases. Relying on Focal Concerns Theory and the affect heuristic, we examine the relative importance of substantive rationalities (blame-worthiness and protection of the community from harm) and affect (anger and sympathy) in explaining the impact of such evidence. U.S. adults participated in a mock juror tasks in which exposure to ACEs as mitigating evidence was experimentally manipulated. Defense testimony elicited leniency, largely operating through affective responses to ACE evidence. Evidence of abuse did not contribute to evaluations of the defendant as a greater threat to the community. Substantive rationalities explained variability in sentencing decisions, but did not explain a substantial portion of the impact of ACE evidence. Implications for the constitutionality of capital punishment and directions for future research are discussed.

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Adverse childhood experiences; affect heuristic; capital punishment; focal concerns theory; mitigating evidence

## Introduction

Capital juries are tasked with determining whether to impose the most severe sentence authorized by law—the death penalty. Based on a wide variety of evidence informing on the aggravated nature of the capital offense, the degree of intentionality of their conduct, and the character and culpability of the defendant, juries deliberate within the confines of a complex system of laws and precedents that govern when and how they can impose a death sentence. Capital jurisprudence has focused on how aggravating evidence and mitigating evidence should be considered and weighed to produce reasoned moral judgment (e.g. *Gregg v. Georgia*, 1976; *Lockett v. Ohio*, 1978). Generally, the Supreme Court requires that the death penalty be narrowly applied, that is, only in cases where the offense is very serious, and the defendant possesses an extreme degree of culpability (see *Atkins v. Virginia*, 2002, p. 319). Though it is contested that jurors can fulfill this mandate (see Bell Holleran & Vaughan, 2020), juries are responsive to a variety

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of pieces of evidence (e.g. Bell Holleran et al., 2016; Edens et al., 2004; Matsuo & Itoh, 2016), and their decisions are shaped by substantive rationalities, to a certain degree (Garvey, 2000; White, 1987). Recent capital jury research has begun, however, to acknowledge and model the role of affect (Georges, Weiner, & Keller, 2013). Research has focused primarily on anger as a motivator for punishment (also see Weiner, Georges, & Cangas, 2014) and has yet to fully explore a variety of affective responses and the evidence that elicits those responses.

Alongside these developments in capital jury research, criminologists have rapidly advanced the study of Adverse Childhood Experiences (ACEs) as risk factors for criminal and violent behavior (see Baglivio et al., 2020). Childhood maltreatment, emotional, physical, & sexual abuse, emotional & physical neglect, exposure to violence, mental illness & substance abuse, and parental abandonment, incarceration, or separation/divorce, have been identified as traumatic childhood events with profound consequences for criminal behavior, particularly as ACEs accumulate (Baglivio et al., 2014). ACEs are scored dichotomously and a cumulative score indicates the extensiveness of childhood adversity. ACEs are much more prevalent among justice involved populations as compared to the general population and ACE scores in excess of 4 have been observed in more than 50% of incarcerated offenders in a Welsch prison survey (Ford et al., 2019), 50% of Florida juvenile offenders (Baglivio et al., 2014), and nearly 50% of male sex-offenders (Levenson et al., 2016). ACE research on capital defendants or death row inmates is limited, though it is clear that childhood abuse and neglect is common among this population (Cunningham & Vigen, 2002; Lisak & Beszterczey, 2007).

In this study, we take insights from these disparate research areas as a starting point for revisiting the mechanisms by which capital juries sentence. As ACEs are prevalent among offenders, the role that ACE evidence plays in capital trial merits special attention. Though a significant body of work examines the impact of mitigating evidence and the role of culpability, as well as anger, ACE evidence is unique in that it is likely to elicit different emotional responses (see Garvey, 1998). Indeed, it is a defense strategy to present evidence of an defendants' background to elicit sympathy from jurors (see *California v. Brown*, 1986, Brennan Dissenting, p. 548). In this study, we investigate whether this defense strategy is effective from a practical standpoint, but also examine the utility of an elaborated focal concerns perspective, drawing on research on an affect heuristic, to theoretically explain the impact of ACEs on capital sentencing decisions.

## Prior Research

Our focus lies in the impact of ACEs on sentencing decisions in the capital context. ACEs are most comparable to "remote culpability factors" in the mitigating evidence literature—these are circumstances that take place early in a defendant's life, are separated in time from the offense, and are meant inform on their character and diminished responsibility for their conduct (Garvey, 1998). We use the terms ACEs evidence and remote culpability factors interchangeably as both relate to childhood adversities with implications for criminal behavior. Several studies with diverse methodologies

have shown certain varieties of childhood adversity do elicit some leniency in capital sentencing (for example Denno, 2019; Garvey, 2000; Gordon & Greene, 2018; Stevenson et al., 2010; Bell Holleran et al., 2016). Evidence of neglect, physical abuse, or sexual abuse as a child has been shown to have a small impact on mock jurors' sentencing decisions in mock jury experiments (Barnett et al., 2004; Lynch & Haney, 2000; Platania & Konstantopoulou, 2014; Bell Holleran et al., 2016, but see Najdowski et al., 2009). Observational studies have shown a minority of people (20%) reported they would be more lenient in sentencing if the defendant experienced sexual abuse as a child (Barnett et al., 2007). Similarly, self-reports from actual jurors show that ACEs are mitigating, though less mitigating than proximate culpability factors like mental illness or intellectual disability at the time of the offense (Garvey, 1998). Garvey (1998) found varying percentages of jurors report they would be less likely to vote for death if the defendant had been seriously abused as a child (37%), had a background of extreme poverty (16%), or had been in institutions but never received any real help (48%). Some experimental evidence suggests childhood adversity mitigates sentences but only for a narrow range of capital offenses (Najdowski et al., 2009, see also Bell Holleran & Vaughan, 2020). Despite some mixed evidence, remote culpability factors such ACEs have at least a small leniency effect.

Existing evidence also informs on the mechanisms by which this evidence elicits leniency, and more broadly the factors that determine the punishment decision. Foremost, jurors' assessment of future dangerousness looms large in capital sentencing. Experimental and observational research demonstrates defendants who are perceived to pose a high risk of future dangerousness are more likely to be sentenced to death (Blume et al., 2001; Costanzo & Costanzo, 1992; Garvey, 1998). Experimental studies find the greatest percentage of death sentences are handed down to defendants construed as more likely to be dangerous in the future (e.g. Gordon & Greene, 2018; Saks et al., 2014). These sentences promote utilitarian punishment goals, such as incapacitation.

However, retributive punishment goals also motivate sentencing decisions. The just deserts philosophy focuses punishment decisions retrospectively on harm, intent, moral culpability, responsibility, and extenuating circumstances, to ensure sentences are proportional to the harm caused and the "internal wickedness" of the perpetrator (Kant, 1952; Carlsmith et al., 2002). Research demonstrates retributive motivations are particularly important in punishment preferences and decisions generally (Darley et al., 2000). Research on retribution and capital juries also demonstrates remorse is especially powerful—whether the defendant shows remorse or accepts responsibility is pivotal to the sentencing decision (Eisenberg et al., 1997). Defendants who prepared, planned, and premeditated the offense were perceived as expressing "belated remorse," and those who did not display remorse tend to be perceived as responsible and emotionless (Garvey, 1998; Sundby, 1997; Costanzo & Costanzo, 1994; Geimer & Amsterdam, 1987). Sundby (2003) suggested victim characteristics and the role the victim played in the offense affect juror evaluations of culpability—defendants whose victims were vulnerable (children, the elderly, etc.), would be perceived as more blameworthy compared to victims who are perceived to have precipitated the offense in some way (see also Vaughan et al., 2019). The evidence presented at trial, as well as

the demeanor of the defendant, appear to affect jurors' evaluations of the moral responsibility of the defendant, thereby affecting punishment decisions.

Yet, jurors still feel. Research suggests anger and sympathy play a central role in jury decision making (Garvey, 2000), though fear, disgust, pity, and empathy, are also relevant affective responses to the defendant and trial. Qualitative evaluations of mock jury deliberation have emphasized anger and sympathy and revealed that anger was the emotion expressed most often by mock jurors (Lynch & Haney, 2015; Stevenson et al., 2010). Georges et al. (2013) demonstrated anger was highly predictive of death sentences, and no other affective response impacted sentencing decisions in their mock jury experiment. Garvey showed defendant abuse as a child was significantly related to jurors' feelings of sympathy, but not anger, even if the juror believed the crime was especially heinous (2000). The existing literature on affective responses of capital jurors is mixed, though there is evidence that jurors respond to childhood adversity of defendants with sympathy (Robbins & Litton, 2018). One experiment examined sympathy towards the defendant, showing that the largest effect of mitigating evidence was on sympathy (though substantively significant, the experiment was under-powered, and the effect was not statistically significant, see Robbins & Litton, 2018).

Given the clear significance of perceptions of future dangerousness and culpability to capital juror sentencing decision, our review of prior research highlights the utility an elaborated focal concerns perspective, in which the heuristics are relied on to make theoretical sense of ACEs evidence within the focal concerns framework. While FCT is largely applied to judges sentencing decisions to explain racial/ethnic, gender, and age-based sentencing disparities (see Steffensmeier et al., 1998) several prior works have applied FCT to capital jurors' sentencing decisions (Jennings et al., 2014; Richards et al., 2016; Ulmer et al., 2020) and lay sentencing preferences (Berryessa, 2018). This research answers calls by both Ulmer (2019) and Lynch (2019) for methodological diversity in FCT research partially through continued application of FCT to sentencing juries. We first test for variability in sentencing decisions across mock trials where ACEs evidence is manipulated, then explore how focal concerns and heuristics explain sentencing decisions directly and the impact of ACEs evidence.

## **Focal Concerns of Sentencing**

Explicated first by Steffensmeier (1980), then expanded upon in a number of significant works (Steffensmeier et al., 1993, Steffensmeier et al., 1998; Ulmer & Kramer, 1998), Focal Concerns Theory (FCT) perspective centers the decisions made by sentencing authorities on three factors or substantive rationalities. Sentencing authorities consider the moral culpability of the defendant in conjunction with the degree of harm caused by the offense when evaluating their *blameworthiness*. This factor largely informs sentencing authorities on the degree to which punishment would serve retributive goals—more culpable defendants who engage in more serious crimes are more deserving of punishment. The threat of dangerousness posed by the defendant and subsequent need to protect the community is evaluated and weighed in pursuit of utilitarian punishment goals (i.e., incapacitating offenders through life imprisonment

or execution). Practical constraints connected to the punishment decision, such as organizational efficiency (Ulmer & Bradley, 2006) or other organizational factors within courts also influence decisions. A core proposition of focal concerns is sentencing authorities make their decisions with incomplete information under conditions of uncertainty, impute blameworthiness, and predict future dangerousness (Albonetti's 1991). Furthermore, cognitive processing is limited, and when faced with complex decisions and uncertainty, humans rely on mental short-cuts or heuristics in judgment (Kahneman, 2011).

We consider first which focal concern, if any, explains the impact of mitigating evidence at capital sentencing. The compelling criminological evidence linking ACEs to serious juvenile offending (e.g. Baglivio et al., 2015) and violence in adulthood (Wilson & Widom, 2009) is extremely relevant to blameworthiness. The effect of mitigating evidence is typically understood in terms of *diminishing culpability*—evidence of the development and character of a defendant can inform on their moral responsibility for the offense. Experts testifying for the defense point to empirical evidence of the association between ACEs and criminal behavior and explain to the jury that “the life path of [the abused defendant]... is damaged so profoundly that the odds significantly increase that his life is going to involve violent criminal conduct” (White, 2009, p. 128). By highlighting factors beyond the defendant's control that shaped their conduct, this suggests that the defendant should not be “judged solely or primarily on the basis of the crimes he committed” (White, 2009, p. 105), but rather should be judged as less *deserving* of death. If jurors infer that conditions beyond the control of the defendant contributed to their conduct, this could diminish jurors' perceptions that the defendant is fully responsible (see Stevenson et al., 2010).

While a defendant's blameworthiness is highly predictive of sentencing decisions (see Darley et al., 2000), this effect can be attributed in part to differences in the seriousness of the offense (i.e., the harm caused) as well as in part to culpability or intent (see Aharoni & Fridlund, 2012). It seems unlikely the *culpability* element of blameworthiness is the prevailing focus of capital jurors evaluating ACEs evidence for several reasons. Primarily, there is a well-documented tendency for jurors to misunderstand or misuse mitigating evidence. In fact, a minority of jurors report that a defendant's history of serious abuse as a child would make them less likely to vote for death (Garvey, 1998). Childhood adversity and other environmental and remote culpability factors are pieces of mitigating evidence that jurors often ignore, fail to understand its relevance, or assign it weight (Bentele & Bowers, 2001; Garvey, 1998; Sandys et al., 2009). Jurors place much more mitigating value on proximate culpability factors such as intellectual disability (Garvey, 1998), and the case for mitigation is strengthened when evidence is directly related to the offense and the defendant's intent. Jurors can feel fear or disgust towards to the abused defendant (Garvey, 2000), or ultimately attribute the offense to the defendant's choice despite their childhood adversity (Stevenson et al., 2010). Culpability may play a role, but previous research suggests its impact is minimal.

Alternatively, the emphasis on predicting future dangerousness in capital sentencing has also been argued to obscure a meaningful culpability inquiry, leading juries to place utilitarian punishment goals ahead of retributive ones (Shapiro, 2008, p.

168–169). Juries encounter the typical prosecution argument that the defendant poses a future danger, is solely responsible for their conduct, and must be incapacitated (Haney, 2008). The charges themselves, aggravating circumstances, and gruesome evidence all elicit severe negative reactions to the defendant, and relative to the impact of mitigating evidence these effects could be much larger. Therefore, the extreme emphasis on future dangerousness in capital trials (Blume et al., 2001; Eisenberg & Wells, 1993; Cunningham et al., 2009; Shapiro, 2008) may be relevant to explaining the relatively weak effects of childhood abuse and other childhood adversities in mitigating the penalty. Perhaps mitigating evidence affects perceptions of blameworthiness, but other forms of evidence, indirectly through future dangerousness, overwhelm this effect.

It could also be the case that ACEs evidence itself may be supportive of a prosecution theory that the defendant will continue to pose a threat of violence. Though probabilistic, ACEs evidence brings to light how adversity faced by the defendant is a significant risk factor for violent criminal behavior. In *Penry v. Lynaugh*, U.S. Supreme Court Justice O'Connor essentially speculated that jurors would draw countervailing inferences about evidence of abuse as a child because such evidence "indicates that there is a probability that [the defendant] will be dangerous in the future" (1989, p. 324). Respondents in Stevenson and colleagues study explained how a specific defendant's childhood adversities signalled future dangerousness during deliberation, stating: "you're not going to cure him of that. And I think treating him for these problems is impossible too" (2010, p. 27). Empirical research also suggests that abused juveniles are perceived as less amenable to rehabilitation than non-abused juveniles (Najdowski et al., 2009, p. 410). Presenting evidence of childhood adversity and attributing the current offense to these fixed and distant causes may be associated with increased future dangerous (see Stevenson et al., 2010).

Practical constraints also emanate throughout the sentencing process on an individual and organization level—working relationships among the courtroom work-group, the ability of defendants to "do time" as well as the political frameworks surrounding judges' decisions come into play in sentencing decisions (Steffensmeier et al., 1998). Practical constraints are certainly relevant to capital jury deliberations, though research in this area is scant. However, Lynch and Haney (2015) demonstrated that the interpersonal dynamics of jury deliberation play a significant role in the "punitive shift" (tendency for life votes to shift towards death). Negative reactions to the defendant and their offense were treated as natural by mock jurors in this simulation study, but arguments advanced by pro-life-sentence jurors in deliberations had comparatively less "built-in legitimacy", suggesting pro-life-sentence jurors face an uphill battle in convincing their peers. Pro-life-sentence jurors may silently change their vote in deliberations where it may be seemingly impossible to overcome the jury's anger and provide a coherent argument for their lenient position.<sup>1</sup>

### ***Heuristics in Focal Concerns Theory***

To sharpen the theoretical conceptualization of the role of heuristics in capital jurors' sentencing decisions, we incorporate research on the affect heuristic (Finucane et al.,



2000). Like other mental short-cuts used in judgment, the affect heuristic enables decision makers to consult (consciously or unconsciously) positive and negative feelings associated with representations of objects and people, thereby using those feelings as cues for judgment. That is, people associate images, conceptions, and impressions of people and objects with feeling states such as sympathy or anger. Reliance on an overall affective impression (as positive or negative) is less effortful than complex cost-benefit analysis, particularly where the decision is complex or the decision maker is uncertain. When overwhelmed by the volume of evidence and complexity of the law, the affective responses may cue the decision between life and death. This process presumes (1) jurors have affect pools on which to draw with respect to capital defendants and capital punishment, and (2) those affective evaluations are correlated with their punishment preferences. Empirical research supports both premises (See Garvey, 2000; Lynch & Haney, 2015).

Capital jurors' feelings appear to depend on numerous factors, however, feelings of anger, disapproval, and resentment towards the defendant are well documented (Georges et al., 2013; Lynch & Haney, 2015). Jurors feel sympathy for defendants abused as children and anger and fear towards defendants who they believed to be dangerous to other people (Garvey, 2000; Lynch & Haney, 2015). More generally, cultural feeling rules in the United States dictate that victims deserve sympathy (Hochschild, 1979; Loseke, 2003). Theory, as well as extensive empirical research, demonstrate that feelings of sympathy motivate helping and prosocial behavior, like leniency or mercy (Rudolph et al., 2004). In a study of capital jurors, Georges et al., (2013) found evidence that jurors who experienced anger early in a jury simulation, or whose anger increased through the simulation, were more likely to choose a sentence of death; implying that jurors used affect as a shortcut to determining the appropriate sentence. Interestingly, they also found that jurors whose anger increased throughout the scenario perceived the mitigating evidence presented to be weaker, and in turn were more punitive in sentencing. Georges et al., and (2013) did not measure sympathy, however, mitigating evidence in their study was very limited (the defendants' youth, lack of a criminal record, and emotional distress), and less likely to elicit sympathy than childhood adversities (see Garvey, 2000). As evidenced by ACE studies however, childhood adversity is very prevalent among violent offenders, and exclusion of evidence of childhood adversity in previous research may provide an incomplete picture of the role of affect in mock trial research.

Unfortunately, the existing research and theory is limited by several factors. Recent work examining the role of mitigating evidence neglects affect entirely (Berryessa, 2021). Though theoretically important, some studies posit emotion is in play, but failed to measure it (Harris et al., 2011; Stevenson et al., 2010). Among studies that do measure affective responses, their effects are sometimes overlooked (Robbins & Litton, 2018). Georges et al., and (2013) more explicitly traced the impact of anger, but neglected a common piece of mitigating evidence. Research by Garvey examined a wide range of affective responses to evidence (1998), but did not statistically probe indirect effects of mitigating evidence, nor did it decompose the effect of mitigating evidence on substantive rationalities and affect. Finally, studies relying on jurors' self-reports, while illuminating, have limited utility for making causal inferences (Barnett



et al., 2007; Stevenson et al., 2010). Indeed, almost no experimental work has directly investigated the causal pathways through which mitigating evidence operates (but see Robbins & Litton, 2018; Georges et al., 2013), and no study has examined the relative effects of factors in FCT in this context. Most studies employing the FCT framework fail to measure the cognitive and affective processes that represent consideration of focal concerns (see Lynch, 2019). Below, we specify several hypotheses stemming from the foregoing discussion and detail an empirical study of mock jurors which seeks to improve on these limitations. Primarily, we rely on direct measurement of mock jurors' evaluations of focal concerns and affect, and using mediation analysis, test for the indirect effects of ACEs of evidence on a dichotomous sentencing decision.

## **Hypotheses**

Prior literature indicates that evidence of abuse as a child plays a significant role in capital jurors' decision making, though it is less influential than other more proximate culpability factors. As such, we hypothesize:

H1: ACEs evidence will have a small impact on capital juror leniency, though, more extensive ACEs evidence will have a greater effect.

Prior research also demonstrates the empirical and theoretical importance of substantive rationalities in FCT for sentencing decisions, and based on our analysis of the role of blameworthiness and protection of the community we hypothesize:

H2: Attributions of responsibility and perception of the defendant as posing a continuing threat of violence will be associated with punitiveness in sentencing.

H3: ACEs evidence will have a small to moderate negative effect on blameworthiness.

H4: ACEs evidence will have a positive impact on future dangerousness

Our incorporation of the affect heuristic implies that jurors will experience emotions because of evidence presented and those feelings provide cues for the appropriate punishment. We strongly suspect that ACEs evidence construing the defendant as a victim will elicit sympathy, and leniency.

H5: Net of any influence that ACEs evidence has on perceptions of blameworthiness, jurors presented with ACEs evidence will feel sympathy towards the defendant.

H6: Feelings of sympathy toward the defendant will be associated with leniency.

H7: ACEs evidence will have an indirect effect on jurors sentencing decisions through their affective response to the evidence (sympathy).

## **Methods**

### **Sample**

To test these hypotheses, a survey experiment was conducted with participants recruited through Amazon Mechanical Turk Platform (MTurk), a platform where individuals opt-in to complete brief tasks called Human Intelligence Tasks (HITs) in

exchange for payment. Our task was only made available to workers whose rate of HIT approval was greater than 95% and had completed more than 100 HITs (i.e., they satisfactorily complete 95% of a sufficiently large number of tasks). We analyze responses of 1,493 MTurk workers. The sample was similar in age to Capital Jury Project jurors ( $M = 37$ ,  $SD = 12$ ), though the sample was primarily female (65%). Most respondents self-identified as white non-Hispanic (76%), 8% African American, 6% Hispanic, and 8% as another racial or ethnic group. The racial composition of our sample is quite similar to estimates of actual capital jurors presented by Devine and Kelly (2015) in which 80% of jurors were white and about 15% were Black. Black jurors are slightly underrepresented in our sample and jurors and Hispanic or other racial and ethnic identities were overrepresented, though studies of actual jurors called for jury duty in Texas were primarily Hispanic (46%, Bell Holleran et al., 2016). Like other MTurk samples, our respondents were fairly educated (35% were college graduates, 16% had advanced degrees).

Utilization of MTurk for the recruitment of research participants was increasing in recent years (For recent examples see Pickett et al., 2019; Vaughan, et. al, 2019), and the literature suggests that MTurk yields high quality data useful for making inferences about relationships between variables (Simmons & Bobo, 2015; Clifford et al., 2015; Mullinix et al., 2015). However, statistical estimates in experimental research conducted in the context of criminal justice issues can be vulnerable to selection bias, and data quality is reported to have decreased in recent years (Chmielewski & Kucker, 2020). These data were collected in 2017, and therefore only a partial replication of the generalizability check procedures recommended by Thompson and Pickett (2020) was possible (see analytical appendix for further details and analysis of the generalizability of findings). Based on the similarity of our models to the General Social Survey models predicting death penalty support as well as the demographic similarity of our sample to actual and simulated jurors we concluded the sample was reasonably representative of actual U.S. jurors. While the sample and procedure described below differs in several ways from the process followed by actual jurors deliberating in groups, given the sample size and statistical power demands for estimating indirect effects on the dichotomous sentencing outcome, this recruitment method was close to the best possible.

### ***Design & Procedures***

Consistent with prior research (for example, Vaughan et al., 2019) respondents who consented to participate were provided approximately 850-word vignettes of capital trials. We used a fully randomized 4 (fact pattern) X 4 (mitigating evidence) X 2 (race of the defendant) between-subjects experimental design. At the beginning of a self-administered questionnaire, respondents read details of one of four hypothetical crimes determined at random (including murders against police, multiple victims, a child, and in the course of a robbery, these data were collected as part of a broader and multifaceted effort to understand sentencing decisions). Detail concerning the defendant's behavior while awaiting trial as well as his criminal history was also provided and this detail was consistent across all vignettes. With respect to ACEs

evidence, we employed a counterfactual design where a control group was not provided with evidence concerning the defendant's background. ACEs research demonstrates individuals who experience one ACE are more likely to experience others (Baglivio & Epps, 2016), and among offenders, ACE composite scores tend to be elevated (four or greater, see Baglivio et al., 2015). We drew on these findings and our experience with capital sentencing hearing transcripts to generate our three realistic experimental conditions in which the extensiveness of ACEs evidence was varied and described through expert testimony of the defendant's social history. In the Low ACEs condition, the defendant was detailed to experience parental abandonment, emotional neglect, exposure to mental illness, and exposure to substance abuse. In two High ACEs conditions, the defendant was described as experiencing greater than 5 ACEs with emphasis on the experience of severe physical abuse in one (High ACEs Physical abuse) and with emphasis on severe sexual abuse in the other (High ACEs Sexual abuse). The expert witness in all fictional transcripts detailed the relationship between the childhood adversity and decreased ability to reason and increased risk of aggressive behavior. The descriptions of evidence and the expert's testimony of the impact of the evidence on the defendant's decision making received an equal degree of emphasis. Finally, we provided a picture of the defendant to the respondents as they read the transcript. To eliminate idiosyncrasies produced by individual pictures, we assigned the respondents one of three pictures of a white or black defendant at random.

Vignettes included questioning of the defense expert by the defense attorney and excluded cross examination of the defense expert and testimony of a prosecution expert. While others have documented the prosecution narrative (Costanzo & Peterson, 1994), and examined its impact on jurors (Garvey, 2000; Stevenson et al., 2010), excluding such testimony allowed us to examine whether the presentation of this evidence as a part of the defense strategy would lead jurors to draw countervailing inferences on its own. For similar reasons, we excluded detailed jury instructions to eliminate misunderstanding of mitigation and aggravation (see Eisenberg & Wells, 1993; Luginbuhl & Howe, 1995), though those instructions are present at trial and in many mock jury studies. Finally, consistent with the Supreme Court's decisions in *Wainwright v. Witt* (1985), *Morgan v. Illinois* (1992) and following prior research (see Bell Holleran et al., 2016; Butler & Moran, 2002; also see Lynch & Haney, 2018), we inquired into our respondents' willingness to impose the death penalty following the vignette task to determine whether they would be qualified as capital jurors. We eliminated from our analytic sample those who expressed that they felt so strongly about the death penalty that they could not impartially consider evidence to render a sentencing decision (about 9% of the sample). However, in the current study qualification questions took place *after* the sentencing decision to reduce biased decision making (Blume et al., 2001; Bowers et al., 2001; but see Vitriol & Kovera, 2018), whereas in an actual capital trial qualification is during *voir dire*. These differences make our jurors' simulated decisions different in some ways from the decisions made by actual capital jurors; however, they allow for the estimation of causal effects of ACEs evidence and eliminate several confounding threats to internal validity of inferences related to our hypotheses. We consider threats to the ecological validity and generalizability of these findings further in the limitations section.

## Measures

### *Future Dangerousness, Blameworthiness, Sympathy, & the Sentencing Decision*

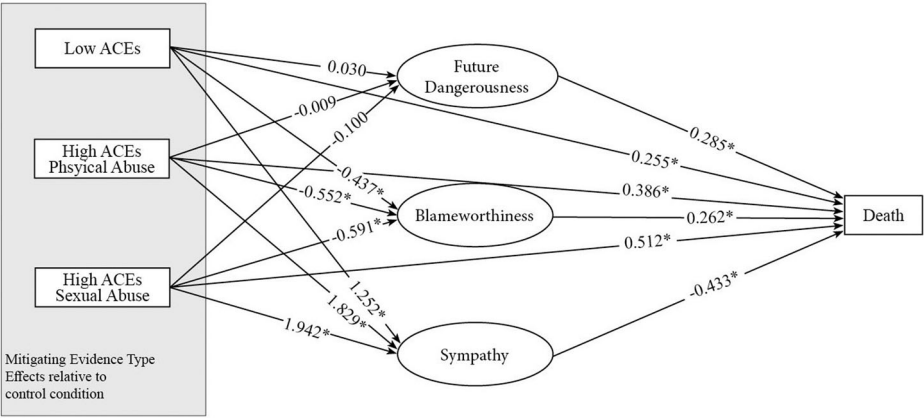
Following the vignette, but before the sentencing decision, respondents responded to a 10-item scale measuring our theoretical mediators. Jurors responded to questions such as “The defendant is fully responsible for the crime” (blameworthiness), “The defendant will act in a violent manner in the future” (future dangerousness), and “I feel bad for the defendant” (sympathy). These questions were asked before the sentencing decision was rendered. This was done partially to replicate the deliberation process where jurors consider the legally relevant aspects of culpability and future dangerousness, but also to ensure that their affective response was influencing the sentencing decision rather than the sentencing decision affecting their deliberation and feelings. We consider the complications presented by alternative question ordering in more detail in the limitations section, and conducted sensitivity analyses, but emphasize that juror deliberation is a process that takes place prior to the rendering of the sentencing decision and that many states mandate evaluation of future dangerousness and blameworthiness in the deliberation room. The decision to inquire into their perceptions prior to the sentencing decision; therefore, reflects a realistic scenario though it could be argued to prime respondents and make their deliberation more strongly influenced by these specific considerations though numerous other considerations could be relevant. The final question in the vignette task asked jurors to choose between a sentence of life in prison without parole or death, and the order of these options was determined randomly.

### *Demographic and Control Variables*

After completing the vignette task, respondents provided their age in years, sex, and racial and ethnic. We further inquired into the respondents spirituality/religiosity using a 6-point scale (0 = not religious/spiritual-5 = high,  $M = 2.44$ ,  $SD = 1.75$ ) and frequency of worship in the last month (0 times, 1–3, 4–6, 7 or more times,  $M = 0.96$ ,  $SD = 1.87$ ); and treated them as continuous variables (using midpoints for the frequency of worship categories). The level of education attained by the respondents was self-reported (no college degree, bachelor’s degree, advanced degree). Respondents also self-reported their political identity on a 4-point liberal-conservative continuum (1 = Strong liberal, moderate liberal, moderate conservative, 4 = strong conservative,  $M = 2.44$ ,  $SD = 0.83$ ). This four-point scale was sufficient to get a reliable indication of the respondents’ political leanings (Bradburn et al., 2004) and has proven to have strong predictive validity in previous mock juror studies (Vaughan et al., 2019). We also included the long form Moral Foundations Questionnaire, grouping the purity, loyalty, and authority subscales to form a single latent variable for binding moral foundations and the care and harm subscales to form a single latent variable for individualizing moral foundations (See Vaughan et al., 2019 for a similar approach). Death penalty support was also measured among qualified jurors (jurors selected whether they were in favor or opposed to the death penalty).

## Results

Our results center on the analysis of data provided by 1,493 qualified mock jurors.<sup>2</sup> Consistent with hypothesis 1, we noted a significant relationship between



**Figure 1.** Full structural equation model with measurement and structural components. Effects of mitigating evidence in parallel mediation model predicting death sentence.

Notes:  
n = 1,493 \*  $p < .05$   
Coefficients for effects of endogenous latent variables are fully standardized. Coefficients for the effects of mitigating evidence type are Y-standardized.  
Factor loadings for mediators omitted. Coefficients for observed exogenous variables, aggravating evidence, and defendant race omitted. Coefficients and factor loadings for latent Moral Foundations omitted.

experimental condition and the sentencing decision ( $\chi^2_{[df = 3]} = 46.12$ ,  $p < 0.01$ , Cramer's  $V = 0.176$ ). In the control condition, 36% of jurors voted for death, compared to 23% in the Low ACEs condition, and 17% and 19% in the High ACEs Physical/Sexual abuse conditions, respectively. The probability of a juror voting for death was reduced by 35–50% when ACEs evidence was presented, with steeper reductions when the hypothetical defendant was exposed to more childhood adversity.

Hypotheses 2–7 were tested using a full structural equation model with measurement and structural components, which provided an adequate fit to the data, as the point estimate of the RMSEA was near the conventional limit for well-fitting models (0.06, Hu & Bentler, 1999) and its 90% confidence interval estimate (0.061←90% CI→0.064) was fully below 0.08 (see Browne & Cudeck, 1993). (See Figure 1). The model demonstrates considerable predictive validity, explaining a healthy 44% of the variability in the sentencing decision response. To estimate the standard errors of the indirect effects of exogenous latent and observed variables and evaluate their statistical significance, bootstrapped confidence interval estimates are utilized throughout with the number of samples set at 2,500. Out of an abundance of caution, the more conservative, though less powerful, percentile bootstrap confidence interval was utilized here with a confidence level of 99%. Given the sample size, we relied on percentile bootstrap confidence intervals as opposed to bias-corrected (Fritz et al., 2012). The coefficients relevant to testing our hypotheses are displayed in Table 1.

The proximate causes of the sentencing decision in this model were our measures of focal concerns (blameworthiness and future dangerousness) as well as sympathy. Examination of the direct effects revealed blameworthiness and future dangerousness operated in the expected manner consistent with focal concerns theory and Hypothesis 2. Perceptions of future dangerousness and blameworthiness were positively associated with punitiveness. Due to the non-linear nature of the Probit model,

Table 1. MTurk experiment 1: SEM1 full structural equation model with measurement and structural components parallel mediation model predicting death sentence.

Endogenous Variables	Endogenous Variables			Death <sup>b</sup> Direct Effects	Percentile Bootstrap 99% Confidence Interval for Total Indirect Effects (2,500 Replications)		
	Future Danger	Blame-worthiness	Sympathy		Lower bound	Point estimate	Upper bound
Future Danger	—	—	—	0.285**	—	—	—
Blameworthiness	—	—	—	0.262**	—	—	—
Sympathy	—	—	—	−0.433**	—	—	—
Exogenous Variables							
Experimental Manipulations <sup>a</sup>							
Low ACEs	0.030	−0.437*	1.252*	0.255*	—	—	—
High ACEs (Physical Abuse)	−0.009	−0.552*	1.829*	0.386*	−1.458	−1.019	−0.576
High ACEs (Sexual Abuse)	−0.100	−0.591*	1.942*	0.512*	−1.556	−1.110	−0.631
Police victim scenario	−0.626**	0.248*	0.142*	−0.275*	−0.359	−0.193	−0.035
Multiple victim scenario	−0.063	0.449*	0.050	−0.356*	−0.117	0.029	0.184
Robbery scenario	−0.083	0.473*	0.181*	−0.359*	−0.180	−0.042	−0.104
Defendant race (Black)	−0.116*	−0.148*	0.090*	0.111	−0.234	−0.115	−0.019
R <sup>2</sup>	0.234	0.265	0.694	0.439			

Model Fit Statistics:  $N = 1,493$ ;  $\chi^2_{(DF=1,159)} = 7,936.7$ ; RMSEA = 0.063, RMSEA<sub>190% CI</sub> = 0.061–0.064.

Notes: Factor loadings for measurement components not reported in table. Model controls for demographic variables & moral foundations; coefficients & factor loadings for not reported, but available by request from the first author.

See Figure 1 for loadings of exogenous factor indicators, all factor loadings  $p < .001$ .

<sup>a</sup>Experimental manipulations are orthogonal; control condition, child victim, and white defendant are reference groups.

<sup>b</sup>Probit link function.

\* $p < .05$ , †  $p < .10$ .

we estimated marginal effects for “life-prone” and “death-prone” jurors using baseline probabilities of .33 & .67 with corresponding baseline Probits of  $\pm 0.440$ . The marginal effect for the direct effect of each mediator was given by the difference in the cumulative distribution functions evaluated at the baseline probit and baseline probit plus the coefficient for the mediator (coefficients were fully standardized). Marginal effects were similar for death-prone and life-prone jurors—a standard deviation increase in future dangerousness increased the probability of a death sentence by 0.096 for death prone jurors and 0.109 for life prone jurors. Likewise, a standard deviation increase in perceptions of blameworthiness increased the probability of a death sentence by 0.089 for life prone jurors and 0.100 for death prone jurors.

Because we relied on a counterfactual design, vis-à-vis the mitigating evidence manipulation, the coefficients for the mitigating evidence conditions can be interpreted as causal effects (i.e., the impact of presenting each type of evidence to jurors over presenting no mitigating evidence at all). Turning to Hypothesis 3, presenting jurors with ACEs evidence decreased blameworthiness ratings by about half a standard deviation ( $p < 0.001$  for all three experimental conditions). Mock jurors who received the High ACEs sexual abuse neglect rated blameworthiness the lowest ( $b = -0.591$ ). Concerning Hypothesis 4, we failed to support the hypothesis as ACEs did not have a statistically significant effect on perceptions of future dangerousness ( $p > 0.10$ ), suggesting the defense expert’s testimony did not lead jurors to infer that the ACEs evidence signaled a continuing threat to society.

ACEs evidence had the most pronounced effect on jurors’ feelings of sympathy towards the defendant. Consistent with Hypothesis 5, ACEs evidence increased feelings of sympathy relative to the control group by about 1.2 standard deviations in the Low ACEs condition, 1.8 standard deviations in the High ACEs Physical Abuse condition and 1.94 standard deviations in the High ACEs Sexual Abuse condition. Turning to the direct effect of sympathy on the sentencing decision, we noted a significant leniency effect ( $p < .001$ ). The marginal effects indicate a standard deviation increase in sympathy reduced the probability of a death sentence by 0.168 for life-prone jurors and 0.139 for death-prone jurors. The affective response of both life-prone and death-prone jurors was slightly more impactful than the effect of blameworthiness and future dangerousness.

### **Indirect Effects**

Thus far, our analysis replicates what Garvey found over 20 years ago (1998). Our analytical approach, however, improves on prior research through the utilization of structural equation modelling and mediation analysis with bootstrapping to estimate confidence intervals for indirect effects. The total indirect effect of each ACEs condition was statistically significant at the 0.01 level, as none of the 99% percentile bootstrapped confidence intervals came close to containing zero. Despite having a positive direct effects (between 0.22 for Low ACEs and 0.51 for High ACEs Sexual Abuse), the total indirect effect of the ACEs evidence conditions ranged from  $-0.65$  for Low ACEs and  $-1.02$  for High ACEs Sexual abuse. Due to the inconsistent mediation, negative total indirect and specific indirect effects can be misleading because they are degraded by the positive direct effect. Therefore, marginal effects for the *total effects*



**Table 2.** Confidence intervals for total, direct, and indirect effects; effect decomposition by ace evidence conditions and mediator.

	Percentile Bootstrap 99% Confidence Interval (based on 2,500 replications)			Indirect Effect Decomposition
	Lower bound	Point Estimate	Upper Bound	(% of total indirect effect)
<b>Low ACEs</b>				
<b>Total Effect</b>	−0.620	−0.393	−0.171	
<b>Direct Effect</b>	−0.076 <sup>a</sup>	0.255	0.567	
<b>Total Indirect Effect</b>	−0.946	−0.649	−0.361	
Specific: Future Dangerousness	−0.056	0.008	0.068	0%
Specific: Blameworthiness	−0.204	−0.114	−0.048	17%
Specific: Sympathy	−0.799	−0.543	−0.284	83%
<b>High ACES (Physical Abuse)</b>				
<b>Total Effect</b>	−0.776	−0.554	−0.324	
<b>Direct Effect</b>	−0.072 <sup>a</sup>	0.386	0.804	
<b>Total Indirect Effect</b>	−1.337	−0.940	−0.536	
Specific: Future Dangerousness	−0.062	−0.002	0.056	<1%
Specific: Blameworthiness	−0.254	−0.145	−0.067	15%
Specific: Sympathy	−1.152	−0.793	−0.421	84%
<b>High ACEs (Sexual abuse)</b>				
<b>Total Effect</b>	−0.756	−0.513	−0.288	
<b>Direct Effect</b>	0.031	0.512	0.952	
<b>Total Indirect Effect</b>	−1.421	−1.025	−0.598	
Specific: Future Dangerousness	−0.089	−0.028	0.029	2%
Specific: Blameworthiness	−0.267	−0.115	−0.068	15%
Specific: Sympathy	−1.293	−0.842	−0.443	82%

<sup>a</sup>95% confidence interval does not contain 0.

Confidence intervals containing zero are italicized.

of mitigating evidence were calculated. The evidence presented in the Low ACEs condition reduced the probability of a death sentence in whole by about 0.15 for life prone jurors and about 0.13 for death prone jurors. High ACEs evidence reduced the probability of a death sentence by about 0.2 for life prone jurors and 0.16 for death prone jurors.

The decomposition of specific indirect effects is illuminating for the purposes of examining the relative impact of substantive rationalities and affect. Examining specific indirect effects and the effect decomposition in Table 2, we confirmed the earlier finding that mitigating evidence alone does not operate as an aggravator by increasing perceptions of future dangerousness. Although jurors' perceptions of future dangerousness impacted the sentencing decision, the 95% confidence intervals for the specific indirect effects through future dangerousness contained zero. The specific indirect effects of blameworthiness and sympathy were statistically distinguishable from zero at the 99% confidence level. While blameworthiness was affected by mitigating evidence and in turn effects the sentencing decision, the total indirect effects of mitigating evidence were largely composed of the impressive specific indirect effect of sympathy. In fact, across all three ACEs scenarios, the specific indirect effect of sympathy accounted for greater than 82% of the total indirect effect. Perceptions of diminished blameworthiness accounted for a non-negligible 15–17% of the total indirect effect.

## Discussion

This study makes several unique and sizeable contributions to the knowledge base, theory, and practice. Our key finding was that the presentation of ACEs evidence by a defense expert does not lead mock capital jurors to draw the inference that defendants abused as children had a greater probability of future dangerousness. This finding tells us the evidence itself does not necessarily work against the defense, and largely contributes to leniency in sentencing. We, therefore conclude that the relatively weak impact of ACE type evidence (see Sandys et al., 2009) is not due to countervailing inferences drawn by jurors in deliberating on why ACEs matter, and that presentation of this specific type of mitigating evidence does not appear to backfire. The practical implication is that investigation into adverse childhood experiences and the presentation of this evidence by the defense is critical in eliciting leniency in capital cases and establishing effectiveness of counsel. Despite recent research suggesting MTurk samples lack generalizability and may be a source of low-quality data, we found that the effect of ACEs evidence was strikingly similar to the effect of childhood abuse as a mitigator in Bell Holleran et al., (2016) analysis of data from actual venirepersons summoned for jury duty. The findings here demonstrate considerable convergent validity with research on the effect of remote culpability factors with disparate modes of observation and research designs (Barnett et al., 2004; Lynch & Haney, 2000; Platania & Konstantopoulou, 2014).

Though ACEs evidence did not impact perceptions of future dangerousness, our participants did vary in their ratings of dangerousness, and this variability was related to sentencing decisions. In fact, both perceptions of blameworthiness and future dangerousness were salient factors that affected the sentencing decision in support of FCT. Results indicated that deliberation on culpability and dangerousness contributed equally to the sentencing decision—each eliciting harsher sentencing decisions, on average. Clearly, even lay-people resort to these substantive rationalities in their sentencing decisions, consistent with prior research on capital punishment (see Garvey, 1998, Georges et al., 2013).

Our empirical models also demonstrated that ACEs evidence contributed to leniency indirectly by diminishing perceptions of culpability. This impact can largely be attributed to the testimony of the expert in our experimental stimulus which described how the defendant's adversity impacted self-regulation, emotional regulation, and capacity for good decision making. We wonder if further testimony and the presentation of criminological and biopsychosocial evidence (which does elicit leniency in sentencing, see Berryessa, 2021) can assist jurors in recognizing the implications of ACEs for diminishing culpability and therefore focus their deliberation on this substantive rationality. If jurors better understood the theoretical mechanisms (e.g. strain and negative emotions, Agnew, 2007; imitation and reinforcement, Akers, 1973; low self-control, Gottfredson & Hirschi, 1990; psychopathy and emotional detachment, Baglivio et al., 2020; brain development and chromosome damage, Baglivio et al., 2015) and empirical research supporting a mechanistic link between adversity and future behavior (e.g. Baglivio et al., 2020), perhaps they would be better equipped to weigh ACE evidence in a meaningful culpability inquiry, and rely less on affect. On the other hand, increased complexity in the defense case may increase reliance on

heuristics. Nonetheless, mediation analysis and specific indirect effects demonstrate that ACE evidence does draw leniency from jurors, partially through their evaluation of the defendants' culpability.

We supported the hypothesis that ACEs evidence would draw out representations of the defendant as a victim, and because of feeling rules (Hochschild, 1979), this evidence would cause jurors to feel sympathy. Sympathy then cued leniency as an appropriate response (Rudolph et al., 2004) consistent with the affect heuristic (Finucane et al., 2000). Not only was sympathy influential in the sentencing decision, but its standardized effect was also stronger than those for blameworthiness and future dangerousness, indicating that the affective response to the defendant had a greater impact on the sentencing decision than the deliberative response. Mediation analysis and the effect decomposition also indicated that mitigating evidence resulted in lenient sentencing decisions largely because of the affective response. ACEs evidence matters because of sympathy, not because jurors understand mitigating evidence and use it in an extensive culpability inquiry. We furthered the knowledge base on capital jury decision making by more clearly mapping the affective response of jurors to ACEs evidence, thus expanding upon prior work (Georges et al., 2013) which highlighted anger. More research is needed to examine a wider range of cases to examine how ACEs and other forms of mitigating evidence interact with aggravating evidence and to determine whether certain types of evidence tend to overwhelm others.

### Limitations

Our experimental design enabled us to examine the absolute effect of mitigating evidence on mock juror leniency (the effect of ACEs evidence over no evidence at all). In practice, attorneys rarely present no evidence to highlight the character of the defendant in sentencing. Our control vignette did not include any mitigating evidence, and therefore our estimates are likely larger than the *marginal causal effect* of such evidence. (i.e., the impact of ACEs above and beyond other forms of mitigating evidence that are typically presented). While the experimental design ensures the findings have a high degree of internal validity thereby permitting such causal inferences, the simulated sentencing decision we studied here is limited, and there are several threats to ecological validity and generalizability. Though preferable to student simulations (Wiener et al., 2011), adults participating in online jury simulations bear little resemblance to actual capital trials. The respondents in this study interacted with a limited amount of evidence, testimony, and procedure, but actual capital jurors are exposed to an extensive amount of evidence and must make their decisions within the confines of complex, often confusing legal instructions. Actual jurors can be adversely affected by capital trial, experiencing psychological suffering and a high degree of stress (Antonio, 2008). Jurors are questioned in a lengthy process of *voir dire* where their willingness to impose the death penalty is probed, and this process can push jurors towards a sentence of death (Bowers & Foglia, 2003; Butler & Moran, 2002; Lynch & Haney, 2018). We did eliminate respondents who would not be death qualified under *Morgan v. Illinois* (1992) and *Wainwright v. Witt* (1985), however, we assessed qualification after the stimulus and sentencing decision. Capital juries deliberate, and this deliberation has consequences for their understanding of instructions,

mitigation and their sentencing decision (Lynch & Haney, 2009), yet our respondents made their sentencing decisions alone. A capital jury's verdict ultimately sends a defendant to death row, whereas the sentencing decisions made in this study lacked verisimilitude (Bornstein & McCabe, 2005). Though our simulation was markedly different, capital jurors' initial verdicts are highly predictable from their death penalty attitudes, and their final votes are strongly predictable from their initial votes (Bowers & Foglia, 2003; Bowers et al., 1998) and the findings largely converge with findings from observational research. Furthermore, from a practical standpoint, it would be impossible to randomize the presentation of evidence in actual capital trials and cost prohibitive to stage hundreds of mock trials to collect data from a sufficiently large number of deliberating mock juries.

## Conclusions

These results specifically have implications for the constitutionality of capital punishment in cases where the defense presents ACEs as mitigating evidence. The Supreme Court held that juries must not be precluded from considering any aspect of the character or background of the defendant as mitigating evidence (*Lockett v. Ohio*, 1978). Personal culpability has been one focus of the Court in defining the narrow class of defendants to which the death penalty applies (See *Atkins v. Virginia*, 2002; *Roper v. Simmons*, 2005), and a meaningful inquiry into the culpability of a defendant is thought to lead juries to assign weight to mitigating evidence. Our elaboration of FCT and the results suggest the social psychological processes that drive juror sentencing decisions are inconsistent with these constitutional demands and the requirement that the death penalty be applied in a non-arbitrary fashion. Only a small portion of the effect of mitigating evidence operated through inferences made about the defendant's moral responsibility. If mitigating evidence affected jurors' sentencing decisions solely through their perceptions of culpability our estimates imply the majority (85%) of the effect of mitigating evidence on the sentencing decision would vanish.

In order to fulfill the Supreme Court's mandate to narrow the application of death penalty to the most culpable defendants, jurors need more guidance in how to use mitigating evidence within the confines of a meaningful culpability inquiry. Though we found some indication that a culpability inquiry is taking place among mock jurors deciding the appropriate sentence, we found sympathy to be far more important. We are skeptical that judges can instruct sympathy out of jurors' sentencing process, and the findings suggest an instruction *not* to allow sympathy or other emotional responses to influence the sentencing decision "effectively [negates] the intended effect of the Court's requirement that all mitigating evidence be considered" (*California v. Brown*, 1987, p. 548). Therefore, further research is needed to examine whether anti-sympathy instructions actually impede jurors from assigning weight to mitigating evidence.

These findings illustrate the importance of theoretical conceptualization of the role of specific heuristics in sentencing research. While Ulmer and Bradley (2006) among others, have suggested that affect is compatible with focal concerns, rarely have focal concerns scholars incorporated specific hypotheses stemming from the research on availability, representativeness, or affect heuristics in testing the heuristics component

of focal concerns theory. This study attempted to specify not only the mental shortcut relied upon by capital jurors exposed to ACEs evidence, but empirically demonstrate how the affect heuristic enables jurors to act on this evidence. While the affect heuristic was particularly relevant given our emphasis on testimony painting the defendant as a victim, other heuristics may prove promising in solving other sentencing disparity puzzles. Given the rich research on emotion and race in capital sentencing (e.g. Brewer, 2004; Lynch & Haney, 2000; Lynch & Haney, 2015), and the connections between empathy for the victim, fear, and punitiveness we suspect that the affect heuristic may be useful to explain disparities in death penalty sentencing based on the victim's race (see Ulmer et al., 2020).

Finally, this research responded to Lynch (2019) and Ulmer's (2019) calls to map out improved methodologies for testing FCT. Indeed, this study relies on a non-traditional mode of observation in sentencing disparity research. Furthermore, unlike much focal concerns scholarship, we incorporated direct measures of substantive rationalities and affect, and linked these directly to evidence and the sentencing decision. We did not provide a complete test of FCT, as we did not measure any practical constraints facing the jurors. We do suspect that practical constraints have an impact on the sentencing process though future research could more completely conceptualize these constraints to address this limitation. Given the theoretical and substantive significance of the findings herein, we recommend, consistent with Wiener et al., (2011) suggestions, that future research gradually add more realistic trial processes in high quality community-based samples to further increase the credibility of the elaborated FCT approach here and explore a wider range of relevant questions and puzzles posed by mitigating evidence and deliberating juries.

## Notes

1. While fascinating, and worthy of further empirical attention, our methods preclude an examination of these types of practical constraints and interpersonal dynamics. We therefore focus on the main two substantive rationalities laid out by FCT.
2. A total of 2,127 workers accessed the full study, 47 were ineligible because they had been convicted of a felony (2.2%), 129 did not complete the vignette task (6.1%). Of the 1,951 workers who rendered a sentence, 279 failed all manipulation checks (14.3%), and further 179 respondents were not qualified under *Witt* (9.2%). Our analytic sample was the remaining 1,493 eligible qualified workers. We requested responses when respondents moved pages without completing all questions and as a result there was no missing data.

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No potential conflict of interest was reported by the authors.

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