When the World is Just: How Belief in a Just World Shapes Attitudes Towards Restorative

Justice and Punitive Sentencing

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Master's Thesis

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May 8th, 2025

Abstract

When aiming to prevent crime and foster restorative justice approaches, it is necessary to understand how societal beliefs about the causes of criminal behaviour shape support for several justice systems. This study investigated Belief in a Just World (BJW), a concept that assumes that individuals generally get what they deserve in life. It was hypothesized that the relationship between BJW and acceptance towards restorative justice (DV1) and punitive sentencing (DV2) is mediated by internal and external attributions to crime. A convenience sample of predominantly German citizens (N = 123) completed an online survey assessing BJW, attributions of criminal responsibility, attitudes towards restorative justice, and punitive sentencing. Results revealed internal attributions mediating BJW and punitive sentencing, while external attributions fully mediated BJW and acceptance towards restorative justice. Specifically, individuals believing the world is a just place attributed crime to more internal factors and less to external factors, leading them to favour punitiveness more and accept restorative justice less. These results illuminate how societal beliefs about justness and attributional processes foster systemic injustice. Addressing and challenging these concepts could increase people's openness to restorative justice approaches, which may lead towards more effective practices in crime prevention.

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Factors such as poverty, homelessness, or low socioeconomic status are important social determinants of criminal behaviours (Caruso, 2017). To effectively prevent crime, addressing systemic injustice and fostering social equity are crucial (Caruso, 2017; Gaynor, 2018; Young, 1985). Young (1985) argues that promoting social justice is far more effective in preventing crime than criminal justice systems. This is because addressing root causes such as poverty, inequality, and lack of opportunities can reduce the social conditions that may produce criminal behaviour (Allais, 2008). An approach that considers sources leading to crime may fundamentally challenge how justice systems respond, question whether punitive approaches can effectively address social inequality, or whether they may instead foster the conditions that lead to criminal behaviour.

Instead of understanding social causes of crime, many justice systems make use of retributive justice, which emphasises accountability through punishment, believing offenders must pay for their wrongdoings. This approach is rooted in two key justifications: first, punishment is viewed as a mechanism for restoring moral equality between offender and victim (Levanon, 2014; Lippke, 2003), and second, retributivism serves as the foundation for punitive sentences (Allais, 2008). The retributive system assumes that justice is given through punishment, rather than through addressing underlying causes or promoting rehabilitation.

Contrary to retribution, restorative justice represents a paradigm shift in criminal justice, focusing on healing the harm caused by crime rather than merely punishing offenders (Monterosso, 2007). According to von Hirsch et al. (2003), restorative justice serves as a practical programme to reduce injustice and stigmatisation. Restorative justice emphasises accountability, rehabilitation, and the restoration of relationships (Gromet & Darley, 2006; Zehr, 2015). Specifically, to restore harm that has been done, victim-offender mediations, community conferences, or peace-making cycles are conducted. These practices aim to give victims, offenders, and citizens an active part in the justice

process (Moss, 2019; Wenzel et al., 2008). Still, many countries are building on retributive justice principles, whereby citizens often perceive these principles as fair and as a commitment to protect society's values (Tsai, 2021).

One possible factor influencing people's advocacy for their preferred justice system is how just they perceive the world to be. Individual differences in how people view justice and fairness fundamentally shape their attitudes towards crime and punishment. The psychological concept of Belief in a Just World (BJW) proposes that individuals generally believe others get what they deserve in life (Hafer & Sutton, 2016). Past studies have investigated the connection between people's BJW and their preferences for criminal sentences. It has been found that not believing in a just world is connected to favouring rehabilitation of offenders, while individuals who strongly believe in a just world show an increased support for punitive measures against offenders (Hafer & Bègue, 2005; Templeton & Hartnagel, 2012). BJW has the potential for negative consequences not only for offenders. Believing in a just world makes citizens prone to blame victims for their misfortune and believe they deserve their fate. Also, social inequalities are accepted by those who deem the world a just place (Hafer & Olson, 1998; Smith, 1985).

The established connection between BJW and different preferences for criminal justice approaches may be explained by individuals attributing different causes to crime. Psychological theories distinguish between internal, such as personality traits, and external attributions, such as socioeconomic conditions, to events and behaviours (Michel, 2017). In the context of crime, criminal behaviour is also attributed to stem from internal or external causes. When people simultaneously assume the world to be a just place, which includes viewing the world as stable and orderly, disrupting this order by crime cannot be explained by external factors. Instead, to stay congruent with their worldview, people with strong BJW attribute internal explanations, such as character flaws of the offender, to have led to committing a crime (Smith, 1985).

So far, studies consistently indicate that a high BJW determines favourability for punitive sentencing and since a high BJW holds no to little space for external explanations of a crime that was committed, causes are attributed to an offender's internal characteristics. Yet it remains unknown whether high BJW relates to acceptance towards restorative justice and to what extent this might be mediated through attributions to criminal responsibility. This raises the research question "How does belief in a just world affect 1) the acceptance towards restorative justice and 2) punitive sentencing?".

This study contributes to existing research by investigating how BJW influences individuals' choices to punish criminal behaviour, but also how open individuals are to an alternative restorative justice system. This study's purpose is to illuminate how societal beliefs may perpetuate cycles of injustice. By examining how people's BJW influence their explanations of criminal behaviour, we can better understand why some individuals view crime as purely individual failure while overlooking systemic causes. This understanding is crucial since attributing crime solely to individual factors while ignoring societal issues may perpetuate ineffective punitive approaches and maintain existing inequalities. Ultimately, this research aims to show how understanding people's beliefs about crime can help break through cycles of injustice and lead to more effective approaches to crime prevention.

Theoretical Background

Belief in a Just World (BJW)

The Belief in a Just World (BJW), a concept first introduced by Lerner (1965), posits that individuals have a fundamental need to believe that all people generally get what they deserve in life. This belief serves as a coping mechanism, allowing individuals to perceive the world as predictable and controllable, helping them make sense of inequalities in a chaotic and often unfair reality (Hafer & Sutton, 2016). By believing in the justness of this world, anxiety can be minimised, as individual actions have predictable consequences. This means that hard work and good behaviour following social norms are rewarded. From the emotional perspective, BJW can help people shield themselves from the distressing reality, which shows that bad things can happen randomly to good people (Correia, 2024).

Correia et al.'s (2024) study revealed that BJW serves as a personal coping resource, as it was positively linked to well-being.

The stronger people believe in the concept of a just world, the more likely they are to observe structural problems, such as the strong division between the poor and the rich, as being immutable and inevitable (Smith, 1985). Furnham and Procter (1989, p. 374) stated that BJW is "maintained by derogating the victims of poverty and rationalising that they deserve their fate". Believers in a just world tend to ignore or dismiss structural explanations of inequalities while highlighting individualistic explanations (Smith, 1985). Conversely, individuals with a weaker BJW may be more inclined to acknowledge systemic inequalities and support rehabilitative approaches to justice. This occurs as those individuals do not perceive the world as inherently fair and are therefore able to not only attribute behaviour to individual choices but also perceive structural problems as causes of crime (Strelan et al., 2011). Understanding the role of BJW in shaping sentencing attitudes is crucial, as it provides insight into the psychological underpinnings of public support for different criminal justice policies.

Sentencing Goals and Restorative Justice

Whereas BJW indicates how individuals perceive fairness in society, these beliefs can influence preferences for how sentencing approaches and justice systems shall be administered. When dividing sentencing goals into two main aims, punishment and rehabilitation, criminal punishment can then again broadly be described as falling into two categories: deontological and consequentialist. Deontological punishment is often referred to as the moralistic or retribution form of punishment. It is referred to as deontological as it considers its morally obligatory and self-justification (Aharoni & Fridlund, 2012). This concept can be well connected with the retribution model of crime, which suggests that individuals' support for punishment comes from the simple stance that criminals must pay for their criminal acts (Sidanius et al., 2006). The severity of this form of punishment is often

measured by the moral blameworthiness of the crime, not by the perceived dangerousness for future criminal events (Aharoni & Fridlund, 2012).

In contrast, the consequentialist approach takes a more practical stance, aiming to control future behaviour and therefore punishes offenders to protect society (Aharoni & Fridlund, 2012). Its primary goals involve incapacitation, specific deterrence, and general deterrence (Vidmar, 2001). This approach aligns with the framework of the deterrence model of crime. The model suggests that individuals' support for deterrence arises from the belief that harsh punishment will prevent the frequency and likelihood of future offenses (Carlsmith et al., 2002; Sidanius et al., 2006). Research shows that, particularly, the conservative political right holds the view that crime will increase if criminals are not punished. Fear shall serve as a tool for self-control induced by severe punishment of criminals (Carroll et al., 1987). A perspective often advocated by conservatives claims that society's embrace of liberal values, particularly those advocating for leniency in the criminal justice system or challenging the authority of law enforcement, can lead to increased crime rates. This view posits that when the justice system fails to impose sufficiently severe sanctions on offenders, it may encourage criminal behaviour (Carroll et al., 1987). However, empirical literature questions the effectiveness of a punitive approach to crime deterrence.

Contrary to general belief, research suggests long prison sentences may enhance the likelihood that offenders will re-offend once released (Aharoni & Fridlund, 2012) while it does nothing to rehabilitate prisoners (Caruso, 2017). In the United States, where the criminal justice system emphasises retributive justice and punishment, recidivism rates are high, with 76.6% of released prisoners being rearrested within five years (Caruso, 2017). In contrast, Norway, where rehabilitation and reintegration is prioritised, core principles of restorative justice, maintains significantly lower recidivism rates of approximately 20% (Caruso, 2017).

While these traditional approaches emphasise punishment as either a moral imperative or deterrent, an alternative perspective on sentencing criminals has emerged which focuses on

rehabilitation and restoration. Restorative justice was introduced into Western criminology by Eglash (1959) as an alternative to traditional punitive approaches. Unlike retributive justice, which primarily seeks to punish criminal behaviour, restorative justice aims to repair damage, reintegrate offenders, and address the needs of all parties affected by the crime (Braithwaite, 2002; Okimoto, 2009). Its core principles include victim participation, offender accountability, and community involvement in the justice process (Van Ness et al., 2022). Restorative justice gives a voice to those who are often marginalised by the justice system by challenging hierarchical structures within the justice system. The system seeks to empower all involved parties by moving away from a top-down and authoritative traditional justice system.

Common restorative justice programmes include victim-offender mediation or family group conferencing, which is done through community reparative conferences, aiming to work on agreements to repair the harm (Gromet & Darley, 2006; Umbreit et al., 2005). Three main parties are integral to this restorative justice practice: Victims are prioritized and empowered to take an active role in the justice process, giving them a voice in their healing. Offenders are guided to develop an understanding of the harm their actions have caused, promoting accountability and empathy. Community members actively participate in the resolution process, enacting collective responsibility toward both rebuilding trust and reintegration of offenders (Moss et al., 2019; Wenzel et al., 2008; Wood et al., 2022). Resolution agreements might include monetary compensation, an apology, services done by the perpetrator for the victim, or community services (Gromet & Darley, 2006). The aspect of rehabilitation is based on the principle that something has gone wrong in an individual's history to result in criminal behaviour. By acknowledging this, a provision of training, better opportunities, and a better environment will emphasise non-criminal behaviour (Carroll et al., 1987). In the context of this study, understanding restorative justice is crucial as it represents a rehabilitative approach to sentencing, potentially influenced by individuals' BJW (Wenzel et al., 2010).

In sum, people with strong BJW prefer punitive sentencing that supports their belief in a predictable world, where criminal actions are met with proportional punishment. By supporting the retributive framework, they psychologically shield themselves from the uncomfortable possibility of random misfortune (Hafer & Sutton, 2016). Their belief leads them to rationalise that criminals deserve punishment, making them less likely to accept restorative justice approaches that acknowledge systemic inequalities or seek rehabilitation. Consequently, strong BJW leads individuals towards more punitive sentencing goals and resistance to alternative justice models, such as restorative justice. From this reasoning, the first hypothesis could be formulated:

H1: Scoring higher on BJW is predicted to be related to 1) lower acceptance towards restorative justice and 2) stronger punitive sentencing.

Attributions of Criminal Responsibility

One important determinant to consider when talking about how people would judge criminal behaviour is how individuals explain crime. What do people think is at the core of criminal behaviour? This may vary from socioeconomic factors, such as poverty or educational inequalities, to ideological explanations, such as cultural or political theories. This perception of crime can be an important factor when forming an attitude towards sanctioning policies (Cullen et al., 1985).

The judgement of criminals and the causes for their behaviour can be broadly explained using the attribution theory from social psychology. Attributions of crime typically fall into two categories (Michel, 2017). First, individuals may explain crime with internal or dispositional attributions. By using this explanation, individuals attribute criminal behaviours to factors within the individual committing the crime. Examples may include personality traits, mental illness, morality, or personal choice (Gudjonsson, 1984). Some people hold the strong belief in personal responsibility and free will when individuals commit a crime. From this view, criminal offenders made a conscious choice to perpetrate a crime and should therefore be held fully accountable for their behaviour (Michel, 2017).

Second, crime can be attributed to external or situational factors. From this perspective, criminal behaviour can be explained by factors outside the individual, which are often related to the environment or circumstances of the offender. Here, examples may include poverty, social inequalities, lack of education, or peer influence. Individuals making situational attributions might view crime resulting from societal failure (Gudjonsson, 1984).

Previous research conducted by Smith (1985) found that individuals with strong BJW favoured internal explanations of inequalities resulting in crime over external explanations. Moreover, it was found that perpetrators from a low socio-economic status were perceived as being more responsible for the crime and deserved more severe sentences from individuals with a high BJW compared to those with a low score on BJW (Freeman, 2006). This suggests that high BJW individuals tend to dismiss external explanations and instead attribute crime primarily to individual failings, which justifies punitive judgements against societally marginalised groups.

Moreover, those who believe that criminal acts are the consequence of internal factors are more likely to favour punitive sanctioning than those who explain crime with external reasoning (Maruna & King, 2009). Specifically, Michel (2017) reported that people who favoured punitive approaches over rehabilitation attributed crime to internal factors like low intelligence and alcoholism, while downplaying socioeconomic causes and the prevalence of mental illness among offenders. Conversely, individuals attributing criminal behaviour to external factors, such as poverty or lack of opportunities, tend to prioritise rehabilitation (Allais, 2008; Maruna & King, 2009; Templeton & Hartnagel, 2012). The literature consistently supports this relationship between causal attribution and punitiveness, distinguishing between those who attribute crime to internal characteristics of offenders and those who view it as a result of structural circumstances (Maruna & King, 2009; Smith, 1985; Sims, 2003; Templeton & Hartnagel, 2012).

In sum, previous research found that BJW influences attributions of criminal behaviour (Smith, 1985) and that these attributional patterns shape preferences for justice approaches (Allais, 2008;

Michel, 2017). Based on these established connections, this study assumed attributions of criminal responsibility to mediate the link between BJW and justice attitudes. This led to the second hypothesis (see Figure 1):

H2: The relationship between BJW and acceptance towards restorative justice and punitive sentencing is mediated by attributions of criminal responsibility: higher BJW causes internal attributions of crime, and this in turn causes a decrease in the acceptance of restorative justice and higher support for punishment.

Figure 1

Hypothesised Mediation Model
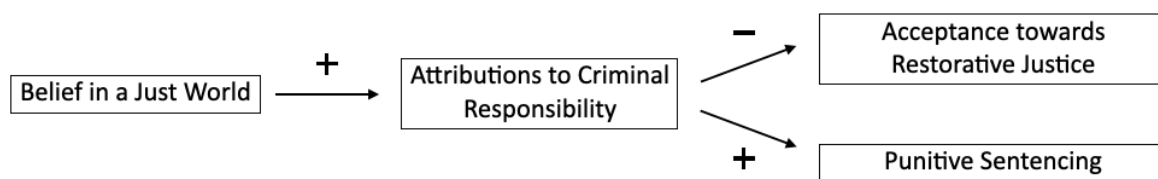
Note. '+' and '-' signs illustrate estimated positive/negative relationships.

Explorative Variables

The main research focus will be complemented by exploring two additional variables: implicit beliefs and social dominance orientation. This is because research on BJW consistently shows these concepts interact with sentencing preferences, potentially providing insight into how attitudes towards justice are formed (McKee & Feather, 2008; Sidanius et al., 2006; Weimann-Saks et al., 2022).

Implicit Beliefs

Beyond the main model discussed above, exploring citizens' implicit belief systems may further explain how judgements of offenders are formed. People's implicit beliefs about the controllability of behavioural responses to events differ (Bandura, 1986). Dweck et al. (1996) formulated two implicit theories about the malleability of personal character traits, believing that individuals either hold

incremental beliefs (growth mindset) or entity beliefs (fixed mindset). Individuals who hold incremental beliefs view personal attributes as malleable and controllable, believing in the potential for individual change (Dweck & Leggett, 1988). This leads individuals to interpret events flexibly and respond to challenges with assertive self-regulation, ultimately increasing their chances of successful behaviour. For instance, someone with an incremental view of intelligence is more likely to focus on skill acquisition and respond to failure by increasing their effort, rather than giving up (Dweck, 1996). Moreover, individuals with a growth mindset are less likely to endorse stereotypes directly towards others (Levy et al., 1998). The incremental theory contains the general belief that criminal offenders could fundamentally change (Moss et al., 2019). People scoring high on the incremental theory show a lower likelihood of favouring punishment for criminal behaviour (Chiu et al., 1997) and anticipated positive attitudes towards ex-offenders (Rade et al., 2018). In the context of restorative justice, Moss et al. (2019) state that the incremental theory is linked to supporting rehabilitation and restorative justice over punishment.

Contrary, the entity theory contains the view that attributes are a fixed and stable trait, impossible to change or control (Dweck, 1996; Dweck & Leggett, 1988; Gerber & O`Connell, 2012). Individuals with entity beliefs tend to make stable, internal attributions in response to their experiences. When faced with challenges, this mindset decreases their motivation to self-regulate, ultimately resulting in effort withdrawal after failure (Dweck, 1996). In the criminological research context, Tam et al.'s (2013) study revealed that individuals holding entity beliefs were more punitive than incremental theorists. Moreover, individuals with entity beliefs attributed criminal behaviours more to internal factors, leading to stronger punishment tendencies (Tam et al., 2013). Although research on implicit theories' role in restorative justice is scarce, Weimann-Saks et al. (2022) found that incremental beliefs significantly influence attitudes towards restorative justice across all offense types. While literature suggests implicit beliefs influence justice preferences, this study aimed to explore whether BJW alone, regardless of implicit beliefs, explain the expected findings. In other words, this serves to specify

whether the hypothesised model can be explained exclusively by the main variables or whether part of it is accounted for by people's implicit beliefs.

Social Dominance Orientation

Judgments about offenders are also influenced by individuals' beliefs about social hierarchy and their position within it. Social Dominance Orientation (SDO), an individual's support for group-based hierarchy and the domination of 'inferior' groups by 'superior' groups in society, has an important role in how individuals form attributions about criminal behaviour (Pratto et al., 1994). People scoring high on SDO focus on maintaining group-based hierarchies. They are more likely to attribute negative outcomes to internal characteristics of disadvantaged groups (Sidanius et al., 2006). SDO has been found to influence attitudes towards various social and political issues, including criminal justice (Sidanius et al., 2006). Also, individuals high in SDO tend to endorse beliefs and policies that maintain or increase social inequalities, while those low in SDO are more likely to support egalitarian ideals. In the context of criminal justice, individuals scoring high on SDO show higher support for deterrence and retribution beliefs (McKee & Feather, 2008; Sidanius et al., 2006) and show higher tendencies for punitive attitudes in criminal settings (McKee & Feather, 2008). Previous research has also found SDO to be negatively associated with beliefs in an offender's rehabilitation (Moss et al., 2019). In short, SDO might shape attributional processes about crime and attitudes towards offenders.

While existing literature suggests relationships between SDO and several aspects of criminal justice attitudes, the nature of how SDO will interact with BJW and attributions of criminal responsibility remains unclear. Therefore, this study will take an exploratory approach to examine the moderated mediation effects of SDO on the indirect pathways through attributions of criminal responsibility. Specifically, it will be explored whether SDO moderates how strongly BJW influences attributions of criminal responsibility, and in turn, how these attributions affect punitive sentencing and the acceptance towards restorative justice.

Methods

Design

The study employed a mixed design, combining a cross-sectional design and a within-subjects design. The first part examined the relations between the independent variable BJW, the mediator attributions of criminal responsibility, and the two dependent variables: punitive sentencing and acceptance towards restorative justice. Additional explorative variables, social dominance orientation and implicit beliefs, were also examined.

The second part compared participants' state-level responses across two different crime scenarios. This approach was included to test if participants' general attitudes about justice, crime and attributional processes (trait measures) would change when presented with specific criminal contexts (state measures). The theft scenario emphasised external circumstances of the offender, such as poverty and unemployment, while the violence scenario highlighted internal factors like chronic anger or an impulsive nature. Including these two scenarios helped determine whether the theoretical relationships remained the same when participants judged concrete criminal events.

Participants

A power analysis was conducted based on Fritz and MacKinnon's (2007) empirical estimates for detecting mediated effects. Given that research on the relationship between BJW and justice attitudes has shown medium effect sizes (Hafer & Sutton, 2016), medium-sized effects were expected (around 0.39) for both the α and β paths. For a mediation model with medium effect sizes using bias-corrected bootstrapping, Fritz and MacKinnon (2007) recommend a minimum sample size of 71 participants to achieve power of .80. However, to account the two dependent variables, possible measurement error, and additional exploratory analyses, it was aimed to recruit a minimum of 100 participants to ensure adequate power for detecting the hypothesised mediation effects.

After the study was approved by the BMS ethics committee of the University of Twente, with the project number 241201, it was distributed using a convenience sampling method. The online survey

was advertised through multiple social media platforms (e.g., WhatsApp, Instagram) as well as by recruiting participants via SONA system, which is a participant tool accessible for University of Twente students. The study was available in English and German. The inclusion criteria comprise owning or having access to a digital device with a stable internet connection, being at least 18 years old and possessing good understanding of the English or German language.

The study consisted of a total convenience sample of 144 participants. After screening the data, 20 participants were excluded - 19 as they did not answer all scales of the main variables, and one did not indicate a final consent at the end of the questionnaire. This led to a final sample of 123 participants, where 46 identified as male, 72 as female, 4 as non-binary, and one participant preferred not to answer. Ages ranged from 18 to 83 (M = 31.10, SD = 13.41). Regarding nationality (M = 1.26, SD = 0.59), 101 participants were German, followed by 12 Dutch participants, with 10 participants from other nationalities. Political orientation showed a predominantly left-leaning sample (M = 2.91, SD = 1.625), with 46 participants identifying as Left, 33 as Centre-left, and 15 as Far Left. The remaining participants identified as Centre (14), Centre-right (7), Right (1), Far right (1), or preferred not to disclose (6).

Materials

The following scales were included in the order presented.

Global Belief in a Just World Scale (GBJWS)

For measuring participants' levels of BJW, the global belief in a just world scale was utilised (Lipkus, 1991). The 7-item scale consists of general items, all keyed towards the just-world direction, meaning higher scores indicated a stronger belief in a just world, such as "I feel that people get what they are entitled to have in life". The items were measured on a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree" (see Appendix A). In this study, a Cronbach's Alpha of α = .84 was detected. This can be labelled as reliable (Taber, 2018).

Penal Attitudes Scale (PENAS)

The Penal Attitudes Scale (PENAS) is a 26-item instrument measuring six goals and justifications of punishment: deterrence, just desert, moral balance, incapacitation, rehabilitation, and restorative justice (De Keijser et al., 2002). Participants responded on a 5-point Likert scale from 1 = "strongly disagree" to 5 = "strongly agree". The scale allows for constructing two composite measures: Punitiveness (encompassing deterrence, desert, moral balance, and incapacitation) and Rehabilitative Orientation (combining restorative justice and rehabilitation). An example item for deterrence is "Heavy sentences increase the credibility of the criminal justice system". This study utilised only the 18 items measuring punitiveness, where higher scores indicated stronger support for punitive measures (see Appendix B). A strongly reliable Cronbach's Alpha (Taber, 2018) of α = .90 was detected.

Restorative Justice Attitudes Scale (RJAS)

The Restorative Justice Attitudes Scale (RJAS) is a 20-item instrument designed to measure attitudes towards restorative justice processes (Taylor & Bailey, 2022). The scale encompasses five conceptual dimensions: 1) Empathic Understanding, 2) Harm and Needs, 3) Restoration Processes, 4) Accountability, and 5) Community Engagement. For instance, the item "Inclusive, collaborative processes between victims and offenders of wrongdoing are necessary to repair harm" is an indicator of community engagement. Participants respond on a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree", with higher scores indicating more favourable attitudes towards restorative justice processes (see Appendix C). Confirmatory analyses by Taylor and Bailey (2022) suggested the use of a total scale score for overall measurement. The scale showed a Cronbach's Alpha of α = .82, which can be labelled as high (Taber, 2018).

Implicit Person Theory Measure (IPT)

To measure implicit beliefs, the implicit person theory measure was utilised. It comprises three items assessing beliefs about personality malleability (Levy et al., 1998). The items, such as "People can do things differently, but the important parts of who they are can't really be changed", are

measured on a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree" (see Appendix D). Participants are classified as entity theorists if they agree with these statements (mean scores between 4 and 5), incremental theorists if they disagree (mean score between 1 and 2), and remain unclassified if their mean scores fall in between. Levy et al. (1998) confirmed that disagreement with the entity items represents agreement with incremental personality beliefs. A robust reliability of α = .81 was detected in this study (Taber, 2018).

While results of the implicit person theory have originally been interpreted using categorical division between entity and incremental theorists, our sample showed an imbalanced distribution (Entity theorists: N = 12, 9.7%; Incremental theorists: N = 56, 45.5%; Remaining participants: N = 55, 44.8%). Therefore, implicit beliefs were further analysed as a continuous variable. Higher scores indicated stronger entity beliefs, and lower scores indicated stronger incremental beliefs.

Attribution Theory Scale

To measure the variable attributions to criminal responsibility, a self-constructed 8-item scale was established. Half of the items were reverse-coded, whereas high scores indicate attributing crime to internal factors, and low scores indicate external attributions. Items such as "Criminal behaviour is due to lack of self-control" are measured on a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree" (see Appendix E).

To validate the newly constructed Attribution Theory Scale, an exploratory factor analysis (EFA) was conducted utilising principal axis factoring with oblimin rotation. The Kaiser-Meyer-Olkin measure verified sampling adequacy (KMO = .667), and Bartlett's test of sphericity was significant ($p < .001$). Two factors emerged with eigenvalues over 1, explaining 57.11% of variance. Factor 1 comprised the four items measuring external attributions, while Factor 2 contained two items measuring internal attributions. One item about self-control was removed due to cross-loading, and another about personal choice was removed due to poor factor loading. Both factors showed acceptable reliability (Factor 1: α = .753; Factor 2: r = .54). Based on these findings, the Attribution theory scale was treated

as two separate dimensions in all analyses: external attributions (Factor 1) and internal attributions (Factor 2).

Social Dominance Orientation Scale

The Social Dominance Orientation (SDO) scale utilised Pratto et al.'s (1994) abbreviated 8-item measure. Participants responded on a 5-point Likert scale ranging from 1 = "very negative" to 5 = "very positive", with instructions emphasising attitudinal orientation. Higher scores indicate greater endorsement of social dominance orientation, with half of the items reverse-coded. For instance, the item "Group equality should be our ideal" had to be recoded to ensure high scores indicating stronger support for SDO (see Appendix F). A strong Cronbach's Alpha of α =.79 was detected (Taber, 2018).

Case Scenarios

Two case scenarios were implemented, one illustrating a scene about a theft, the other one describing a scenario where the criminal act was physical violence. Drawing from Gromet and Darley's (2006) research, these scenarios were adapted with minor modifications. Following each case scenario, participants answered four items on a 5-point Likert scale from 1 = "strongly disagree" to 5 = "strongly agree". These items, originally derived from the Attribution Theory Scale, Implicit Person Theory (IPT), and Penal Attitudes Scale (PENAS), were reframed to measure participants' state-level attributions specific to the scenarios. After the description of the theft scenario, these four items were presented to participants: "Andrew committed this crime because of his personal choices.", "Poverty forced Andrew into stealing the wallet.", "The kind of person Andrew is, is something basic about him, and he can't change very much.", and "Andrew must be punished to restore the legal order in society which he disrupted by this act of crime." (see Appendix G and H). The cases were randomised for each participant to control for potential order effects and survey fatigue (Abay et al., 2022).

Procedure

Participants completed the online survey via Qualtrics. After participants agreed to the informed consent (see Appendix I), the measures were presented in the order of 1) Global Belief in a just World

Scale (GBJWS), 2) Penal Attitudes Scale (PENAS), 3) Restorative Justice Attitudes Scale (RJAS), 4) Implicit Person Theory Measure (IPT), 5) a scale measuring attribution to criminal responsibility, and 6) Social Dominance Orientation Scale.

After participants completed the six initial scales, they were presented with the two brief case scenarios illustrating a theft and an incident of physical violence. The case scenarios were randomised across participants to mitigate potential order effects and survey fatigue, ensuring that each participant encountered the theft and physical violence scenarios in a counterbalanced order (Abay et al., 2022). Afterwards, participants were asked to fill in demographic data, such as age, gender, and political orientation.

In the end, participants received a debriefing statement explaining the study's nature and aims, followed by a consent confirmation (see Appendix J). The mean duration participants needed to complete the entire survey was 31.2 minutes.

Data Analysis

First, preliminary analyses were conducted to validate our measures and test statistical assumptions. Explorative factor analyses were utilised for the newly constructed scale. We assessed the reliability of all scales using Cronbach's alpha coefficients. Also, statistical assumptions of linearity, normality, homoscedasticity, and multicollinearity were verified for further regression analyses.

Second, the main hypotheses were tested. For the first hypothesis, two separate linear regressions were conducted. For the second hypothesis, we employed a mediation analysis using PROCESS macro model 4 (Hayes, 2017) with 5000 bootstrapping. This approach allowed us to assess the direct as well as indirect effects in our theoretical model. In addition to the main analyses, several exploratory analyses were conducted, to further investigate potential connections between variables. These included analysing additional moderation pathways and comparing trait and state measurements.

Results

Preliminary Analyses

Before conducting the main analyses, four statistical assumptions for mediation analysis were examined. Scatterplots revealed acceptable linear relationships between all variables (R^2 ranging from .14 to .20). Normal distributions of residuals were largely supported by Shapiro-Wilk tests, with only minor deviations in one relationship (p = .014), while skewness and kurtosis values were within acceptable ranges. Inspections of Q-Q plots showed good alignment. The Breusch-Pagan test indicated violations of homoscedasticity in some relationships (p < .05). Given that mediation analysis using bootstrapping is robust to such violations, the analysis using bootstrapped confidence intervals proceeded (Hayes, 2017). Finally, multicollinearity was not a concern, as indicated by the moderate correlation between BJW and Internal Attribution (r = .37).

Descriptive Statistics

The descriptive statistics and correlations among all variables are presented in Table 1. Overall, relatively low mean scores were revealed on BJW and SDO, and moderate scores on implicit beliefs and internal and external attributions. Participants demonstrated higher acceptance of restorative justice compared to punitive sentencing.

Correlation analyses revealed several significant relationships between the variables. BJW showed a moderate negative correlation with restorative justice (r = -.36, p < .001) and moderate to strong positive correlations with punitiveness (r = .58, p < .001) and SDO (r = .49, p < .001), suggesting that stronger BJW align with punitive approaches and social hierarchy preferences. Restorative justice consistently demonstrated negative relationships with all other variables, most notably with external attributions (r = -.43, p < .001) and SDO (r = -.41, p < .001), indicating that supporting restorative justice led to dismissing external attributions of crime while conforming to SDO. Punishment and SDO showed some of the strongest positive correlations in the dataset (r = .50, p < .001), and both variables were positively associated with internal and external attributions. Interestingly, while internal and external

attributions both correlated with most variables, they did not show a significant relationship with each other (*r* = .13, ns), suggesting they may represent distinct psychological constructs in this context.

Table 1

Means, Standard Deviations and Correlations Between Variables.

Variable	M	SD	1	2	3	4	5	6	7
1. BJW	2.24	0.64	-						
2. Restorative Justice	3.62	0.41	-.36**	-					
3. Punishment	2.84	0.63	.58**	-.34**	-				
4. Internal Attributions	2.58	0.94	.37**	-.24**	.47**	-			
5. External Attributions	2.48	0.78	.41**	-.43**	.33**	.13	-		
6. Implicit beliefs	2.43	0.83	.31**	-.20*	.47**	.20*	.13	-	
7. SDO	1.65	0.54	.49**	-.41**	.50**	.12	.50**	.33**	-

Note. N = 123. * *p* < .005. ** *p* < .001.

Hypotheses Testing

H1: Scoring Higher on BJW is Predicted to be Related to 1) Lower Acceptance Towards Restorative Justice and 2) Stronger Punitive Sentencing Goals.

Two simple linear regression analyses were conducted to test whether BJW predict punitive sentencing and acceptance towards restorative justice. The first regression showed that BJW significantly predicted punitive sentencing goals, with higher BJW scores were associated with stronger support for punitive sentencing, *ß* = .576, *t*(121) = 7.74, *p* < .001, 95% CI [0.42, 0.72], R^2 = .33. The second regression analysis revealed that BJW significantly predicted the acceptance towards restorative justice, with higher BJW scores predicted lower acceptance of restorative justice, *ß* = -.315, *t*(121) = -3.66, *p* < .001, 95% CI [-.32, -.10], R^2 = .10. These results support Hypothesis 1.

H2: The Relationship Between BJW and Acceptance Towards Restorative Justice and Punitive Sentencing is Mediated by Attributions of Criminal Responsibility.

Mediation analyses were conducted to examine whether internal and external attributions mediate the relationship between BJW and punitive sentencing and acceptance towards restorative justice. The model 4 of the PROCESS macro version 4.2 with 5000 bootstrap samples (Hayes, 2017) was used.

Internal Attributions as Mediator. It was revealed that internal attributions mediated the relationship between BJW and punitive sentencing. BJW significantly predicted internal attributions, b = .54, SE = 0.12, $p < .001$, which then predicted punitive sentencing, b = .20, SE = 0.05, $p < .001$. The direct effect of BJW on punitive sentencing remained significant, b = .46, SE = 0.07, $p < .001$, and the indirect effect was significant, b = .11, 95% bootstrap CI [.044, .193]. The total effect of BJW on punitive sentencing was significant, b = .57, SE = 0.07, $p < .001$, R^2 = .33.

Concerning acceptance towards restorative justice, BJW predicted internal attributions, b = .54, SE = 0.12, $p < .001$, while internal attributions did not predict restorative justice acceptance, b = -.06, SE = 0.04, $p = .140$. The direct effect was significant, b = -.17, SE = 0.06, $p = .005$, but the indirect effect was not significant, b = -.03, 95% bootstrap CI [-.079, .009], indicating no mediation. The total effect of BJW on acceptance towards restorative justice was significant, b = -.20, SE = 0.06, $p < .001$, R^2 = .32.

External Attributions as Mediator. BJW significantly predicted external attributions, b = -.51, SE = 0.10, $p < .001$, meaning higher scores on BJW are associated with lower external attributions to crime. External attributions did not significantly predict punitive sentencing, b = -.09, SE = 0.07, $p = .163$. The direct effect of BJW on punitive sentencing remained significant, b = .52, SE = 0.08, $p < .001$. The indirect effect was not significant, b = .05, SE = 0.03, 95% bootstrap CI [-0.01, 0.12], indicating no mediation through external attributions. The total effect of BJW on punitive sentencing goals was significant, b = .57, SE = 0.07, $p < .001$, R^2 = .33.

Results for the analysis with restorative justice as the dependent variable revealed that BJW significantly predicted external attributions, but in a negative direction, b = -.51, SE = 0.10, $p < .001$.

External attributions significantly positively predicted restorative justice attitudes when controlling for BJW, b = .19, SE = 0.05, p < .001. The direct effect of BJW on restorative justice attitudes was marginally statistically significant, b = .11, SE = 0.06, p = .065, 95% bootstrap CI [-0.22, 0.01]. The indirect effect was significant, b = -.10, SE = 0.03, 95% bootstrap CI [-0.17, -0.04], indicating a full mediation. The total effect of BJW on restorative justice attitudes was significant, b = -.20, SE = 0.06, p < .001, R^2 = .10.

These results partially support hypothesis 2, as internal attributions significantly mediated the relationship between BJW and punitive sentencing (see Figure 3), meaning that people high in BJW attribute criminal behaviour towards internal attributions and show high support for punitive sentencing. Also, external attributions fully mediated the relationship between BJW and restorative justice attitudes through an indirect-only mediation (see Figure 4).
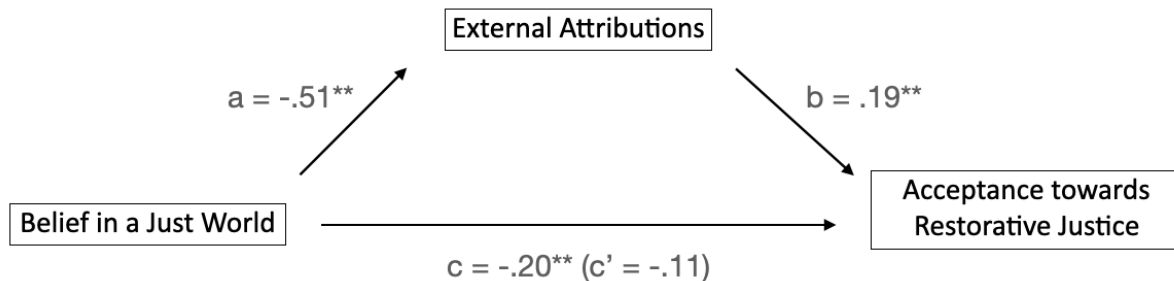
Figure 3

Mediation Coefficients of Only Significant Direct, Indirect and Total Effects
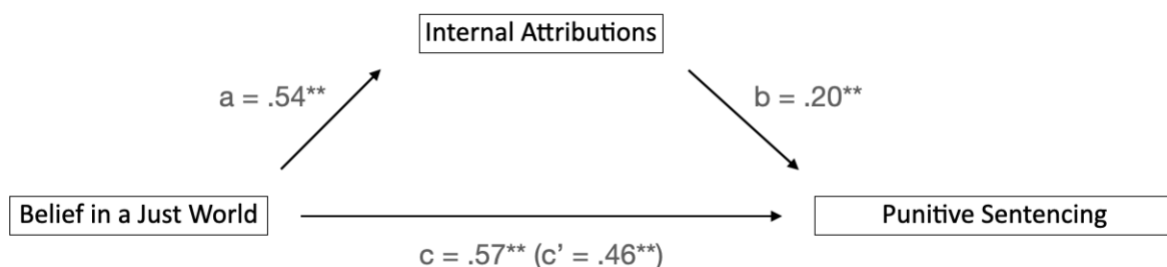
Note. Standardised coefficients. C' = direct effects of X on Y, c = combined effect of direct and indirect effects of X on Y. *p < .05. **p < .01, ***p < .001.

Figure 4

Mediation Coefficients of Only Significant Direct, Indirect and Total Effects

Note. Standardised coefficients. C' = direct effects of X on Y, c = combined effect of direct and indirect effects of X on Y. *p < .05. **p < .01, ***p < .001.

Exploratory Analyses

Social Dominance Orientation Moderated Mediation

As a first exploratory analysis, it was tested whether social dominance orientation moderated the main mediation model. Two moderated mediation analyses were conducted using PROCESS Model 7 (Hayes, 2017) with 5000 bootstrap samples. For punitive sentencing as a DV, SDO did not significantly moderate the relationship between BJW and internal attributions, b = -0.23, p = .273. While the indirect effects were significant at all SDO levels, the index of moderated mediation was not significant, Index = -0.046, 95% CI [-0.146, 0.020].

For restorative justice, SDO similarly showed no significant moderating effect, b = -0.23, p = .273. Neither the conditional indirect effects nor the moderated mediation index was significant, Index = 0.014, 95% CI [-0.007, 0.054]. These results suggest that the previously established relationships between BJW, internal attributions, punitive sentencing and restorative justice remain consistent regardless of individuals' levels of SDO[1].

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[1] It was additionally tested whether SDO moderated the b-path from attributions to our dependent variables, using PROCESS macro model 14 (Hayes, 2017). Results revealed no significant moderation for punitive sentencing (Index = -0.046, 95% CI [-0.146, 0.020]) and restorative justice (Index = 0.014, 95% CI [-0.007, 0.054]), suggesting the relationships remain consistent regardless of SDO levels.

Controlling for Implicit Beliefs

Previous research has demonstrated that individuals' beliefs about whether personal characteristics are fixed or malleable can affect attitudes towards justice approaches such as restorative justice (Weimann-Saks et al., 2022). Therefore, additional analyses were conducted to examine whether the mediation effect of attributions of criminal responsibility remained significant when including implicit beliefs as a covariate in the mediation analyses.

For punitive sentencing goals, when controlling for implicit beliefs, the overall model remained significant, $F(3, 119) = 37.56$, $p < .001$, $R^2 = .49$, using PROCESS macro Model 4 (Hayes, 2017). Both direct effects of BJW, $b = 0.38$, $p < .001$, and internal attributions, $b = 0.18$, $p < .001$, on punitive sentencing goals remained significant. Notably, implicit beliefs showed a significant unique effect on punitive sentencing, $b = 0.23$, $p < .001$, indicating that implicit beliefs independently predicted support for punishment. The indirect effect through internal attributions remained significant, b = 0.09, 95% CI [0.031, 0.167], suggesting that the model is robust regardless of the effect of implicit beliefs.

For restorative justice, the model was significant, $F(3, 119) = 5.63$, $p = .001$, $R^2 = .12$. While the direct effect of BJW remained significant, $b = -0.16$, $p = .014$, neither internal attributions, $b = -0.06$, $p = .174$, nor implicit beliefs, $b = -0.05$, $p = .285$, showed significant effects. The indirect effect was not significant, $b = -0.03$, 95% CI [-0.070, 0.011]. These outcomes underline that the relationship between BJW and restorative justice attitudes is not mediated by internal attributions, regardless of implicit beliefs.

Case scenarios: Analyses with State Values

To examine whether participants judged the criminal act displayed in the case scenarios differently compared to what they indicated in the general scales, the items in the case scenario were compared to the exact same single items from the trait scales.

Table 2 shows differences between participants' general attitudes (trait measures) and their scenario-specific judgments in the theft case (Andrew). Paired samples *t*-tests revealed significant

differences for all four measures. Internal and external attributions were rated significantly higher in the theft scenario compared to general trait measures. Regarding implicit beliefs, participants viewed the offender as more capable of change in the theft scenario compared to their general belief, $t(122) = 9.07$, $p < .001$. Interestingly, participants supported more punitive approaches when judging the specific scenario than indicated by their general attitudes, $t(122) = -5.19$, $p < .001$. These findings suggest that contextual information provided in the theft scenario influenced participants' judgments, often in directions different from their general attitudes.

Table 2

Comparison of Trait and State Measures for the Theft Scenario: Paired Samples T-Test *Results*

	Trait value	State value	$t(122)$	p
	M (SD)	M (SD)		
Internal Attribution	3.34 (0.80)	3.60 (0.87)	-7.72	.007
External attributions	2.24 (1.02)	2.66 (1.05)	-3.63	<.001
Implicit beliefs	2.30 (0.96)	1.72 (0.76)	5.85	<.001
Punitive Sentencing	2.83 (1.10)	3.26 (0.94)	-4.15	<.001

Note. N = 123. Trait values represent general attitudes measured by a single scale item. State values represent scenario-specific judgments in the theft scenario.

Table 3 presents comparisons between participants' general attitudes (trait values) and their scenario-specific judgments in the violence case (Jake). Paired samples *t*-tests revealed significant differences across three out of four measures. Internal and external attributions were rated significantly higher in the violence scenario compared to general trait measures, suggesting participants attributed Jake's violent behaviour more to internal as well as external factors. Most notably, participants endorsed substantially more punitive approaches when judging Jake's violence compared to their general attitudes towards punishment. These findings suggest that the violence

scenario elicited stronger attributions and more punitive responses than participants' general attitudes would predict.

Table 3

*Comparison of Trait and State Measures for the Violence Scenario: Paired Samples T-*Test *Results*

	Trait value	State value	$t(122)$	p
	M (SD)	M (SD)		
Internal Attribution	2.90 (1.03)	4.11 (0.65)	-11.88	<.001
External attributions	2.58 (0.90)	3.00 (0.94)	-4.94	<.001
Implicit beliefs	2.30 (0.96)	2.20 (0.93)	1.12	.265
Punitive Sentencing	2.84 (1.10)	3.68 (0.76)	-8.67	<.001

Note. N = 123. Trait values represent general attitudes measured by a single scale item. State values represent scenario-specific judgments in the violence scenario.

To examine whether the mediation model holds for specific scenarios, two separate mediation analyses were conducted with the single state items from the case scenario, using PROCESS Model 4 (Hayes, 2017) with 5000 bootstrap samples[2]. For the theft scenario (Andrew), only the direct effect of BJW on punitive sentencing remained significant (b = 0.431, p = .001). For the violence scenario (Jake), only internal attribution predicted punitive sentencing (b = 0.423, p < .001), while BJW showed no significant direct effects (b = 0.061, p = .551). Neither scenario showed significant mediation through state internal attributions (theft: b = 0.030, 95% CI [-0.011, 0.104]; violence: b = 0.039, 95% CI [-0.038, 0.128]), suggesting that the relationships between these variables may be context dependent. It also

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[2] Mediation analysis was repeated with the same single items from the trait scales. Similar results were found, with only significant direct effects and no mediation. Mediation analysis with bootstrapping (5000 samples) revealed a significant direct effect of BJW on punitive sentencing (b = .52, p < .001, 95% CI [.23, .81]), but no significant indirect effect through internal attributions (b = .02, 95% CI [-.03, .08]).

revealed that measurement specificity may influence mediation effects, as scenario-specific and single trait item analyses deviated from our primary mediation analysis.

Discussion

Summary

The purpose of this study was to examine the extent to which BJW predicts people's acceptance towards restorative justice and their punitiveness in sentencing goals. Our first hypothesis, that scoring higher on BJW predicts lower acceptance towards restorative justice and stronger punitive sentencing goals, was confirmed. Next, our second hypothesis, that the relationship between BJW and acceptance towards restorative justice and punitive sentencing is mediated by attributions of criminal responsibility, was partially supported. Our results confirm that internal attributions of criminal behaviours significantly mediate the relationship between BJW and punitive sentencing. External attributions fully mediated the relationship between BJW and acceptance towards restorative justice. These findings contribute to identifying psychological barriers that hinder acceptance towards alternative justice systems (Gaffney et al., 2024).

Interpretation of Findings

Our research suggests that just world beliefs lead people to support internal explanations over external ones for criminal behaviours and subsequently favour punitive sentencing more and restorative justice less. Many societies continue to choose punishment over rehabilitation, although there is supporting evidence for the effectiveness of restorative justice approaches (Caruso, 2017). The opposite direction of these relationships suggests that BJW not only influences the intensity of punitive responses but also shapes the acceptance towards restorative justice. This is consistent with theoretical literature suggesting that BJW promotes people's acceptance of the retributive justice system they live in (Smith, 1985). This also keeps individuals from considering opposing justice concepts, such as restorative justice, which challenge the traditional approach (O'Toole & Sahar, 2014). In other words, believing in a just world seems to contain the conception that punishment is the right

and just response to crime. It demonstrates that a high BJW builds possible barriers to reforming current justice systems and therefore may hinder restorative justice from being socially accepted as a justice serving tool. In a cross-national study which included citizens from 29 European countries, more than half of the sample held moderate-to-high endorsement of general BJW (Bartholomaeus, 2025). Considering this great number of people believing in the justness of the world, this could well explain the continuous adherence to retributive justice.

How BJW Shapes Justice Preferences through Different Attributional Processes

Results of our study revealed that internal attributions significantly mediated the relationship between BJW and punitive sentencing, while external attributions did not mediate the same relationship. Our findings indicate that those with high BJW attribute criminal behaviour to internal factors. If people assume crime to have emerged from offenders' personal and conscious choice, punishment is considered the appropriate response, a phenomenon known as the 'just desert principle' (Carlsmith et al., 2002; Gerber & Jackson, 2013). This finding is consistent with a study by O'Toole and Shar (2014), where a significant connection between attributing crime to internal attributions and retributive punishment across laypeople was found.

Another explanation of these findings lies in Weiner's (2006) attribution-affect-action model. This framework suggests that attributions generate emotions, which in turn influence behaviour and intentions (Weiner, 1980). In the context of the present study, when individuals score high on BJW and attribute criminal behaviour to internal factors, these attributions most likely evoke negative emotions like anger rather than positive feelings (Cochran et al., 2003; Weiner, 1980; Weiner, 2006). These negative emotional responses then serve as a motivation to support punitive sentencing goals. Cochran et al. (2003) empirically tested this framework across criminal justice contexts, revealing that attributions to internal causes led people to feel anger, which increased their support for punitive measures. Our findings extend the attribution-affect-action model by adding BJW as a belief system which shapes attributions, which then influence punitive preferences. This explanation would suggest

that the mediation not merely operated through cognitive attributional judgements but possibly also through emotions that these attributions generate.

While internal attributions did mediate the relationship between BJW and punitive sentencing, external attributions did not. Our findings revealed that higher BJW was associated with lower external attributions, indicating that individuals with strong BJW are likely to reject external factors such as poverty or systemic failures as explanations for criminal behaviour. However, these external attributions did not relate to support for punitive sentencing. This suggests that people's punitiveness arises from assuming offenders to be personally responsible rather than considering external factors as a cause of criminal behaviour (Templeton & Hartnagel, 2012). First and foremost, retributive justice is rooted in the belief that offenders deserve to be punished (Carlsmith et al., 2002), and this might be particularly so in cases in which offenders' characteristics instead of external factors are perceived as responsible. These results indicate that the attributional processes underlying punitive sentencing primarily operate through attributions of personal blame rather than through the dismissal of external circumstances. In essence, it was revealed that punitive sentencing is driven more by attributing personal responsibility to offenders rather than by simply discounting external factors, which is to our understanding a novel finding. It reinforces the relationship between BJW, internal attributions, and retributive justice principles.

Another interpretation of this finding arises from the 'system justification theory' established by Jost and Banaji (1994). The theory proposes that individuals are prone to defend and justify existing social systems, which serve to decrease social uncertainty (Jost, 2019). The content of the theory can be applied to explain people's judgements in the criminal justice context, as justifying social systems is predominantly strong in individuals with high levels of BJW (O'Toole & Sahar, 2014). When people with a strong BJW would acknowledge external factors as causes of crime, they would simultaneously recognise flaws in society that require a change in the system. To avoid this acknowledgement, which would create discomfort, people may simply ignore external explanations of criminal behaviour (Hafer

& Sutton, 2016). This allows individuals to believe that the world is just while supporting punitive measures. This further confirms that punitiveness is predominantly linked to the perception that individuals consciously choose to commit a crime and a diminished awareness of social factors leading to crime.

Moreover, our findings revealed that external attribution fully mediated the relationship between BJW and restorative justice. In fact, individuals with a high BJW show lower acceptance towards restorative justice primarily because they reject external attributions for crime. Not acknowledging attributions outside a person's control seems to create a barrier to accepting restorative justice. Restorative approaches seem to require taking factors beyond individual choices into account, which is why the full mediation through external attributions was found to be so robust. This makes a logical connection to past literature, describing restorative justice as inherently recognising social contexts as root causes of crime. When individuals who strongly believe in a just world deny external explanations, they are also violating a core principle of restorative justice (Zehr, 2015).

That BJW is negatively related to acceptance of restorative justice shows that people who believe in a just world may be resistant to alternative justice systems, which focus on rehabilitation rather than retribution. While the connection between BJW and punitive sentencing has been well established by previous studies (Hafer & Sutton, 2016), this study's findings successfully extend to prior knowledge by detecting a negative impact of BJW on acceptance towards restorative justice. It demonstrates that a high BJW builds possible barriers to reforming current justice systems and therefore may hinder restorative justice from being socially accepted as a justice serving tool.

In sum, the two mediation models reveal distinct but complementary psychological processes. First, BJW leads to more internal attributions, which promote punitiveness. Second, BJW decreases external attributions, which then diminishes restorative justice. These results help to understand why traditional approaches such as retributive justice still dominantly exist.

Social Dominance Orientation

Regarding SDO, explorative analyses tested whether SDO moderated the mediation of attributions of criminal responsibility between BJW and punitive sentencing and acceptance towards restorative justice. Results revealed no moderation for either path of the mediation model, regardless of SDO being strongly correlated to nearly all variables, except internal attributions. Previous literature already pointed out that people with high SDO favour harsh punishments to maintain social hierarchies (Sidanius et al., 2006). A negative correlation towards restorative justice of high SDO individuals may stem from the rejection of the values of the system, such as equality and community involvement (McKee & Feather, 2008).

One alternative explanation of the result is rooted in the demographic and methodological factors of our sample. Participants were predominantly females with a left-leaning political orientation, while the overall scores of SDO were relatively low. A study conducted by Mebane et al. (2021) investigated an increase in the political gender gap, stating that women are more inclined to vote for left parties, which represent hierarchical attenuating values, than men. By examining right and left-wing groups, the study by Mebane et al. (2021) found SDO to account for the political gender gap, where SDO was significantly higher in the male dominated right wing group. Our findings are in line with these results, that women are more prone to politically identify as left, while scoring generally low on SDO. This limited variety in our sample may have restricted the possibility of finding a moderation effect, which might have been present in a more diverse gender and political sample.

Implicit Beliefs

Furthermore, implicit beliefs and BJW and punitive sentencing goals show strong correlations, indicating some conceptual overlap between the frameworks. This means, the more people believe someone cannot change, indicating entity beliefs, also seem to hold strong beliefs that the world is a just place and favour punitive sentencing goals. This is in line with previous literature, indicating people

holding entity beliefs show stronger support for punitive measurements than those holding incremental beliefs (Tam et al., 2013).

Notably, the results of this study suggest that the main model effects remain unchanged, even when controlling for the effect of implicit beliefs. This means, BJW predict more support for punitive sentencing and less support for restorative justice approaches due to attributional processes, regardless of people's implicit beliefs. These results amplify our main findings, as the relationship of BJW, attributional processes, and justice preferences demonstrates a robust model distinct from implicit beliefs.

Case Scenarios

Theft Scenario. Our findings regarding the comparison of participants' general and case specific perceptions underpin the influence of having contextual information when forming a judgement about crime. It was revealed that participants attributed more external factors to the specific theft scenario than they indicated by answering the scale, showing that external factors are more salient when specific information about a case are presented. It illustrates that concrete framing of criminal behaviours shapes attributional patterns (Sims, 2003). There is a seemingly unlogic finding, where the theft crime is attributed more to external factors as well as to higher agreement for punitive measurements. This may be due to Haidt's (2001) established 'moral intuition', stating that moral reasoning (external attributions) does not necessarily cause moral judgements.

For the theft specific mediation analysis, only the direct effect of BJW on punitive sentencing remained significant, while the mediation role disappeared. A similar result emerged when repeating the analysis with the matching trait items (rather than the full scales). This suggests the primary mediation effect may be dependent on the measurement of attributional processes captured by the full scales. The relationship between BJW and punitive sentencing was found to be direct, whether in general or scenario-specific contexts. This may indicate that single attribution judgements do not capture the psychological pathways through which BJW influence punitive sentencing. Côté-Lussier

and David (2023) found that witnessing a specific crime that creates negative emotions can trigger intuitive punitive responses, possibly bypassing attributional processes, explaining why the direct effect on punitive sentencing remained robust across all measurements. These results highlight the importance of considering measurement specificity when investigating mediational pathways in justice attitudes.

Violence Scenario. Correlations of the trait and case specific judgements revealed distinct patterns. Participants showed increased internal as well as external attributions compared to their trait attitudes, demonstrating that multiple attributional causes for the violent crime were recognised. Moreover, punitive measures were endorsed substantially more. This finding is in line with the public favouring harsh punishment for offenders of violent crimes (O'Hear & Wheelock, 2019). That participants recognised internal and external attributions to the crime while strongly supporting punitive sentencing seems to display a contradictory pattern. A reason might be that violent crimes trigger moral outrage in individuals, reinforcing punitive support regardless of attributional processes or logical reasoning (Carlsmith et al., 2002; Darley & Pittmann, 2003). Jake's violent scenario seemingly prompted participants to attribute external factors to the behaviour, while still attributing internal factors and endorsing punishment. It demonstrates different crime types eliciting judgement of criminal behaviour that diverge from individuals' general attitudes about punishment.

In the violent specific mediation analysis, only internal attributions significantly influenced punitive sentencing, while BJW showed no direct effect. These results deviate from the single trait item mediation, where internal attribution had no effect. Therefore, internal causes of crime seem to be the most dominant determinant of punishment in violent crimes involving chronic anger and impulsivity. Research previously suggested that violent crimes trigger support for punitive sentencing as people explain the offense with internal attributions (Oosterhoff, 2018), which might overshadow more general beliefs such as BJW. Jenni and Loewenstein (1997) first studied the 'identifiable victim effect', examining the difference between trait beliefs and concrete crime scenarios. According to this

study, individuals judge behaviours as more unethical when confronted with specific victims rather than abstract situations, leading to stronger punishment preferences. These findings demonstrate that judgements about justice are context dependent, with crime specific information creating attribution and sentencing preferences that may diverge from general attitudes.

Strengths and Limitations

A powerful strength of this study lies in its integration of several psychological frameworks, belief in a just world, attributional processes, justice preferences, implicit beliefs, and social dominance orientation. By connecting these theoretical constructs, this research established a more comprehensive understanding of underlying mechanisms of punitive sentencing and restorative justice. Different attributions of crime were found to predict support for either retributive or restorative justice, setting a cornerstone to develop future interventions which aim to increase acceptance towards restorative justice. Specifically, this study highlights that high BJW and dismissing external attributions impede acceptance towards restorative justice. In essence, these findings contribute greatly to the existing literature on public perception of criminal justice by closing a gap in the understanding of barriers to restorative justice.

One limitation concerns methodological challenges with our measurement approach. The full version of the self-constructed Attribution Theory Scale demonstrated lower internal consistency than anticipated, necessitating a reduction in items included in the analyses. Consequently, participants' internal attributions were assessed using only two items, which raises legitimate concerns about the reliability of the scale and the validity of its results (Cígler, 2022). The reduced scale exhibited acceptable reliability coefficients, allowing us to consider the findings sufficiently informative. Still, future research should develop and validate a more robust measurement tool that possesses greater statistical power to capture the complex nature of attributions regarding criminal behaviour.

Additionally, a demographic limitation of the study was the composition of our sample, which consisted predominantly of politically left-leaning individuals and women. This homogeneity may have

affected the detected attitudes towards justice systems, shielding effects that a more diverse sample might show. This aligns with previous studies reporting that conservatives often view serious crime as a result of personal failings like a lack of self-control or moral conscience, while liberals attribute social inequalities and systemic discrimination as root causes (Carroll et al., 1987; McKee& Feather, 2008). Moreover, the samples' gender imbalance may have impacted the non-significant interaction effect of SDO on the relationship between BJW and attributions of criminal responsibility. Research conducted by Mebane et al. (2021) revealed that women are more likely to identify with the political left and tend to score lower on SDO than men. The underrepresentation of men and political orientations to the right end might have contributed to the low SDO mean score. Different results may have been found in a more balanced sample.

Theoretical and Practical Implications

This psychological research addresses an important criminological topic with clear theoretical and practical implications. As alternative justice systems to traditional retributive punishment are in constant debate, understanding possible psychological barriers to accepting restorative justice approaches is inevitable. This study made the first steps in identifying how belief systems influence attributional processes and subsequently shape preferred legal systems.

On a theoretical level, our finding expands the just world theory by demonstrating that BJW not only influences justice preferences but also identifies attributional processes through which these relationships occur. While there is well established literature about BJW and punitiveness (Hafer & Sutton, 2016; Templeton & Hartnagel, 2012), our model specifies the mediation that explains these relationships. Specifically, many people believe in a just world, a worldview which was found to be related to higher internalisations and lower externalisation of crime. This is connected to more punitive measures and lower acceptance towards restorative measures. In short, our findings explain why people might have punishment as the primary response to crime.

On a practical level, many anti bias trainings fail to effectively reduce biases (Devine et al., 2012). The only intervention that has been shown to produce long-term reductions in bias is the 'bias habit-breaking training' (Cox & Devine, 2019). The three-hour workshop aims to reduce people's unintentional intergroup biases. Cox (2023) reports, that after participation, attendees are more aware of their tendency to express bias, have lower levels of implicit bias, are better able to detect bias in themselves, others and in social systems, are more likely to educate others about biases and inequity, and stereotype less than control groups. It is believed that this training could be used to challenge the assumption that the world is a just place and thereby reduce punitive attitudes towards offenders. Additionally, such an intervention should focus on discussing how people understand the causes of criminal behaviour and emphasise external factors as possible reasons people might engage in crime. By challenging BJW and enhancing people's awareness of external factors to criminal behaviour, it might be possible to reduce the support for punishment and enhance the acceptance of restorative justice.

Future Research Directions

To further develop theoretical insights, future research should examine additional variables. As stated earlier, previous literature has already examined the role of emotions in punitive sentencing based on the attribution-affect-action model (Cochran et al., 2003). While this study revealed that BJW shapes attributions, which then influence justice preferences, we did not test whether participants' emotional reactions mediate these connections. An expanded model could be tested, where BJW influences attributions, attributions lead to emotional responses, which in turn shape punitiveness and restorative justice acceptance. While the link between emotional responses and punitiveness has been established (Cochran et al., 2003), the link between emotional responses and restorative justice acceptance remains largely unknown. This could provide an even more nuanced understanding of the psychological connections which form people's judgements about justice preferences.

Furthermore, future studies should utilise full scales when measuring people's state values. In this study, we only used single items from the original scales to measure participants' judgements about attribution to the specific crime, their implicit beliefs, and their punitiveness. Future studies should consider measuring state specific attitudes using complete scales. This would provide more comprehensive data on how situational factors influence participants' judgements. Moreover, this study did not assess participants' acceptance towards restorative justice in both case scenarios. Future research might consider testing such state measures of restorative justice, which would enable a more comprehensive comparison between the trait and state values. Doing so would provide insight into how external factors relate to support for restorative justice in specific crime scenarios.

Another point concerns the full mediation of external attributions between BJW and restorative justice acceptance. This finding expands potential intervention approaches by suggesting that when addressing attributional processes, acceptance towards restorative justice might increase. Future research should develop and test interventions that specifically target people's attributional judgements in criminal contexts. Such interventions should adapt established principles of the above discussed habit-breaking training (Cox, 2023) but focus explicitly on enhancing the awareness of external factors. Elements of the proven anti-bias training could be combined with specific education about social determinants of criminal behaviours. Post-studies might then measure individual changes in attributional processes and subsequent changes in acceptance towards restorative justice. This would provide further inside whether an increase in external attributions does indeed lead towards more acceptance of restorative justice.

Conclusion

This study represents a first approach to investigate the complex psychological mechanisms through which BJW forms attitudes towards punitive sentencing and restorative justice. Results of this study contribute to existing literature by extending the assumption that attributional processes shape individuals' justice preferences (Michel, 2017; Templeton & Hartnagel, 2012), dependent on their just-

world beliefs. BJW predicts stronger punitive sentencing preferences and lower acceptance towards restorative justice. Interestingly, internal attributions mediate the relationship between BJW and punitive sentencing, where high BJW predict internal attributions of crime leading to stronger punitive sentencing judgements. Also, external attributions fully mediate the relationship between BJW and acceptance towards restorative justice. In other words, BJW predict low attributions to external factors of crime, leading to less acceptance of restorative justice. This reveals the essential role of acknowledging external attributions to accept restorative justice approaches (Taylor & Bailey, 2022). Future studies should extend these findings by developing interventions that focus on challenging just world beliefs and increasing the acknowledgement of external factors in criminal behaviour. Such interventions would validate whether changes in BJW and higher external attribution directly increase the acceptance towards restorative justice. Additionally, there is a methodological need to investigate how BJW influences different justice preferences through a more diverse population, especially in a more conservative sample. Ultimately, understanding these underlying psychological mechanisms of justice preferences provides a crucial step toward creating more effective and equitable criminal justice systems.

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Appendix

AI statement

During the preparation of this work, I (Pia Lauber) used Elicit AI as a literature searching tool. Claude AI was used to improve the structure of this paper, and assist in data analysis, for instance, by resolving errors in SPSS or to correctly interpret outputs. Grammarly was utilized to check for grammar and spelling mistakes. After using these tools, I thoroughly reviewed and edited the content as needed, taking full responsibility for the outcome.

Appendix A

Global Belief in a Just World Scale (GBJWS)

1. I feel that people get what they are entitled to have.

2. I feel that a person's efforts are noticed and rewarded.

3. I feel that people earn the rewards and punishments they get.

4. I feel that people who meet with misfortune have brought it on themselves.

5. I feel that people get what they deserve.

6. I feel that rewards and punishments are fairly given.

7. I basically feel that the world is a fair place.

Appendix B

Penal Attitudes Scale (PENAS)

Deterrence

1. In order to deter a larger number of potential offenders, heavier sentences should be imposed.

2. If heavier sentences were to be meted out, more potential offenders would be deterred than at present.

3. When criminal statistics show the prevalence of a particular offence to be increasing, the severity of punishment for that offence also should increase.

4. Heavy sentences increase the credibility of the criminal justice system.

Incapacitation

5. Most people who advocate resocialization measures for perpetrators of offences attach little importance to the seriousness of the crimes committed.

6. To ensure the safety of citizens, perpetrators of serious crimes should be incarcerated for as long as possible.

7. Unless the perpetrator of a serious crime receives an unconditional prison sentence, he will continue to pose a threat to society.

8. For a great many offenders, it is safer for society to have them locked up rather than walking around freely.

9. In punishing serious crimes of violence, the safety of citizens is of greater importance than the needs of the offender.

10. It is better to incarcerate known (regular) offenders for longer periods since this will prevent many crimes from taking place.

Deserts

11. Punishment is deserved suffering.

12. Even for alternative sanctions the infliction of suffering should be a prominent feature.

13. Infliction of suffering should be an explicit element in every sanction.

14. Punishment without an element of suffering is no punishment.

15. The meting out of punishment to perpetrators of offences is a moral duty.

Moral Balance

16. Punishment restores the legal order in society disrupted by an act of crime.

17. Punishment restores the 'moral balance' in society disrupted by a crime.

18. By undergoing punishment, a criminal pays off his debt to society.

Appendix C

Restorative Justice Attitudes Scale (RJAS)

1. It is important to empathize with individuals who have caused harm to others

2. It is important to show empathy towards offenders of wrongdoing

3. People should empathize with others, even if the person has caused harm

4. Showing support to offenders can be beneficial in helping the individual accept responsibility for their actions

5. It is important to understand the needs of offenders that are connected to the harm they caused

6. Offenders of wrongdoing have needs associated with the harm they caused that justice processes should address

7. There should be a greater emphasis on understanding those who cause harm

8. I believe there should be an equal concern towards healing the lives of both those who have been harmed and those who cause harm

9. Offenders of wrongdoing should work to restore relationships with those whom they hurt

10. Offenders of wrongdoing should repair relationships with those who have been harmed

11. It is important for offenders and victims to engage in face-to-face dialogue

12. Inclusive, collaborative processes between victims and offenders of wrongdoing are necessary to repair harm

13. It is important that offenders of wrongdoing accept responsibility for their actions

14. Acknowledging ones wrongdoing is important

15. I believe individuals should be encouraged to understand the impact of their harm

16. Truth-telling in the form of an admission of responsibility for what happened on the part of the person who caused the harm is important

17. Community members should have an active voice in defining justice for victims

18. Justice processes should be more inclusive of individuals within the community

19. I believe victims of harm need the community's support to heal

20. The community has a responsibility to help victims of harm address their needs

Appendix D

Implicit Person Theory Measure

1. The kind of person someone is, is something basic about them, and it can't be changed very much.

2. People can do things differently, but the important parts of who they are can't really be changed.

3. Everyone is a certain kind of person, and there is not much that they can do to really change that.

Appendix E

Attributions of criminal behaviour scale

Internal Attributions:

1. People commit crimes because of their personal choices

2. Criminal behaviour is due to lack of self-control

3. Some people are inherently less moral and therefore engage in criminal behaviour

4. Criminal behaviour is due to a person's inherent lack of morals

External Attributions:

5. Poverty forces people into criminal behaviour

6. Society's unfairness is the main cause of crime

7. People commit crimes because they had a difficult upbringing

8. The way society is structured leaves some people with no choice but crime

Appendix F

Social Dominance Orientation Scale

1. Some groups of people are simply inferior to other groups

2. It's OK if some groups have more of a chance in life than others.

3. To get ahead in life, it is sometimes necessary to step on other groups.

4. Inferior groups should stay in their place.

5. Group equality should be our ideal.

6. We should do what we can to equalise conditions for different groups.

7. Increased social equality.

8. We would have fewer problems if we treated people more equally.

Appendix G

Theft Case Scenario's

Andrew was struggling financially and had lost his job months ago. Living in an economically depressed neighbourhood with high unemployment, he was increasingly desperate to pay his overdue rent. While walking down a busy street, he noticed Jim, a well-dressed businessman deeply engrossed in a heated phone conversation. Seeing an opportunity and feeling overwhelmed by his mounting financial pressures, Andrew quickly took Jim's wallet and disappeared into the crowd. The police later apprehended Andrew when he attempted to use the stolen credit cards.

1. Andrew committed this crime because of his personal choices.

2. Poverty forced Andrew into stealing the wallet.

3. The kind of person Andrew is, is something basic about him, and he can't change very much.

4. Andrew must be punished to restore the legal order in society which he disrupted by this act of crime.

Appendix H

Violence Case Scenario

Jake had been sitting in traffic for two hours when the road started to clear up. He went to change lanes when he was cut off by another car. Sam, the driver that cut him off, then proceeded to drive well below the posted speed limit. This enraged Jake, who began flashing his high beams and honking his horn at Sam. Sam pulled over and Jake followed him to the side of the road. Despite having multiple opportunities to calm down or ignore the situation, Jake's chronic anger and impulsive nature took over. Both men got out of their cars and started arguing. The argument became more and more heated, Jake verbally attacked Sam and then physically assaulted him, punching him repeatedly in the face. A passing motorist witnessed the assault and called the police. Jake was charged after Sam was seriously wounded.

1. This criminal behaviour is due to a lack of Jakes self-control.

2. Jake may have committed this crime because he had a difficult upbringing.

3. The kind of person Jake is, is something basic about him, and he can't change very much.

4. Jake must be punished to restore the legal order in society which he disrupted by this act of crime.

Appendix I

Informed Consent

Voices of Justice: Understanding Social Choices and Responsibility

You are invited to participate in a research study examining public perceptions of social justice, individual responsibility, and societal responses to criminal behaviour. The study aims to gather insights into how people understand and interpret social interactions, personal choices, and community dynamics. You will be asked to complete a series of questionnaires and respond to a few short hypothetical scenarios via Qualtrics using a computer, tablet, or any other electronic device. You need to have a stable internet connection. If you decide to enrol in this study, your involvement will take approximately 30 minutes, and you will receive SONA credits for your participation if you are eligible. To ensure confidentiality, your responses will be fully anonymous: we will not collect any identifying information from you, and your responses will not be traceable back to you. The anonymous raw data might be made publicly available for other researchers.

Participant Rights

Your participation is voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without any consequences. To withdraw participation at a later time, please inform the principal investigator via email within 10 days of your participation. If you have questions about your rights as a research participant, wish to obtain information, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee, ethicscommittee-bms@utwente.nl.

Your consent indicates that:

- I understand that any information given by me may be used in future reports, articles, publications or presentations by the researcher/s, but that my data will not be identifiable.

- I agree to take part in the study. I understand that my participation is voluntary and that I am free to withdraw my participation without explaining.

Appendix J

Debriefing Statement

After reading, please indicate below if you still wish to participate in this study.

This study aims to investigate how people understand and attribute criminal behaviour and explore the psychological factors that influence attitudes towards justice and social responsibility. Specifically, we are examining:

How does belief in a just world affect 1) the acceptance towards restorative justice and 2) sentencing goals?

This includes how individuals explain the causes of criminal behaviour and psychological beliefs about justice and personal responsibility. We are exploring how individual beliefs about fairness, personal responsibility, and social justice shape perceptions of criminal behaviour and justice systems. To ensure genuine and unbiased responses, we did not disclose the full research objectives at the beginning of the survey. This approach helps us capture more authentic perspectives on complex social issues.

All responses remain completely anonymous and will be used solely for research purposes. Findings may be published or used for further presentations.

Thank you for participating in this study.