

**The Moderating Role of the Belief in a Just World on Perceived Unfairness and (Dis)  
Honesty**

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PSB3E-BT15: Bachelor Thesis

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June 20, 2024

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### **Abstract**

Justice is a fundamental human need, required for cooperative interactions. Even so, injustices are unavoidable, and it has been demonstrated that we often respond to them with intense emotional reactions and a desire to restore justice, sometimes by defying social norms. Therefore, the purpose of this research is to learn more about how people cope with perceived injustices. Specifically, the impact of the belief in a just world (BJW) on one form of norm-breaking—namely, dishonesty—will be examined. BJW is commonly divided into several subtypes, such as personal and general kinds. The former appears connected with favorable psychological consequences, whereas the latter has been linked to undesirable actions. The purpose of this study is to test whether a general belief in a just world moderates the positive correlation between perceived unfairness and dishonesty as well as explore the influence of a personal belief in a just world on dishonesty. A between-subjects experiment ( $N = 52$ ) was conducted in which we first induced participants to feel as though they had been treated unfairly, and then offered them a chance to act dishonestly in response to this feeling. The results demonstrated tendencies consistent with our predictions, yet were statistically nonsignificant. We therefore conclude that our hypotheses are not validated and point out significant implications resulting from this as well as directions for future research.

*Keywords:* belief in a just world, general belief in a just world, personal belief in a just world, perceived unfairness, perceived injustice, dishonesty

## **The Moderating Role of the Belief in a Just World on Perceived Unfairness and (Dis) Honesty**

Justice is a universal human need that individuals strive for (e.g., Lerner & Miller, 1978). In fact, our first sense of justice seems to develop as early as around the age of seven (Cohen, 2021; Mendes et al., 2017), and, throughout life, it is one of the core values enabling humans to maintain cooperative relationships (McAuliffe et al., 2017). Yet, injustices are an inevitable part of every individual's life. Throughout life, people experience injustices that range from relatively inconsequential situations such as somebody cutting you off in traffic, to potentially much more impactful and profound societal consequences such as sentencing as part of the legal system. In all likelihood, everyone has, at least once in their lifetime, had to learn how to give meaning to and cope with experiencing injustices or unfairness<sup>1</sup>, which makes this an important topic to address. Evidence for an intrinsic sense of justice has been established in various research fields. From an evolutionary biology and anthropology viewpoint, for instance, humans are a social species built on group cooperation. Hence, group cohesion fostering traits, such as justice, increase the evolutionary success of the species. Further, neuroscience literature shows that a sense of justice is traceable to neuronal or biochemical cooperation between brain structures, thus suggesting a biological basis and genetic hard wiring for justice (Müller, 2019). Given this fundamentality, a multitude of empirical questions emerge, among them being: “How do individuals cope with perceiving injustices?”. Empirical answers to this question show that feeling unfairly treated triggers strong emotional reactions, often accompanied by a wish to retaliate through “justice-restoring” actions, which in themselves, can be norm-breaking behaviors (Gollwitzer & van

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<sup>1</sup> As the terms *fairness* and *justice* are commonly used interchangeably (Schroeder et al., 2019), the current study will do the same.

Prooijen, 2016). Despite the obvious paradox in “treating fire with fire”, these compensatory reactions may range from being self-servingly dishonest (Li et al., 2022), stealing (Skarlicki & Folger, 1997), and non-adherence to social norms (Tyler, 2006) to actual crime (Scheuerman, 2013). Norm-breaking behavior, here, functions as a means to justify an end, namely restoring justice. Building on findings as these, we predict the following:

*Hypothesis 1 (H1):* We expect a positive relationship between perceived unfairness and dishonest behavior (see Figure 1 for the conceptual model).

In sum, feeling treated unfairly may lead to dishonest or norm-breaking behavior in an effort to restore a sense of justice. However, not everyone will be likely to do so, even when experiencing unfairness directly. Whether they do so might depend on their larger societal views on justice. In fact, besides the previously discussed evolutionary and neuroscientific viewpoints, another perspective has been to emphasize a possible adaptive coping function in our “sense of justice”: wanting to perceive meaning in our surroundings has been shown to be an innate tendency (e.g., Chater & Loewenstein, 2015), and seemingly understanding why things happen gives us the predictability we need to feel safe (Lerner, 1980). Or, in other words, humans need justice, and, hence, they also need a way to cope with injustice. Numerous researchers have therefore explored how justice-related coping strategies shape individuals’ responses to injustices, including Melvin Lerner and his *belief in a just world theory* (1980).

### **Belief in a Just World**

According to the belief in a just world theory, a just world is one in which “we get what we deserve” or, in other words, “good things happen to good people and bad things happen to bad people” (Furnham, 2003). The term was first coined by Lerner in 1965, stating that the motivation to *believe in a just world* (BJW) serves as an adaptive coping strategy, unconsciously employed to give meaning to experiencing unfairness (Dalbert & Umlauf,

2009). To handle the prevalence of injustices in our surroundings many individuals, specifically those with a strong belief in a just world, formulate explanations for why things happen the way they do, ranging from cognitive re-evaluations and victim blaming to "restoring justice" through one's own retributive actions. Hence, believing that what happens to us can be explained through motives of justice makes our navigation in this world seem more manageable, which explains the adaptive coping role of a BJW (Hafer & Sutton, 2016). Ultimately, Lerner (1980) suggests that believing in a just world influences the way individuals respond to unfairness depending on their larger societal views but independent from the fact that such a belief may actually constitute a fundamental delusion, possibly evolved out of the desire to cope with harsh reality (Lerner, 1998). Notably, despite the BJW possibly being a "fundamental delusion" (Lerner, 1998), empirical research has been able to prove the concept's stability and cross-cultural generalizability (Chobthamkit et al., 2022).

Nonetheless, there appears to be disagreement in empirical research on how a BJW exerts its influence. In an attempt to clarify this, there has been a development toward dividing the BJW (Lipkus et al., 1996), most commonly by differentiating between a *personal BJW* (pBJW) (Dalbert, 1999), *general BJW* (gBJW) (Dalbert et al., 1987), and *BJW for others*<sup>2</sup>. While this distinction has established that the respective subtypes exert their influence differently and hence correlate differently with diverse concepts, the empirical findings regarding this have been both scarce as well as conflicting (Tan et al., 2023; Wenzel et al., 2017). It is for that reason that researchers such as Hafer and Sutton (2016), Tan et al. (2023), or Wenzel et al. (2017) express the need for further exploration of this ambiguity, particularly concerning correlates with (dis)honesty.

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<sup>2</sup> The two variations, gBJW and BJWothers, are strongly interrelated and often used interchangeably (Wenzel et al., 2017); the current study, however, will use the gBJW term.

In consequence, this study aims to shed light on these equivocal findings by investigating the expected contrasting effects of a pBJW and a gBJW on the level of (dis)honesty demonstrated by participants in circumstances of perceived injustice.

### **Defining the Belief in a Just World and Disentangling its Variations**

Ultimately, a pBJW describes the belief that one's world is just while the gBJW describes the belief that the world is a just place in general. The interrelation here is that a world just for others equals a world just for oneself (Hafer & Sutton, 2016). Nevertheless, despite their interrelatedness, a pBJW and a gBJW have been found to have rather distinct implications for individual's responses to unfairness. Moreover, they have been found to differ with respect to their adaptive as well as maladaptive correlates.

Research shows that the gBJW correlates strongly with negative inter-individual consequences (Alves & Correia, 2009), such as antisocial tendencies, harsh opinions, and delinquent behavior including “justice-restoring” vengeance or victim blaming (e.g., Sutton & Douglas, 2005). Moreover, it seems that a gBJW primarily anchors on social utility (Alves & Correia, 2009), thus believing that individuals (mostly) get what they deserve in a system. These traits have led to the hypothesis that individuals high in a gBJW may be more likely to act in ways that defy societal norms, reasoning that one should only be faced with adversities if one is deserving of it (Wenzel et al., 2017). Put differently, this “moral disengagement” results in a shift in responsibility and, hence, facilitates the violation of social norms (Tan et al., 2023).

In line with this reasoning, studies have found positive correlations for a higher gBJW and dishonesty (e.g., Wenzel et al., 2017). In fact, a gBJW has repeatedly been demonstrated to increase norm-violating behavior and cognitions (Sutton & Winnard, 2007; Hafer and Sutton, 2016). Furthermore, in a study by Dalbert (1999), participants high in a gBJW were shown to lack feelings of remorse. Not only does a gBJW seem to correlate with decreased

feelings of guilt, but it is also hypothesized to serve as a justification for cheating which in itself counts as dishonest behavior. Taken together, these empirical findings justify this study's second hypothesis:

*Hypothesis 2 (H2):* We expect a positive relationship between a general BJW and dishonest behavior, in situations of perceived unfairness (see Figure 1).

A pBJW, on the other hand, seems to carry more of an intra-individual function (Alves & Correia, 2009), which is correlated with positive psychological benefits, such as increased subjective well-being and socially desirable behaviors (Lipkusa et al., 1996; Wenzel et al., 2017; Alves & Correia, 2010). Instead of primarily anchoring on social utility, a pBJW additionally builds on social desirability, hence, behaving in a way that increases liking by others, which then, in turn, will enhance an individual's well-being (Alves & Correia, 2009).

In the same Dalbert (1999) study that was previously noted for describing a lack of regret in individuals with a high gBJW, it was also discovered that people with a high pBJW could not reconcile unjust behavior with their self-concepts. It seems that a personal belief in a just world may be comparable to a contract between an individual and their social world. The stronger one endorses said contract's obligatory nature, the more one's self-esteem suffers (Lerner, 1977). The relationship between behaving well and being treated equally well in return, thus, seems to be more salient in those high in a pBJW compared to those high in a gBJW. In line with this, participants displaying increased scores of a pBJW were also shown to have higher justice sensitivity scores and a stronger commitment to just means (Dalbert 1999; Sutton and Winnard, 2007). Building on this, Schindler et al.'s (2019) study found yet another negative correlation between a higher pBJW and dishonesty. The literature seems to suggest that the moral costs an individual would have to pay for behaving dishonestly are

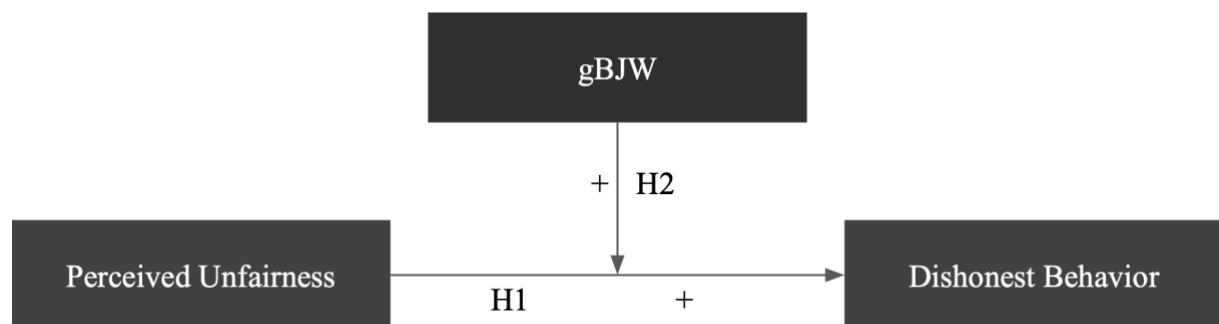


positively correlated with a pBJW. For those with a gBJW, the potential gains made through dishonest behavior seem to outweigh the costs (Wenzel et al., 2017).

Importantly, current research, again, shows some ambiguity. In studies by Wenzel and colleagues (2017) and Tan et al. (2023), for example, a pBJW appeared to have no significant relation with dishonesty. Those results contrast the ones by, for instance, Schindler et al. (2019), reporting significant negative correlations between a high pBJW and dishonesty. These conflicting findings underscore the importance of delving further into these issues; hence, this study will also explore whether a pBJW has, in fact, a relationship with dishonesty, and, if so, what directionality said relationship takes.

### Figure 1

*Conceptual Model illustrating the Effect of Perceived Unfairness on Dishonesty (H1) and the Moderating Effect of a gBJW on the Perceived Unfairness and Dishonesty Association (H2)*



### Methods

#### Participants

Between 6th May 2024 and 17th May 2024, a total of 52 first-year B.Sc. Psychology students completed our study through the University of Groningen's online participants pool

SONA, of whom 39 identified as female, 10 identified as male and 3 as non-binary or other.

The questionnaires were to be completed in English.

### **Procedure**

The current study employed a between-subjects experimental design. *Experimental Condition* serves as the independent variable (IV), representing the two study conditions (an ‘easy’ task condition;  $N = 26$  vs. a ‘hard’ task condition;  $N = 26$ ), and *Reported Difficulties* is the main dependent measure. Ethics approval was received from the Faculty of Behavioral and Social Sciences (BSS) ethics committee at the University of Groningen.

This study makes use of deception at multiple points throughout. To obfuscate the true nature of the study, it was divided into two parts. In the first part, participants were asked to fill out a questionnaire that included all moderating measures. The questionnaire was introduced as measuring attitudes toward moral judgment to be used in another project.

The second part of the study featured the experimental manipulation and dependent variable (DV), Reported Difficulties. Multiple steps were taken to induce a feeling of unfairness. The purpose of the study was framed as assessing mechanisms of reading comprehension in two different conditions.

Participants were told they could either receive the ‘easy’ task condition or the ‘hard’ task condition, which was allocated randomly (see Appendix A). In reality, all participants received the same task which included reading a text as well as working on a cognitive and a reading comprehension task. Participants were deceived about the requirements of the task. They were presented with a visual overview of both conditions, which depicted a short text for the ‘easy’ condition, and a long text for the ‘hard’ condition. The text itself was an excerpt from a cognitive neuroscience article, including a lot of technical terms that are likely unfamiliar to first-year students.

Participants were instructed that they would have to answer questions about the text. All were informed of the possibility that correct answers were rewarded with bonus SONA credits. Participants in the ‘easy’ condition were told that they would need to provide correct answers on a majority of questions to receive the bonus, whereas participants in the ‘hard’ condition were told that they would need to answer all questions correctly (see Appendix B). In reality, one of the questions was impossible to answer based on the text, to guarantee that all participants in the hard condition would experience failure. All of these steps were taken to induce a perception that being allocated to the ‘hard’ condition would require substantially more work to earn the same SONA credits, as well as being eligible for the bonus.

At the end of the study, participants were asked to indicate whether they had any issues with reading comprehension or other problems that could have hindered their performance, which is the DV of this study. Specifically, they could tick up to six boxes representing various difficulties. Each box ticked allowed a participant to receive the aforementioned bonus SONA credits, regardless of correctly answered questions. A reminder was present that participants could not be identified by the researchers.

## **Measures**

This study is part of a larger survey, therefore only measures employed in the current investigation will be described.

### ***Reported Difficulties***

To capture dishonest behavior, participants were provided with the opportunity to be dishonest by ticking boxes of statements about a selection of reading and/or concentration difficulties that could have affected their performance. This was introduced as a way to account for legitimate reasons why someone would be disadvantaged in this study. If an induced perception of injustice indeed leads to more dishonest behavior, more participants would indicate having difficulties in the ‘hard’ condition than in the ‘easy’ condition – to still

be eligible for the bonus SONA credits. Examples of box items included “It is hard for me to pay attention for longer periods of time” or “Something distracted me during the study”.

### ***Belief in a Just World***

For the assessment of the participants’ degree of believing in a just world (*BJW*), both in a personal just world (*pBJW*) as well as in a world generally just for all (*gBJW*), we used a 13-item scale by Dalbert et al. (1987 & 1993b), divided into one 6-item block measuring the *gBJW* and one 7-item block measuring the *pBJW*, respectively. The *gBJW* scale included items such as: “I think basically the world is a just place” or “I am confident that justice always prevails over injustice”. The *pBJW* scale included items such as: “I am usually treated fairly” or “I believe that I usually get what I deserve” (see Appendix C). Cronbach’s alpha was .781 for the *gBJW* scale and .911 for the *pBJW* scale, indicating good internal consistency. Answers were rated on a 6-point Likert scale (1 = *strongly agree*, 6 = *strongly disagree*).

## **Results**

### **Descriptives**

The statistical analyses were performed using JASP version 0.18.3. The DV provided participants with the opportunity to report multiple difficulties. However, for the purpose of this analysis, the variable was made categorical in nature by differentiating between any or none box item ticked (1 = yes, 0 = no). The IV was entered as a categorical variable as well. The scores of the moderator subscale, *gBJW*, important for H2, ranged from 2.17 to 6.0, with a mean score of 3.96 ( $SD = 0.97$ ), the scores of the second subscale, *pBJW*, ranged from 1.57 to 5.57, with a mean score of 3.04 ( $SD = 0.90$ ). Concerning Pearson’s correlations, the association between a *gBJW* and the DV proved to be positive ( $r = .09$ ), yet statistically nonsignificant ( $p = .501$ ). Further, the correlation between a *pBJW* and the DV was shown to

be negative ( $r = -.11$ ), however, again, statistically nonsignificant ( $p = .461$ ). Table 1 serves as both an illustration of the previously outlined descriptives and the mentioned correlations.

**Table 1**

*Descriptive Statistics and Correlations for Study Variables*

| Variable                 | <i>M</i> | <i>SD</i> | 1       | 2       | 3       |
|--------------------------|----------|-----------|---------|---------|---------|
| 1. Reported Difficulties | 0.71     | 0.46      | 1.00*** |         |         |
| 2.gBJW                   | 3.96     | 0.97      | .09     | 1.00*** |         |
| 3.pBJW                   | 3.04     | 0.90      | -.11    | .36***  | 1.00*** |

\*\*  $p < .01$ , \*\*\*  $p < .001$ ,  $N = 52$

The chi-square test of independence was performed to examine the relationship between Reported Difficulties and perceived unfairness as well as the model fit. The association between these variables was statistically nonsignificant,  $\chi^2(1, N = 52) = .843$ ,  $p = .358$ . While technically being positive in nature, one cannot deduce that an increase in perceived unfairness leads to an increase in dishonest behavior.

***Logistic Regression***

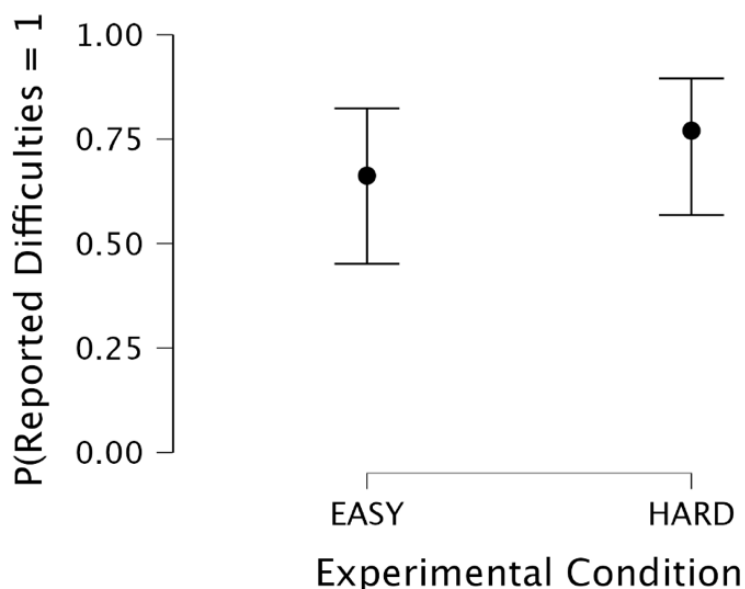
A logistic model was fitted to the data to investigate the effect of perceived unfairness on dishonest behavior (H1), along with a possible interaction effect between a gBJW and perceived unfairness (H2) on dishonest behavior which would imply a moderating role of a gBJW. Moreover, the influence of a pBJW was explored (see Tables 2 and 3 for all data on this logistic regression analysis). In order to test the two hypotheses, Reported Difficulties was entered as the DV, Experimental Condition as the IV, and the centered moderator, gBJW, as a covariate (see Table 2).

The model was statistically nonsignificant,  $X^2(46) = 4.770, p = .445$ , and explained 12.5% (Nagelkerke  $R^2$ ) of the variance in dishonest behavior.

Pertaining to H1, the effect of perceived unfairness on Reported Difficulties was shown to be nonsignificant ( $OR = 1.707, W = 0.676, p = .411$ ), with a positive trend. In other words, results show that there is no significant difference in boxes ticked between the two study conditions. Even though a nominally higher rate of indicated difficulties was observed in the 'hard' condition, this difference is not statistically significant. Hence, no evidence of dishonest behavior in the hard condition could be observed. Figure 2 provides a visual representation of the relationship between the conditions of the predictor variable, Experimental Condition, and the outcome variable, Reported Difficulties.

**Figure 2**

*Conditional Estimates Plot Displaying the Difference in Reported Difficulties Between Study Conditions*

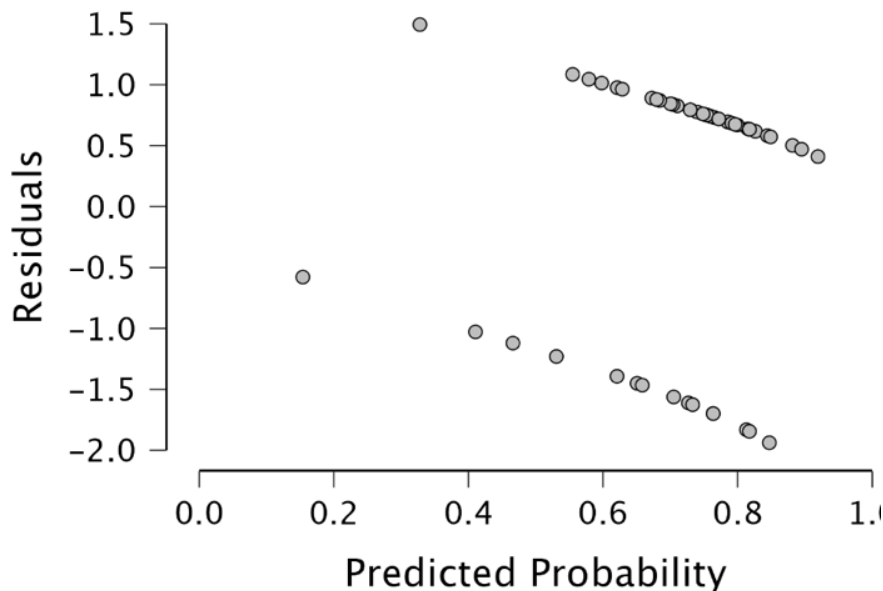


Further, another nonsignificant positive trend was found for the interaction effect of perceived unfairness with gBJW on Reported Difficulties ( $OR = 1.068, W = 0.007, p = .932$ ).

Thus, H2, hypothesizing the role of a gBJW as a moderator of the relation between perceived unfairness and dishonesty, was rejected as well. Figure 3 functions as a visual representation of the predicted residuals of the interaction between a gBJW and perceived unfairness on Reported Difficulties.

**Figure 3**

*Predicted-Residuals Plot of the Interaction Between gBJW and perceived unfairness on Reported Difficulties*



Lastly, the exploration of the relationship between a pBJW and Reported Difficulties (OR= 0.361,  $W = 2.470$ ,  $p = .116$ ) proved to be nonsignificant as well, yet with a negative trend. Hence, higher values of a pBJW did not significantly predict a decreased likelihood of dishonesty. Moreover, the interaction of perceived unfairness with a pBJW on Reported Difficulties (OR= 2.919,  $W = 1.607$ ,  $p = .205$ ) showed a nonsignificant positive trend, suggesting that a pBJW does not significantly alter the relationship between perceived unfairness and dishonesty.

**Table 2***Logistic Regression Coefficients Table*

|                                    | Estimate | Standard<br>Error | Odds<br>Ratio | z      | Wald<br>Test      |    |      |
|------------------------------------|----------|-------------------|---------------|--------|-------------------|----|------|
|                                    |          |                   |               |        | Wald<br>Statistic | df | p    |
| (Intercept)                        | 0.675    | .443              | 1.963         | 1.524  | 2.324             | 1  | .127 |
| gBJW                               | 0.388    | .522              | 1.475         | 0.744  | 0.554             | 1  | .457 |
| pBJW                               | -1.018   | .648              | 0.361         | -1.572 | 2.470             | 1  | .116 |
| Experimental<br>Condition (1)      | 0.535    | .651              | 1.707         | 0.822  | 0.676             | 1  | .411 |
| gBJW*Experimental<br>Condition (1) | 0.066    | .778              | 1.068         | 0.085  | 0.007             | 1  | .932 |
| pBJW*Experimental<br>Condition (1) | 1.071    | .845              | 2.919         | 1.268  | 1.607             | 11 | .205 |

*Note.* Experimental Condition level '1' coded as 'hard' condition.

**Table 3**

*Model Summary of Logistic Regression Analysis with Factor Experimental Condition,  
Covariate gBJW, and Dependent Variable Reported Difficulties*

| Model          | Deviance | AIC    | BIC    | df | X <sup>2</sup> | p    | R <sup>2</sup> |
|----------------|----------|--------|--------|----|----------------|------|----------------|
| H <sub>0</sub> | 62.480   | 64.480 | 66.431 | 51 |                |      |                |
| H <sub>1</sub> | 57.710   | 69.710 | 81.418 | 46 | 4.770          | .445 | .125           |

*Note.* R<sup>2</sup>, here, refers to Nagelkerke R<sup>2</sup>.



## Discussion

In the current study, we sought to gather additional evidence for the link between dishonesty and unfairness, as well as investigate the moderating effect of a (general) belief in a just world on said relationship. Accordingly, two hypotheses were formulated. To start with, in our first hypothesis, we expected that the study's main outcome would be a positive link between dishonesty and perceived unfairness. Furthermore, our second hypothesis illustrates how a gBJW and perceived injustice interact to influence dishonest behavior. The first hypothesis is based on earlier empirical findings, such as those by Gollwitzer and van Prooijen (2016), who demonstrated that individuals typically respond to perceived unfairness by participating in compensatory acts that, in themselves, may violate norms. As a result, coming from a perspective that recognizes dishonesty as a form of norm-breaking, we concluded that encountering a circumstance in which participants feel unfairly treated will increase such misconduct as dishonesty. Regarding the second hypothesis, studies have regularly documented a positive association between a gBJW and dishonesty, since a gBJW has been proven to not only diminish feelings of guilt but also operate as a justification for behaving in a dishonest way (e.g., Wenzel et al., 2017; Dalbert, 1999). As a result, a gBJW was hypothesized to moderate the relationship between perceived injustice and dishonesty; the greater a participant's gBJW score, the more likely they are to participate in dishonest activity in situations of perceived unfairness.

Ultimately, the findings of this investigation did not provide support for either hypothesis. This means, that neither a statistically significant effect of perceived unfairness on dishonesty nor an interaction between a gBJW and perceived injustice on dishonesty could be found. The data does, however, show certain correlational tendencies worth acknowledging, including a positive correlation between dishonesty and perceived injustice, a positive interaction between perceived unfairness and a gBJW on dishonesty, and a negative

association between a pBJW and dishonesty. Despite these tendencies, the statistical nonsignificance does not allow us to make further inferences or draw conclusive statements.

Importantly, as will be discussed in more detail throughout the following paragraphs, it should be acknowledged here that this study's power was greatly limited by the small sample size ( $N = 52$ ). It may be assumed that with a larger sample size and thus more statistical power, some of these tendencies would have been significant otherwise.

### **Theoretical and Practical Implications**

Given past empirical findings, two of these three relationships were insofar unexpected as they conflict with earlier literature<sup>3</sup>. In previous studies, both the correlation between perceived unfairness and dishonesty and the effect of a gBJW on honesty were frequently found to be significant (e.g., Li et al., 2022; Wenzel et al., 2017). Notably, however, due to the small sample size limitation mentioned previously, no conclusions can truly be drawn from these contrasting results. That being said, concerning our pBJW exploration, our findings proved to be more in line with prior ones (e.g., Schindler et al., 2019; Tan et al., 2023), which either found a significant negative relationship between a pBJW and dishonesty or a statistically nonsignificant one, respectively. Thus, in this instance, our findings' lack of significance as well as the negative trend in the data does align with a portion of the body of pBJW literature.

Nevertheless, some theoretical and practical implications can be drawn from this study, even in the absence of statistical significance. To begin with, statistical nonsignificance can suggest that additional refinement of operationalizations is necessary to achieve greater

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<sup>3</sup> At least with earlier *published* literature. The "file drawer effect," which causes an underrepresentation of insignificant findings in psychology's literature base, does seem worthy of mention in this context.

measure sensitivity. We believe that the same issue applies to both the gBJW and the pBJW variations in our investigation and may also account for inconsistencies between findings from various studies.

The personal and general variations appear to have become the most often utilized definitions in BJW literature over time. Even so, a great deal of research continues to focus on the same ideas under somewhat different operationalizations, such as "*selfBJW*", "*BJWothers*", or just "*BJW*". Even though they are all essentially measuring the same phenomenon, differences in conceptualization may still result in the utilization of distinct scales. Two straightforward illustrations of this would be the fact that in contrast to a gBJW, BJWothers frequently explicitly removes the self from measuring (Tan et al., 2023) or that a study may utilize the Lipkus et al. (1991) scale or the Janoff-Bulman (1989) BJW subscale rather than the Dalbert et al. (1987 & 1993b) one. The scales differ, for example, with regard to their number of items, with the scales by Lipkus et al. (1991) and the one by Janoff-Bulman (1989) consisting of more statements. This implies that these scales might offer a more comprehensive assessment of the underlying concept, potentially capturing more nuances. Further, this may also allow for a finer distinction between different levels of the construct, providing more precise measurements and better discrimination. Ultimately, the reasons why some studies discover significant correlations for the same links while others do not may be explained, at least in part, by such variations in measurement. As a result, we propose that it might be worthwhile to employ a variety of measures throughout a study to accurately identify which variables contribute to a significant relationship—like explicitly removing the self from measurement—and which ones could skew the findings—like failing to account for the influences of selfBJW. Remarkably, it has also been observed that seemingly insignificant elements like the sequence in which BJW subtypes are evaluated may have an impact on the outcomes (Schindler et al., 2019). Accordingly, it appears that BJW is

a phenomenon that is greatly impacted by what is made salient for participants, whether it is through item phrasing or the order in which BJW forms are measured. Furthermore, contextual factors can have an additional impact. As noted by Tan et al. (2023), "the effects of different types of BJW are determined by which target participants focus on" (p.77). As a result, findings from, say, an individualistic nation as opposed to a collectivistic one may vary. In the end, it appears that all of these theoretical implications are worthwhile to take into account, particularly for subsequent studies that seek to comprehend and maybe resolve the existing discrepancies in the results that were highlighted above. They also serve as a reminder that the development of BJW subtypes was intended to improve measurement; therefore, studies may find it beneficial to assess each one to identify small modifications that may ultimately have a significant influence.

In terms of the study's practical implications, we aim to expand on an interesting viewpoint presented in a Tan et al. (2023) paper. These researchers suggest that the positive correlation between a gBJW and dishonesty can be explained by moral disengagement. Although this association was determined to be nonsignificant in the current study, our data did show a positive directionality trend, which led us to propose the following: What kind of behavioral consequences could follow a "shift in responsibility" from a gBJW viewpoint on the world to one that is more aligned with pBJW beliefs? Or, to put it another way, transitioning from the belief that everyone gets what they deserve to acknowledging that one bears responsibility for this? Given that previous studies have demonstrated a positive link between the variables in question, a decline in gBJW scores would arguably also lead to a decline in norm-breaking behavior. Could exercises designed to reduce gBJW-related cognitions while simultaneously enhancing pBJW-related worldviews then be a useful addition to therapies targeted at, for instance, youth who are at risk for breaching norms? Especially considering that their worldviews may arguably still be more modifiable than

those of adults. Tan et al. (2023) tend to believe so, and we agree with them. Moreover, a high gBJW has not only been found to be associated with an increase in norm-defiant behaviors but also with both negative social and psychological consequences (Sutton & Winnard, 2007). Crucially, however, an increased pBJW has been connected to improved well-being and mental health (Lipkus et al., 1996a). Thus, incorporating what has been found about these BJW correlations into interventions may both decrease undesirable behaviors as well as increase desired benefits. In summary, as moral disengagement might be a keystone of a gBJW, it could be beneficial to concentrate on this variable in treatments designed to reduce norm-breaking behaviors, such as dishonesty.

### **Strengths, Limitations, and Future Directions**

The study presents both strengths as well as limitations that need to be taken into account. Principally, the study greatly benefited from the DV representing actual behavior rather than just thoughts. Nevertheless, the most noteworthy limitation of this investigation is likely its small sample size ( $N = 52$ ), which led to a lack of statistical power. However, despite having small sample sizes, studies such as the one conducted by Alves & Correia in 2010 were able to find statistically significant impacts, therefore the small sample may not be the only reason for the nonsignificant results observed in our study. Furthermore, dishonesty was solely inferred based on our prediction that participants who had been allocated to the ‘hard’ task condition would feel more unfairly treated, resulting in a stronger desire to engage in justice-restoring actions, and, thus, a higher number of indicated difficulties compared to the ‘easy’ task condition. Notably, the fact that the intergroup difference in rates of cheating was found to be nonsignificant may not necessarily mean that our assumed relationship between the ‘hard’ condition and a higher number of indicated difficulties is false. Instead, it may imply limited manipulation strength. Arguably, a stronger manipulation may have produced even larger rates of unfairness perceptions, resulting in a stronger desire to engage in justice-

restoring reactions, ultimately leading to a higher number of indicated difficulties, and, thus, a difference in rates of cheating large enough to be deemed significant. An additional strength, however, is the study's high ecological validity which was ensured by putting participants in situations that genuinely made them feel unfairly treated, as opposed to merely asking them to recall occasions in which they had previously experienced unjust treatment. Nevertheless, the study design and measure sensitivity may be further improved by taking into consideration individual differences in fairness norms and controlling for as many confounding variables as feasible. Measurements of bio-physiological reactions or other robustness-enhancing indicators could be used to achieve this. Instead of assuming genuinely felt unfairness based on a difference in the number of boxes checked between the IV conditions, one may, for instance, evaluate dorsolateral prefrontal cortex and insular cortex activation (Knoch et al., 2006; Sanfey et al., 2003). Importantly, however, for a study like this, it is crucial that participants feel they cannot be caught lying. Thus, the utilization of such biomarkers is only feasible when participants are deceived about the way this information is used. Informing them that only parts of their data will be looked at, namely, those recorded during the reading task to investigate differences in brain activation while reading an easy or a difficult text, might be one way to achieve this.

Ultimately, these constraints prohibit us from deriving conclusions that would lend support to any of the two hypotheses or from assuming any sort of causal relationship. However, we can recognize the broad patterns that emerge from our data and, with the help of an improved research design, explore these further in future investigations.

In terms of future directions, we think that the information provided by Alves & Correia (2009) highlights a crucial issue that deserves additional study. Interestingly, they postulated that none of the cognitions associated with a high gBJW nor a high pBJW appear to reflect an individual's true belief systems. Instead, they demonstrated that a moderate interpretation of

the truth of beliefs pertaining to both a pBJW and a gBJW was equally true. Based on these findings, they hypothesized that, at least in Western, individualistic societies, people and even society itself might function best when holding beliefs like "Everyone gets what they deserve anyways" and "If I want a just world for myself, I need to act accordingly," which maintain a balance between gBJW and pBJW beliefs. Despite appearing to be universal, the BJW phenomenon's impact on dishonest behavior may nonetheless vary depending on one's cultural background. From this perspective, we believe it is important that future research examine the differences in gBJW and pBJW scores between individualistic and collectivistic cultures, as these may be significant influences (Alves & Correia, 2009; Markus & Kitayama, 1991). Crucially, cultural influences are frequently overlooked in empirical research even though their importance is well acknowledged. Moreover, it was shown that empirical research has a bias toward investigating individuals' perceptions and interpretations of unfairness, injustice, or disadvantage. For instance, one of the main focus areas of the BJW study is the relationship with victim-blaming behaviors (e.g., Mendonça et al., 2016; Strömwall et al., 2012). Therefore, we believe it would be quite interesting to see subsequent research devoted to determining the function that a BJW serves in assessing the situations of those who are more privileged. Are the blessings bestowed upon oneself or others still appreciated in terms of a just world or are those interpreted from a different meaning-making framework?

## **Conclusions**

This study investigated the relationship between perceived injustice and dishonesty as well as the moderating impact of a gBJW. Despite the lack of statistical evidence to support our hypotheses, noteworthy trends were observed, and stimulating ideas for subsequent research have been formulated. Our study underscores the variability within the just world belief constructs, suggesting that future studies should pay attention to measurement

differences that may result from varying operationalizations. Practically, interventions could focus on reducing gBJW-related cognitions while strengthening pBJW-related beliefs to mitigate dishonest behavior and enhance well-being. Future research may also benefit from taking into account cultural variances, and further investigating the role of a BJW for those who have been more privileged instead of merely studying BJW in the context of injustices.



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## Appendix A

### Survey Instructions

“On the next screen, you will be randomly assigned to one of two conditions. This can either be the easy reading comprehension condition or the hard reading comprehension condition. The goal is the same in both conditions: You are asked to read a text and afterwards answer questions about it. Please make sure to carefully read the text. Based on our initial testing, the easy reading comprehension task should take about half as long as the hard reading comprehension task. Please try to give it your best efforts. This will really help us increase our understanding of the link between cognitive styles and reading comprehension. The difference between the conditions may seem unfair, but we cannot really study this another way. Regardless of the condition, you can earn a bonus amount of SONA credits if you answer all questions correctly! Eligible participants will be contacted after participation. Your cooperation is greatly appreciated!”



Easy



Hard

## Appendix B

### Manipulation Texts

#### *'Hard' Task Condition*

“You have been assigned to the hard reading comprehension condition. On the following screen you will see a long text on a scientific subject. Please read the text carefully – you will be asked a few questions about its content afterwards. If you answer all questions correctly, you will receive a bonus amount of SONA credits after the study concludes. You cannot go back to read the text again. So, make sure you advance only when you are ready!”

#### *'Easy' Task Condition*

“You have been assigned to the easy reading comprehension condition. On the following screen you will see a text on a scientific subject. Please read the text carefully – you will be asked a few questions about its content afterwards. If you answer more than half of the questions correctly, you will receive a bonus amount of SONA credits after the study concludes. You cannot go back to read the text again. So make sure you advance only when you are ready!”

## Appendix C

### Measures

*BJW Scale* (Dalbert et al., 1987 & 1993b)

- gBJW.** 1) I think basically the world is a just place.
- 2) I believe that by and large, people get what they deserve.
- 3) I am confident that justice always prevails over injustice.
- 4) I am convinced that in the long run, people will be compensated for injustices.
- 5) I firmly believe that injustices in all areas of life (e.g., professional, family, politics) are the exception rather than the rule.
- 6) I think people try to be fair when making important decisions.

- pBJW.** 1) I believe that by and large, I deserve what happens to me.
- 2) I am usually treated fairly.
- 3) I believe that I usually get what I deserve.
- 4) Overall, events in my life are just.
- 5) In my life injustice is the exception rather than the rule.
- 6) I believe that most of the things that happen in my life are fair.
- 7) I think that important decisions that are made concerning me are usually just.