Why the Powerful Remain Powerful in a Not-So-Just World: The Effects of Power and Justice Beliefs on Responses to Distributive Injustice

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This thesis is submitted in partial fulfilment of the Honours Degree of Bachelor of Psychology

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October 2018

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Abstract

Research suggests that, compared with low-power counterparts, individuals who are afforded power (control over valued resources) exhibit more goal directed and action-oriented behaviour in the face of adversity (Anderson, & Berdahl, 2002). Theoretically, given a power threatening situation in which valued resources are distributed unfairly by other powerful individuals, high-power individuals subjected to the situation will display more action-oriented behaviour. Such a situation also calls into question an individual's beliefs about justice; research indicates that those who attribute justice in the world to God, nature or others (as opposed to oneself or chance) are more likely to exhibit action-oriented behaviour (Stroebe, Postmes, Täuber, Stegeman, & John, 2015). The current study hypothesized that, given a distributive injustice, high power individuals would be more likely to exhibit action-oriented behaviour than low-power individuals, particularly when they believed that others, God or nature were the ultimate sources of justice. Using a majority-student sample (n = 87), power was manipulated through a previously used recall task (Galinsky, Gruenfeld, & Magee, 2003), beliefs about the source of justice were measured using the Belief in a Just Treatment Scale (BJT-5; Stroebe et al., 2015), a hypothetical distributive injustice scenario was given (involving the unfair distribution of grades) and the main outcome was assessed using a tailored measure of revenge and compensation requesting behaviours. To test for the main effects of power and the moderating effects of justice beliefs, regression analyses were conducted but yielded no significant results. As such, the discussion covers possible improvements for future research in the area, including the use of a larger sample size or alterations to the current measures used.

Declaration

This thesis contains no materials that has been accepted for the award of any other degree or diploma in any University, and to the best of my knowledge, this thesis contains no materials previously published except where due reference is made. I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

2nd October 2018

Acknowledgements

I would like to acknowledge my Supervisor, Peter Strelan, for motivating and inspiring me throughout the year. I would also like to thank family and friends for supporting me.

Introduction

1.1 Background

Being able to respond adequately to an injustice is not only a fundamental human concern, but an individual-level factor that contributes to the maintenance of the social status quo. It is an ongoing issue, and therefore one we need to understand better (Lerner, 1981).

In this thesis I argue that people's power, their fundamental need to believe that the word is just, and the specific source to which they attribute this justice, will affect the extent to which they can (and will) respond to injustice. Research suggests that the powerful are more inclined to take action than the disempowered due to greater resource access and perception and experience of fewer obstacles (Anderson, & Berdahl, 2002). It is also posited that belief that God, nature or other people are sources of justice in the world enables people to perceive avenues for outward action and to engage in those actions. Conversely, belief that the self or chance is responsible for delivering justice is associated with a lack of outward responding (Stroebe, et al., 2015). I will test the interaction of power and justice beliefs by measuring people's responses to injustice in the context of a scenario close to university students' hearts: unfair marking. In this scenario, one is asked to reflect on a mark that is far lower than one's colleague for a similar standard of work. I hypothesize that, in response to this, powerful individuals will engage in more action-oriented behavior than low power individuals, particularly when they are assured that there is justice in the world which is delivered by God, nature or other people.

1.2 Power

1.2.1 Defining Power

Power is conceptualized as a social inequality conceived in the interaction between an individual or collective with control over a resource and an individual or collective that requires

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this resource but does not have direct control over it. Those who are advantaged in this interaction are considered powerful and those who are not are considered disempowered (Anderson, & Berdahl, 2002). Power is related but distinct from dominance (assertive behaviours), leadership (persuading people to pursue a common goal that is more important than the individual goal), status (popularity and respect socially bestowed on an individual) and authority (an institutionalized superordinate role; Anderson, & Berdahl, 2002). However these usually entail power, and, sometimes, predict a sense of being empowered (Anderson, Kraus, Galinsky, & Keltner, 2012).

Furthermore, it is also useful to note that power may be distinguished from sense of power (Anderson, John, & Keltner, 2012). Sense of power implies the psyche has fully inhabited the powerful position posited by social relations. Actual power may not guarantee sense of power. For example, in a parent child relationship, traditionally, parents have more power because, in their upbringing, children rely on their resources and knowledge. However if parent-child relations are strained through a child's misbehavior, the parent may feel a sense of loss of control and loss of power (as the child is outwardly denying the importance of the parent-child alliance for his or her livelihood despite the underlying reality that the alliance is still deeply paramount). Therefore, when assessing power in real world circumstances it is practical to take into account not only objective but subjective power.

Power may be "chronic" or "episodic" (Strelan, Weick, and Vasiljevic 2014). Chronic power refers to an enduring power usually afforded by social institutions and structures. Chronically powerful people are secure in their position of power, and have an established system of representations and responses informed by their possession of power. People who experience incidental power only have fleeting experiences of power or "felt" power that may be

afforded to them in more interpersonal contexts. It has been found that those who are chronically powerless have a tendency to monopolize on incidental power by exacting revenge, whereas those who are always powerful tend to be less inclined to take advantage of this incidental power (because they do not appreciate the hardships of having little power; Strelan, et al.) .

1.2.2 Major Implications of Power

It has been suggested that powerful people are more likely to assume an active role in a given situation and that the approach and inhibition theory of behavior may be pivotal to this link (Anderson, & Berdahl, 2002). Approach and inhibition describe behavior systems associated with rewards and threats. The "approach" dyad refers to heightened perception of environmental rewards and active goal seeking behavior that might be exhibited by a person who is accustomed to experiencing actual reward in his or her environment. Conversely, the "threat" dyad refers to heightened vigilance to threats, negative affect (feelings of anxiety) and avoidance behaviours exhibited by a person who is accustomed to experiencing punishments in his or her environment. When integrating this model with power, it follows that more powerful people, who have access to financial and social resources or "rewards", will assume approach-orientated behaviours and, in contrast, powerless people will assume inhibition-orientated behaviours.

Findings in the literature demonstrate that power leads to action. Powerful people are more likely to act in a goal consistent manner (Schmid, 2018); for example, in a situation where it is desirable to turn off an annoying fan in a public space, it has been found that power primed students are more inclined to do so than their low-power or non-power primed counterparts (Galinsky et al., 2003). Similarly, in a hypothetical situation of salary negotiation in the workplace, those with more power (as determined by other job prospects, competitiveness of the current position and desire for the current position) have been found to be more likely to exhibit

behaviors of engaging, requesting and optimizing their employment conditions (Kapoutsis, Volkema, & Lampaki, 2017). Powerful individuals are also more likely take action in a social dilemma (prosocial or antisocial, depending on the particular dilemma and the actions available to them; Galinsky et al.), for instance, sense of power in American participants recruited online (as well as hierarchical position and procedural justice) has been found to predict prosocial behaviours in an online game involving sharing or retaining points allocated at the beginning of the game (Van Dijke, Cremer, Langendijk, & Anderson, 2017). Thus, in the current study, power is considered as a predictor of action oriented behavior in a challenging situation.

Also illustrated by findings is the link between power and positive emotion or the absence of negative emotion and, albeit to a lesser extent, self-efficacy. For example, in the context of a situation where students are either given or denied control over allocating bonuses to employees in a hypothetical situation, those with greater power report less negative affect (Anderson, & Berdahl, 2002). It has been found that socioeconomic status (power) in combination with the respect and admiration from friends and co-workers (status) predicts subjective well-being, including greater positive affect and less negative affect (Anderson et al., 2012). Similarly, it has been found that goal-setting leads to better performance, particularly when an individual has high self-efficacy and low power-distance within their culture (the accepted distance between powerful superiors and subordinates in a society; Sue-Chana, & Ong, 2002). Thus, in the current study, it is hypothesized that power will predict less negative affect and, by extension, higher self-efficacy.

1.3 Distributive Justice

1.3.1 Defining Distributive Justice

Distributive (in) justice refers to the fair distribution of rewards and punishments (Jasso, Törnblom, & Sabbagh, 2016) and is one of three other types of justice: procedural justice (the fairness and transparency of procedures; Vermunt, & Steensma, 2016), retributive justice (the punishment of transgressors; Wenzel ,& Okimoto, 2016), and restorative justice (the restoration of just relations between victims and transgressors; Cohen, 2016). Distributive justice can be defined using four terms: "actual reward", "just reward", "justice evaluation" and "justice consequences"; and three actors: allocator, observer and rewardee (Jasso et al., 2016). The process begins with a comparative appraisal (justice evaluation) between an actual reward (or punishment) and a theoretically just reward (or punishment). Ensuing this is a series of consequences (justice consequences) that serve to action the initial appraisal. The allocator is responsible for allocating the actual reward, the rewardee receives the reward and the observer makes the justice evaluation; these are not mutually exclusive roles, for example, the observer may be one and the same as the allocator or rewardee. To illustrate with a simplistic example, imagine within a work place an employee works 30 hours one week, however, despite her expectations, the manager only pays her for 25 hours which prompts her to request compensation from her manager. In this instance, the actual reward is pay for 25 hours, the theoretically just reward is pay for 30 hours, the justice evaluation is that it is unfair (and not in line with expectations), and the justice consequences are that the employee requests compensation. The role of the manager is allocator and the role of the employee is both rewardee and observer. This example, and others like it, readily demonstrates the process of delivering, evaluating and responding to rewards and punishments that defines distributive justice.

1.3.3 Implications of Distributive Justice

The above distributive justice model potentiates research relating to the nature of rewards and punishments, justice evaluations, justice consequences, and characteristics of allocators, rewardees and observers (Jasso et al., 2016). A subfield within the justice consequences research is the observation and quantification of the individual responses of rewardees. For example, when it is perceived that distributive and procedural (in)justice had been violated by restaurant staff, it has been observed that patrons are most likely to engage in revenge behaviours (like negative word-of-mouth, as per a sample of Taiwanese patrons; Chih, Chiu, Lan, & Fang, 2017). Similarly it has been observed that Belgian employees, who perceive unfair, idiosyncratic deals between individual employees and employers in their workplace, seek to restore equity through voice behaviours (either complaining or requesting compensation; Marescaux, De Winne, & Sels, 2017). The current study will resume this line of enquiry by examining individual reactions to a distributive injustice in an educational setting entailing the allocation of a grade that is disproportionately small to a colleague's for an essay of similar merit.

1.4 Justice Beliefs

1.4.1 Belief in a Just World

Melvin Lerner (1980) argued that people have a fundamental *need* to believe the world is ultimately just (BJW). He argued that individuals establish a psychological contract with the "world" (an omnipresent entity that takes on multiple forms in one's physical and psychological environment) in which it is agreed that, essentially, "good" behaviour and traits will be rewarded and, conversely, "bad" behaviour and traits will be punished.

BJW is perhaps a fundamental drive propelling one's existence in the world as, without this, there would be no perceived purpose to the traits or behaviours that signify one's existence. As Lerner suggested, this is evidenced by the psychological dysfunction and threats to well-

being faced by those who have had their BJW displaced through traumatic experiences (Park, Edmondson, Fenster, & Blank, 2008, Schaafsma, 2013; Wickham, & Bentall, 2016). Not only does this belief seem imperative to maintaining mental health in a clinical setting, but it is central to the pleasure and entertainment of mass society. In particular, BJW is reflected in the media's inclination for the meta-narrative as portrayed in televised fiction which tells a tale of triumph against adversities, defeat of the "bad guy" and a happy ending for the "good guy" (Appel, 2008).

Furthermore, BJW buffers against the heightened despair one might experience as a result of suffering or observing others suffering in the world (and, therein, confronting its often unavoidable and unpredictable nature) because it enables emotional distance between oneself and the situation (Lerner, 1997). In a general sense, BJW is linked with harsh, persecutory attitudes towards the poor and unfortunate, including a preference for a non-egalitarian distribution of wealth and resources in society that disadvantages the non-privileged (Kasperbauer, 2015; Frank, Wertenbroch, & Maddux, 2015) which is echoed in findings that higher socioeconomic status leads to development of stronger BJW (Thomas, & Mucherah, 2000; Thomas, & Napolitano, 2017), a tendency to blame victims of violent crimes like rape (Pedersen, & Strömwall, 2013; Vonderhaar, & Carmody, 2015 Russell, & Hand, 2017; Pinciotti, & Orcutt, 2017) and a tendency to stigmatize the ill, for example those suffering with eating disorders or obesity (Ebneter, Latner, & O'Brien, 2011). BJW is also associated with endorsement of the status quo, for example, acceptance of rules in the workplace, endorsement of political outcomes and adherence to experts' knowledge (Stieger, Kastner, & Voracek, 2011, Dover, Matthews, Krauss, & Levin, 2012, Sirois, & Iyer, 2017); this may be because the alternative, which is to question the status quo, would be to acknowledge that the world does not

always deliver ideal outcomes (and would potentiate, in one's head, the possibility of random suffering in the world) and, therefore, is antithetical to BJW. Furthermore, BJW has been associated with a tendency to avoid engaging in actions that might trouble the notion of justice in the world and the ultimate absence of suffering, like counteracting global warming which is antithetical to BJW (Feinberg, & Willer, 2011). Conversely, BJW might encourage behaviours geared at restoring justice in the world and enabling retribution for those who have suffered, for example, an endorsement of revenge behaviours following terrorist attacks (Ferguson, & Kamble, 2012).

Although BJW was initially conceptualized as unidimensional (Rubin, & Peplau, 1975), more recently, it has been understood in terms of two dimensions that reflect who is receiving the (in) justice; these dimensions are also associated with attitudes and antisocial or apathetic behaviors that indicate a tendency to maintain psychological distance between oneself and situations of suffering. One can believe that the world delivers justice to oneself or the individual (referred to as BJW-Self [Lipkus, Dalbert, & Sigler; 1996], or BJW-Personal [Dalbert, 1999]), or that the world delivers justice to others or people in general (referred to as BJW-Others [Lipkus et al.], or BJW-General [Dalbert, Montada, & Schmitt, 1987]). There is evidence that BJW-Others posits the view that other people, who are victims to misfortune and suffering, are to blame, and, therefore, one should avoid assisting them because it obscures the natural course of justice, for example, victims of transgressions in close relationships (Strelan, & Van Prooijen, 2014). Furthermore, BJW-Others posits that if another person has explicitly transgressed, one must exact punishment on them in order to maintain a state of justice in the world, for example, by punishing transgressors in close relationships (Strelan, & Sutton, 2011; Bartholomaeus, & Strelan, 2016). On the other hand, evidence suggests that BJW-Self buffers

against revolt or retaliation because of an inclination to "turn the other cheek" in the face of adversity or suffering, with the view that this will be rewarded with ultimate justice in the long-term, for example, abstaining from revenge or anger after being transgressed against in a relationship, ostracized in a broader social situation, or inconvenienced due to a violation of road rules (Strelan, & Sutton; Nesbit, Bartholomaeus, & Strelan; Poon, & Chen, 2014; Nesbit, Blankenship, & Murray, 2012). In sum, the literature suggests that BJW-other is related to harsh social responding, and BJW-self (or closely related constructs) is related to inaction.

1.4.2 Defining Belief in a Just Treatment

In the initial conception of BJW, Lerner suggested that, if given adequate resources, individuals will take action, particularly social action, in the face of injustice (1980). In an attempt to rectify some discrepancy between Lerner's initial conception and recent findings, a different but associated construct had been proposed which has been given the title "Belief in a Just Treatment" (BJT-5; Stroebe et al., 2015). The ethos underlying this is that an assured belief in justice in the world does not necessarily have to lead to either inaction or antisocial action. If, in a situation entailing oneself or another person being subjected to injustice, one is privy to who/ what is, in their opinion, responsible for rectifying justice in the situation, they may appeal to that source; furthermore, if they believe that source is *generally* responsible for justice in the world, then they may be even more disposed to appeal to the source in the specified situation. Appealing to the source of justice that they believe responsible may take the form of inward contemplation or outward action (prosocial or antisocial) depending on the nature of the source and who is receiving the injustice. It is proposed that there are five sources that people generally attribute justice to in the world: God, nature, oneself, others and chance (discussed below). In

accordance with the literature, the current study hypothesizes that belief in God, nature or others as sources of justice will lead to greater endorsement of action-oriented behaviours,

1.4.3 Belief in a Just Treatment Relating to God for Oneself or Others

This belief, (BJT-5 God) is evidenced in the association between BJW and high religiosity and respect for religious institutions (Rubin, & Peplau, 1975). Strong belief that God is responsible for justice for oneself and others has been associated with a greater endorsement of action-oriented behavious (many of which are congruent with this belief) within hypothetical crisis situations in society (a natural disaster, or fatalities associated with a firework tutorial placed on YouTube). God-related actions (praying to God or appealing to religious institutions), other-related actions (appealing to groups like Red Cross or Peace Corps) and self-related actions (personally assisting the injured by travelling to the affected region) have all been endorsed by those with high BJT-5 God (Stroebe et al, 2015).

1.4.4 Belief in a Just Treatment Relating to Nature for Oneself or Others

The belief (BJT-5 Nature) may be understood through the lens of scientific determinism which posits that the trajectory of past physical phenomena predict and shape present physical phenomena (Paulhus, & Carey, 2011). As such, a state of justice is reached by virtue of natural, physical phenomena operating in predetermined ways to arrive at a predetermined set of outcomes. For example, that humans, as a species, adapt genetically to survive in their given environment is an example of how, in the unfurling of predetermined, physical processes, nature balances challenges (new, harsh environments) and solutions (genetic adaptation) to arrive at an ultimate justice. Although evidence is inconclusive, it is assumed that such a belief may motivate one to restore equilibrium by actions involving outward appeal to one's environment, particularly when faced with environmental dilemmas (Stroebe et al., 2015).

1.4.5 Belief in a Just Treatment Relating to Others for Oneself and Others

This belief (BJT-5 Others), that others are *the source* of justice, is not the same as BJW Others, the belief that others *receive* justice in the world. In the latter circumstance, "others" refers to other people (aside from the self) receiving justice (or injustice) and, in previous studies, is associated with accusations of deservingness towards the receiver of justice (or injustice). In the former circumstance, "others" refers to individuals or institutions of people accounted power in society who *deliver* justice in society. Justice *from* others can be *delivered to* others, for example: an individual may be of the belief that a rape victim (an "other" on the receiving end of justice or injustice) will receive ultimate justice, not because they are internally deserving, but because the court/legal system (powerful other delivering justice) will adequately punish the perpetrators thus providing vindication for the victim. It has been found that those with high BJT-5 Others are particularly likely to endorse other-related action in a social crisis (refer to section *1.4.3* for details; Stroebe et al., 2015).

1.4.6 Belief in a Just Treatment Relating to the Self for Oneself and Others

Similarly this belief (BJT-5 Self), that the self *delivers* justice to either oneself or others, is not the same as BJW Self, that the self *receives* justice,. Whilst the latter implies a passive acceptance that justice will be delivered to the self, either at present or in the future, the former implies that it is the responsibility of the individual victim of injustice to restore justice through alteration of the self, whether the victim is oneself or another person, reflecting findings that high BJW is related to higher scores on internal locus of control (Rubin, & Peplau, 1975; Zuckerman, M., & Gerbasi, K, 1977). BJT-5 Self is associated with less outward responding and more inward, internalized responding in a social crisis situation (again, refer to section *1.4.3* for details; Stroebe et al., 2015).

1.4.7 Belief in Just Treatment and Chance for Oneself or Others

Although chance has been viewed as antithetical to BJW (Lerner, 1980), it may be the case that people believe that, by virtue of the natural trajectory of chance events, rewards and punishments will be delivered in balance to either oneself or others (BJT-5 Chance). It has been found that BJT-5 Chance is associated with a rejection of external responding in a social crisis, perhaps because appealing to chance implies taking a passive role and simply waiting for chance events to "play out" (again, refer to section *1.4.3* for details; Stroebe et al., 2015).

1.6 Power, Just Belief in a Just Treatment and Distributive Injustice

Intrinsically, power seems to tap into the notion of distributive justice, which pertains to the process of evaluating the fairness or justice of the distribution of rewards or punishments (Jasso et al., 2016). The powerful (who have control over valued resources or "rewards") may readily find themselves in positions of delivering distributive (in)justice (Wang, Sun, & Li, 2015); but, inevitably, to ascertain and maintain resources/ rewards, (and thus power), they must, at some point, be on the receiving end of distributive justice (or injustice). Although, there has been some investigation into how perception of procedural justice and experiences of personal power or others' power contributes to response systems within various situations (Wu, & Chaturvedi, 2009, Gobena, & Van Dijke, 2016) few studies, to my knowledge, have looked at the impact of power on responses to a distributive injustice. Thus, the current study investigates this with the expectation that the more powerful individuals feel, the more likely they are to engage in action-oriented responses, have high self-efficacy and experience low negative affect in response to a distributive injustice.

It is also possible that this situation will activate BJT-5 facets which will form an additional predictor of responses. The most obvious and appropriate action response to the unfair

grade is to appeal to the tutor who allocated the grade or some other person within the educational institution; therefore, those most likely to endorse the available actions might be those with high BJT-5 Other. It might also be the case that those who have high BJT-5 God and BJT-5 Nature exhibit more action-oriented responses. Conversely those who have high BJT-5 Self or BJT-5 Chance will be disinclined to take action.

It follows that as combination of high power and high BJT-5 God, BJT-5 Other or BJT-5 Nature will reflect the optimal conditions for action to be taken in response to the scenario and low power and high BJT-Self and BJT-Chance will be the least optimal conditions for action to occur.

1.7 Aims and Hypotheses of Current Study

The first aim of the current study is to assess the effect of power on reactions to a distributive injustice. Therefore:

Hypothesis One (H_1) = Powerful individuals will endorse action-oriented behaviours to a greater extent than disempowered individuals following an incidence of distributive injustice.

Hypothesis Two (H_1) = Powerful individuals will express higher self-efficacy than disempowered individuals when faced with a distributive injustice.

Hypothesis Three (H_3) = Powerful individuals will express less negative affect than disempowered individuals when faced with a distributive injustice.

The second aim of the current study is to assess the effect of beliefs about sources of justice on action-oriented behaviour following subjection to distributive injustice. Therefore:

Hypothesis Four (H_4) = *Strong BJT-5 God, BJT-5 Nature, and BJT-5 Others will be*

associated with greater endorsement of action-oriented behaviours following a

distributive injustice.

Hypothesis Five *(H_5) = Strong BJT-5 Self and BJT-5 Others will be associated with*

weaker endorsement of action-oriented behaviours following a distributive injustice

The central aim of the current study is to assess whether the combination of power and

belief in a just treatment will impact action-oriented response to a distributive injustice.

Therefore:

Hypothesis Six *(H_6) = In a distributive injustice situation, powerful individuals will*

be particularly likely to endorse action-oriented behavior when they have strong

BJT-5 God, BJT-5 Nature, or BJT-5 Others.

Hypothesis Seven *(H_7) = In a distributive injustice situation, low power individuals*

will be particularly unlikely to endorse action-oriented behvaiours when they have

strong BJT-5 Self or BJT-5 Chance

Method

2.1 Pilot Study

In order to ensure that the survey generated for this study made sense to a general audience,

a pilot survey was administered among four friends and family members who gave verbal

feedback. They indicated that one aspect of the survey needed clarification. An explanatory

clause was added to the final survey to address this issue (see section *2.4.7*).

2.2 Participants

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There were initially 96 participants but nine responses were excluded for being incomplete (failing to give a written answer to the power manipulation question or denying having experienced high or low power at all) or indecipherable. Thus, the final total for analysis was $n = 87$ participants, 60 of whom were female (the remaining 27, male). Of the participants, 74 reported currently or previously studying at university and 13 reported that they were not currently studying at university (7 of whom reported having studied in the past).

2.3 Procedure

Participants completed a survey on Survey Monkey (online) either through an online recruitment system for course credit, Facebook posts, Facebook messenger or by copying the link from a paper advertisement placed on the University of Adelaide campus. Participants who were in the latter category were given a small token gift for their participation and also went in the draw to win a $50 voucher.

Data were then downloaded onto an SPSS data sheet and analyzed in SPSS.

2.4 Materials

   2.4.1 Demographic Information

Demographic information was captured through questions asking for age, gender and university education status.

   2.4.2 Power Manipulation

In order to explore the causal effects of power on thought, feelings and actions, the current study employed a commonly-used, experimental design emulating power or disempowerment in the participants. This design entailed random allocation of participants to either a *high power* condition in which they were asked to recollect experienced power; or, a *low power condition* in which they were asked to recollect experienced disempowerment (Galinsky, Gruenfeld, &

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Magee, 2003). In both cases they were prompted to describe what happened and how they felt. The clause "because you were more qualified than them" was added to the *high power* condition and "because they were more qualified than yourself" to the *low power* condition. The reason for this was to prevent participants' sense of power or disempowerment being confounded with perceptions of injustice (that they were *unfairly* given the upper-hand or, conversely, unfairly subordinated). The task was given the subtitle "recall task" so as to draw attention to the reflective aspect of the task rather than the theme of power; this is because the intention was to manipulate the participants' sense of power without their knowledge. This recall methodology is advantageous in that, in asking the individual to recall power, the implication is that responses will reflect subjective (felt) power.

2.4.3 Distributive Injustice Scenario

The scenario chosen was tailored to the interests of the sample (mainly first year psychology students) and entailed an unfair distribution of good and bad grades for a university level essay assignment (as Deutsch (1979) suggests, grades can, in some contexts, be considered a finite resource). In the scenario, it was stated that grades were allocated based on the average of all grades in that cohort, implying that there was a finite number of good grades to be distributed. In the scenario, participants were asked to imagine receiving a pass grade for an assignment that is 30 percent lower than one's friend received for an assignment of seemingly equal merit. Although the grade is low, it is not a fail grade; the scenario was intended to elicit a response to a distributive injustice or unfairness rather than simply a response to the negative experience of failing. The grade difference was 30% as, intuitively, this seems like a large enough injustice for one to care about it, without it being so large that it is inconceivable (refer to Appendix A for full scenario)

2.4.4 Self-Efficacy

Self-Efficacy was measured using four questions adapted to the scenario presented, two reflecting magnitude and two reflecting size (refer to Table 1). Overall self-efficacy score was calculated bv multiplying answers to questions (1) and (3), and questions (2) and (4) and then averaging these outcomes. The questions were developed intuitively and pertained to a general sense of being able to do something about the situation and a specific sense of being able to restore justice in the situation; the framings of the questions and varying response formats were based on past findings that indicate that a combination of questions measuring magnitude and size of self-efficacy yield the most reliable and valid results (Lee, & Bobko, 1994). This measure had high internal reliability, Cronbach's $\alpha = .73$.

Table 1

Questions Measuring Self-Efficacy (Reflecting Magnitude and Strength of Self Efficacy)

Questions Measuring Magnitude	Questions Reflecting Size
(1) "Do you think you could do something to change the outcome of this situation".	(3) "How confident are you that you could do something to change the outcome of this situation".
(2) "Do you think you could do something to restore justice in this situation".	(4) "How confident are you that you could restore justice in this situation".

Note: Responses for magnitude were given on a *yes/ no* response scale (weighted 0 = *no* and 1 = *yes*); responses for size were given on a five-point, Likert scale, 1 = *not at all confident*, 2 = *not so confident*, 3 = *somewhat confident*, 4 = *very confident*, 5 = *extremely confident*.

2.4.5 Negative Affect

Negative affect was measured using a selection of four items from the short version of the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1985; Watson, 1988) and eight items based on the initial four items from the PANAS (refer to Table 2). This scale was chosen due to its use in previous research on power (Anderson, Kraus, Galinsky, & Keltner,

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2012). The scale reflects two distinct dimensions, positive affect and negative affect; one pole within each dimension reflects a heightened affective state and the opposite pole reflects the absence of that heightened affective state. For example, in the negative affect dimension, the heightened negative affect state consists of emotions like distress, fear, hostility, jitteriness, nervousness and scorn; conversely, the absence of negative affect implies feelings of being at rest, calm, placid and relaxed (Watson, & Tellegan, 1985). Overall negative affect was calculated by averaging answers to the twelve items. This measure had high internal reliability, Cronbach's $\alpha = .89$.

Table 2

Items from the PANAS	Synonymous Items
(1)"distressed"	(5)"concerned"
	(6)"shocked"
(2)"upset"	(7)"dismayed"
	(8)"perturbed"
(3)"hostile"	(9)"angry"
	(10)"bitter"
(4)"irritable"	(11)"annoyed"
	(12)"resentful"

Items Measuring Negative Affect

Note: PANAS is the *Positive and Negative Affect Scale* (Watson, Clark, & Tellegen, 1985), items were framed "*to what extend would you feel…*"; responses were given on a five point, Likert response scale, 1 = *none at all*, 2 = *a little*, 3 = *a moderate amount*, 4 = *a lot*, 5= *a great deal*).

2.5.6 Action Orientation

Action-oriented behavior was measured with ten items which were adapted to the distributive injustice scenario (refer to Table 2). These were based on past research on reactions to various injustices in the workplace or upon receiving services in areas like hospitality (Chih, Chiu, Lan, & Fang, 2016; Marescaux, Winne, & Sels, 2017). The average of overall action-oriented

behaviours (all ten items), compensation behaviours (five items) and revenge behaviours (the other five items) were calculated. This measure had satisfactory reliability, Cronbach's α = .68 (reliabilities for compensation behavior and revenge behavior separately were Cronbach's α = .64 and Cronbach's α = .53 respectively).

Table 3

Items Measuring Action Orientation (Compensation and Revenge Behaviours)

Compensation Action	Revenge Action
(1) "I will ask my course coordinator to liaise with my tutor to rectify the situation".	(6) "I will approach my course coordinator and request that they investigate and reassess my tutor's competency for the job".
(2) "I will ask my tutor to remark the essay assignment".	(7) "I will make a point of giving my tutor a bad rating in the end of semester course evaluation task".
(3) "I will ask my friend's tutor to remark the essay assignment (instead of my regular tutor)".	(8) "I will post a comment on the online course discussion board about how poorly my tutor has treated me".
(4) "I will ask a student union to contact my coordinator or tutor to rectify the situation".	(9) "I will approach my tutor and vent my frustrations towards them".
(5) "I will ask my friend's tutor to remark the essay assignment (instead of my regular tutor)".	(10) "I will let my colleagues know how poorly my tutor has treated me through word of mouth".

Note: Responses were given on a five-point, Likert scale, 1 = *very unlikely*, 2 = *unlikely*, 3 = *neither likely nor unlikely*, 4 = *likely*, 5 = *very likely*).

2.4.7 Belief in a Just Treatment

A subset of 39 items with the highest factor loadings from the 70 item *Belief in a Just Treatment Scale* (BJT-5) were employed (Stroebe, et al. 2015). Eight items from each of the BJT-5 God, BJT-5 Others, BJT-5 Self, and BJT-5 Chance facets were used, four reflecting belief that that particular source (specified by the facet) delivers justice to the self (for example, "I feel *I* earn rewards and punishments I receive from other people I encounter" [italics added]), and

four reflecting that that particular source delivers justice to others (for example, "I feel *people* earn the rewards and punishments they receive from other people they encounter" [italics added], with a five point, Likert response scale, 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). Only seven items from the BJT-5 Nature facet were used (only three reflecting BJT-5-Nature for the self, due to an error in the data collection process).

Because in the pilot study, participants indicated that they did not understand what "nature" was referring to in the items measuring BJT-5 Nature, the following clause was included before the administration of these items in the final survey:

> *Note: On the first page, you are asked to indicate whether or not you believe "the forces of a nature" are a source of justice. By "nature", we mean the physical universe; this entails any physical phenomena in or around you that you see as delivering justice. For example the notion that humans, as a species, adapt genetically to survive in their given environment could be seen as a form of justice brought on by the forces of nature.*

All facets of the belief in a just treatment scale had high internal reliabilities; BJT-5 God had Cronbach's α = .99, BJT-5 Nature had Cronbach's α = .93, BJT-5 Others had Cronbach's α = .89, BJT-5 Self had Cronbach's α = .95, and BJT-5 Chance had Cronbach's α = .96.

2.4.8 Manipulation Checks

In order to ensure the validity of the power manipulation, two raters assigned scores to participants' responses - a number between negative three and positive three reflecting the strength of responses (the higher the number, the more reflective of high power the response was). Responses were scored according to the following criteria: inclusion of a high or low

power scenario, inclusion of negative emotion in the *low power* condition or positive emotion in the *high power* condition (as it was decided that inclusion of the specified emotions in the specified contexts explicitly indicated the participant had emotionally inhabited the role of being powerful or disempowered), and the absence of ambivalence (for example, if, in their response, a participant talked about a high power scenario, but reflected that they felt burdened by the scenario, it was considered an ambivalent response and indicative of a weaker sense of power, because it implied an insight that power was relative [that is, an individual may have power in one interaction, but in another interaction, be subjected to other people's power]).

To check that the distributive injustice scenario was effective, participants were asked to indicate whether or not they thought the situation was unfair (with a five point, Likert response scale, 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree).

2.2.9 Quality Control Measures

In order to ensure participants understood the study, a brief overview at the beginning of the survey was provided, followed by a multiple choice question that required information from the overview to be answered correctly; a correct answer enabled access to the next page of the survey. In order to determine whether the situation described in the survey was relevant to participants, at the end of the survey, they were asked if they had experienced the situation before and could they imagine experiencing the situation.

Results

3.1 Power and Distributive Injustice Manipulation Checks

Ratings for the strength of participants' responses in the power manipulation were as follows. In the *high power* condition, only 27.9% of responses were coded three ($n = 12$). On the other hand, 32.6% responses were coded two ($n = 14$), and 41.9% of responses were coded one ($n = 18$). In the *low power*, condition, 43.2% of responses ($n = 19$) were coded negative three. Of the remaining percentage, 34.1% of responses were coded negative two ($n = 15$), and 20.5% of responses were coded negative one ($n = 9$). This indicates that only just over a quarter (27.9%) of responses were viewed as embodying high power to the full capacity and just less than a half (43.2%) were viewed as embodying low power to the full capacity.

The majority of participants indicated they agreed or strongly agreed that the distributive injustice situation was unfair (78.2%, $n = 68$). 17.2% neither agreed nor disagreed ($n = 15$), and only 4.5% disagreed or strongly disagreed ($n = 4$)

3.2 Principle Component Analyses to Check the Factor Structure of Belief in a Just Treatment Scale

To check that it was, in fact, the case that there were five separate belief systems relating to sources of justice underlying the facets of the Belief in a Just Treatment Scale (BJT-5), two principal component analyses (PCA) were conducted on the 39 items with orthogonal rotation (varimax). The initial PCA yielded a total of 6 components, however, only two items clustered on the 6th component (whilst also clustered on component 5). Therefore, the analyses was repeated forcing 5 components. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .75, and all KMO values for individual items were > .48 which marginally acceptable (.5 and above is usually what is considered acceptable; Field (2009)) . Bartlett's test of sphericity X^2 (741) = 4304.99, $p < .001$, indicated that correlations between items were sufficiently large for PCA. An initial analysis was run to obtain eigenvalues

over Kaiser's criterion of 1 and in combination explained 76.37% of variance. The items that clustered on the same components suggested that component one represented belief that God is a source of justice (BJT-5 God), component two represented belief that chance is a source of justice (BJT-Chance), component three represented belief that oneself was a source of justice (BJT-Self), component four represented belief that nature was a source of justice (BJT-5 Nature), and component five represented belief that others were a source of justice (BJT-5 Others), thus confirming the five factor structure of the Belief in a Just Treatment scale. It was recognized that sample size ($n = 87$) was a limiting aspect in this analyses, but outcomes were accepted by virtue of the fact that, when forcing five factors, items loaded on these exactly as they were expected to do.

3.3 Inter-correlations Between Belief in a Just Treatment and Measures of Self- Efficacy, Negative Affect, and Action Orientation

To investigate the relationship between the five facets relating to belief in a just treatment construct, and the outcome variables, efficacy, negative affect, overall action, compensation action and revenge action, Pearson's correlations were calculated for each variable. Distributions are indicated by Figure 1 and Figure 2, and means , standard deviations and correlations are reported in Table 4.

There was a small significant correlation between BJT-5 God and BJT-5 Others, and revenge action ($r = .22$, $p < .05$, and, $r = .24$, $p < .05$ respectively). This indicates that those who had high BJT-5 God or high BJT-5 Others were more likely to engage in revenge action. These results give partial support for H_3 (that there would be a positive relation between BJT-5 God, BJT-5 Nature or BJT-5-Others and action) but do not support H_4 (that there would be a negative

relation between BJT-5 Self, or BJT-5 Chance and actions). Otherwise, there were no other significant relations between the sources of justice and any of the outcome measures.

There was a moderate correlation between compensation action and efficacy ($r = .28$, $p <$ .01), indicating those who had higher efficacy were more likely to take compensation action as well as overall action. There was also a moderate correlation between overall action and negative affect ($r = .3$, $p < .01$) and a moderate correlation between compensation action and negative affect ($r = .32$, $p < .01$) indicating that those who reported more negative affect were more likely to take compensation action as well as overall action.

There was a small to moderate correlation between the BJT-5 Nature facet and BJT-5 Self ($r = .26$, $p < .05$), BJT-5 God facet ($r = .33$, $p < .01$) and BJT-5 Chance facet ($r = -.24$, $p < .05$), indicating that those who scored highly on BJT-5 Nature facet were more likely to score highly on BJT-5 Self facet and BJT-5 God facet and, conversely, less likely to get high scores on BJT-5 Chance facet. Similarly there was a small correlation between BJT-5 Self facet and BJT-5 Others facet ($r = .21$, $p < .05$), indicating that those who scored highly on BJT-5 Self facet were also more likely to score highly on BJT-5 Others facet.

Figure 1

Histograms to Illustrate the Distribution of Outcome Variables (Self Efficacy, Negative Affect and Action)

1)
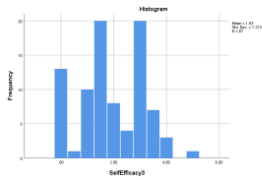
2)
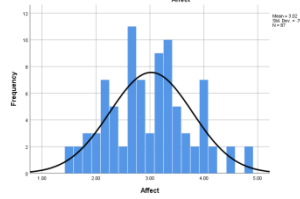
3)
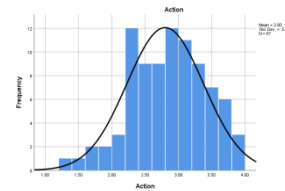
4)
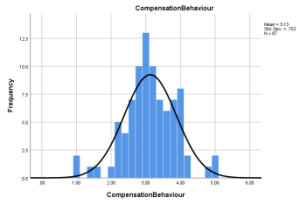
5)
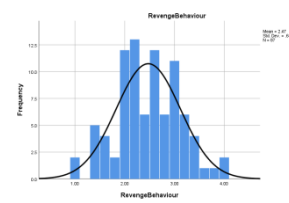
Note: (1) is self-efficacy, (2) is negative affect, (3) is action overall, (4) is compensation action, and (5) is revenge action.

Figure 2

Histograms to Illustrate the Distribution of the Five Facets of Belief in a Just Treatment Scale

1)

2)

3)

4)

5)
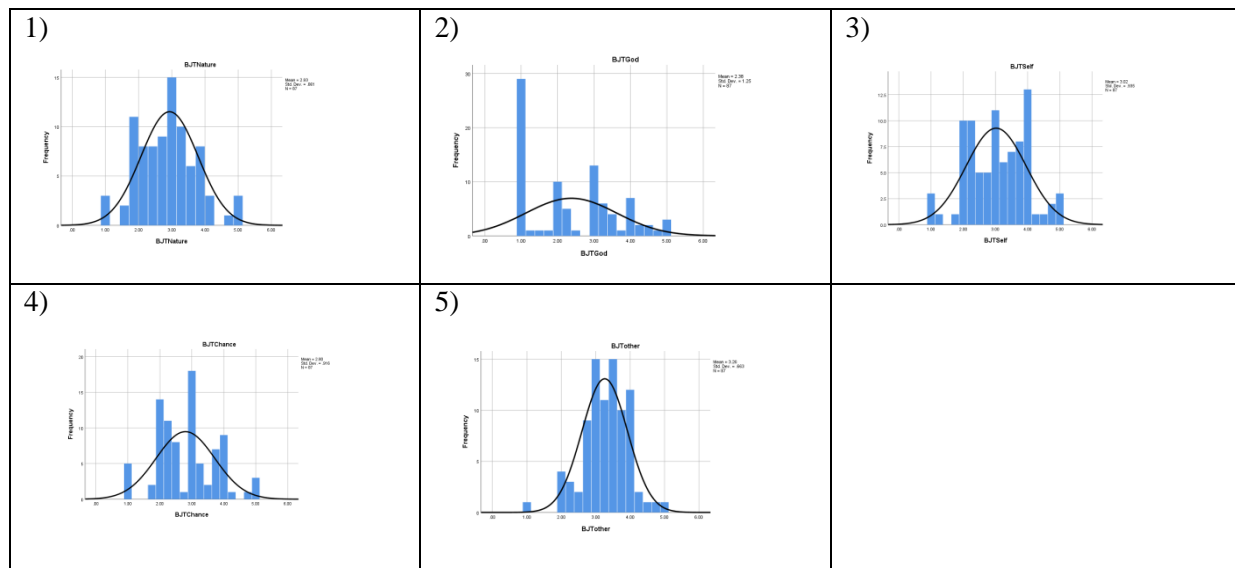
Note: (1) is Belief in a Just Treatment from Nature, (2) is Belief in a Just Treatment from God, (3) is Belief in a Just Treatment from Self, (4) is Belief in a Just Treatment from Chance, and (5) is Belief in a Just Treatment from Others.

Table 4

Summary of Intercorrelations, Means and Standard Deviations for scores on Measures of Self-Efficacy, Negative Affect and Action, and the Five Facets of BJT-5

	Self-Efficacy	Negative Affect	Action - Overall	Action - Compensation	Action - Revenge	BJT-5 Nature	BJT-5 God	BJT-5 Self	BJT-5 Chance	BJT-5 Other
Self-Efficacy	-									
Negative Affect	.02	-								
Action- Overall	.18	.30**	-							
Action - Compensation	.28**	.32**	-	-						
Action - Revenge	-.01	.16	-	-	-					
BJT-5 Nature	-.01	.1	.12	.1	.1	-				
BJT-5 God	.16	-.01	.15	.04	.22*	.33**	-			
BJT-5 Self	.05	.02	.06	.03	.07	.26*	.08	-		
BJT-5 Chance	-.04	-.08	-.13	-.08	-.13	-.24*	-.18	-.02	-	
BJT-5 Other	-.19	.05	.12	-.03	.24*	.14	-.13	.21*	.07	-
M	1.93	3.02	2.8	3.13	2.47	2.93	2.38	3.02	2.8	3.26
SD	1.21	.77	.58	.75	.65	.86	1.25	.94	.92	.66

Note: For all scales and measures, higher scores are indicative of more extreme responding in the direction of the construct assessed. Scores on the "Action-Overall" measure are divided into two separate categories ("Action-Compensation" and "Action-Revenge"). BJT-5 = Belief in a Just Treatment Scale (Stroebe et al., 2015).
*p < .05, **P < .01

3.4 T-tests to Test the Grouping Effect of Power on Self-Efficacy, Negative Affect and Action Orientation (and, to Make Sure Power was not Directly Effecting Facets of Belief in a Just Treatment)

To test whether there was a difference between the *high power* condition and the *low power* condition on the outcome variables, independent samples t-tests were run (results given in Table 5). No significant difference between the *high power* and *low power* condition were found

for self-efficacy, negative affect, overall action, compensation action or revenge action (as per

Table 2). Therefore, H_1, H_2 , and H_3 (That high power people would endorse action-oriented

behaviours more, have higher self-efficacy and experience lower negative affect) were not

supported.

To make sure that power was not having an effect on any of the belief in a just treatment

facets (the supposed moderating variables), independent samples t-tests were also run on these.

There was a significant difference between *high power* and *low power* conditions on BJT-5

Others ($t(85) = 2.2$, $p < .05$) such that those in the *high power* condition had higher BJT-5 ($M =$

3.42, $SD = .63$) and those in the *low power* condition had slightly lower BJT-5 Others ($M = 3.11$,

$SD = .67$). However, as expected, there was no significant difference between *high power* and

low power on BJT-5 Nature, God, Self, or Chance.

Table 5

Summary of T-tests Measuring Differences Between High Power and Low Power on Self-Efficacy, Negative Affect, Overall Action, Compensation Action, Revenge Action and the Five Facets of The Belief in a Just Treatment Scale

	Low Power		High Power		t (85)	p	95% CI	
	M	SD	M	SD			LL	UL
Self-Efficacy	1.98	1.36	1.88	1.05	-.36	.72	-.61	.43
Negative Affect	3.00	.83	3.04	.70	.25	.81	-.29	.37
Overall Action	2.77	.60	2.83	.55	.52	.61	-.18	.31
Compensation Action	3.14	.87	3.11	.62	-.18	.86	-.35	.29
Revenge Action	2.40	.60	2.55	.69	1.14	1.14	-.12	.43
BJT-5 Nature	2.89	.92	2.98	.81	.51	.62	-.27	.46
BJT-5 God	2.22	1.27	2.54	1.22	1.22	.23	-.21	.86
BJT-5 Others	3.11	.67	3.42	.63	2.19	.03	.03	.58
BJT-5 Self	2.88	.98	3.16	.87	1.40	.17	-.12	.68
BJT-5 Chance	2.76	.94	2.84	.90	.43	.67	-.31	.48

Note: CI = confidence interval; *LL* = lower limit; *UL* = upper limit

3.5 Regression Analyses to Model the Relationship Between Power and Action Orientation and the Moderating Effect of BJT-5

To investigate the moderating effect of BJT-5 facets on a potential relation between power and the outcome variable, action-orientation (including the two sub-variables, compensation action and revenge action), 10 multiple linear regression analyses were conducted using the "Process" macro (Hayes, 2014), with mean centering, for each of these three outcome variables. Power was entered as the predictor variable, either overall action (see Table 6), compensation action (see Table 7) , or revenge action (see Table 8) was entered as the outcome variable, and each of the five facets of the Belief in a Just Treatment scale was entered as the moderator variable. While testing the moderating effects of each facet of BJT-5, the other facets were also controlled for in the later analyses (models 5^a, 6^b, 7^c, 8^d, and 10^e included in Tables 3, 4, & 5). Almost none of the 30 models reached significance with the exception of power and BJT-5–Self predicting revenge action when controlling for BJT-5 Nature, God, Chance and Others *(F(7,79) = 2.13, p = .05, R^2= .16)*, however the coefficients for power, BJT-5- Self, and the interaction term were not significant (as significance, in this case, was accounted for by one of the variables being controlled for; see Table 8). The other four models predicting revenge using power and each of the just treatment facets (whilst controlling for the other four) almost reached significance (BJT-5 Nature: *F(7,79) = 1.99, p = .07, R^2= .15*; BJT-5 God: *F(7,79) =* .1.86, *p = .09, R^2= .14*; BJT-5 Other: *F(7,79) = 1.80, p = .10, R^2= .14*; and BJT-5 Chance: *F(7,79) = 1.98, p = .07, R^2= .15*; see Table 5).   None the less, it was concluded that H_6 and H_7 (that power would predict action particularly when individuals had high BJT-5 Others, BJT-5 Nature or BJT-5 God and that a combination of low power and BJT-5 Self and BJT-5 Chance would predict inaction) was not supported.

Table 6

Summary of Regression Analyses for Relations Between Power, Each of the Five Facets of the Belief in a Just Treatment Scale, and Overall Action

Model Number	Model Significance	Predictors	β Coefficient	95% CI	
				LL	UL
1	$F(3, 83) = .51, p = .68, R^2 = .02$	Power	-.06	-.30	.19
		BJT-5 Nature	.08	-.07	.23
		Power x BJT-5 Nature	-.06	-.35	.23
2	$F(3, 83) = .67, p = .57, R^2 = .02$	Power	-.04	-.29	.21
		BJT-5 God	.07	-.03	.17
		Power x BJT-5 God	-.02	-.22	.18
3	$F(3,83) = .92, p = .43, R^2 = .03$	Power	-.05	-.30	.20
		BJT-5 Self	.04	-.09	.18
		Power x BJT-5 Self	-.20	-.47	.07
4	$F(3,83) = .63, p = .60, R^2 = .02$	Power	-.07	-.32	.18
		BJT-5 Chance	-.08	-.22	.05
		Power x BJT - Chance	.06	-.21	.33
5	$F(3,83) = .42, p = .74, R^2 = .02$	Power	-.04	-.29	.22
		BJT-5 Others	.09	-.10	.29
		Power x BJT-5 Others	-.06	-.44	.33
6[a]	$F(7,79) = .65, p = .71, R^2 = .05$	Power	-.01	-.27	.25
		BJT-5 Nature	.02	-.15	.19
		Power x BJT-5 Nature	-.07	-.36	.23
7[b]	$F(7,79) = .64, p = .72, R^2 = .05$	Power	-.01	-.28	.25
		BJT-5 God	.06	-.05	.17
		Power x BJT-5 God	-.04	-.25	.18
8[c]	$F(7,79) = 1.01, p = .43, R^2 = .8$	Power	-.01	-.27	.25
		BJT-5 Self	.02	-.12	.16
		Power x BJT-5 Self	-.22	-.49	.06
9[d]	$F(7,79) = .77, p = .61, R^2 = .06$	Power	-.001	-.26	.26
		BJT-5 Chance	-.07	-.21	.08
		Power x BJT-5 Chance	.14	-.15	.43
10[e]	$F(7,79) = .64, p = .72, R^2 = .05$	Power	-.01	-.27	.25
		BJT-5 Others	.11	-.09	.32
		Power x BJT-5 Others	.05	-.45	.34

Note: *a* = BJT-5 God, Self, Chance and Others were controlled for; *b* = BJT-5 Nature, Self, Chance and Others were controlled for; *c* = BJT-5 Nature, God, Chance and Others were controlled for; *d* = BJT-5 Nature, God, Self and Others were controlled for; *e* = BJT-5 Nature, God, Self and Chance were controlled for.

Table 7

Summary of Regression Analyses for Relations Between Power, Each of the Five Facets of the Belief in a Just Treatment Scale, and Compensation Action

Model Number	Model Significance	Predictors	β Coefficient	95% CI	
				LL	*UL*
1	$F (3, 83) = .30, p =$ .83, $R^2 = .01$	Power	.04	-.29	.36
		BJT-5 Nature	.08	-.11	.27
		Power x BJT-5 Nature	.05	-.33	.43
2	$F (3, 83) = .07, p =$ .98, $R^2 = .01$	Power	.04	-.29	.37
		BJT-5 God	.02	-.10	.16
		Power x BJT-5 God	.02	-.24	.29
3	$F(3,83) = .48, p =$ .69, $R^2 = .02$	Power	.04	-.29	.37
		BJT-5 Self	.04	-.14	.22
		Power x BJT-5 Self	-.20	-.56	.15
4	$F(3,83) = .30, p =$ .82, $R^2 = .01$	Power	.02	-.30	.35
		BJT-5 Chance	-.07	-.25	.11
		Power x BJT - Chance	-.10	-.25	.46
5	$F(3,83) = .09, p =$ .96, $R^2 = .01$	Power	.02	-.31	.36
		BJT-5 Others	-.03	-.29	.22
		Power x BJT-5 Others	-.11	-.62	.40
6[a]	$F(7,79) = .18, p =$ .99, $R^2 = .02$	Power	.02	-.33	.37
		BJT-5 Nature	.07	-.15	.29
		Power x BJT-5 Nature	.04	-.35	.44
7[b]	$F(7,79) = .17, p =$ .99, $R^2 = .02$	Power	.02	-.33	.37
		BJT-5 God	-.01	-.15	.14
		Power x BJT-5 God	.01	-.28	.29
8[c]	$F(7,79) = .39, p =$ .90, $R^2 = .03$	Power	.02	-.32	.37
		BJT-5 Self	.03	-.16	.21
		Power x BJT-5 Self	-.23	-.59	.14
9[d]	$F(7,79) = .23, p =$ .98, $R^2 = .02$	Power	.03	-.32	.38
		BJT-5 Chance	-.05	-.24	.14
		Power x BJT-5 Chance	-.12	-.26	.51
10[e]	$F(7,79) = .21, p =$ .98, $R^2 = .02$	Power	.02	-.33	.37
		BJT-5 Others	-.05	-.32	.22
		Power x BJT-5 Others	-.14	-.66	.39

Note: *a* = BJT-5 God, Self, Chance and Others were controlled for; *b* = BJT-5 Nature, Self, Chance and Others were controlled for; *c* = BJT-5 Nature, God, Chance and Others were controlled for; *d* = BJT-5 Nature, God, Self and Others were controlled for; *e* = BJT-5 Nature, God, Self and Chance were controlled for.

Table 8

Summary of Regression Analyses for Relations Between Power, Each of the Five Facets of the Belief in a Just Treatment Scale, and Revenge Action

Model Number	Model Significance	Predictors	β Coefficient	95% CI	
				LL	*UL*
1	$F(3, 83) = .1.03, p = .38, R^2 = .04$	Power	-.15	-.43	.13
		BJT-5 Nature	.08	-.08	.24
		Power x BJT-5 Nature	-.17	-.50	.15
2	$F(3, 83) = 1.77, p = .16, R^2 = .06$	Power	-.12	-.40	.15
		BJT-5 God	.11	-.01	.22
		Power x BJT-5 God	-.06	-.28	.16
3	$F(3,83) = 1.11, p = .35, R^2 = .04$	Power	-.14	-.42	.13
		BJT-5 Self	.05	-.10	.20
		Power x BJT-5 Self	-.20	-.51	.10
4	$F(3,83) = .99, p = .40, R^2 = .03$	Power	-.17	-.44	.11
		BJT-5 Chance	-.10	-.25	.05
		Power x BJT - Chance	.02	-.29	.32
5	$F(3,83) = 1.87, p = .14, R^2 = .06$	Power	-.09	-.37	.19
		BJT-5 Others	.22	.01	.43
		Power x BJT-5 Others	-.01	-.43	.42
6^a	$F(7,79) = 1.99, p = .07, R^2 = .15$	Power	-.04	-.32	.23
		BJT-5 Nature	-.03	-.21	.14
		Power x BJT-5 Nature	-.17	-.49	.14
7^b	$F(7,79) = .1.86, p = .09, R^2 = .14$	Power	-.05	-.33	.23
		BJT-5 God	.13	.01	.25
		Power x BJT-5 God	-.07	-.30	.15
$*8^c$	$F(7,79) = 2.13, p = .05, R^2 = .16$	Power	-.04	-.32	.23
		BJT-5 Self	.01	-.15	.16
		Power x BJT-5 Self	-.21	-.50	.08
9^d	$F(7,79) = 1.98, p = .07, R^2 = .15$	Power	-.03	-.31	.25
		BJT-5 Chance	-.09	-.24	.07
		Power x BJT-5 Chance	-.16	-.15	.47
10^e	$F(7,79) = 1.80, p = .10, R^2 = .14$	Power	-.04	-.33	.24
		BJT-5 Others	.28	.06	.49
		Power x BJT-5 Others	.03	-.40	.45

Note: *a* = BJT-5 God, Self, Chance and Others were controlled for; *b* = BJT-5 Nature, Self, Chance and Others were controlled for; *c* = BJT-5 Nature, God, Chance and Others were controlled for; *d* = BJT-5 Nature, God, Self and Others were controlled for; *e* = BJT-5 Nature, God, Self and Chance were controlled for. * = model reached significance, but none of predictors within the model were significant.

3.6 Secondary Analyses Using a Smaller, More Refined Data Set

One possible explanation for the absence of effects was that responses to the power manipulation did not adequately reflect high power or low power. Therefore, I re-analyzed the data by removing several responses to the power manipulation (if they only were only a weak account of having power or being disempowered). The resulting data consisted of *n* = 60 (*high power* condition consisted of *n* = 25, and *low power* condition consisted of *n* = 35). Correlations, independent samples t-tests and regression analyses were conducted on this data (see Appendix B for all analyses), but results show no additional support for H_6 and H_7, therefore the discussion focuses on the initial analysis.

Discussion

4.1 Findings

4.1.1 Findings Relating to Hypotheses about Power

It was hypothesised that there would be differences between high power and low power on outcome variables of self-efficacy, negative affect and action orientated behaviour. Specifically it was hypothesised that high power would be associated with higher self-efficacy, lower negative affect and a greater likelihood of engaging in action orientated behaviours as was found in previous studies on power (Anderson, & Berdahl, 2002). In the current study, there were no differences between high and low power on any of the outcome variables.

4.1.2 Findings Relating to Hypotheses about Belief in a Just Treatment

It was also hypothesised that there would be a relationship between beliefs associated with who or what is responsible for delivering justice in the world and action orientated behaviour. Specifically, it was hypothesised that stronger belief that justice in the world could be

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attributed to others (BJT-5 Others), God (BJT-5 God) and nature (BJT-5 Nature), would be associated with greater endorsement of action orientated behaviours and, conversely, stronger belief that justice in the world could be attributed to chance (BJT-5 Chance) or oneself (BJT-5 Self) would be associated with weaker endorsement of action orientated behaviours as suggested by the study conducted by Stroebe, et al. (2015). In partial support of this, it was found that greater BJT-5 God and greater BJT-5 Others were associated with higher endorsement of action-oriented behaviours related to revenge. However, there was no relationship between BJT-5 Nature as a source of justice and endorsement of action oriented behaviours, nor was there a relation between BJT-Self and BJT-5 Chance and rejection of action-oriented behaviours.

4.1.3 Findings Relating to Hypotheses about the Interaction Between Power and Belief in a Just Treatment

Lastly, it was hypothesised that beliefs in the sources of justice would moderate the relationship between power and endorsement of action oriented behaviours. Specifically, strong belief that BJT- 5 Others, BJT-5 God or BJT-5 Nature would interact with high power to strongly predict action oriented behaviours; conversely, BJT-5 Self and BJT-5 Chance would interact with low power to strongly predict rejection of action-oriented behaviours. The current study did not find that any of the just treatment belief facets enhanced relations between high power and endorsement of action orientation or relations between low power and rejection of action orientation. This being said, models predicting revenge behaviours with power and justice beliefs did approach significance (in one case, a model reached significance, but this significance was accounted for by a control variable).

.14).

4.1.4 Additional Findings

As implicit in hypothesis that high power would be related to endorsement of action-oriented behaviours, higher self-efficacy and lower negative affect , higher self-efficacy was associated with higher endorsement of action oriented behaviours relating to compensation. What was not anticipated, (and indeed contradicted by the implicit expectation of the hypotheses) was a relationship between greater negative affect and higher endorsement of action oriented behaviours. Curiously high power was causally related to high BJT-5 other people.

It is worth noting that, although factor analysis confirmed the five sources of justice were largely distinct from one another, there were positive relations between BJT-5 Nature, and BJT-5 God and BJT-5 Self, as well as between BJT-5 Self and BJT-5 Others; and negative relations between BJT-5 Nature and BJT-5 Chance.

4.2 Limitations of Current Study

4.2.1 Limitations of Power Manipulation

It may be reasonable to assume that the failure of the power manipulation plays some accountability in explaining why results were largely non-significant. As indicated by the manipulation check, relatively few responses actually embodied high power or low power to the full capacity of the criteria. Although the analysis was re-conducted excluding participants' responses with very low scores, due to the already small sample size, it was impractical to remove all suboptimal responses. What this means in practical terms is that participants were included who, a) definitely did provide a situation that was clearly and unambiguously an account of high or low power, b) may or may not have included information about how they felt, and, c) if they did include an account of feeling, this encompassed purely positive feelings for high power individuals and negative feelings for low power individuals. In other words, any *expressed* situational or emotive ambiguity was excluded from the data set. This, of course, does

not eradicate *implicit* ambiguity; just because some responses did not specify emotion at all (and, thus, there was no outward account of contradicting emotion), it does not rule out the possibility that the situation accounted by the individual did actually elicit contradicting or ambiguous feelings that they chose not to mention. Thus, although the analysis was re-conducted with intent of improving the accuracy of the power manipulation, it cannot be absolved of accountability for the non-significant results.

This manipulation has been used and verified by other researchers in the past (Galinsky, et al., 2003; Van Duke, et al., 2017) and was chosen for the current study for this reason, in addition to its convenient nature (simply asking individuals to reflect on a situation that has happened in the past) and the fact that it is not ethically questionable (not actually inducing a novel power or powerlessness situation chosen and tailored by the researcher which may elicit a higher level of stress and upset in the participants). There are a couple of discrepancies between the current study and other studies that have used this manipulation. Most notably, unlike the current study which used a majority student sample, the manipulation has been used in the past on a non-student sample recruited online from the general American population in some cases (Van Duke, et al., 2017). The manipulation has also been used with a student sample, however participants were required to complete the exercise in a lab a setting enabling a high level of regulation (control over time taken, minimization of distractions; Galinsky et al., 2003). It is arguable that, in the current study, students may not be able to inhabit the role of being powerful through their recollections as much because it is probably the case that they have less social capital than, say, members of the general population. That significant results were found in some student samples may be attributable to the highly controlled environment under which the manipulation was delivered, that enabled students to focus in a quiet, neutral , stimulus reduced

environment and thus inhabit the role of being powerful (or not powerful) to a greater extent than they otherwise would and thus enabling the manipulation to detect small effects that it otherwise could no hope to pick up.

Furthermore, the afore mentioned studies differ to the current study because of proximity of the participants to the researcher. In these, there was a degree of social distance between a university lecturer conducting research and either undergraduate students or the general population. In current study, there was far less difference between myself, a student researcher, and other undergraduate students from different levels. As such, participants may have been far more conscious of how they responded, particularly when asked to recall a situation of high power. In this case, they may have felt it was more desirable to focus on aspects of power that they found challenging rather admitting to enjoying power or experiencing positive feelings in relation to having power.

Also worth noting, despite past research that suggests that power predicts *less* negative affect and *more* action-oriented behaviours (Anderson, & Bedhal, 2002) and thus, by implication, it can be assumed there may be a slight negative relation between the two, there was a curiously positive relation between negative affect and action-orientation. This is perhaps because the common denominator, power, was not affecting the outcomes in the expected ways, namely it was not predicting action orientation. Therefore, action may have been the result, not of people's experience, or lack of experience, of power (and emotions associated with being powerful or lacking power), but purely of people's animosity towards the situation.

4.2.2 Limitations of Belief in a Just Treatment Scale

Although the *Belief in a Just Treatment* Scale did yield some expected results, the fact that BJT-5 Nature, BJT-Self and BJT-Chance was not related to action or inaction suggests that,

none the less, there may have been some problems with it. In particular people may have had problems deciphering what nature meant as suggested by the pilot study in which people reported having problems with comprehension. Although, as a result of this, an explanatory clause was added to the survey, this is not full proof insurance of adequate comprehension. Furthermore, correlation between BJT-5 Nature and other facets of the scales indicated that there might be some confusion in differentiating BJT-5 Nature from the other facets. The relation between BJT-5 Other and BJT-5 Self could, likewise, indicate that people slightly confounded these variables.

4.2.4 Limitations of Hypothetical Distributive Injustice Scenario and Outcome Measures (Negative Affect, and Action-Orientation)

It was necessary to construct a distributive injustice scenario which was relevant to the participants and, as such, a scenario involving the distribution of unfair grades was given. It is possible that this scenario was not salient enough to encourage active responding in predisposed individuals. It may be the case that a greater discrepancy was required between the hypothetical grade they were given and the grade of the colleague, for participants to care enough about it to do something. The situation was chosen because it was meant to reflect an injustice in the distribution of grades *not* simply the negative experience of receiving a bad grade, so positing a similar but more extreme scenario should be approached with caution.

Given the nuances of the experiment, it was necessary to construct an original measure for action orientation based on past findings (Chih et al., 2016; Marescaux et al., 2017) and include alterations to the measure of negative affect (Watson, et al., 1985). It is possible, then, that either of these measures did not encompass a broad enough response range; or the response range may have been too broad and some of the items irrelevant. Maybe some of the emotions

listed in the *Negative Affect* scale or the items reflecting courses of action in the action-orientation measure were too heavy handed and thus, people who would ordinarily feel negatively in the situation or who would take action in the situation, could only purport to endorse a few of the items, and thus their averaged negative affect or action orientation scores were still low in spite of their underlying feelings towards the situation. It is also possible, although probably less likely, that although they endorsed taking action, none of the items in the action-orientation measure reflected the actions they would like to take. Furthermore, although similar items have been successful in measuring action –orientation in previous studies, these studies reflect different context s to the present study (actions in the workplace or actions in the context of reviewing a restaurant; Chih et al., 2016; Marescaux et al., 2017). These problems may have been prevented by further pilot studies, however, this was beyond the amount of time and resources afforded to the current study.

4.3 Future Research

In light of the limitations of the current study, it may be worthwhile repeating the investigation with different methodology. First and foremost, this may involve using a different power manipulation if a student sample was to be employed again. For example, a manipulation could involve one group of participants being given perceived actual power over outcomes for participants in the other group (Anderson, & Berdahl, 2002). Alternatively, one could administer a similar survey format using the same power manipulation to the one in the current study, but to a different group of participants (using a different distributive injustice scenario), like people employed in a particular type of job (as it is advantageous to keep constant all determinants of power [other than the manipulation] like employment status and wage). It would also be

advantageous to repeat the current study with a much larger sample size in light of results approaching significance.

Future research may also approach the general constructs, justice beliefs, distributive justice and power, from different angles. For example it may be useful to investigate whether felt power *directly* impacts beliefs about justice which in turn, impacts responses to an unfair situation. Alternatively, it may prove fruitful to investigate whether "felt" power and "actual" power influences the trajectory of responses to distributive injustice differently.

4.4 Conclusion

In conclusion, the current study covers both new and old territory in relation to important constructs: power, belief in a just treatment and distributive (in)justice. Although the investigation failed to support the main hypothesis, that a combination of power and belief in a just treatment in the world would affect reactions to a distributive injustice, it provides some evidence for the utility of pursuing future research related to all three constructs. It did confirm some (though not all) predictions relating to the facets of belief in a just treatment construct, thus suggesting the relevance of at least some of the underlying facets. Furthermore, it provides a conceptual frame work for future research to test the current hypotheses in ways other than those used in the current study. In sum, it is not in vain that this study attempted to address the determinants of behaviour in a distributive injustice situation as the concepts and methods employed here may provide a spring board for related, but new and improved research in the future.

References

Anderson, C., & Berdahl, J. (2002). The Experience of Power: Examining the Effects of Power on Approach and Inhibition Tendencies. *Journal of Personality and Social Psychology*, *83(6)*, 1362-1377. DOI: 10.1037/0022-3514.83.6.1362

Anderson, C., John, O., & Keltner, D. (2012). The Personal Sense of Power. *Journal of Personality*, *80*(2), 313-344. DOI: 10.1111/j.1467-6494.2011.00734.x

Anderson, C., Kraus, M., Galinsky, A., & Keltner, D. (2012). The Local-Ladder Effect: Social Status and Subjective Well-Being. *Psychological Science, 23*(7), 764-771. DOI: 10.1177/0956797611434537

Appel, M. (2008). Fictional Narratives Cultivate Just-World Beliefs. *Journal of Communication, 58*, 62-83. DOI: 10.1111/j.1460-2466.2007.00374.x

Bartholomaeus, & Strelan. (2016). Just world beliefs and forgiveness: The mediating role of implicit theories of relationships. *Personality and Individual Differences*, *96*, 106-110. DOI: 10.1016/j.paid.2016.02.081

Chih, W., Chiu, T., Lan, L., & Fang, W. (2017). Psychological contract violation. *International Journal of Conflict Management*, *28*(1), 103-121. DOI: 10.1108/IJCMA-02-2016-0010

. Cohen, R.(2016). Restorative Justice. *Springer Science + Business Media*, 257-274. DOI: 10.1007/978-1-4939-3216-0_11

Dalbert, C., Montada, L., & Schmitt, M. (1987). Glaube an eine gerechte Welt als Motiv: Validierungskorrelate zweier Skalen (Belief in a just world: Validity correlates of two scales). *Psychologische Beitrage, 29*, 596-615.

Dalbert, C. (1999). The World is More Just for Me than Generally: About the Personal Belief in a Just World Scale's Validity. *Social Justice Research, 12*(2), 79-98. DOI: 10.1023/A:1022091609047

Deutsch, M. (1979). Education and Distributive Justice: Some Reflections on Grading Systems *American Psychologist*, 34(5), 391-401. DOI: 0003-06«X/79/3405-0391$00.7S

Dover, T., Matthews, M., Krauss, D., & Levin, S. (2012). Just World Beliefs, Expert Psychological Testimony, and Verdicts: A Mediational Model. Analyses of Social Issues and Public Policy, 12(1), 340-363. DOI: 10.111/j.1530-2415.2011.01278.x

Ebneter, Latner, & O'brien. (2011). Just world beliefs, causal beliefs, and acquaintance: Associations with stigma toward eating disorders and obesity. *Personality and Individual Differences*, *51*(5), 618-622. DOI: 10.1016/j.paid.2011.05.029

Feinberg, M., & Willer, R. (2011). Apocalypse Soon? Dire Messages Reduce Belief in Global Warming by Contradicting Just-World Beliefs. *Psychological Science*, *22*(1), 34-38. DOI: 10.1177/0956797610391911

Ferguson, N., & Kamble, S. (2012). The Role of Revenge, Denial, and Terrorism Distress in Restoring Just World Beliefs: The Impact of the 2008 Mumbai Attacks on British and Indian Students. *The Journal of Social Psychology*, *152*(6), 687-696. DOI: 10.1080/00224545.2012.688893

Field, A. P. (2009). Discovering Statistics using SPSS (and sex and drugs and rock' n' roll) (3rded.). London: Sage.

Frank, Wertenbroch, & Maddux. (2015). Performance pay or redistribution? Cultural differences in just-world beliefs and preferences for wage inequality. *Organizational Behavior and Human Decision Processes*, *130*(C), 160-170. DOI: 10.1016/j.obhdp.2015.04.001

Galinsky, A., Gruenfeld, D., Magee, J., & Dovidio, John F. (2003). From Power to Action. *Journal of Personality and Social Psychology*, *85*(3), 453-466. **DOI:** 10.1037/0022-3514.85.3.453

Gobena, & Van Dijke. (2016). Power, justice, and trust: A moderated mediation analysis of tax compliance among Ethiopian business owners. *Journal of Economic Psychology*, *52*, 24-37. DOI: 10.1016/j.joep.2015.11.004

Greitemeyer, T., & Sagioglou, C. (2017). Increasing wealth inequality may increase interpersonal hostility: The relationship between personal relative deprivation and aggression. *The Journal of Social Psychology*, *157*(6), 766-776. DOI: 10.1080/00224545.2017.1288078

Ilias Kapoutsis, Roger Volkema, & Antonia Lampaki. (2017). Mind the First Step: The Intrapersonal Effects of Affect on the Decision to Initiate Negotiations under Bargaining Power Asymmetry. *Frontiers in Psychology*, *8*, 1313. DOI: 10.3389/fpsyg.2017.01313

Jasso, G., Törnblom, K.Y., & Sabbagh, C. (2016). Distributive Justice. *Springer Science + Business Media*, 201-218. DOI: 10.1007/978-1-4939-3216-0_11

Kasperbauer, T. (2015). Psychological Constraints on Egalitarianism: The Challenge of Just World Beliefs. *Res Publica*, *21*(3), 217-234. DOI: 10.1007/s11158-015-9284-z

Lee, C., Bobko, P., & Schmitt, Neal. (1994). Self-Efficacy Beliefs: Comparison of Five Measures. *Journal of Applied Psychology, 79*(3), 364-369. DOI: 10.1037/0021-9010.79.3.364

Lerner, M. (1980). The Belief in a Just World: A Fundamental Delusion. New York: Plenum.

Lerner, M. (1997). What Does the Belief in a Just World Protect Us From: The Dread of Death or the Fear of Understanding Suffering? Psychological Inquiry, *8*(1), 29-32. DOI: 10.1207/s15327965pli0801 5

Lerner, S. (1981). Adapting to Scarcity and Change (1): Stating the Problem. In M. Lerner & S Lerner (Eds.), The Justice Motive in Social Behaviour (pp. 3-10). New York: Plenum Press.

Lipkus, I., Dalbert, C., & Siegler, I. (1996). The Importance of Distinguishing the Belief in a Just World for Self Versus for Others: Implications for Psychological Well-Being. *Personality and Social Psychology Bulletin, 22*(7), 666-677. DOI: 10.1177/0146167296227002

Marescaux, E., De Winne, S., & Sels, L. (2017). Idiosyncratic Deals from a Distributive Justice Perspective: Examining Co-workers' Voice Behavior. *Journal of Business Ethics*, 1-19. DOI: http://dx.doi.org/10.1007/s10551-016-3400-7

Mutch, C., & Tisak, J. (2005). Measurement Error and the Correlation between Positive and Negative Affect: Spearman (1904, 1907) Revisited. *Psychological Reports*, *96*(1), 43-46.

Nesbit, S., Blankenship, K., & Murray, R. (2012). The influence of just-world beliefs on driving anger and aggressive driving intentions. *Aggressive Behavior*, *38*(5), 389-402. DOI: 10.1002/ab.21439

Park, Crystal L., Edmondson, Donald, Fenster, Juliane R., & Blank, Thomas O. (2008). Meaning Making and Psychological Adjustment following Cancer: The Mediating Roles of Growth, Life Meaning, and Restored Just-World Beliefs. *Journal of Consulting and Clinical Psychology*, *76*(5), 863-875. DOI: 10.1037/a0013348

Paulhus, D., & Carey, J. (2011). The FAD–Plus: Measuring Lay Beliefs Regarding Free Will and Related Constructs. *Journal of Personality Assessment, 93*(1), 96-104. DOI: 10.1080/00223891.2010.528483

Pedersen, S., & Strömwall, L. (2013). Victim Blame, Sexism and Just-World Beliefs: A Cross-Cultural Comparison. *Psychiatry, Psychology and Law*, *20*(6), 932-941.DOI: 10.1080/13218719.2013.770715

Pinciotti, C., & Orcutt, H. (2017). Understanding Gender Differences in Rape Victim Blaming: The Power of Social Influence and Just World Beliefs. *Journal of Interpersonal Violence*, 886260517725736.

Poon, & Chen. (2014). When justice surrenders: The effect of just-world beliefs on aggression following ostracism. *Journal of Experimental Social Psychology*, *52*(C), 101-112. DOI: 10.1016/j.jesp.2014.01.006

Rubin, Z., & Peplau, L. (1975). Who Believes in a Just World? *Journal of Social Issues,31*(3), 65-89. DOI: 10.1111/j.1540-4560.1975.tb00997.x

Russell, & Hand. (2017). Rape myth acceptance, victim blame attribution and Just World Beliefs: A rapid evidence assessment. *Aggression and Violent Behavior*, *37*, 153-160. DOI: 10.1016/j.avb.2017.10.008

Schaafsma, J. (2013). Through the lens of justice: Just world beliefs mediate relationships between perceived discrimination and subjective well-being. *International Journal of Intercultural Relations*, *37*(4), 450-458. DOI: 10.1016/j.ijintrel.2013.04.002

Schmid, P. (2018). Less Power, Greater Conflict. *Social Psychology*, *49*(1), 47-62. DOI: 10.1027/1864-9335/a000327

Sirois, & Iyer. (2018). "At least David Cameron resigned": The protective effects of just-world beliefs for counterfactual thinking after Brexit. *Personality and Individual Differences*, *121*, 25-30. DOI: 10.1016/j.paid.2017.09.015

Stieger, S., Kastner, C., Voracek, M., & Furnham, A. (2011). Association between Just World Beliefs and Perceptions of Counterproductive Workplace Behaviors. *Psychological Reports*, *108*(2), 606-616.DOI: 10.2466/09.16.17.PRO.108.2.606-616

Strelan, & Sutton. (2011). When just-world beliefs promote and when they inhibit forgiveness. *Personality and Individual Differences*, *50*(2), 163-168. DOI: 10.1016/j.paid.2010.09.019

Strelan, & Van Prooijen. (2014). Rationalizers or realists? The effects of transgressors' just world beliefs within committed relationships. *Personality and Individual Differences*, *63*(C), 41-46. DOI: 10.1016/j.paid.2014.01.046

Strelan, P., Weick, M., & Vasiljevic, M. (2014). Power and revenge. *British Journal of Social Psychology, 53*(3), 521-540. DOI:10.1111/bjso.12044

Stroebe,K., Postmes,T. Täuber, S, Stegeman, A, & John M. (2015). Belief in a just what? Demystifying just world beliefs by distinguishing sources of justice. *PLoS ONE, 10*(3), DOI: 10.1371/journal.pone.0120145

Sue-Chana,C.,& Ongb, M. (2002). Goal assignment and performance: Assessing the mediating roles of goal commitment and self-efficacy and the moderating role of power distance. *Organizational Behavior and Human Decision Processes, 89*, 1140–116. DOI: 10.1016/S0749-5978(02)00017-1

Thomas, K., & Napolitano, P. (2017). Educational privilege: The role of school context in the development just world beliefs among Brazilian adolescents. *International Journal of Psychology*, *52*(S1), 106-113. DOI: 10.1002/ijop.12382

Thomas, & Mucherah. (2016). How fair is my world? Development of just world beliefs among Kenyan students. *Journal of Adolescence*, *49*(C), 244-253. DOI: 10.1016/j.adolescence.2016.03.011

Vermunt, & Steensma, H. (2016). Procedural Justice. *Springer Science + Business Media*, 219-236. DOI: 10.1007/978-1-4939-3216-0_11

Van Dijke, M., De Cremer, D., Langendijk, G., Anderson, C., & Chen, Gilad. (2018). Ranking Low, Feeling High: How Hierarchical Position and Experienced Power Promote Prosocial Behavior in Response to Procedural Justice. *Journal of Applied Psychology*, *103*(2), 164-181. DOI: 10.1037/apl0000260

Vonderhaar, R., & Carmody, D. (2015). There Are No "Innocent Victims": The Influence of Just World Beliefs and Prior Victimization on Rape Myth Acceptance. *Journal of Interpersonal Violence*, *30*(10), 1615-1632. DOI: 10.1177/0886260514549196

Wang, N., Sun, Y., & Li, P. (2015). Impact of power conceptualization and construal-level mindset on distributive fairness. *Social Behavior and Personality: An International Journal, 43*(8), 1361.

Watson, D. (1988). The Vicissitudes of Mood Measurement: Effects if Vary Descriptors, Time Frames, and Response Formats on Measures of Positive and Negative Affect. *Journal of Personality and Social Psychology, 55*(1), 128-141. DOI: 0022-3514/88/$00.75

Watson, D., Clark, L., & Tellegen, A.(1988). Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070. DOI: 0022-3514/88/$00.75

Watson, D., & Tellegen, A. (1985). Toward a Consensual Structure of Mood. *Psychological Bulletin*, *98*(2), 219-235. DOI: 0033-2909/85/$00.75

Wenzel, & Okimoto, T. G. (2016). Retributive Justice. *Springer Science + Business Media*, 237-256. DOI: 10.1007/978-1-4939-3216-0_11

Wickham, S., & Bentall, R. (2016). Are Specific Early-Life Adversities Associated With Specific Symptoms of Psychosis?: A Patient Study Considering Just World Beliefs as a Mediator. *The Journal of Nervous and Mental Disease*, *204*(8), 606-13. DOI: 10.1097/ NMD.0000000000000511

Wu, P., & Chaturvedi, S. (2009). The Role of Procedural Justice and Power Distance in the Relationship Between High Performance Work Systems and Employee Attitudes: A Multilevel Perspective. *Journal of Management*, 35(5), 1228-1247. DOI: 10.1177/0149206308331097

Zuckerman, M., & Gerbasi, K. (1977). Belief in internal control or belief in a just world: The use and misuse of the I-E scale in prediction of attitudes and behavior. *Journal of Personality*, *45*(3), 356-378.

Appendix A

Distributive Injustice Scenario (and explanatory clause given before scenario)

Please read the scenario below. After reading this scenario, you will be given a series of words, phrases and statements that describe how you may think, feel or act in response to the scenario. You will be asked to indicate on the scales provided the extent to which these words, phrases and statements accurately reflect how you would actually think, feel or act in response to the scenario.

Imagine you are completing a course through an educational institution, on campus along with other colleagues in the course cohort. Every week, one particular lecturer gives a presentation to you and your colleagues on one of the topics in the course. To hone your knowledge of each topic, you are also divided into separate weekly tutorial groups that are each run by a different tutor.

As part of the course assessment, you are required to complete an essay on one of the topics pertaining to the course. You are told that you will be given a grade out of 20 that reflects how well you perform in comparison to the average performance in the cohort and that your tutor is responsible for allocating this grade. Upon submission of your essay, you receive a grade of 10/20 or 50%. Your friend in another tutorial, who has also written their essay on the same topic as you, has received 16/20 or 80%. Your friend lends you their essay so you can compare it with your own and identify where you could make improvements. You notice that there is very little difference between your essay and your friend's essay, that is, both essays appear to satisfy the assessment criteria to the same extent.

Appendix B

Table 9

Summary of Intercorrelations, Means and Standard Deviations for scores on Measures of Self-Efficacy, Negative Affect and Action, and the Five Facets of BJT-5 – Refined Data Set

	Self-Efficacy	Negative Affect	Action - Overall	Action - Compensation	Action - Revenge	BJT-5 Nature	BJT-5 God	BJT-5 Self	BJT-5 Chance	BJT-5 Other
Self-Efficacy	-									
Negative Affect	.09	-								
Action- Overall	.13	.35**	-							
Action - Compensation	.28*	.37**	-	-						
Action - Revenge	-.10	.18	-	-	-					
BJT-5 Nature	-.12	.17	.09	.28*	.04	-				
BJT-5 God	.10	-.05	.14	.03	.28*	.24	-			
BJT-5 Self	.04	.08	.02	-.09	.03	.20	.11	-		
BJT-5 Chance	-.04	-.06	-.03	.25	-.09	-.28*	-.14	-.01	-	
BJT-5 Other	-.26*	.13	.15	.04	.25	.19	-.03	.15	.07	-
M	1.83	2.98	2.74	3.04	2.43	3.04	2.53	3.02	2.81	3.26
SD	1.23	.81	.54	.70	.66	.89	1.21	.95	.95	.69

Note: For all scales and measures, higher scores are indicative of more extreme responding in the direction of the construct assessed. Scores on the "Action-Overall" measure are divided into two separate categories ("Action-Compensation" and "Action-Revenge"). BJT-5 = Belief in a Just Treatment Scale (Stroebe et al., 2015).

*p < .05, **P < .01

Table 10

Summary of T-tests Measuring Differences Between High Power and Low Power on Self-Efficacy, Negative Affect, Overall Action, Compensation Action, Revenge Action and the Five Facets of The Belief in a Just Treatment Scale – Refined Data Set

	Low Power		High Power		t (58)	p	95% CI	
	M	*SD*	*M*	*SD*			*LL*	*UL*
Self-Efficacy	1.80	1.35	1.86	1.08	.18	.86	-.59	.71
BJT-5Other	3.13	.71	3.45	.63	1.84	.07	-.03	.68
Negative Affect	3.00	.90	2.96	.67	-.15	.88	-.46	.39
Overall Action	2.68	.60	2.81	.44	.88	.38	-.16	.41
Compensation Action	3.02	.85	3.06	.44	.18	.86	-.34	.40
Revenge Action	2.34	.64	2.56	.69	1.26	.21	-.13	.56
BJT-5 Nature	2.95	.97	3.17	.77	.92	.36	-.25	.68
BJT-5 God	2.17	1.15	3.04	1.14	2.89	.01	.27	1.47
BJT-5 Self	2.85	1.04	3.26	.77	1.67	.10	-.08	.90
BJT-5 Chance	2.84	.97	2.76	.95	-.33	.74	-.59	.42

Note: CI = confidence interval; *LL* = lower limit; *UL* = upper limit

Table 11

Summary of Regression Analyses for Relations Between Power, Each of the Five Facets of the Belief in a Just Treatment Scale, and Overall Action – Refined Data Set

Model Number	Model Significance	Predictors	β Coefficient	95% CI	
				LL	*UL*
1	$F(3, 56) = .41, p = .74,$ $R^2 = .02$	Power	-.30	-1.43	-.83
		BJT-5 Nature	-.05	-.67	-.57
		Power x BJT-5 Nature	-.06	-.29	-.41
2	$F(3, 56) = .47, p = .70,$ $R^2 = .02$	Power	-.05	-.80	.70
		BJT-5 God	.07	-.36	.49
		Power x BJT-5 God	-.01	-.27	.25
3	$F(3,56) = .58, p = .63,$ $R^2 = .03$	Power	.41	-.71	1.52
		BJT-5 Self	.29	-.32	.90
		Power x BJT-5 Self	-.17	-.51	.17
4	$F(3,56) = .27, p = .85$ $R^2 = .01$	Power	-.07	-.98	.84
		BJT-5 Chance	.02	-.49	.53
		Power x BJT – Chance	-.02	-.33	.29
5	$F(3,56) = .58, p = .63,$ $R^2 = .03$	Power	.08	-1.42	1.58
		BJT-5 Others	.19	-.57	.94
		Power x BJT-5 Others	-.05	-.49	.39
6[a]	$F(7, 52) = .38\ p = .91,$ $R^2 = .05$	Power	-.25	-1.53	1.02
		BJT-5 Nature	-.09	-.75	.58
		Power x BJT-5 Nature	.07	-.32	.46
7[b]	$F(7,52) = .36, p = .92,$ $R^2 = .05$	Power	-.05	-.89	.79
		BJT-5 God	.05	-.43	.53
		Power x BJT-5 God	.01	-.29	.30
8[c]	$F(7,52) = .61, p = .75,$ $R^2 = .08$	Power	.71	-.51	1.93
		BJT-5 Self	.39	-.26	1.04
		Power x BJT-5 Self	-.24	-.61	.13
9[d]	$F(7,52) = .38, p = .91,$ $R^2 = .05$	Power	-.23	-1.20	.75
		BJT-5 Chance	-.12	-.70	.47
		Power x BJT-5 Chance	.07	-.29	.43
10[e]	$F(7,52) = .36, p = .92,$ $R^2 = .05$	Power	.07	-1.52	1.66
		BJT-5 Others	.17	-.63	.96
		Power x BJT-5 Others	-.03	-.50	.44

Note: *a* = BJT-5 God, Self, Chance and Others were controlled for; *b* = BJT-5 Nature, Self, Chance and Others were controlled for; *c* = BJT-5 Nature, God, Chance and Others were controlled for; *d* = BJT-5 Nature, God, Self and Others were controlled for; *e* = BJT-5 Nature, God, Self and Chance were controlled for.

Table 12

Summary of Regression Analyses for Relations Between Power, Each of the Five Facets of the Belief in a Just Treatment Scale, and Compensation Action – Refined Data Set

Model Number	Model Significance	Predictors	β Coefficient	95% CI	
				LL	UL
1	$F(3, 56) = .28, p = .84,$ $R^2 = .01$	Power	-.35	-1.83	1.12
		BJT-5 Nature	-.11	-.91	.70
		Power x BJT-5 Nature	.11	-.35	.57
2	$F(3, 56) = .09, p = .97,$ $R^2 = .01$	Power	.01	-.98	.99
		BJT-5 God	.01	-.56	.56
		Power x BJT-5 God	-.03	-.36	.31
3	$F(3,56) = .07, p = .98,$ $R^2 = .01$	Power	.26	-1.21	1.72
		BJT-5 Self	.16	-.64	.96
		Power x BJT-5 Self	-.09	-.54	.36
4	$F(3,56) = .12, p = .95$ $R^2 = .01$	Power	-.28	-1.47	.90
		BJT-5 Chance	-.11	-.78	.56
		Power x BJT - Chance	.09	-.31	.49
5	$F(3,56) = .10, p = .96,$ $R^2 = .01$	Power	.47	-1.51	2.44
		BJT-5 Others	.24	-.76	1.23
		Power x BJT-5 Others	-.15	-.73	.43
6[a]	$F(7, 52) = .26 \ p = .97,$ $R^2 = .03$	Power	-.60	-2.27	1.07
		BJT-5 Nature	-.15	-1.02	.72
		Power x BJT-5 Nature	.16	-.35	.67
7[b]	$F(7,52) = .20, p = .99,$ $R^2 = .03$	Power	-.10	-1.21	1.01
		BJT-5 God	-.07	-.69	.56
		Power x BJT-5 God	-.01	-.38	.39
8[c]	$F(7,52) = .26, p = .97,$ $R^2 = .03$	Power	.43	-1.19	2.06
		BJT-5 Self	.26	-.60	1.13
		Power x BJT-5 Self	-.16	-.66	.33
9[d]	$F(7,52) = .21, p = .98,$ $R^2 = .03$	Power	-.28	-1.56	1.01
		BJT-5 Chance	-.06	-.82	.71
		Power x BJT-5 Chance	.07	-.39	.54
10[e]	$F(7,52) = .25, p = .97,$ $R^2 = .03$	Power	.56	-1.53	2.64
		BJT-5 Others	.26	-.78	1.30
		Power x BJT-5 Others	-.19	-.81	.42

Note: *a* = BJT-5 God, Self, Chance and Others were controlled for; *b* = BJT-5 Nature, Self, Chance and Others were controlled for; *c* = BJT-5 Nature, God, Chance and Others were controlled for; *d* = BJT-5 Nature, God, Self and Others were controlled for; *e* = BJT-5 Nature, God, Self and Chance were controlled for.

Table 13

Summary of Regression Analyses for Relations Between Power, Each of the Five Facets of the Belief in a Just Treatment Scale, and Revenge Action – Refined Data Set

Model Number	Model Significance	Predictors	β Coefficient	95% CI	
				LL	*UL*
1	$F(3, 56) = .52, p = .67,$ $R^2 = .03$	Power	-.24	-1.62	1.13
		BJT-5 Nature	.01	-.75	.76
		Power x BJT-5 Nature	.01	-.42	.44
2	$F(3, 56) = 1.68, p =$ $.18, R^2 = .08$	Power	-.11	-1.01	.79
		BJT-5 God	.13	-.38	.64
		Power x BJT-5 God	.01	-.30	.31
3	$F(3,56) = .99, p = .40,$ $R^2 = .05$	Power	.55	-.80	1.91
		BJT-5 Self	.42	-.32	1.16
		Power x BJT-5 Self	-.24	-.66	.17
4	$F(3,56) = .82, p = .49$ $R^2 = .04$	Power	.15	-.95	1.25
		BJT-5 Chance	.15	-.48	.77
		Power x BJT - Chance	-.13	-.50	.24
5	$F(3,56) = 1.49, p = .23,$ $R^2 = .07$	Power	.30	-2.10	1.50
		BJT-5 Others	.14	-.77	1.04
		Power x BJT-5 Others	.05	-.48	.58
6[a]	$F(7, 52) = 1.42\ p = .22,$ $R^2 = .16$	Power	.09	-1.38	1.56
		BJT-5 Nature	-.03	-.80	.74
		Power x BJT-5 Nature	-.04	-.48	.42
7[b]	$F(7,52) = 1.41, p = .22,$ $R^2 = .16$	Power	-.01	-.97	.97
		BJT-5 God	.17	-.38	.72
		Power x BJT-5 God	-.01	-.34	.34
8[c]	$F(7,52) = 1.78, p = .11,$ $R^2 = .19$	Power	.99	-.42	2.39
		BJT-5 Self	.51	-.23	1.26
		Power x BJT-5 Self	-.31	-.74	.12
9[d]	$F(7,52) = 1.43, p = .21,$ $R^2 = .16$	Power	-.18	-1.30	.95
		BJT-5 Chance	-.18	-.85	.50
		Power x BJT-5 Chance	.07	-.34	.48
10[e]	$F(7,52) = 1.45, p = .21,$ $R^2 = .16$	Power	-.41	-2.25	1.42
		BJT-5 Others	.08	-.84	.99
		Power x BJT-5 Others	.12	-.42	.67

Note: *a* = BJT-5 God, Self, Chance and Others were controlled for; *b* = BJT-5 Nature, Self, Chance and Others were controlled for; *c* = BJT-5 Nature, God, Chance and Others were controlled for; *d* = BJT-5 Nature, God, Self and Others were controlled for; *e* = BJT-5 Nature, God, Self and Chance were controlled for.