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Belief in a just world among undergraduates, graduate students, and law students

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BELIEF IN A JUST WORLD AMONG UNDERGRADUATES, GRADUATE
STUDENTS, AND LAW STUDENTS

by

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A thesis submitted in partial fulfillment
of the requirement for the

**Master of Arts Degree in Psychology
Department of Psychology
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and Law Students

is approved in partial fulfillment of the requirements for the degree of

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ABSTRACT

Belief in a Just World among Undergraduates, Graduate Students, and Law Students

by

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Participants were 135 undergraduates, graduate students, and law students. They were compared on the strength of their belief in a just world. In addition, half the participants were primed with a word task that threatened their belief in a just world. It was hypothesized that the law students would exhibit a stronger belief in a just world than the other two educational groups, and that the primed participants would score higher in just world belief than the non-primed participants. Results failed to support the research hypotheses. Possible interpretations of the results are discussed, and recommendations for future research are offered.

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CHAPTER 1

INTRODUCTION

The Belief in a Just World Theory

Melvin J Lerner developed his theory of Belief in a Just World (BJW) in the 1960s. This theory states that most people believe the world is, in general, a just and fair place where people get what they deserve and deserve what they get. Good people prosper and bad people suffer (Lerner, 1980, 1997).

Initially the theory was met with skepticism and even derision. Critics, arguing from intuition and common sense, said that adults were too mature and knowledgeable to hold such a simplistic and obviously false belief. Young children might believe in a just world. Children are taught that the good are rewarded and the bad are punished. This belief is instilled through religious instruction, children's books, the media, and parental teaching. But as children grow and mature and interact with the real world they quickly learn that the world is not a just place, at least not all the time or in all circumstances. Children should naturally outgrow their early belief in a just world. No one except naïve children, fools, and idiots could believe in a just world (Lerner, 1980; Shorkey, 1980).

Lerner countered his critics by making a number of testable predictions from his theory, then proceeded to perform experiments to test his predictions. Over the next few decades Lerner and his colleagues conducted numerous experiments to test the

predictions of BJW. Results supported his theory. As the evidence accumulated, BJW became a generally accepted theory in the field of social psychology. Recent research has focused on refining the theory and on developing more reliable measures of BJW (Lerner, 1980; Montada & Lerner, 1998).

BJW theory says most people believe that anyone who is suffering deserves to suffer, and anyone who is prospering deserves to be rewarded. Therefore BJW theory says that we determine the worth of a person according to that person's fate. People who prosper must be good people who are worthy of their rewards; and people who suffer any sort of injury (economic, social, or physical) must be bad people who merit their suffering. This method of judging the worthiness of people conflicts with conventional, rational norms. Societal norms recognize that some victims are innocent and merit compassion. Norms also require that we admire good deeds and noble actions even though they may produce unintended and even undesirable consequences. According to society's norms we are supposed to evaluate victims not by their fate but by an objective appraisal of their intentions and actions. Society's standards require that we blame only those victims who either cause their own suffering or behave in a morally blameworthy manner. Thus there is a conflict between the norms of our society and the judgments produced by BJW.

Lerner and his colleagues acknowledge that BJW theory predicts behavior that does not comport with the behavior demanded by the dictates of societal norms. Lerner also admits that sometimes people do behave according to rational, conventional norms when judging the blameworthiness of victims. However, he argues that most people apply society's standards for blameworthiness only when they are evaluating a victim who is not immediately affecting them. He also says that people will apply society's norms if

those norms are deliberately called to their attention and made salient. In everyday life, however, people who are confronted with events that are immediate and important to them usually do not apply society's norms to evaluate the blameworthiness of a victim because society's norms are not salient at the moment. Instead people usually use non-conscious automatic cognitive processes learned in childhood to make their judgments. For example, one such automatic cognitive process is the assumption that if two events are closely linked in time and place then the first event caused the second. These automatic cognitive processes, such as the inference of cause and effect, are intuitive and occur below the level of conscious thought, and they are based upon what people learn about justice and suffering during the earliest period of their lives. And what most people learn first, at a very young age, is the moralistic lesson that the good are rewarded and the bad are punished. In other words, most young children learn that the world is a just place. What is learned in childhood remains with us throughout life, Lerner says. Even as adults, when we evaluate the blameworthiness of a salient victim most of us naturally and subconsciously use the standard first learned in childhood, that the good prosper and the bad suffer. When people see a victim suffering they evaluate the situation and the blameworthiness of the victim by invoking preconscious automatic cognitive processes. Once they have determined that a victim is in fact suffering they make sense of the situation by asking subconsciously why the victim is suffering, and they answer subconsciously that the victim must be suffering because the victim deserves to suffer. This conclusion, arrived at without a conscious, rational examination of the situation, then motivates their behavior towards the victim (Lerner, 1980; Lipkus, Dalbert, & Siegler, 1996; Montada & Lerner, 1998; Shorkey, 1980; Stowers & Durm, 1998).

BJW theory states that when people observe injustice in the world (when they see the good suffering or the bad prospering) this conflicts with their fundamental belief that the world is a just place. This conflict produces negative affect, painful emotions that people must seek to alleviate for the sake of their mental health. When people are faced with salient threats to their belief in a just world they naturally try to defend their belief. When people are faced with this contradiction between reality and their basic belief in a just world they choose among three possible responses to their psychological distress in their efforts to preserve their just world beliefs (Lerner, 1980; Montada & Lerner, 1998).

The first possible response is to try to prevent the injustice or restore justice (prevention or restitution). People might try to intervene directly in the unjust situation. For example, a person might come to the defense of someone who is being attacked. Or a person might try to restore the losses of those who have suffered unjustly by donating money to victims or volunteering to work for a charitable organization. Of course it is not always possible or feasible to restore justice or make restitution through one's own direct efforts. When it is not possible to prevent injustice or restore justice through direct action people might try the second alternative response.

The second possible response to injustice is avoidance. When people observe obvious injustice and cannot prevent it or compensate the victim they might seek to relieve their own psychological distress by simply leaving the scene of the injustice either physically or mentally or both. For example, they might avoid knowledge of unjust events by never going where such events occur, or by refusing to read or watch media reports of unjust events. In this way people can refuse to think about injustice and avoid reminders of injustice.

If people cannot prevent injustice or restore justice, and if they cannot avoid knowledge of injustice, they might resort to the third possible alternative response to injustice. The third possible response is to reinterpret the unjust event so that it is no longer unjust. People will find or create evidence that the victim really deserves to suffer. In this case people conclude that the victim either caused his suffering through his own actions, or the victim otherwise deserves to suffer because of his character or personality flaws. This process is called victim derogation or victim devaluation. Through this process the justness of the world is affirmed and the belief in a just world is defended by concluding that the apparent victim really deserves his fate and therefore no injustice has occurred (Lerner, 1980; Montada & Lerner, 1998).

Lerner calls the belief in a just world a fundamental delusion. It is a delusion because the world really is not a just place, at least not all the time and not for everyone. It is fundamental because we all need to believe in a just world for our psychological well-being. The only alternatives to a just world are an unjust world and a random world. In an unjust world the good would be punished and the bad would be rewarded, and this idea is repugnant to just about everyone. No reasonable person would want to live in an unjust world, and no reasonable person could maintain sanity in an unjust world. In a random world rewards and punishments would be meted out in a purely random fashion. If the world were random then it would not matter whether a person was good or bad, and our actions would not produce predictable results. No rational person would want to live in a random world because everyone needs to believe that he has at least some control over his life. Everyone needs to feel that certain actions can produce predictable outcomes. If actions do not cause predictable effects then people cannot plan for the

future or work towards desirable outcomes. People need to live in a stable and orderly world where human behaviors produce predictable consequences; otherwise, people would have no control over their lives. Considering the alternatives, Lerner argues that the only possible choice for any rational person is to believe in a just world (Lerner, 1980; Lipkus et al., 1996).

Purpose and Significance of This Study

BJW has been shown to be a stable personality trait that motivates behavior. BJW can sometimes produce inaccurate evaluations of victims and events. When the belief in a just world is threatened by the occurrence of injustice people will defend their belief by choosing among the three possible responses discussed above. The first two alternatives, prevention/restitution and avoidance, are not always possible. No one can prevent every injustice or restore justice by compensating all victims. The media is so prevalent that news of numerous worldwide injustices permeates society and this makes it almost impossible to avoid knowledge of the rampant injustice in the world. And yet all rational people need to believe in a just world. Often the only viable way to maintain this belief is by engaging the third alternative response which is victim derogation. If victim derogation is successful then unjust events will be interpreted as just and victims will be condemned. When people derogate innocent victims they are unlikely to try to change unjust situations or to alleviate the suffering of victims. They will not challenge the status quo no matter how unjust it may be. The stronger their belief in a just world the more likely they are to defend that belief by derogating victims and maintaining the current situation. A strong belief in a just world can cause people to accept and perpetuate injustice (Lerner, 1980; Montada & Lerner, 1998).

BJW can be measured on a continuous scale (Rubin & Peplau, 1973). Individual differences in BJW can predict individual responses to instances of injustice. Those who possess a strong belief in a just world should be more willing to devote their time and resources to alleviating injustice. The stronger the belief in a just world the greater the negative affect that will be produced by personal experiences of injustice, thereby creating a greater need to defend the belief in order to restore psychological health. Those who possess a strong belief in a just world should have a great need to defend their belief. Both the need to relieve emotional distress and the need to defend a necessary belief that has come under attack should be powerful motivators of behavior. The defensive behavior will be one (or more) of the three possible responses to injustice: prevention/restitution, avoidance, or victim derogation. The first two responses may be successful in preserving the belief in a just world for some limited time. But eventually, as the evidence for an unjust world accumulates and people experience ever more instances of injustice, people may well find that the first two responses are inadequate to preserve their belief in a just world. When this happens their only alternative will be the third alternative, victim derogation (Lerner, 1980; Montada & Lerner, 1998).

There has been no reported attempt to investigate the strength of BJW among law students, or to explore how they might defend their belief. This is an important area for research because law students will become the attorneys who run our court system and serve in our legislatures at both the state and federal level. Attorneys occupy positions of power and influence in the United States. They play a crucial role in the making of our laws at all levels of government, and they operate our court systems which interpret and enforce our laws. It is quite possible that law students do possess very strong BJW

because one of the responses to injustice is the willingness to devote time and resources to restoring justice. Law students obviously are devoting practically all their time and energy to becoming members of our legal system. Law students have made an immense commitment to the accomplishment of justice. If law students, our future attorneys, do in fact possess stronger than average BJW then they would be more at risk for engaging in victim derogation. Attorneys, being intimately involved in the administration of justice, would be unable to avoid knowledge of injustice in our society. If they found themselves frustrated in their attempts to accomplish justice, as may well happen, then they would most probably resort to victim derogation to maintain their BJW. If they engage in victim derogation then they would probably not support laws to alleviate unjust situations because they would not interpret the situations as unjust and in need of change. And they might well be prone to make unjust decisions in court cases because they would not recognize the injustice of the suffering of crime victims. Therefore a strong BJW might negatively impact the administration of justice and legislative programs. An accurate measurement of the strength of BJW among law students would provide the information needed to assess the risk of adverse consequences caused by excessively strong BJW. If data indicated that indeed law students showed a stronger than average BJW then programs could be instituted in law school to make the students aware of this risk, and perhaps educational awareness programs could be developed to counter this risk.

Another issue that has not been investigated adequately is the nature and intensity of the immediate response to a salient threat to BJW. Research on this point is limited. BJW theory predicts that when faced with an immanent threat to BJW people should respond with an immediate (although probably temporary) increase in the strength of

their BJW in an attempt to defend their view of the world as a fair and just place. This study attempted to investigate unexplored aspects of BJW theory by using law students as participants and by employing a priming technique to manipulate the strength of BJW.

Research Hypotheses

1. Law students will exhibit stronger BJW than undergraduates and graduate students.

Rationale

There is a common misconception that most young people who go to law school do so because they are motivated by high ideals and a desire to accomplish social justice. Research reveals that law students give many reasons for choosing law as a career. The research on this topic generally uses open-ended questions that provoke a variety of responses. Researchers ask questions like: How did you come to be here? The answers are coded into categories such as career, intellectual, social justice, and default (Schleef, 2000). The category of “career” includes such concerns as money, financial security, prestige, and respect of the community. The category of “intellectual” includes a desire for a job that provides intellectual challenges, problem solving, and a variety of demanding cognitive tasks. The category of “social justice” includes a desire to help the disadvantaged in society, to promote change and reform, and to benefit society in general through altruistic activities. The “default” category is a catch-all that covers all sorts of expressions of confusion and doubt about why the person is in law school (including claims of parental pressure and nothing better to do). Not all researchers code the answers in exactly the same way but Schleef’s (2000) method is similar to that used by others (Chartrand et al., 2001).

The concept of social justice as a reason for attending law school is sufficiently broad to include the belief in a just world. None of the researchers in this area specifically mentions belief in a just world, and none of the researchers ever mentions the belief in surveying law students. But the answers that are coded into the category of social justice do mention such ideals as helping the downtrodden and minorities, reforming the law to make society more just and fair for all, making the world a better place, and accomplishing justice in general. Results vary among law schools, but for six law schools surveyed in two studies the percentage of law students who described social justice motives for attending law school ranged from 43 to 78 percent (Chartrand et al., 2001; Schleef, 2000). This research suggests that the concept of justice plays a significant role in motivating young students to go to law school.

Law students have made an immense commitment of time and effort to participate in the justice system. Research suggests that at least part of their motivation for choosing law as a career is their desire for justice and their willingness to work to accomplish justice. BJW theory predicts that those with the strongest belief in a just world will be the people most likely to take personal action to prevent injustice and restore justice. Law students have taken personal action to work for justice. They have committed themselves to devote their working lives to the promotion of justice. Probably no other segment of society makes such a great commitment. Therefore it is reasonable to hypothesize that law students will have a greater than average belief in a just world.

If this hypothesis is correct then it follows that law students (future lawyers) also would be more susceptible to the negative effects of high BJW. When they are working in the administration of justice and are faced on a daily basis with obvious evidence of

injustice, they may well resort to the usual devices to defend their belief in a just world, specifically victim derogation, victim blaming, and denial of injustice in society. These defense mechanisms might well cause attorneys to make unjust decisions or pass unjust laws. These harmful effects of high BJW could be avoided through cognitive intervention techniques in law school. The harmful effects of BJW occur because people are not consciously aware of the underlying factors motivating their unjust behavior. When they are made consciously aware of their normally non-conscious and automatic belief in a just world they can intentionally override the automatic negative impulses produced by BJW and conform their conduct to rational principles of social justice.

2. Undergraduates, graduate students, and law students, when threatened by salient reminders of injustice, will defend their psychological well-being by increasing (at least temporarily) the strength of their belief in a just world.

Rationale

Research indicates that BJW operates as a defense mechanism to protect mental and physical health. It is well established that when people are confronted with injustices and they cannot restore justice in reality through their own efforts they will attempt to restore justice by either blaming the victim for causing the injustice or re-interpreting the events to deny that an injustice occurred. This requires a cognitive reappraisal that can affect the level of BJW. This cognitive response can act to stabilize BJW, prevent a drop in BJW, or even raise the level of BJW from its initial strength (Reichle, Schneider, & Montada, 1998). I used a priming technique with some of the participants to induce a threat to BJW, then made a direct measurement of changes in the level of BJW using the Rubin-Peplau (1975) scale.

Priming refers to the process of temporarily activating a certain response tendency by presenting a stimulus which is known to activate that response. The priming stimulus can be presented either supraliminally or subliminally. No matter how the priming stimulus is presented, the response tendency can be activated without a conscious act of the will because the stimulus is familiar and the response is well-practiced. The concept of priming refers to the temporary activation of a certain response tendency, the tendency to behave in a certain way, by the presentation of a selected stimulus known to activate that response tendency. In such a case the stimulus is so familiar that it can be identified and processed without a conscious act of the will. This information processing is automatic and does not require volition. Priming can activate the neural networks or connections used to produce the selected responsive behavior without actually causing the person to perform the response. Even if the response is not actualized the neural networks which were activated by the stimulus remain in a state of readiness and can be re-activated more easily if the stimulus or some other similar stimulus is presented again shortly after the presentation of the priming stimulus. Thus priming produces an unconscious state of psychological readiness to perform a behavior or produce a feeling or attitude. After a successful priming even a weakened stimulus may produce the desired response (Bargh, 1996; Bargh & Chartrand, 2000).

Automatic information processing is used to produce motor behaviors that have been well-learned and well-practiced. Driving a car, typing, throwing a ball, and walking are examples of behaviors that are produced and controlled by automatic processing. Such actions require a conscious act of will to initiate, but once begun these behaviors continue without conscious effort and with little or no attention. There is another type of

automatic processing that does not require a conscious act of will to initiate. This type of automatic processing is entirely preconscious. The mere presence of the triggering stimulus is sufficient to initiate the behavior or feeling without the necessity of a conscious act of the will. A specific attitude about members of stereotyped groups is an example of this second type of automatic processing (Bargh, 1996; Bargh & Chartrand, 2000).

Carolyn L. Hafer (2000a) performed experiments which used priming to activate the belief in a just world. She used a supraliminal stimulus to activate the response tendencies associated with BJW. The activation was automatic and entirely preconscious. She showed subjects a video tape containing several clips of news stories. In one condition one of the stories depicted an injustice (an innocent person was assaulted and robbed, and the culprit escaped justice). After viewing the tape the subjects performed a Stroop task. The subjects who had seen the news story depicting an injustice exhibited longer response latencies to justice-related words than to neutral words. This type of response is known as an emotional Stroop effect. Hafer interpreted the results as evidence of a defensive response to a salient threat to BJW. The present study attempted to build on Hafer's experiment by priming a threat to BJW and then making a direct measurement of BJW to assess the effects of the priming manipulation.

CHAPTER 2

LITERATURE REVIEW

Early Studies of Victim Derogation and Devaluation

In 1965 Lerner conducted his first experimental test of the BJW theory. If BJW is correct then people should believe that actions have a direct effect on outcomes. People should attempt to interpret events so that successes and failures can be attributed to personal efforts rather than to chance. Lerner recruited 22 female college students and had them observe two men cooperating to perform an anagram task. The subjects were told that due to a shortage of funds only one of the workers could be compensated, and the worker who was to be compensated was chosen by chance. Unknown to the subjects the two workers, Tom and Bill, were research assistants and the task was arranged so that each made an equal contribution to the accomplishment of the task. In one condition Tom received the reward and in the second condition Bill received the reward. The subjects were told which worker would receive the reward, then they observed the two workers perform the task. Afterwards they rated the relative contribution of the two workers to the completion of the task, and they also rated the workers on a variety of personal characteristics such as likeableness and maturity. Finally, the subjects indicated whether they would like to work with Tom or Bill in the future. The hypotheses were that the subjects would rate the worker selected for compensation as contributing more to the task than the non-rewarded worker. In addition, Tom was considerably more

attractive than Bill, and it was hypothesized that when Bill was to receive the reward the subjects would rate the productivity of both workers lower because they would be uncomfortable with the fact that the more attractive worker did not receive any reward. Results confirmed the hypotheses. When Tom received the reward he was rated as having contributed more to the task; when Bill received compensation he was rated as having contributed more to the task. Regardless of which worker was rewarded, the subjects rated Tom, the attractive person, higher on the scales of personal characteristics and they preferred to work with Tom rather than Bill in the future. When Bill received the reward the subjects appeared to be uncomfortable with that outcome and rated the productivity of both workers lower. Lerner interpreted the results as supporting BJW theory. People interpret the outcomes of events so that the outcomes will support their belief that the good are rewarded and the bad are punished. People do this even when they know that the outcome is completely fortuitous. In this study the worker who received the reward, no matter which one it was, was consistently rated as making a greater contribution to the task and therefore more deserving of the reward. When the less attractive worker received the reward the subjects were disturbed by this and attempted to justify the rewarding of the less attractive worker by rating the performance of both workers lower.

BJW theory states that people have a genuine need to believe that the world is a fair and just place not just for themselves but for others as well. People need to believe that the distribution of rewards and punishments does not occur randomly but for a reason. If BJW is correct then people who observe others suffering should have a need to believe that those suffering deserve their fate. People deserve to suffer if they have behaved

inappropriately or if they possess undesirable personal qualities. In other words, people should suffer only if they have performed some deed worthy of punishment or their personal character makes them worthy of punishment. When people see others suffering they should decide that the sufferers deserve their fate either because of something they have done or because of the kind of persons they are. But what if the circumstances make it clear that the sufferers have done nothing to merit punishment? In this case BJW theory predicts that observers would be forced to devalue the personal worth of the victims in order to maintain their belief in a just world.

In 1966 Lerner and Simmons tested this hypothesis. Once again female college students were the subjects. They observed a victim receiving painful electric shocks whenever the victim gave an incorrect response during a learning task. Of course no shocks were administered; the victim was a confederate who acted as though she were experiencing painful punishment. Since the victim was trying her best to give correct responses her behavior did not justify her suffering. After observing the victim suffer, the subjects rated the victim on several measures of attractiveness and personality. It was hypothesized that subjects would devalue the personal characteristics of the victim in order to maintain their belief in a just world. Results confirmed the hypothesis. Subjects devalued and rejected the suffering victim when they thought her suffering would continue and they were powerless to stop her suffering or provide her with sufficient compensation for her suffering. In one of the experimental conditions the victim was portrayed as more than an innocent victim. In this condition the victim actually volunteered to undergo the painful experiment with full knowledge that it would be a painful experience, even though she really did not want to participate, just so that the

subjects could earn lab credits. She voluntarily became a martyr, willing to suffer in order to help others. BJW theory predicts that martyrs should constitute an even more serious threat to the belief in a just world because their suffering is obviously undeserved and constitutes powerful evidence that the world is not a just place. In such a case people should have an even greater need to defend their belief in a just world. In fact this is exactly what happened. The subjects devalued the martyr victim who was suffering for the benefit of others even more than they devalued the other innocent victim. This result supports the proposition that the greater the threat to BJW the greater the need to support the belief in BJW by justifying the suffering of the victim. The overall results of this study support BJW theory by showing that people need to devalue suffering victims to maintain their belief in a just world.

BJW theory predicts that people will devalue victims. But the norms of Western society require that people feel compassion for those who suffer, especially for those who suffer unjustly. According to these norms, people bear a social responsibility to assist those in need. However, Western norms also permit people to act in their own self-interest as long as the conditions of competition are equal for all competitors. Lerner and Lichtman (1968) tested the interaction of BJW and societal norms. Once again the subjects were female undergraduate students. The subjects were deceived into believing they were to participate in a learning experiment. The subjects were told they would be participating in pairs, and that one member of the pair would be in an innocuous control condition while the other member of the pair would be in a painful electric shock condition. Each subject was then given a choice of which condition she wanted to participate in, with the understanding that her partner would automatically be put in the

other condition. In other words, each subject believed she was choosing which of the pair would end up in the painful condition. It was predicted that, in accordance with the norm of justified self-interest, most subjects would choose to avoid the pain and place their partners in the painful condition. This prediction was supported because most subjects did choose to avoid the painful shocks and to make the other subject serve in the painful condition. But some of the subjects were given additional information before making their choices. In the first case the subject was told that her partner had expressed fear and had asked not to be put into the painful condition. According to societal norms and BJW theory it was predicted that in this situation subjects would place themselves in the painful shock condition but would devalue their partners because of the partner's demonstrated weakness. Again the results supported the prediction; subjects did choose the painful condition for themselves but rated their fearful partners as unattractive. In a second situation the subject was told that her partner had won the right to make the choice of assignment to conditions but had graciously passed the opportunity to the subject. It was predicted that in this situation the subject would choose the painful condition for herself and would not devalue her partner because the partner had acted in a noble and generous way. The results supported this prediction; most subjects chose the painful condition for themselves without devaluing their partners. In a third situation the subject was told that her partner was fearful of the painful condition and had elicited the sympathy and support of the experimenter. In this situation it was made to appear that the partner was attempting to enlist the help of an authority figure (the experimenter) and to put public pressure on the subject to choose the painful condition for herself. It was predicted that the subject would act altruistically and would choose the painful condition

for herself but would view the behavior of her partner as an illicit attempt to manipulate societal norms for her own benefit. This is exactly what occurred. The subjects did choose the painful condition for themselves but only because they felt compelled to do so by public pressure, and they greatly devalued their partners. In a final situation the subjects were told that their partners had won the right to choose assignment to the conditions but had relinquished that privilege to the subject; however, the subjects also were told that their partners had acted graciously only because they were certain that the subject would feel trapped by the gracious action into choosing the painful condition for herself. The subjects were led to believe that their partners were using the norm of social responsibility to trick them into accepting the painful condition. It was predicted that in this situation the subjects would place the partner in the painful condition and devalue the partner for her attempted manipulation of the situation. This is exactly what happened. In summary, this study showed that BJW theory and societal norms do interact in varying situations. When a competition seems fair and all competitors appear to be equal then competitors generally act in their own self-interest and try to benefit themselves, and they feel no guilt if they win and the other competitors lose. In some situations people will exhibit prosocial behavior and act altruistically even to their own detriment. But even when they act altruistically they will devalue the recipient of their generosity if they feel the recipient needs help because he is weak or inferior in some respect, or if they feel the recipient is trying to manipulate societal norms (norms of social responsibility) in an unfair way to pressure or trick them into behaving altruistically.

Lerner (1971a) attempted to replicate the results of the immediately preceding experiment using male subjects. He replicated the prior results to some extent but

discovered that societal norms for men are different from the norms for women, and the interaction of these male norms with BJW produced different results in some situations. In this study the methods were the same as in the preceding study except that the pairs of subjects were composed of two males. The male subjects unexpectedly chose the painful condition for themselves (the women had chosen the non-painful control condition). In addition, regardless of whether the male subjects chose the shock or the control condition they devalued their partners. Lerner explained this surprising result by postulating that societal norms require men to be tough and endure pain, so they could not justify causing others to suffer just to avoid pain. To justify choosing the painful condition for themselves the male subjects devalued their partners. To test this explanation Lerner conducted another experiment wherein the male subjects had to choose either a painful shock condition or a non-painful control condition, but in the control condition the subjects would have the chance to earn a considerable amount of money. When given this choice the subjects chose the money-making control condition and avoided the shock condition, and they did not devalue their partners. Lerner concluded that societal norms of behavior differ for men and women. Norms permit women to avoid pain and impose the pain on someone else, but male norms do not permit men to impose pain on another just to avoid their own suffering. However, self-interest permits men to impose suffering on another when this is done in the course of a competition for money. When such choices are justified by legitimate self-interest there is no need to devalue the other party in the competition. Even in the situation where the subject was placed in the shock condition by the choice of his partner he did not devalue his partner because he recognized the partner's right to act in his own self-interest. The societal norm of

justifiable self-interest does modify the usual BJW principle that would require devaluation of a suffering victim under other circumstances.

In the next set of experiments Lerner (1971b) attempted to answer some objections raised to earlier studies and to investigate some other possible explanations for the devaluation of subjects that occurred in earlier studies. In these three studies Lerner used both male and female subjects. Most of his earlier studies had used only female subjects and some researchers had objected that the behavior of females might not be representative of the behavior of males. The basic procedure used in these three studies was the same as was used in previous studies: Subjects observed a "victim" receiving electrical shocks for incorrect responses and then rated the overall personality of the victim by rating the victim on 15 bipolar scales (intelligent-unintelligent, likable-unlikable, uncooperative-cooperative, bossy-easygoing, immature-mature, imaginative-unimaginative, irresponsible-responsible, nervous-calm, patient-impatient, reasonable-unreasonable, rigid-flexible, courteous-rude, selfish-unselfish, warm-cold, and sincere-insincere). In the first of these studies subjects were divided into three conditions: In the denatured condition the subjects were told that the victim was not receiving any shocks and was just acting; in the midpoint condition the subjects believed the victim was being shocked; in the opportunity-to-substitute condition the subjects believed the victim was being shocked but the subjects were given an opportunity to take the victim's place in the next session. No subject volunteered to substitute for the victim. Subjects in the midpoint and the opportunity-to-substitute conditions rated the victim significantly lower on the attractiveness scale than did the subjects in the denatured condition. In the second study the subjects were students in a helping profession curriculum. Subjects were in a

classroom setting and received their instructions in the form of printed packets passed out by a guest lecturer, thus eliminating direct contact between the experimenter and the subjects (researchers had criticized Lerner's past experiments on the grounds that the results may have been due to experimenter expectancy effects, and this procedure was used to protect against a possible Rosenthal effect). There were three conditions: the denatured and the midpoint conditions were identical to the first study; in a reward condition the subjects were told that the victim would be compensated with an adequate money payment although she did not know this. Subjects in the midpoint condition rated the victim significantly lower than did the subjects in the other two conditions. In the third study the victim was portrayed as a martyr. The victim professed to be terrified of receiving shocks but agreed to participate so that students could earn lab credit by observing her performance. Subjects were divided into four conditions: A denatured condition as described above (the subjects were told the victim was not being shocked and was merely acting); in the other three conditions the subjects believed the victim was being shocked and in one condition they were told she would not be compensated, in another condition they were told that unknown to her she would receive \$10.00 compensation, and in the final condition they were told that unknown to her she would receive \$30.00 compensation. Subjects who believed the victim was shocked without any compensation rated the victim significantly lower than did the subjects in the other three conditions. Lerner drew several conclusions from the combined results of these three studies. All three studies replicated his prior findings that victims of undeserved and uncompensated suffering are condemned and denigrated by people who witness their suffering. This is the case even when the victim is performing altruistically (the martyr

scenario). Condemnation occurs because of the victim's fate and not because of the victim's behavior. The tendency to condemn innocent victims is not caused by guilt because even those who were not benefiting from the victim's altruistic behavior (in the martyr scenario) still condemned the victim. Even those who are inclined to help others (those subjects who were studying to enter a helping profession) denigrated the innocent victim, although they condemned her less than the other subjects. The condemnation of innocent victims was not the result of experimenter expectancy effects. Condemnation of innocent victims is not a response peculiar to females; both males and females exhibit the same attitude towards innocent victims (although the underlying psychological mechanisms that produce this attitude may be different for men and women). Overall, Lerner concluded that condemnation of innocent victims is caused by BJW, not by methodological factors, gender differences, guilt feelings experienced by subjects, or any inherent quality of the victim's behavior.

In 1972 Lincoln and Levinger, who were not directly concerned with testing the BJW theory, conducted an experiment which nevertheless confirmed the victim derogation aspects of BJW and suggested a modification to BJW theory that Lerner and his colleagues would explore in later research. Lincoln and Levinger (1972) used male and female undergraduate psychology students as subjects. This study was a 2 (aggression versus non-aggression) X 2 (consequence versus no consequence) factorial design. Subjects observed either an aggressive interaction between a white policeman and a black protestor (who appears to be a victim of an unjustified assault by the white policeman) or a non-aggressive interaction between the same policeman and protestor (who does not appear to be a victim). Subjects were then asked to rate the black protestor using the

same rating scale used by Lerner and Simmons (1966). However, before rating the protestor, some subjects were told that their ratings would be used only by the researcher (the no consequence condition) while other subjects were told that their ratings would be given to a commission investigating the incident and to the people involved in the incident (the consequence condition). As predicted by the researchers, subjects in the no consequence condition devalued the victim protestor as compared to the non-victim protestor. But in the consequence condition subjects did not devalue the victim protestor compared to the non-victim protestor. The researchers explained these results by suggesting that victim derogation might not occur in those situations where the observers believe they have the option to compensate the victim for his unjust treatment. Lerner and his associates later would investigate this idea further and eventually incorporate it into BJW theory.

Mills and Egger (1972) investigated the ramifications of compensating or aiding the victim of unjust suffering. In their study female college students served as subjects and were paired with confederates to form two-person teams. Before being assigned to conditions the subjects rated the confederates on the characteristics of careless, cynical, happy, imaginative, irritable, lazy, lucky, likeable, mature, modest, nervous, open-minded, responsible, rude, selfish, shallow, stubborn, sympathetic, thoughtful, and warm. By subterfuge the confederates were assigned to the shock condition and the subjects were assigned to one of four experimental conditions: (1) choose-to-aid/stress-not-reduced, wherein the subjects were given the opportunity to reduce the shock to the confederate but the confederate's distress was not reduced; (2) choose-to-aid/distress reduced, wherein the subjects were given the opportunity to reduce the shock to the

confederate and the confederate's distress was reduced; (3) required-to-aid/stress-not-reduced, wherein the subjects were required to reduce the shock to the confederate but the confederate's distress was not reduced; and (4) required-to-aid/stress-reduced, wherein the subjects were required to reduce the shocks to the confederate and the confederate's distress was reduced. After the subjects and confederates had performed their tasks the subjects again rated the confederates on the characteristics described previously. In all four experimental conditions the subjects derogated the confederate/victims, but the derogation was less in those conditions where the subjects had the choice to reduce the shocks as opposed to being required to reduce the shocks. The degree of victim derogation was not affected by whether or not the victim's distress actually was relieved by the helping behavior of the subject. The researchers concluded that choosing to help another person increases liking for the other person. To counter the victim derogation effects of BJW it is necessary to get the observer to choose freely to help the victim. If this can be done then victim derogation will decrease regardless of whether or not the helping behavior actually benefits the victim.

In 1973 Jones and Aronson carried out the first experiment to assess the impact of BJW on the criminal justice system. According to BJW theory people who suffer deserve to suffer either because they are intrinsically bad (possess a bad character) or they have behaved in such a way that their behavior merits misfortune (their behavior is blameworthy). The researchers reasoned that the more respectable a victim is (the better the victim's character) the more the victim's behavior must be blamed for the suffering. The more respectable victim should be judged to be more at fault for his suffering than a less respectable victim. To test this hypothesis the researchers recruited 234 male and

female undergraduates and had them read a written account of a rape. In some of the written accounts the victim was either a virgin or a married woman (respectable victims) or a divorcee (less respectable). Manipulation checks ensured that the subjects actually considered the virgin and the married woman to be more respectable than the divorcee. The results supported the research hypothesis. Both male and female subjects rated the respectable victim as more at fault than the less respectable victim. The researchers interpreted these results to indicate that the subjects needed to find the respectable victim had caused her own misfortune through her own behavior since the victim's misfortune could not be attributed to her character. This study was the first to find that observers, when evaluating a serious crime of violence, will try to maintain their belief in a just world by concluding that the behavior of the victim is at least a partial cause of the crime.

Consolidation and Extension of the Early Research

By 1973 research had elucidated some basic principles of the BJW concept. When people see someone suffer their belief in a just world gives them only three options: (1) Compensate the victim or believe that the victim will be compensated for his suffering; (2) Conclude that the victim somehow caused or was responsible for his suffering; or (3) Derogate the victim so that he is seen as deserving to suffer. But what about accidents? An accident is an injurious occurrence that happens by chance. An accident is unpredictable and uncontrollable. A true accident is a direct challenge to the belief in a just world. What does BJW theory say about a person's response to accidents? Chaikin and Darley (1973) sought to answer this question. They used male undergraduates as subjects. The subjects were told that they would work in two-person teams with one person being the supervisor and the other person being the worker. The supervisor would

be paid a flat fee but the worker would be paid according to output and could earn more money if he produced more product. The experimental task was verbal decoding. The subjects were assigned either the role of supervisor or the role of worker. But before they began the task the subjects watched a videotape of a supposedly past session wherein subjects (actually researchers) performed the same task they were about to perform. On the tape two researchers played the roles of supervisor and worker, and they performed the verbal decoding task for several minutes; at the conclusion of the work session the supervisor "accidentally" bumped the table on which the worker had stacked his work product and caused the product to topple and be destroyed. This meant that the worker would not be paid and would lose a substantial amount of money that he would have received had the supervisor not accidentally destroyed the worker's output. After watching the tape the subjects rated the supervisor and the worker they had observed in the film. The subjects also were asked to give their opinions about the cause of the accident that resulted in the worker losing money, and the subjects rated how likely it was that the accident was caused by chance, by the supervisor, by the worker, or by faulty equipment. The results indicated that the subjects who were to be future supervisors attributed the accident to chance significantly more often than did the future workers. But more importantly both future supervisors and future workers more often identified non-chance causes for the accident and were less willing to attribute the accident to chance. Subjects assigned causes in such a way that the person in the role they expected to play would not be blamed for the accident. Future supervisors blamed the accident on faulty equipment (not the obviously innocent worker). Future workers blamed the supervisor for the accident. This outcome accords with BJW theory which predicts that

people need to believe in an orderly world where misfortune does not occur by chance. Future supervisors also attributed significantly less blame to the supervisor than did the future workers. Future supervisors derogated the victim/worker, but future workers did not derogate the victim/worker. It appears that the need to believe in a just world interacts with the need to protect self image and self esteem. When future workers foresaw that they soon would be in the same situation that resulted in harm to the workers and they themselves might well be victims of the same misfortune, they declined to derogate the victim/worker because to do so would be too close to derogating themselves. If an observer identifies with or sees himself in the same situation as the victim he will not derogate the victim because to derogate a victim in these circumstances would be very much like derogating himself. Thus defensive attribution mechanisms appear to moderate the usual BJW need to derogate a victim.

Belief in a Just World Is a Measurable Personality Trait

By 1971 researchers had concluded that BJW was a stable personality trait that could be measured like other personality traits. It had been shown to be a stable personality trait with individual differences that can be measured on a continuum. The earliest attempt to measure BJW was a 19 item scale developed by Rubin and Peplau (1973). This scale was replaced in 1975 by a 20 item Just World Scale that is still widely used. The Rubin-Peplau (1975) Just World Scale treats BJW as a unidimensional trait, but later research showed that BJW is a multidimensional trait (Ambrosio & Sheehan, 1990; Loo, 2002; Hyland & Dann, 1987).

Rubin and Peplau (1973) used their original scale to measure the strength of BJW among draft lottery participants. In 1971 the United States still drafted men into the

armed forces, and the draft used a lottery system to assign draft numbers by birth dates drawn at random. Young men whose numbers were drawn early received low draft numbers and were most likely to be drafted. The Vietnam war was raging in 1971 so those who were assigned low draft numbers faced the real possibility of going into combat. According to BJW theory people find an arbitrary world to be threatening to their need to believe the world is a just place. If the world really is arbitrary then people cannot control their fate. Lerner asserts that people need to believe they have control over their fate, that they can impact their future by their choices and actions. Therefore BJW predicts that people will defend their belief in a just world by imposing an underlying moral order on even truly random events. The draft lottery was just such a random event. The lottery operated entirely by chance and some young men inevitably would suffer a bad outcome purely by chance. Rubin and Peplau asked: How would people react to the losers in the draft lottery? The researchers reasoned that some people are more willing than others to acknowledge the arbitrariness of fate. Those who accept the arbitrariness of the world should not need to devalue victims in order to preserve a belief in a just world. In fact, those who accept the role of chance in the world might be more inclined to sympathize with victims of a bad fate and possibly even reject the undeserving recipients of a good fate. Those who believe most strongly in a just world should devalue the victims of a bad fate in order to preserve their world view, and they might possibly find the recipients of a good fate to be even more deserving and admirable. Rubin and Peplau used their new Just World Scale to measure the strength of belief in a just world among draft lottery participants. (Later factor analysis resulted in the elimination of 3 of the original 19 items on the scale, and the addition of 4 new items

brought the total number of items on the Just World Scale to 20. The revised scale had a Coefficient Alpha of .79.) The researchers predicted that those who scored high on the scale would admire the lottery winners and devalue the lottery losers, while those who scored low on the scale would express compassion for the losers. The subjects of this study were 19 year old men participating in the 1971 draft lottery. In addition to the Just World Scale the researchers also administered measures of self esteem and locus of control, and collected various demographic data. Results showed that the self esteem of the lottery losers fell and the self esteem of the winners rose, and this result was not affected by scores on the Just World Scale. Across all subjects the tendency was to express compassion for lottery losers, which is contrary to what the researcher had expected. However, those subjects who scored in the highest third on the Just World Scale did not exhibit the same pattern of response. Those who scored high on BJW showed no more compassion for losers than for winners, and they resented losers more than winners. Results also showed that BJW correlated positively and significant with belief in an active god, church attendance, and religiosity. BJW also correlated very highly with authoritarianism and with an internal locus of control. The researchers concluded that the degree to which one believes in a just world has important consequences. People with high levels of BJW are more likely to be unsympathetic towards the plights of the poor, oppressed, and minority groups. Although BJW is not the only factor involved in determining a person's attitude towards victims, BJW certainly is an important contributing factor towards an attitude of indifference or even hostility towards the oppressed. Thus high levels of BJW may help perpetuate social injustice.

Many other experiments have confirmed that high levels of BJW cause people to devalue and derogate innocent victims (e.g., Ford, Liwag-McLamb, & Foley, 1998; Hafer, 2000b; Kleinke & Meyer, 1990; Montada, 1998; Sinclair & Bourne, 1998; Sorrentino & Boutilier, 1974; Sorrentino & Hardy, 1974). Today victim derogation and devaluation is the most well-established and most often discussed aspect of BJW.

Explication of Belief in a Just World Theory

By 1980 Lerner and his colleagues had formulated the essential elements of BJW theory, which can be summarized as follows. BJW researchers admit that rational, conventional norms of morality do not agree with BJW theory. Societal norms require that people feel compassion for innocent victims and that people admire good deeds and noble intentions even when the outcomes may be undesirable. People are supposed to evaluate victims not by their fate but by their intentions and actions. BJW researchers argue that people do apply these societal norms when they evaluate victims who are not immediately important and when the events do not directly affect those doing the judging. People also apply societal norms when these norms are brought to conscious attention and made salient. In everyday life, however, people do not apply societal norms when they are confronted with events that are immediate and important. In these situations most people employ cognitive processes learned in childhood, such as assuming causation when people and events are closely linked in time and place. These automatic cognitive processes are intuitive and preconscious, and are based upon what people learn early in life about justice and suffering. And what people learn as children is that we get what we deserve and deserve what we get. The good are rewarded and the bad are punished. When people invoke these preconscious cognitive processes they think

backwards: They assess the immediate situation and then calculate what must be true in order for the situation to be just (Lerner, 1980,1998; Lipkus et al., 1996; Shorkey, 1980; Stowers & Durm, 1998).

In the modern world almost everyone is exposed to numerous examples of injustice, either through the media or through personal experience. According to BJW theory, observations of injustice conflict with the belief in a just world and challenge that belief. This produces a negative affect, painful emotions which people naturally seek to alleviate (somewhat like cognitive dissonance). People need to preserve and defend their belief in a just world in order to maintain their mental health and be happy. People facing threats to this belief may make one or more of three possible responses. The first possible response is prevention and/or restitution. People may try to prevent the injustice from occurring, or they may try to restore justice. For example, they might try to intervene directly, such as coming to the defense of a mugging victim, or performing volunteer charitable work, or they might act indirectly by donating money to charities or worthy causes. If people are unable to prevent injustice or restore justice through their own efforts then they may try the second possible response to injustice, which is avoidance. They might leave the area of the injustice, either physically leaving the area or mentally distancing themselves from the unjust situation. For example, they might live in places where injustice rarely occurs (such as wealthy gated communities), or they might ignore the media (as much as possible) so they will not have to see or hear or read about injustice. However, if people cannot prevent injustice and cannot avoid knowledge of injustice then they are left with the third possible response to injustice which is reinterpretation of events. To preserve their own mental well-being people may find or

create evidence that the victims of apparent injustice really deserve their fate and therefore no injustice is occurring (victim derogation or victim devaluation). People decide that either the victims have caused their suffering by their own actions or they deserve their fate because of their character and personality flaws (Lerner, 1980, 1998).

BJW can lead to undesirable social consequences. People can function and be happy only in a just world. Therefore people need to defend their belief that the world is a just place. When this belief is challenged by circumstances or events people react by forming judgments and evaluations that will preserve the inherent justice of the world in which they live. This attempt to defend the belief in a just world leads people to condemn victims of suffering and to interpret unjust events as just (through victim derogation or devaluation). People who condemn innocent victims and interpret unjust events as just are unlikely to see any need to alleviate suffering or to change the situation. Those who have the strongest belief in a just world tend to be satisfied with the status quo and to have confidence in established institutions and authorities. In this way a strong belief in a just world can cause people to accept and preserve injustice in the world (Hafer & Olson, 1998; Lerner, 1980, 1998).

Scale Development

Rubin and Peplau (1975) thought that the Just World Scale they developed measured one trait, the belief in a just world. Factor analytical studies of the scale led to a disagreement among researchers; some thought the scale was unidimensional while others found multiple factors. Lerner (1978) extracted four factors. Ahmed and Stewart (1985) concluded that BJW is a unitary trait. Hyland and Dann (1987), using a British sample,

found four factors in the Just World Scale. Ambrosio and Sheehan (1990) used an American sample and got results that generally agreed with Hyland and Dann, finding four factors which they labeled Escape Justice, Deserve What One Gets, Teach Justice, and Prudence. Lea and Fekken (1993) used Canadian samples and extracted four factors, but these four factors were not congruent with the four factors identified by Hyland and Dann. Whatley (1993) used California students as subjects and extracted two factors from the Just World Scale, and he labeled these factors Lawful (composed of the items affirming a just world) and Unlawful (composed of items affirming an unjust world). This conflict in the research may be due to the fact that the various researchers used samples from different countries, and they used different factor analytical methods to analyze the Just World Scale.

The Just World Scale also appeared to have mediocre psychometric properties (Furnham, 1998), with coefficient alphas usually below 0.70 (e.g., 0.56 in Whatley's study, 0.64 in the Amrosio and Sheehan study, and 0.67 and 0.68 for samples used by Lea and Fekken).

The conflicting factor analyses of the Just World Scale, the disagreement over the identification of the factors measured by the scale, plus its apparent poor internal reliability, led some researchers to develop other scales to measure the BJW construct. In 1991 Lipkus created and tested a seven item Global Belief in a Just World Scale (GBJWS). This new scale was scored with a Likert scale, with possible responses ranging from 1 (strong disagreement) to 6 (strong agreement). Respondents were asked to consider how the items pertained to themselves and to other people (the Just World Scale of Rubin and Peplau does not specify whether respondents are to apply the items to

themselves or to others or to both). Factor analysis of the GBJWS found that it measured a unitary construct. It had a coefficient alpha of 0.83. Lipkus concluded that his GBJWS was superior to the Rubin and Peplau Just World Scale because it measures one construct, clearly measures a global belief in a just world, and has better internal reliability. The GBJWS was analyzed by O'Connor, Morrison, and Morrison in 1996 using a Canadian sample and found to be unidimensional with a coefficient alpha of 0.80, although they did recommend dropping one item from the scale to remove possible gender bias in the scale.

Despite its shortcomings, the Rubin and Peplau (1975) Just World Scale is still used. Today there is general agreement that the scale measures two constructs, belief in a just world and belief in an unjust world. The latest factor analytical research on the scale (Loo, 2002) found a two factor solution, and the two factors are a just world dimension and an unjust world dimension. The just world factor is composed of the eleven positively coded items on the scale, and the unjust world factor is composed of the nine negatively coded items. Loo suggests that researchers use not only the total score but also the scores on the two identified subscales in performing their analyses.

In addition to the Just World Scale (Rubin & Peplau, 1975) and the Global Belief in a Just World Scale (Lipkus, 1991), two other scales have been developed and are commonly used today. They are the General Belief in a Just World Scale and the Personal Belief in a Just World Scale (Dalbert, 1999). Lerner and Miller (1978) argued that a personal belief in a just world should be distinguished from a generalized belief in a just world. Personal BJW is the belief that one's own fate is just, that one's own local environment is fair and just, that life is fair for oneself and one's own family and friends.

General BJW is the belief that the world in general is fair and just for all (or almost all) people. Lipkus et al. (1996) tested this idea that people actually hold two separate beliefs about a just world: the degree to which they believe their own world is just, and the degree to which they believe the world in general is just. They conducted in studies which confirmed their hypothesis that people actually hold two distinguishable beliefs in a just world. They used several different BJW scales to differentiate between these two types of BJW. Their dependent measures were depression, stress, and life satisfaction. They found that personal BJW (a belief in a just world for oneself) better predicted less depression, less stress, and more life satisfaction. They concluded that personal BJW makes a greater contribution to personal well-being than general BJW. Later experiments (Dalbert, 2002) have confirmed that personal BJW is distinct from general BJW and the two constructs produce different effects. For example, personal BJW provides greater protection against the health hazards of anger and greater protection against the impairment of self-esteem.

Benefits of Belief in a Just World

Throughout most of the history of BJW research the concept has been viewed in a negative light because of the undesirable consequences of strong belief in a just world (victim derogation and victim blaming). Recently, however, researchers have begun to focus on the more positive aspects of BJW. BJW is now recognized as a positive coping mechanism that promotes mental health (Furnham, 2003). Lipkus et al. (1996) found that BJW predicts life satisfaction and well-being. Dalbert (1998) argued that BJW acts as a stabilizing force in life and helps people deal with daily hassles, and BJW can decrease the chances of developing depression and stress-related illnesses. People with high BJW

are more likely to help victims (if help is possible), and when people with high BJW become victims of injustice they cope better than those who do not believe in a just world (Dalbert, 1998). Stress can precipitate physical and mental illness, and BJW offers some protection against these adverse consequences of stress. Those with high BJW tend to view stressors more as challenges than threats, and this produces healthier physiological responses to the stressors (Tomaka & Blascovich, 1994). BJW also promotes long-term goal planning and gives people confidence that their efforts will produce positive results (Hafer, 2000b). In short, BJW has been shown to be adaptive and to promote good mental and physical health.

These studies on the health benefits of BJW were mostly correlational, so they did not provide evidence that high BJW actually causes improved health. Dalbert (2002) performed two experimental studies to determine the cause and effect relationship between BJW and good health. In both studies she measured both personal and general BJW, and divided her student participants into those who were high or low in both types of BJW. Then she primed either anger or happiness or sadness to produce four experimental conditions: angry, sad, happy, and control. In one study anger was the dependent measure, and in the other study self-esteem was measured. Using multiple regression analysis she found that BJW did provide a buffering effect for anger. Results supported the conclusion that high BJW protects against angry feelings and protects against impairment of self-esteem. Both personal and general BJW provided this buffering effect, but personal BJW produced a stronger and more extensive protective effect. These two studies are the first experimental demonstrations of the adaptive benefits of BJW.

CHAPTER 3

METHODOLOGY AND DATA DESCRIPTION

Participants

Participants were 135 students at the University of Nevada, Las Vegas: 51 undergraduate students from the Psychology 101 subject pool, 46 graduate students (from the psychology, history, and social science departments), and 38 law students from the William S. Boyd School of Law. The undergraduate students were awarded one-half credit towards the completion of the Psychology 101 research requirement; the graduate students and the law students did not receive any compensation for participation. All participants were advised of the risks and benefits of participation, and all signed an informed consent prior to participation (Appendix A). The data from one participant were not used because, upon debriefing, the participant (a graduate student) revealed that she was familiar with Just World theory, had administered the Just World Scale in her previous research, and had attempted to guess the research hypotheses.

Fifty of the participants were male (37%) and 85 were female (63%). The mean age of all participants was 27.72 (S.D. = 9.71), with a range of 18 to 62. The mean age of undergraduates was 19.88 (S.D. = 2.60), with a range of 18 to 34. The mean age of graduate students was 32.87 (S.D. = 10.30), with a range of 22 to 62. The mean age of law students was 32.00 (S.D. = 8.18), with a range of 22 to 54. With regard to political affiliation, 55 listed themselves as Democrat (40.7%), 33 as Republican (24.4%), 28 as

none (20.7%), 12 as Independent (8.9%), 5 as Libertarian (3.7%), and 2 as other (1.5%).

With regard to religious affiliation, 35 listed themselves as other (25.9%), 32 as none (23.7%), 29 as Protestant (21.5%), 25 as Catholic (18.5%), 9 as Atheist/Agnostic (6.7%), 4 as Jewish (3.0%), and 1 as Muslim (0.7%). Descriptive statistics are summarized in Tables 1 through 5 contained in Appendix B.

Participants were divided according to their educational level (undergraduate, graduate, or law student) and then within their educational levels assigned randomly to the primed or not primed conditions. There were 67 primed participants: 25 undergraduates, 23 graduate students, and 19 law students. There were 68 non-primed participants: 26 undergraduates, 23 graduate students, and 19 law students. By educational level there were 51 undergraduates, 46 graduate students, and 38 law students.

Materials

The Rubin-Peplau (1975) Just World Scale was used to measure belief in a just world. The scale is a paper instrument and consists of 20 statements concerning the global concept of justice and fairness. Participants responded by indicating their degree of agreement with each statement on a scale of 0 to 5 with 0 indicating strongly disagree and 5 indicating strongly agree. The Just World Scale was scored by reversing the scores on items 1, 3, 4, 8, 10, 13, 16, 17, and 20 (these items are reverse coded), and then summing the scores for each of the 20 items. Prior analyses of the psychometric properties of the Just World Scale report inconsistent results. Some have found the scale to be unidimensional (Ahmed & Stewart, 1985) while others have found the scale to be multidimensional (Ambrosio & Sheehan, 1990; Hyland & Dann, 1987; Whatley, 1993).

Most factor analytical studies support a multidimensional solution, although the studies differ as to the exact number and description of the factors. The latest research (Loo, 2002) supports a two factor solution which corresponds to a justice subscale composed of the positively coded items and an injustice subscale composed of the negatively coded items. In the present study a factor analysis was performed on the Just World Scale. A Principal Component Analysis with Varimax rotation extracted two principal factors corresponding to the two subscales, the justice and the injustice subscales. The total variance explained by the first factor (the justice subscale) was 14.44%, and the total variance explained by the second factor (the injustice subscale) was 10.94%. These results generally agree with Loo's (2002) analysis. In the present study the Coefficient Alpha for the Just World Scale was 0.63, which is within the range (0.6 to 0.7) reported in the literature (O'Connor, Morrison, & Morrison, 1996).

The Scrambled Sentences Task was a paper instrument consisting of 20 sets of 5 scrambled words, 4 of which can be arranged to form a grammatically correct and meaningful sentence. Participants chose 4 of the words in each set of 5 words and used the chosen words to write a correct sentence on a line to the right of the set of words. There were two versions of the Scrambled Sentences Task. In one version, the priming version, fourteen of the sets of words contained one or two words that describe or refer to some sort of injustice or suffering (e.g., sickness, homeless). Overall, the priming version of the Scrambled Sentences Task contained 17 priming words. These 17 words were intended to prime the participants with non-conscious thoughts of suffering and misfortune that can happen to innocent victims. The other version of this task, the neutral or non-priming version, was identical except that it did not contain any words that

described or referred to suffering or misfortune; it contained only neutral words. The priming version was given to the three priming groups (groups 1, 3, and 5), and the neutral version was given to the three not-primed groups (groups 2, 4, and 6). The priming version of the Scrambled Sentences Task is Appendix C and the neutral version is Appendix D. The Scrambled Sentences Task was a type of supraliminal conceptual priming that has been used successfully for over three decades (Bargh & Chartrand, 2000; Costin, 1969; Srull & Wyer, 1979).

All participants performed a manipulation check. The manipulation check consisted of a recognition test. Participants were presented with a list of 76 words and were instructed to circle words they recognized as having appeared on the Scrambled Sentences Task. There were two versions of the recognition test. The experimental groups received a recognition test that contained 76 words; of these 76 words, 42 were words contained in the Scrambled Sentences Task, and 16 of these words were priming words. The control groups also received a recognition test that contained 76 words; of these 76 words, 19 were words contained in the Scrambled Sentences Task. On the same piece of paper, just below the recognition test, participants were asked to respond to the following evaluation questions: “The Scrambled Sentences Task that you performed is a new task that we are testing. We would like your thoughts and feelings about this task. Did it arouse any particular feelings or emotions? Did it contain too many positive words or negative words? Did you feel anxious or uncomfortable while you were doing the task? Please give your honest opinion below.” These evaluation questions were intended to determine if the participant had guessed the hypotheses or the manipulation being

employed. The experimental/priming version of the recognition test is Appendix E and the control/neutral version is Appendix F.

The Career Motivation Survey was a paper task. It asked participants to rate, on a scale of 1 through 7 with 1 being Not Very Important and 7 being Very Important, the importance of 8 different factors in choosing a career. The eight factors affecting career choice, in the order presented, were money, financial security, prestige, social justice, benefit to society, altruism, intellectual challenge, and personal accomplishments. The Career Motivation Survey is Appendix G.

All participants completed a Demographic Survey. The Demographic Survey asked for the participant's age, sex, educational level, political affiliation, religion, and income. The Demographic Survey is Appendix H.

Procedure

Participants were recruited mostly through the use of announcements posted to e-mail listserves operated by the department of psychology, the department of sociology, and the William S. Boyd School of Law. The researcher also visited some graduate history classes and posted signs around campus to recruit participants. To maintain the naivete of potential participants the recruitment announcement described this study as an exploration of attitudes about society. Participants were told that they would be asked to complete a simple sentence construction task, to provide some demographic information, and to complete a few short surveys about their attitudes towards several aspects of society.

Within educational levels participants were assigned randomly to either the primed or not primed levels. All participants were advised of their rights as human subjects and

completed an informed consent form. After signing the informed consent form all participants were given an envelope containing the five paper instruments in the following order: Scrambled Sentences Task; Just World Scale; recognition test; Career Motivation Survey; and Demographic Survey.

Participants received the following instructions: The envelope in front of you contains five pieces of paper numbered 1 through 5 in the upper left corner; each piece of paper has instructions at the top; complete the tasks in the numbered order; once you have completed working on a piece of paper turn it face down and do not return to it; do not to look ahead; there is no time limit and you can work at your own speed; when you are finished return the five pieces of paper to the envelope; you may ask questions at any time; and you will be debriefed at the end of the session.

Participants in the priming groups were given the following materials in this order: the priming version of the Scrambled Sentences Task, the Just World Scale, the priming version of the recognition test, the Career Motivation Survey, and the Demographic Survey. The participants in the control groups were given the following materials in this order: the neutral version of the Scrambled Sentences Task, the Just World Scale, the neutral version of the recognition test, the Career Motivation Survey, and the Demographic Survey. After completing the five instruments the participants returned them to the envelope and the envelopes were collected by the researcher. The researcher then gave the participants a Debriefing Form and also provided an oral summary of the research hypotheses, the manipulation, and the purpose of each instrument.

The study was administered to the undergraduate participants in four group sessions held in a classroom on the University of Nevada, Las Vegas campus. The study

was administered to the graduate and law student participants individually, although on a couple of occasions two participants performed the study at the same place and at the same time, and on one occasion four law students performed the study in a group. Most graduate students performed the study in the social sciences laboratory of the psychology department. A few graduate student participants performed the study in their graduate assistant's offices. Most of the law students performed the study in the law library. On one occasion the researcher traveled to a private residence about five miles south of Las Vegas to administer the study to a law student.

CHAPTER 4

DATA ANALYSIS

Group Differences

Analyses were performed to compare the groups on the demographic variables of age, sex, political affiliation, religious affiliation and income. The primed and not primed groups did not differ significantly on any demographic variables (all p s > .05). Education level groups differed significantly with regard to age, $F(2,129) = 43.09$, $p < .05$, political affiliation, $F(2,129) = 9.54$, $p < .05$, and income, $F(2,127) = 13.28$, $p < .05$. Tukey HSD post hoc tests revealed that undergraduates were significantly younger ($M = 19.88$) than the graduate students ($M = 32.00$) and law students ($M = 32.87$); that undergraduates were significantly different from graduate students and law students with regard to political affiliation with most undergraduates listing themselves as none while most graduate students and law students listed themselves as either Democrats or Republicans; and that undergraduates were significantly different from graduate students and law students with regard to income with undergraduates reporting a mean income of \$16,200, graduate students reporting a mean income of \$32,600, and law students reporting a mean income of \$33,400. Since the groups differed significantly on these three factors correlations were performed to determine if any of these three factors was related significantly to the dependent measure, Just World Scale scores. None of the correlations

were significant with all p s $> .05$. Therefore none of the descriptive factors were used as covariates in subsequent analyses.

Analyses of the Dependent Measure

The means and standard deviation scores for the Just World Scale for all groups are reported in Table 6 in Appendix I.

A factorial Analysis of Variance of Just World Scale scores was performed to examine whether or not the results supported the research hypotheses. The statistical analyses revealed no significant main effects for priming, $F(1,129) = 1.82$, $p > .05$, or for educational level $F(2,129) = 0.33$, $p > .05$, and no significant interaction, $F(2,129) = 0.42$, $p > .05$.

For further analysis the Just World Scale was divided into its two factors to comprise two subscales: the Justice Subscale (items 2, 3, 6, 7, 9, 11, 12, 14, 15, 18, and 19) and the Injustice Subscale (items 1, 4, 5, 8, 10, 13, 16, 17, and 20). The means and standard deviations scores for the Justice Subscale are reported in Table 7 in Appendix J, and the means and standard deviations for the Injustice Subscale are reported in Table 8 in Appendix K. A factorial Analysis of Variance using the Justice Subscale as the dependent measure revealed no significant main effects or interaction (all p s $> .05$). A factorial Analysis of Variance using the Injustice Subscale as the dependent measure revealed a significant main effect for priming, $F(1, 129) = 4.93$, $p < .05$; and a significant main effect for educational level, $F(2,129) = 4.60$, $p < .05$; but the interaction was not significant. The primed groups ($M = 20.97$, $S.D. = 5.04$) differed significantly from the not primed groups ($M = 23.06$, $S.D. = 5.89$). A Tukey's HSD range test revealed that undergraduates ($M = 20.29$, $S.D. = 5.66$) differed significantly from the graduate students

($M = 22.76$, $S.D. = 5.51$) and the law students ($M = 23.45$, $S.D. = 5.02$). The Tukey's HSD test also revealed that the undergraduates and graduate students differed from the law students.

Analyses of the Career Motivation Survey Data

The means and standard deviation for the eight factors listed on the Career Motivation Survey are reported in Table 9 in Appendix L.

Each of the eight variables on the Career Motivation Survey were examined to determine if they were significantly correlated with Just World Scale scores. Only two correlations were significant. The variables of intellectual challenge ($M = 5.77$, $S.D. = 1.19$, $r = .23$, $p < .05$) and personal accomplishment ($M = 6.27$, $S.D. = 1.05$, $r = .17$, $p < .05$) were significantly positively correlated with the dependent variable.

Manipulation Checks

The primed Scrambled Sentences task was scored for the number of grammatically correct sentences formed. The mean number of sentences formed by all participants was 18.93 (out of a possible 20). A one-way ANOVA revealed that there were no significant differences between the educational levels with regard to the number of sentences formed ($p > .05$).

The recognition test was scored only for the primed participants, because this was intended to function as a check of the priming manipulation; the not primed participants also completed a recognition test but this was done simply to preserve standardization of procedure. For the primed participants the recognition test was scored for the number of words correctly recognized (number right, with the maximum possible score being 42), the number of words incorrectly recognized (number wrong, with the maximum possible

score being 34), and a total recognition score computed by subtracting the number wrong from the number right (total recognition score). A one-way ANOVA of the number correct scores revealed a main effect for educational level, $F(2,64) = 5.43$, $p < .01$. A Tukey's HSD range test revealed that the undergraduates recognized a significantly greater number of words correctly. The mean number of words correctly recognized was 27.36 for the undergraduates, 21.78 for the graduate students, and 21.74 for the law students. A one-way ANOVA of the number wrong scores revealed no significant difference between the educational levels ($p > .05$). A one-way ANOVA of the total recognition scores revealed main effect for educational level, $F(2,64) = 4.95$, $p < .05$. A Tukey's HSD range test revealed that the undergraduates performed significantly better than the other two educational levels on total recognition scores. The mean total recognition score for the undergraduates was 25.56, for the graduate students it was 20.17, and for the law students it was 20.26.

There were 76 words on the recognition test for the primed participants. Forty-two of these words were found in the Scrambled Sentences Task, and of these 42 words 16 were priming words and 26 were non-priming words. For all primed participants the mean number of priming words recognized was 10.52, or 66% of the priming words on the recognition test. The mean number of non-priming words correctly recognized was 11.69 (out of a possible 26), or 45% of the non-priming words. Therefore primed participants recognized priming words at a rate 47% greater than their rate of recognition of non-priming words.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS, AND CONCLUSIONS

The first research hypothesis was that law students would score higher in BJW than undergraduates and graduate students. The data did not support this hypothesis. The means were in the predicted direction, but the differences between the educational level groups were not significant.

One possible reason for this result is that priming may have been confounded with educational level. Non-primed law students scored higher ($M = 55.68$) than not primed undergraduates ($M = 52.67$) and not primed graduate students ($M = 54.70$), but the scores for primed law students ($M = 52.63$) reduced the overall mean for law students ($M = 54.16$). The unexpected destructive effect of priming on BJW may have prevented an accurate comparison of the strength of BJW among the three educational groups. It is recommended that, in future research, the second research hypothesis be tested by administering a BJW scale to participants from different educational groups without priming any of the groups.

An examination of the raw data revealed an unexpected and interesting phenomenon. Part of the reasoning behind the second research hypothesis was that people who go to law school probably have higher BJW and that this is one of the motivating factors leading them to decide to attend law school and become part of the justice system. The mean Just World Scale score for first year law students was 51.57 ($S.D. = 7.87$),

which was lower than the overall mean for undergraduates ($M = 52.53$) and the overall mean for graduate students ($M = 52.98$). Therefore it appears that the reasoning was incorrect and that beginning law students do not possess stronger BJW than others in the population. Another surprising phenomenon is that the strength of BJW increased as students progressed through law school. The mean for first year law students was 51.57 ($S.D. = 7.87$), while the mean for second year law students was 55.00 ($S.D. = 13.54$) and the mean for third year law students was 56.23 ($S.D. = 9.09$). Thus it appears that, at least for this sample from this particular law school, there is something about a law school education that increases the strength of BJW. Perhaps the law school curriculum portrays the American justice system positively and emphasizes examples of justice triumphant. It is recommended that this apparent phenomenon be investigated in future research without the use of priming and with an attempt to discover possible mechanisms for the effect.

The second research hypothesis was that primed participants would score higher on the Just World Scale than non-primed participants. Once again the data did not support the hypothesis. In fact, the means were in the opposite direction from that predicted. The mean for the non-primed groups was 54.18 while the mean for the primed groups was 52.09. This is contrary to what the literature would predict.

One possible reason for this result is that the priming manipulation may not have worked. Hafer (2000a) performed a priming manipulation and found a defensive response to a supraliminal presentation of an example of injustice, but she did not measure the strength of belief in a just world. She used a Stroop task and found longer response latencies to justice-related words after presentation of a visual example of

injustice (a videotape of a news story). Her manipulation used visual images, while the manipulation in this study used only words embedded in a seemingly innocuous word task. It is possible that the manipulation used here was not strong enough to produce a priming effect.

This study did include a manipulation check to try to determine if the priming technique was effective. The results of the manipulation check indicated the primed participants paid attention to the words in the Scrambled Sentences Task, they remembered about 66% of the priming words on the recognition test, and they remembered the priming words at a rate about 47% greater than the rate of remembering the non-priming words. Scrambled sentence tasks have been used successfully for decades to prime research participants (Bargh & Chartrand, 2000). The manipulation check supports the inference that the priming technique used here was effective.

Another possible explanation may be that the priming technique worked, but it produced a priming effect only after the participants completed the Just World Scale. Participants completed the priming mechanism (the Scrambled Sentences Task) then immediately completed the Just World Scale. It undoubtedly took the participants a few minutes, perhaps as many as five minutes, to complete the Just World Scale. They performed the manipulation check (the recognition task) only after this lapse of time. There is some evidence that in certain situations and for some priming tasks the priming mechanism needs some lapse of time, usually about five minutes, before it produces the priming effect (e.g., see Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994). This might account for the absence of the expected priming effect on the dependent measure even though the manipulation check supports an inference that the manipulation worked.

This study did not investigate the possible need for a delay between the priming manipulation and the dependent measure. It is recommended that future research explore this possibility by repeating the method used here but adding another priming group that incorporates a filler task between the completion of the priming technique and the completion of the dependent measure.

A third possibility is that the sample used in this study differed in some important respect from samples used in all prior studies. To the researcher's knowledge, this study is the first to use graduate students and law students as participants. Other studies have used undergraduates or samples drawn from the general population or from distinct subgroups (such as crime victims or racial groups). In this study the graduate students ($M = 52.98$) and the law students ($M = 54.16$) scored higher in BJW than the undergraduates ($M = 52.53$), but most of the difference resulted from the high scores of group 4 (graduate students not primed, $M = 54.70$) and group 6 (law students not primed, $M = 55.68$). It may be that graduate students and law students have a stronger belief in a just world than undergraduates, but this belief is fragile and more susceptible to reduction by evidence of injustice. It could be that, for the graduate students and law students, the priming manipulation was strong enough to overwhelm, at least temporarily, the predicted defensive response, resulting in a decline of BJW among these participants.

The analysis of the subscales supports this inference. Although primed and not primed groups did not differ on the justice subscale, they differed significantly on the injustice subscale with primed groups scoring significantly lower than not primed groups. When this result is considered together with the fact that this decline in BJW occurred only among the graduate students and law students, this suggests that increased formal

education somehow may weaken BJW and make it more susceptible to attack, so that affirmative statements of the injustice of the world may have been sufficiently powerful to decrease BJW. This is merely speculation, and even if this speculation is correct the effect might have been temporary. If the primed graduate students and law students (groups 3 and 5) had delayed completing the Just World Scale until 10 minutes or 30 minutes after the manipulation, would they have scored just as high or even higher in BJW as the not primed graduate students and law students (groups 4 and 6)? This is a question that should be explored by further research.

This study is the first to attempt to prime BJW and then make a direct measure of the possible effects of the manipulation on BJW. Hafer's (2000a) study primed BJW, but she measured the effects on response latencies to justice-related words. Correia and Vala (2003) primed BJW but then measured the effects on victim's attractiveness, derogation of the victim, and perception of justice. But unlike the present study, Correia and Vala used two priming conditions. In one condition participants were primed to view the world as just, and in the other condition the participants were primed to view the world as unjust. Participants primed for an unjust world derogated innocent victims more than participants primed for a just world. Participants primed for an unjust world also increased their derogation of non-innocent victims who escaped suffering. The participants primed for an unjust world not only expected good things to happen to good people but also expected bad things to happen to bad people. Bad people who escape suffering threaten BJW just as much as good people who suffer unjustly. The researchers interpreted this result to mean that participants primed for an unjust world faced a greater

threat to their BJW and defended it more than the participants who were primed for a just world.

Except for the Hafer (2000a) and Correia and Vala (2003) studies, no other reported studies have attempted direct manipulation of the strength of BJW. Clearly this area needs to be explored more thoroughly. Correia and Vala obtained results generally in accordance with BJW theory. But the results of the present study do not accord with BJW theory. Some possible reasons have been mentioned, such the lack of a delay to allow the defense mechanism to operate, or the effects of higher education on BJW. There may be other factors impacting the effect of priming on BJW. Future research is needed to resolve the intricacies of priming and BJW.

Career Motivating Factors

The Career Motivation Survey was a new instrument created for this study. It was intended to be exploratory and there were no research hypotheses formulated with regard to this instrument. The intent was to determine if any of the eight factors predicted BJW. Only two factors, intellectual challenge ($r = .23$) and personal accomplishment ($r = .17$), were significantly correlated with BJW, and the correlations were in the positive direction. The law students scored highest in BJW, followed by the graduate students, so it is reasonable to infer that the law students and graduate students contributed most strongly to this correlation. It seems likely that law students and graduate students would be more highly motivated than the undergraduates by the desire for intellectual challenge and the need to achieve important personal accomplishments. Law school and graduate school are more demanding than undergraduate education. Law students and graduate students have chosen a professional and are striving to achieve professional

qualifications. They would not devote the time and effort to do so unless they thrived on intellectual challenges and were driven by a desire to achieve a difficult personal goal.

It is interesting that the factors of social justice ($r = -.12$) and benefit to society ($r = -.09$) not only failed to predict BJW, but these two factors were actually correlated in the negative direction. The admittedly meager research on motivation to attend law school indicates that social justice and the desire to improve society are mentioned often by law students as reasons for attending law school. The absence of a positive relationship between these two factors and BJW is further evidence that BJW is not an important personality characteristic among law students.

Conclusion

Even though the data did not support the research hypotheses, the results still constitute an important contribution to just world theory. First, the results demonstrate that priming can impact the strength of BJW and it can do so in ways not anticipated by just world theory. The relationship between priming and BJW is more complex than expected. Further research will be needed to explore the intricacies of this relationship and the mechanisms at work. Future research should endeavor to make direct measures of BJW, using either the Just World Scale of Rubin and Peplau (1975), or some of the newer scales under development, rather than simply measuring the expected effects of BJW manipulation (such as victim derogation) and drawing conclusions from that.

Second, the results suggest possible avenues of fruitful research in other areas not previously explored, such as the interplay between higher education and BJW, and in particular the relationship between a law school education and BJW. If a standard law school curriculum does increase the strength of BJW among graduating attorneys, this

has important implications for the legal profession and the operation of the justice system. For example, to the extent that BJW protects people from stress and possible alcohol and drug abuse, increasing BJW during law school can have a positive impact on the lives and careers of attorneys. However, increased BJW may produce increased victim derogation and opposition to legal reform, and in this respect increasing BJW in law school can have an adverse impact on the justice system. It may be advisable to institute intervention programs in law school to counteract the negative consequences of strong BJW.

Whenever experimental results do not agree with the predictions of a theory it is useful to find out why. That is the situation with this study. Results should have supported the research hypotheses, but they did not. Just World theory still holds mysteries to be unraveled.

APPENDIX A
INFORMED CONSENT FORM

**University of Nevada, Las Vegas
Department of Psychology**

INFORMED CONSENT

General Information:

I am Joseph F. Boetcher, a graduate student in the Department of Psychology at the University of Nevada, Las Vegas. I am the researcher on this project. You are invited to participate in this research project. This study will explore your attitudes about society in general. You also will be asked for some demographic information, and you will be asked about your career motivations. Finally, you will be asked to complete a simple task of forming a four word sentence from five common English words. It is expected that it will take about 30 minutes to complete this study.

Procedure:

If you volunteer to participate in this study you will be asked to do the following:

1. Complete a 20 item scrambled sentences task. Each item consists of five common English words, and you are asked to choose the four words that make a grammatically correct sentence and write the sentence.
2. Complete a 20 item survey about your attitudes towards society.
3. Complete a six item questionnaire of demographic information (age, sex, religion, political affiliation, educational level, and income).
4. Complete an eight item survey ranking your possible motivations for choosing a career.

Benefits of Participation:

You will not receive any personal benefits from your participation in this study, other than the satisfaction of knowing that you have contributed to scientific research and the advancement of psychological science. You also may gain a better understanding of how scientific research is conducted. If you are taking PSY 101, your participation in this study will count as one-half credit towards the completion of your research requirement.

Risks of Participation:

Based upon past experience, there are no known risks associated with this type of research. It is possible that you might feel uncomfortable answering some of the questions asked; if this occurs you are encouraged to discuss your concerns with me and I will try to explain the questions in more detail and alleviate your concerns.

Contact Information:

If you have any questions about this study, or if you think you have experienced any harmful effects as a result of your participation in this study, you may contact me at

boetche@unlv.nevada.edu, telephone 702-895-3305, or you may contact my faculty advisor, Dr. Murray Millar, at millar@unlv.nevada.edu, telephone number 702-895-0179

For questions regarding your rights as a research subject you may contact the **UNLV Office for the Protection of Research Subjects at 702-895-2794.**

Voluntary Participation:

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw from this study at any time without prejudice to your relations with UNLV. You are encouraged to ask questions about this study at the beginning or at any time during the research study.

Confidentiality:

All of the information you provide during this study will be given anonymously. You will be assigned a subject number, and only the number will appear on the forms you complete. There will not be any way to trace the subject number back to you personally.

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records of this study will be stored in a locked facility at the Department of Psychology, UNLV, for at least three years after completion of this study.

Participant Consent:

I have read the above information and agree to participate in this study. I am at least eighteen (18) years of age. A copy of this form has been given to me.

Signature of Participant

Date

Participant's Name (Please Print)

APPENDIX B
DESCRIPTIVE STATISTICS TABLES

	Age
Undergraduates	19.88 (2.60)
Graduate Students	32.87 (10.30)
Law Students	32.00 (8.18)
<p>Table 1: Mean (standard deviation) Ages of Participants by Educational Level.</p>	

Political Party	Number	Percentage
Democrat	55	40.7
Republican	33	24.4
Libertarian	5	3.7
Independent	12	8.9
Other	2	1.5
None	28	20.7
Total	135	100.0
Table 2: Political Affiliation of Participants		

	Undergraduates	Graduate Students	Law Students
Democrat	17	21	17
Republican	9	10	14
Libertarian	0	2	3
Independent	2	8	2
Other	0	1	1
None	23	4	1
Total	51	46	38
Table 3: Political Affiliation of Participants by Educational Level			

Religion	Number	Percentage
Protestant	29	21.5
Catholic	25	18.5
Jewish	4	3.0
Muslim	1	0.7
Other	35	25.9
Atheist/Agnostic	9	6.7
None	32	23.7
Total	135	100.0
Table 4: Religious Affiliation of Participants		

	Incomes
Undergraduates	\$16,300
Graduate Students	\$32,600
Law Students	\$33,400
Table 5: Mean Incomes by Educational Level.	

APPENDIX C
SCRAMBLED SENTENCES TASK
PRIMING VERSION

Scrambled Sentences

Directions: From each set of five words below make a grammatically correct four word sentence and write it on the line. If you are unable to form a sentence after one minute move on to the next set of words.

Example: flew eagle the sit around The eagle flew around.

1. send war me it to _____
2. put see fire out the _____
3. she very barn is old _____
4. he walked mugging the saw _____
5. planted the she car seed _____
6. is a radiation blue danger _____
7. find go sickness the car _____
8. long your was here friend _____
9. famine broke the machine down _____
10. people truck ball playing were _____
11. patient cow cancer the has _____
12. they sick here meet often _____
13. many the book killed flood _____
14. helpless he dish hides the _____
15. mail the sky arrived has _____
16. ambulance desk drives she an _____
17. help you the computer homeless _____
18. go out chair door the _____
19. money ate lost the he _____
20. pie table she the ate _____

APPENDIX D

SCRAMBLED SENTENCES TASK

NEUTRAL VERSION

Scrambled Sentences

Directions: From each set of five words below make a grammatically correct four word sentence and write it on the line. If you are unable to form a sentence after one minute move on to the next set of words.

Example: flew eagle the sit around

the eagle flew around

1. send rain me it to

2. put see cat out the

3. she very barn is pretty

4. he walked man the saw

5. planted the she car seed

6. is the blue baby sky

7. find go green the car

8. long friend was your here

9. soft broke machine the down

10. people truck ball playing were

11. dog orange fleas has the

12. they sidewalk here meet often

13. many book long was the

14. gray he dish hides the

15. mail the sun arrived has

16. desk drives bus she a

17. down computer the rug broke

18. go out chair door the

19. stand typed he letter the

20. pen house he the painted

APPENDIX E
RECOGNITION TEST
PRIMING VERSION

Recognition

Circle all the words below that you remember being on the Scrambled Sentences task.

girl jail children truck red crying doctors bullet earthquake drives
seed bring go barn killed car smoothly ambulance dish lost old
danger fly famine hospital couch walk computer talks chair table
animal send cat building fire book war patient clothes book
people meet dirt mugging money lamp helpless horse homeless cow
bottle ate radiation ball sickness do sky planted cleaned run flood
mail test dog town cancer farm green friend door pen mother
arrived food ship

APPENDIX F
RECOGNITION TEST
NEUTRAL VERSION

Recognition

Circle all the words below that you remember being on the Scrambled Sentences task:

girl children truck red tear swim sky drives dirt bring train barn
smooth dish fly couch computer talk animal cat building meet cow
ball lamp horse cleaned run test dog town farm gold pen
arrived ship friend typed rain hard sun speed sheep sea clothes house
student boss job run sit tall down city man plate garage corn
plane watch shoes movie store sleep glasses magnet briefcase
bottle lights key desk few hard ruler television hat

APPENDIX G
CAREER MOTIVATION SURVEY

Career Motivation Survey

We would like to discover what motivated you to choose a career, or what is most likely to be your motivation for choosing a career in the future. Please rate, on a scale of 1 to 7, how important the eight factors listed below are in choosing a career. Remember, this survey is completely confidential so feel free to express your true feelings.

Money:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

Financial security:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

Prestige:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

Social justice:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

Benefit society:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

Altruism:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

Intellectual challenges:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

Personal accomplishments:

Not Very Important								Very
Important	1	2	3	4	5	6	7	

APPENDIX H
DEMOGRAPHIC SURVEY

Demographic Survey

Please give your age and provide the following information by checking the appropriate choice or filling in the blank:

Age: _____

Sex: 1. Male _____
2. Female _____

Educational level:

1. Undergraduate freshman _____
2. Undergraduate sophomore _____
3. Undergraduate junior _____
4. Undergraduate senior _____
5. First year law school _____
6. Second year law school _____
7. Third year law school _____
8. Graduate School (please specify major and year) _____

Political affiliation:

1. Democrat _____
2. Republican _____
3. Libertarian _____
4. Green Party _____
5. Independent _____
6. Other (please specify) _____
7. None _____

Religion:

1. Protestant (please specify denomination) _____
2. Catholic _____
3. Jewish _____
4. Muslim _____
5. Other (please specify) _____
6. Non-theist/atheist/agnostic _____
7. None _____

Yearly Income:

1. Under \$10,000 _____
2. \$10,000 - \$20,000 _____
3. \$20,000 - \$30,000 _____
4. \$30,000 - \$40,000 _____
5. \$40,000 - \$50,000 _____
6. \$50,000 - \$100,000 _____
7. Over \$100,000 _____

APPENDIX I
JUST WORLD SCALE SCORES

	Primed	Not Primed	Total
Undergraduates	52.44 (7.29) 25 Participants (Group 1)	52.62 (7.86) 26 Participants (Group 2)	52.53 (7.51) 51 Participants
Graduate Students	51.26 (10.10) 23 Participants (Group 3)	54.70 (11.38) 23 Participants (Group 4)	52.98 (10.78) 46 Participants
Law Students	52.63 (9.17) 19 Participants (Group 5)	55.68 (11.02) 19 Participants (Group 6)	54.16 (10.12) 38 Participants
Total	52.09 (8.75) 67 Participants	54.18 (9.99) 68 Participants	53.14 (9.42) 135 Participants
Table 6: Just World Scale Score Means (standard deviations) and Number of Participants by Group			

APPENDIX J

JUSTICE SUBSCALE SCORES

	Primed	Not Primed	Total
Undergraduates	33.48 (6.70)	31.19 (6.32)	32.31 (6.55)
Graduate Students	29.61 (7.08)	30.91 (7.46)	30.26 (7.22)
Law Students	30.11 (7.96)	31.58 (6.96)	30.84 (7.41)
Total	31.19 (7.32)	31.21 (6.00)	31.20 (7.03)
Table 7: Justice Subscale Score Means (standard deviations)			

APPENDIX K
INJUSTICE SUBSCALE SCORES

	Primed	Not Primed	Total
Undergraduates	19.04 (5.47)	21.50 (5.68)	20.29 (5.66)
Graduate Students	21.70 (5.15)	23.83 (5.77)	22.76 (5.51)
Law Students	22.63 (3.50)	24.26 (6.17)	23.45 (5.02)
Total	20.97 (5.04)	23.06 (5.89)	22.02 (5.57)
Table 8: Injustice Subscale Score Means (standard deviations)			

APPENDIX L

CAREER MOTIVATION FACTORS
SCORES

Money	5.20 (1.19)
Financial Security	5.96 (1.00)
Prestige	4.66 (1.32)
Social justice	5.20 (1.29)
Benefit to society	5.53 (1.44)
Altruism	4.83 (1.32)
Intellectual challenge	5.76 (1.19)
Personal accomplishment	6.27 (1.04)
Table 9: Means (standard deviations) of the Career Motivating Factors for All Participants	

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