Benefiting from Unfairness: the Consequences of Affirmative Action on Prosocial Behavior

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Author Note

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Abstract

 Affirmative action is an often disputed procedure that violates the equity principle to promote equal treatment for minorities (Kravitz & Platania, 1993). The present paper relates gender-based affirmative action to prosocial behavior displayed by those benefiting from it, and examines several covariates that may affect that relationship. Using three conditions (random reward, deserved reward, and affirmative action based reward) and a measure of prosocial behavior (number of pencils picked up by participants), the study shows that affirmative action is associated with higher levels of prosocial behavior. Participants in the affirmative action condition display significantly more prosocial behavior than those in both the random reward and deserved reward conditions. The covariates openness, global belief in a just world (GBJW), and guilt show small main effects on prosocial behavior as well.

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 Fairness is a principle of vital importance to any human being and even some animals (e.g. Brosnan & de Waal, 2003). When this principle is violated and unfairness occurs, it will lead to dissatisfaction, and negative consequences may be expected (e.g. Zitek, Jordan, Monin & Leach, 2010). The exact definition of fairness varies depending on what perspective one takes. From the equality perspective, fairness refers to a situation in which resources are divided equally among individuals or in which every individual is subject to the same procedures (Wagstaff, 1998). According to the equity perspective this may not be fair, as this perspective describes a situation as fair when an individual gets what is deserved, so that the output is equal to the input of that individual (Wagstaff, 1998). For example, a situation in which a group of four people work on a project and all receive 25% of the output is fair in terms of equality, but if one person has invested more than 25% of the effort, the situation is not fair in terms of equity. Rawls (1971) states that a situation is fair, when one can objectively determine that it is fair. This is done by taking the ‘veil of ignorance’ perspective, which avoids including emotions and personal aspects that may alter fairness perceptions. Given these different perspectives, it is hard to judge whether a situation is fair or not, but regardless of the perspective, fairness is of great importance to people. In psychological literature the equity perspective is most often used, as it incorporates the notion of deservingness (e.g. Brosnan & de Waal, 2003; Zitek et al., 2010; Zizzo & Oswald, 2001). Deservingness refers to whether an outcome is justified given the input of an individual or aspects of the situation that resulted in that outcome (Feather, 1999). Deservingness can easily be manipulated to create unfair situations that generally result in negative consequences. Zitek et al. (2010) recently showed that individuals that receive fewer resources than they deserve, feel mistreated and behave more selfishly compared to others. Brosnan and de Waal (2003) show that also less cognitively developed species (i.e. monkeys) demonstrate dissatisfaction when treated unfairly. These animals refused to accept less valued food when they saw other animals receiving more valued foods for the same input. Another similar display of dissatisfaction and anger is demonstrated by Zizzo and Oswald (2001). In this study participants who received less resources than others in a game, were willing to sacrifice their own resources to punish other participants who gained more resources due to unfair procedural rules. These studies all show that when deservingness is low, equity is violated and the situation is perceived to be unfair, people will feel dissatisfied and angry and engage in undesirable behaviors. In organizations fairness or lack thereof may have consequences as well. Masterson (2001) demonstrated that perceived fairness of the organization was associated with higher levels of performance and organizational commitment, both increasing customer satisfaction. Various negative consequences may be expected when the organization is perceived as unfair. Apart from not attaining the benefits of fairness, unfairness is associated with decreased trust in the organization and superiors (Fox, 1974), decreased cooperation among employees (Scullen, Bergey & Aiman-Smith, 2005), decreased job satisfaction and motivation, and increased intention to quit (Guest, 2004), theft of company property (Greenberg, 1993), and possibly even lawsuits against the organization (Werner & Bolino, 1997). These studies demonstrate how fairness or lack thereof in organizations may be associated not only with negative individual outcomes, but also with serious economic damages. This underscores the importance and relevance of fairness research for both theoretical knowledge and practical application. Given the clear negative consequences of unfairness, it is interesting to explore the possibility of a reversed relationship, in which positive consequences are associated with unfairness. It seems that while some people will suffer from an unfair situation, others may actually benefit from it. For example a situation in a hunter-gatherer society in which food is divided among a group of people according to the principle of equality. If one of the group members did not put in effort, allowing him to conserve his personal resources and still receive his share of new resources, the net gain in resources is higher as no expenses were made. This provides this individual with relatively more resources, thus increasing the chance of survival. In this situation the equity principle is obviously violated, making the situation unfair, but clearly it is beneficial to the individual described above. Apart from the clear material benefits, it remains unknown what attitudinal and especially behavioral consequences are associated with benefitting from an unfair situation. This issue is exactly what the present paper will address, by exploring how people will behave when they have benefitted from an unfair situation. Previous research has mostly focused on the behavioral and attitudinal consequences of people that were disadvantaged by unfairness. There are numerous studies that describe the negative consequences associated with being treated unfairly (e.g. Fox, 1974; Guest, 2004; Scullen et al., 2005; Werner & Bolino, 1997, Zitek et al., 2010, Zizzo & Oswald, 2001). A possible explanation of preference for studying negative consequences of unfairness is that these are more readily available and salient to people, due to a tendency towards loss aversion (Kahneman & Tversky, 1991). In addition, the impact of these negative behavioral and attitudinal consequences of unfairness is likely to be more serious for both individuals and organizations, which makes the negative approach all the more salient. Studies that did focus on the consequences of people who benefit from unfairness mainly investigate emotions and attitudes rather than behavior. The study by Fehr and Schmidt (1999) for example, examined what situations participants favored in terms of distributive justice. They found that people always prefer a situation in which resources are distributed according to the equity principle, even above situations in which they get more than they deserve themselves. Estrada-Hollenbeck & Heatherton (1998) describe that individuals who experience guilt, due to benefitting from unfairness, are likely to engage in prosocial behaviors to alleviate guilt. Van de Ven, Zeelenberg and Pieters (2010) describe that a lack of deservingness (i.e. an unfair situation) may result in malicious envy in others, which is feared by the individual and may eventually lead to prosocial behaviors to ward off this malicious envy. This study strongly relates to the present paper, but differs in that it focuses on fear of being maliciously envied as predictor, as opposed to the unfair situation the present paper will focus on. The unfair situation the present paper will focus on is that of affirmative action. Affirmative action refers to procedures organizations or institutions may employ to promote diversity and equality for minorities, originally designed to make up for a history of discrimination (Holloway, 1989; Kravitz & Platania, 1993). In affirmative action situations, minorities receive advantages over non-minorities (e.g. a higher chance to get hired by an organization, or receiving exclusive bonuses). As affirmative action only applies to members of minority groups, these advantages are divided based on trait-like characteristics (e.g. gender, race or ethnicity) (Holloway, 1989; Kravitz & Platania, 1993). Though some believe that such advantages are fair because they promote equality (Holloway, 1989), affirmative action violates the equity principle as outcomes are based on trait-like characteristics rather than on merit or input, and can therefore be considered unfair. Heilman, McCullough and Gilbert (1996) discuss that affirmative action is unfair indeed, and that it may actually cause reverse discrimination as non-minorities receive an inferior treatment. It seems that some are in favor of employing affirmative action while some are not, which makes it all the more interesting to study this type of unfair situation. Throughout this paper the focus is on the unfair situation of affirmative action and the behavioral consequences for those benefiting from it, considering affirmative action unfair as it violates the equity principle even though it is aimed at promoting equality. The specific behavioral consequence the present paper will focus on is prosocial behavior. Prosocial behavior refers to voluntary behavior intended to benefit another and can take many forms such as helping, sharing, donating, cooperating and volunteering (Brief & Motowidlo, 1986). Organizational citizenship behaviors (OCBs) are a category of prosocial behavior specified to an organizational context. OCBs are known to have an important positive impact on organizations in terms of performance, cooperation, customer service and satisfaction, sales revenue and financial efficiency (Becton, Giles & Schraeder, 2008). Given the positive effects of prosocial behavior and OCBs in particular, a relation between these and affirmative action would make a case in favor of affirmative action. If such a relationship exists, the positive consequences provide a justification for using affirmative action to increase prosocial behavior in the workplace. Therefore, the present paper will measure whether affirmative action is associated with prosocial behavior. Now that the focus of the study is narrowed down to affirmative action and prosocial behavior, the research question can be formulated: *What is the relationship between benefiting from affirmative action and prosocial behavior?* As partially described above, this research question is relevant, especially for organizations. First, it will add to the theoretical knowledge and understanding of unfairness. By focusing on behavior of the benefiting individual rather than the disadvantaged individuals, an under-researched perspective is offered. In addition, the focus on positive outcomes of unfairness is not often employed in research. This allows for more new knowledge to be provided by the present study. Second, because affirmative action is an often disputed procedure that is increasingly used in organizations, the research question may resolve this dispute by identifying a possible merit of affirmative action. Although affirmative action violates the equity principle, the positive behavioral consequences in people who benefit from it may make affirmative action a useful procedure. An important side note is that in order to maximize the benefits of affirmative action, other employees should not view it as unfair, as this associated with negative outcomes (e.g. Heilman et al., 1996), and diversity should be managed properly (e.g. Levi, 2010; Yukl, 2009). As the previous paragraphs suggest, expectations are that affirmative action has a positive influence on prosocial behavior. Thus the main hypothesis can be formulated: *Individuals who benefit from affirmative action display more prosocial behavior compared to other participants.* This prediction is based on several empirical findings. First, as discussed earlier, Zitek et al. (2010) demonstrate a reversed relationship in which individuals that were disadvantaged by unfairness displayed more anti-social behaviors. The reverse could be the case for those who benefit from unfairness. Rather than feeling free to engage in selfish behaviors to restore equity as a result of being undeservingly under-rewarded (Zitek et al., 2010), being undeservingly over-rewarded may stimulate prosocial behaviors to restore equity. This is supported by the fact that according to Austin & Walster (1975) individuals are intrinsically motivated to restore equity with the world. Second, the study by Van de Ven et al. (2010) demonstrates that individuals who fear being maliciously envied by peers are motivated to engage in prosocial behavior to limit the possible negative consequences of malicious envy. Since malicious envy in peers is provoked by being undeservingly over-rewarded, individuals benefiting from affirmative action may display a similar reaction. Third, individuals who are undeservingly over-rewarded experience guilt and distress and are motivated to attenuate these experiences. The negative arousal associated with feeling guilty and distressed is unpleasant, which motivates the individual to remove it and displaying prosocial behaviors may be an excellent means of doing so (Estrada-Hollenbeck & Heatherton, 1998). In summary, the hypothesis that an individual will display more prosocial behaviors when having benefitted from affirmative action seems reasonable, given the empirical support for underlying mechanisms that may cause such a relationship. As prosocial behavior can be measured in many different forms (Brief & Motowidlo, 1986; Dovidio, Pilliavin, Schroeder & Penner, 2006), operationalization is required. In this experiment, prosocial behavior is specified as helping behavior, or even less abstract; the number of pencils (out of twenty) a participant helps to pick up. The idea behind this measure is that the more pencils an individual will pick up, the more prosocial behavior he or she displays. Since this measure of helping behavior has been effectively employed in the past (Twenge, Baumeister, de Wall, Ciarocco & Bartels, 2007), mainly in studies that measured helping behavior of children (e.g. Green & Schneider, 1974), it makes a useful measure for the dependent variable of prosocial behavior. In order to adequately establish the effect of affirmative action on the dependent variable of prosocial behavior, affirmative action is manipulated creating three conditions. First of all there will be a random reward condition that serves as the control group. In this condition individuals receive a reward, since not rewarding could result in different effects beyond the scope of the present paper, but the reward is said to be assigned randomly rather than based on whether they deserve it or not. In the second condition individuals also receive a reward, but this time the reward is said to be deserved by the individual. In the third condition, affirmative action will take place. Individuals will again also receive a reward, but this time the reward is undeserved and based on their gender. These three conditions should allow the hypothesized effect of affirmative action on prosocial behavior to be identified. As described earlier, Van de Ven et al. (2010) demonstrate that prosocial behavior may be motivated by a fear of being envied. This fear motivates an individual to display prosocial behavior in order to reduce envy, especially malicious envy, in other individuals. This is a quite useful mechanism as envy may motivate other individuals to harm the envied person. However, since the present paper focuses on a relationship between affirmative action and prosocial behavior, fear of being envied should be included in the experiment to be able to control for its effect. Therefore, fear of being envied will be included as a possible covariate affecting the level of prosocial behavior. Furthermore, personality should be considered as another possible covariate. Previous research indicates that the big five personality traits are related to prosocial behavior. Though mainly conscientiousness and agreeableness are related to prosocial behavior, extraversion, neuroticism and openness have sometimes proven to be related as well (Dovidio et al., 2006). Therefore, a measure of the big five personality traits should be incorporated in the experiment. In addition, according to the theory of reasoned action (Ajzen & Fishbein, 1980), attitudes may be associated with behavior. Therefore attitudes towards affirmative action and equity are incorporated in the present study as well. If an individual holds a negative attitude towards affirmative action, perceived deservingness of outcomes based on that procedure may be lower, thus increasing the motivation to restore equity, possibly resulting in higher levels of prosocial behavior. A similar relationship may exist for an individual’s attitude towards equity. An individual with a more positive attitude towards equity may have a more salient experience when equity is violated and may be more motivated to restore it. Again, this may result in higher levels of prosocial behavior. Therefore attitudes towards equity and towards affirmative action are incorporated in the experiment as possible covariates. Another possible covariate that may affect prosocial behavior is global belief in a just world (GBJW). Zuckerman (1975) demonstrated that individuals who believe in a just world are more likely to display prosocial behavior. A recent thesis by Breij (2011) shows exactly the opposite, as in this experiment those high in GBJW donated less money to a charity. The findings of Breij (2011) make more sense, as GBJW is defined as the belief that people generally get what they deserve (Dovidio et al., 2006). Therefore, when an individual is in a situation in which help is required, that individual will have deserved to be in that situation and helping would thus not restore the equity balance (Dovidio et al., 2006). Regardless of whether GBJW is negatively or positively associated with prosocial behavior, there is a relationship, requiring GBJW to be measured as a possible covariate. The thesis by Breij (2011), which is highly similar to the present paper, also included the covariates of psychological entitlement, empathic concern, personal distress and emotional state. None of these covariates, except for emotional state, were significantly related to prosocial behavior. Therefore, psychological entitlement, empathic concern and personal distress are not included in the present study. Emotional state, however, is incorporated in the experiment. Previous research shows that mood may affect whether an individual engages in prosocial behavior. Carlson, Charlin and Miller (1988) for example, show that individuals tend to be more helpful when they are in a positive mood. Also individuals in a negative mood are found to be less helpful (McMillen, Sanders & Solomon, 1977). In addition, the emotion of guilt may be an especially strong motivation for individuals to engage in prosocial behavior. As described earlier, individuals experiencing guilt are motivated to attenuate the negative arousal associated with it by acting prosocially towards other individuals (Estrada-Hollenbeck & Heatherton, 1998). Therefore, emotional state, and especially guilt, should be incorporated as possible covariate as well. In summary, the present study investigates the relationship between affirmative action and prosocial behavior. Prosocial behavior is measured by the number of pencils picked up, and affirmative action is manipulated using three different conditions. Before the manipulation, the big five personality traits and attitudes towards equity and affirmative action are measured. These are in theory stable variables that may affect the relationship between condition and the dependent variable as covariates. Finally, fear of being envied, GBJW, and emotional state (including guilt) are incorporated after the manipulation. Since these variables may be affected by the manipulation they should be measured after, as they may mediate the relationship between condition and the dependent variable.

**Method**

*Participants & Design*

 One hundred five students (81 female) of Tilburg University participated in the study in exchange for compulsory course credits. Participant age ranged from 18 to 41 (*M* = 20.01, *SD* = 2.98). Participants were divided into three conditions (i.e. random reward, deserved reward, and affirmative action), resulting in a 3-level ANCOVA design, with condition as factorial independent variable. The dependent variable was prosocial behavior, measured after the manipulation by the number of pencils out of twenty picked up by participants. The covariates age, gender, GBJW, emotional state, extraversion, neuroticism, conscientiousness, openness, agreeableness, fear of being envied and attitudes towards affirmative action and equity were included to control for possible confounding factors.

*Instruments & Procedure*

 Upon entering the laboratory, participants were welcomed and instructed to take place in a private cubicle and to follow the instructions on the computer. Participants were randomly divided into one of the three conditions (random reward, deserved reward, affirmative action). Participants received a welcoming message stating: “Welcome to the Stroop task. Please indicate your age and gender.”. To decrease suspicion by providing legitimate reasons for the questionnaires, participants received the following message when proceeding to the next screen: “This experiment is designed to identify individual difference variables that influence performance on the Stroop task. Previous research indicates that gender is related to performance on this task. During the study you will first complete several questionnaires measuring individual difference variables (e.g. personality) to test whether these account for a substantial percentage of the variance in task performance. Please fill out all questions and complete the experiment as serious as possible. When you have finished the first part of the questionnaire, please knock on the door so the experimenter can start up the Stroop task and provide further instructions. When you have finished the Stroop task please knock on the door again with your score on screen. The experimenter will then determine the reward for your performance, depending on your score. A gender-correction will be applied when determining your reward to keep everything fair, since gender is confirmed to be related to performance on the task. After your score is inspected you have to fill in the last part of the questionnaire and knock on the door when you’re finished. Good luck.”. Subsequent to the introduction, participants received the personality questionnaire. This questionnaire contained items measuring the big five personality traits. A manually translated Dutch version of the 60-item NEO-FFI (Costa & McCrae, 1992) was used. The NEO-FFI consisted of four twelve-item scales measuring extraversion, neuroticism, agreeableness and conscientiousness, and one ten-item scale measuring openness to experiences. The remaining two items were fillers. Participants indicated the extent to which they agreed with various statements (e.g. “I would rather go my own way than be a leader of others”) on a 5-point scale ranging from 0 to 4 (0 = *strongly disagree*, 4 = *Strongly agree*). Second, attitudes towards affirmative action and equity were measured. Since no scales could be found for either type of attitudes, self-constructed scales were used. The affirmative action attitudes scale contained 5 items (e.g. “It is a good thing that to make up for ages of discrimination, minorities (e.g. black people, muslims, or women) sometimes get a special treatment”). Participants indicated the extent to which they agreed with the statement on a 5-point scale (1 = *strongly disagree,* 5 = *strongly agree*). The equity attitudes scale contained 6 items (e.g. “When someone works harder than someone else, the hard working person should get more”). Participants indicated the extent to which they agreed with the statement on a 5-point scale (1 = *Strongly disagree,* 5 = *strongly agree*) (See appendix A for both scales). Fourth, filler questions were presented to divert the attention from the previous scales with the aim of decreasing suspicion. Items included statements like “How often do you play sports involving a ball?”, “How often do you play video games?”, and “How many hours do you study every week?”. Participants indicated the quantity on a 5-point scale (1 = *0-2 hours a week*, 5 = *more than 20 hours a week*) (See appendix B). After these items participants were directed to a new window, which introduced the task they had to accomplish. The task was introduced by the following: “The next task is the Stroop task. For this task you should indicate the color of the letters of the word that pops up on your screen. So not the definition of the word, but the color of the letters. It’s important that you’re fast and accurate, because the better your score is, the more money you can make. Please knock on the door when you’re done so the experimenter can look at your score and reward you accordingly. Since gender may affect performance, a gender-correction will be applied when assigning the reward to keep things fair.”. This task was selected because it is well-known and it would make sense that people do research on variables that may influence performance on it. In addition the task allowed for the participants to obtain a score, which then could be related to a reward. Contrary to the instructions however, no reaction time was measured and all participants received the same score of 723. This score was displayed after the task, accompanied by the instruction to call the experimenter to determine how much money they had won with their score. When the experimenter entered the enclosed cubicle three variations of the explanation of why the participant had won the 3 euro prize were presented, depending on the condition the participant was assigned to. In the affirmative action condition, participants were told: “Based on your score, which is just below average, you would have earned 1.50 euro’s, however since we apply the gender-correction you get three euro’s. If you were a man (or woman) you would have received only 1.50, but since you’re a woman you get three euro’s”. To increase credibility, a sheet with scores was displayed, containing a table that showed the gender correction. Participants in the deserved reward condition were told: “It seems that based on your score, you are one of the top performers. Here’s three euro’s, which is the maximum reward you could have won. Good job, you deserved it as even with the gender-correction you got the maximum amount.”. In the random reward conditions, participants were told “You may have read on screen that the reward would be based on your score, however today we are having some problems with the reward money. The guy who is responsible isn’t here today, so if everyone gets the maximum score we will not be able to pay all participants. I discussed this with my supervisor and he said that instead of basing the reward on your score I should assign it randomly. So I’ve rolled a dice on my mobile phone and you were lucky, here’s three euro’s”. Then the experimenter provided instructions to fill in the next set of questionnaires that were said to be intended to measure the individual differences in motivation for the task and the mood of the participant. Afterwards the experimenter left the cubicle and the participant continued filling out the rest of the questionnaires. After administering the manipulation, the participant was presented with the manipulation checks and fillers that were designed to seem to measure task motivation and task enjoyment. The manipulation check scale consisted of four items, and was designed to measure to what extent the participant perceived the situation as fair (e.g. “Whether you received a reward or not, do you think you deserved the reward?”) (See appendix C for the full list of items including the filler items). Participants indicated the extent to which they thought the statement was true for them on a 5-point scale (1 = *Absolutely not,* 5 = *Absolutely yes*). Second, similar to the experiment by Breij (2011), GBJW was measured using the Global Belief in a Just World Scale (GBJWS; Lipkus, 1991), which was manually translated to Dutch. Participants indicated the extent to which they agreed with a statement (e.g. “I feel that people get what they deserve”) on a 6-point scale (1 = *strongly disagree,* 6 = *strong agreement*). Third, participants received questions measuring the fear of being envied by others. This was done following the methods of Van de Ven et al. (2010). There were three questions related to envy: (“Are you worried that other participants will maliciously envy you?”, “Are you worried that other participants will benignly envy you?”, and “Are you worried that other participants will be jealous of you?”). Participants indicated the extent to which they agreed with the question on a 5-point scale (1 = *Absolutely not,* 5 = *Absolutely yes*). The questions were preceded by the text “Skip if you did not get a reward”, to maintain the illusion that not all participants received rewards. Finally, similar to the study by Breij (2011), participants answered questions taken from the Positive And Negative Affect Scale (PANAS; Watson, Clark & Tellegen, 1988). A Dutch translation of the scale was used in the experiment (Peeters, Ponds & Vermeren, 1996). The scale consisted of ten positive affect items (e.g. “inspired”) and ten negative affect items (e.g. “guilty”). Participants indicated on a 5-point scale to what extent they felt the emotions described by the items at that very moment (1 = *very slightly or not at all,* 5 = *extremely*). Mood was measured last in order to get a measure that represented the mood of the participant as much as possible at the moment of prosocial behavior. Upon completion of the PANAS, participants warned the experimenter that they had completed the questionnaires. At that moment the experimenter escorted the participant out of the cubicle to the list participants had to sign for course credits in exchange for participation in the experiment. Pretending to look for the list the participant had to sign, the experimenter knocked over a plastic cup filled with twenty pencils. The cup was standing on a pile of paper on the edge of the table, and was knocked over by pushing the participant list against the pile of paper the cup was standing on. This procedure was carefully designed to avoid direct contact between the experimenter and the cup, making the dropping of the pencils less suspicious. With the pencils on the ground, the experimenter waited until the participant started picking them up. If the participant did not react to the pencils, the experimenter started slowly picking them up one by one to provide an opportunity for the participant to help. If after five pencils the participant did not help, the rest of the pencils was picked up at a normal pace. The pencils picked up by the participant were counted and served as the dependent variable of prosocial behavior. Afterwards, participants were thanked for their participation and asked three questions to check for suspicion (“Did you notice anything suspicious during the experiment, if so what?”, “Do you think something other than specified in the instructions was measured, if so what?” and “Do you have any idea what could have been measured other than specified in the instructions?”).

**Results**

*Age and gender* Of the one hundred five participants, one participant was excluded from analysis due to an error in dropping the pencils and thirteen more participants were excluded due to some kind of suspicion (exclusion did not affect the significance of results in further analyses). This resulted into ninety-one participants (72 female) being included in the analysis, ranging in age from 18 to 41 (*M* = 19.97, *SD* = 3.09). Neither age (*r*(91)= .04, *p* = .71) nor whether a participant was female (*M* = 10.95, *SD* = 6.66) or male (*M* = 11.58, *SD* = 6.52) *t*(89) *=* -.376, *p =* .71, related significantly to the number of pencils picked up by participants. Therefore age and gender were not included as covariates in further analyses.

*Reliabilities of covariates before the manipulation* Personality was measured using a Dutch translation of the NEO-FFI measuring extraversion, neuroticism, agreeableness, conscientiousness and openness. Four of five subscales consisted of twelve items, three of which with decent internal consistency including extraversion (α = .80), neuroticism (α = .88), and conscientiousness (α = .85). The fourth twelve item scale was agreeableness, which showed the lowest reliability of all five scales (α = .66). The fifth subscale, openness, consisted of 10 items with a decent reliability (α = .77). Given these reliabilities, scores on all of the big five traits were included as possible covariates in further analyses. Subsequently, attitudes towards equity and affirmative action were measured. Since these constructs were measured using self-constructed scales a principal components analysis (PCA) was conducted on both scales. For the six items that were part of the attitudes towards equity scale, PCA revealed two factors with eigenvalues of 2.36 (39.41 % of variance explained) and 1.29 (21.58 % of variance explained) respectively, explaining 60.99 percent of variance in total. The internal consistency of this scale was questionable (α = .61) (Cronbach & Shavelson, 2004). To improve internal consistency the items “I think it is important that people get what they deserve” and “People who do not work for their money do not deserve the money they receive from the government” were removed based on content and insufficient loading on components (< .5). Another PCA on the remaining four items revealed two factors with eigenvalues of 2.19 (54.64 % of variance explained) and 1.12 (27.91 % of variance explained) respectively, explaining 82.54 % of variance in total. However, since the first factor explained over 50% of variance, the four item scale was kept as such (α = .71). PCA on the five items that were part of the attitudes towards affirmative action scale also revealed two factors with eigenvalues of 2.71 (54.19% of variance explained) and 1.03 (20.61% of variance explained) respectively, explaining 74.81% of variance in total. Since the first factor explained over 50% of variance, the five item scale was kept as such (α = .78). Given the decent reliabilities, scores on both scales were included as possible covariates in further analyses.

*Reliabilities of proposed mediator covariates measured after the manipulation* Hypothesized covariates that might mediate the effect of condition on prosocial behavior included GBJW, fear of being envied and emotional state. GBJW was measured using the seven item GBJWS (α = .82). Fear of being envied was measured using three items adapted from Van de Ven et al. (2010), these items were meant to measure different types of envy individually, but worked as a three-item scale (α = .82). Emotional state was measured using the twenty item PANAS, divided into two ten-item subscales measuring positive affect (PA) and negative affect (NA) respectively. Both the PA subscale (α = .82) and the NA subscale (α = .80) showed decent internal consistency. Therefore, scores on all of these scales were included as possible covariates in further analyses.

*Manipulation checks* After the non-sense fillers and the manipulation, a self-constructed manipulation-check scale measured whether participants thought the manipulation was fair or not. This scale was intended to check the success of the manipulation, should no significant results be achieved. PCA on the four item manipulation-check scale revealed one factor with an eigenvalue of 2.09, explaining 52.14% of variance. Since only one factor was revealed, explaining over 50% of variance the four item scale was kept as such (α = .68). An ANOVA with manipulation check as dependent variable and condition as fixed factor revealed a significant difference between the three conditions *F*(2, 76) = 5.87, *p* = .004. Post-hoc Tukey comparisons revealed that participants in the deserved reward condition scored significantly higher (*M* = 11.48, 95% CI [10.56, 12.40]) than those in both the random reward condition (*M* = 9.40, 95% CI [8.47, 10.33]), *p* = .006, and the affirmative action condition (*M* = 9.70, 95% CI [8.77, 10.63]), *p* = .022. Scores did not differ significantly between the affirmative action and the random reward conditions, *p* = .894. This indicated that the manipulation was successful.

*Effects of condition, hypothesized covariates and proposed mediators on prosocial behavior* In order to identify which of the possible covariates affected the number of pencils picked up, all possible covariates were included in the first ANCOVA. The ANCOVA contained number of pencils picked up as dependent variable, condition as fixed factor and neuroticism, extraversion, openness, agreeableness, conscientiousness, attitude towards equity, attitude towards affirmative action, GBJW, fear of being envied, positive affect, negative affect, and the individual guilt item of the PANAS as covariates. The ANCOVA revealed that none of the covariates significantly affected the number of pencils participants picked up, using α < .05 to determine significance (Table 1). However, while controlling for all of these possible covariates, a main significant effect of condition on number of pencils picked up was revealed, *F*(2, 76) = 10.95, *p* < .001. This model did not violate any of the assumptions underlying the ANCOVA, as Levene’s test of equality of variance was not significant (*p* = .212) and the interaction of covariates with condition (testing homogeneity of regression slopes) was not significant either (*p* = .49). As none of the covariates in the previous ANCOVA were significant, a second ANCOVA was conducted without any covariates. Again a significant main effect of condition was revealed *F*(2, 88) = 11.43, *p* < .001. Tukey post-hoc comparisons revealed that participants in the affirmative action-based reward condition picked up significantly more pencils (*M* = 15.63, 95% CI [13.50, 17.76]) than participants in both the deserved reward condition (*M* = 9.10, 95% CI [7.00, 11.19]), *p* < .001, and the random reward condition (*M* = 9.70, 95% CI [7.57, 11.83]), p = .001 (Figure 1). The number of pencils picked up did not significantly differ between the deserved reward condition and the random reward condition, *p* = .915. This confirmed the main hypothesis that participants in the affirmative action condition would pick up more pencils compared to participants in the other conditions. As none of the hypothesized covariates turned out to be significant in the all-including ANCOVA, correlations between the number of pencils picked up and the covariates were calculated (See Table 2 for all correlations of covariates with the dependent variable). This was done to further investigate the relationship between the hypothesized covariates and the dependent variable. Simple bivariate correlations revealed only three small significant correlations between the dependent variable and openness (*r*(91) = .266, *p* = .011), GBJW (*r*(91) = -.258, *p* = .014), and the PANAS guilt item (*r*(91) = .229, *p* = .029). These correlations suggested that participants who felt more guilty, who were higher on openness or who had less strong beliefs in a just world picked up more pencils. Furthermore, these correlations suggested that guilt, GBJW and openness could be covariates after all. Based on the significant correlations, three ANCOVA’s were conducted with guilt, openness, and GBJW as individual covariate with a main effect on the dependent variable and the possibility of an interaction effect with condition. The ANCOVA with guilt as covariate showed a small but significant effect main effect of guilt, *F*(1, 85) = 4.27, *p* = .042. The interaction effect of guilt with condition was not significant, *F*(2, 85) = .01, *p* = .908. Following the same procedure for openness also revealed a significant main effect of openness *F*(1, 85) = 7.23, *p* = .009, but again no significant interaction with condition *F*(2, 85) = .13, *p* = .882. For GBJW as individual covariate, a significant main effect was revealed as well, *F*(1, 85) = 6.05, *p* = .014, but again no significant interaction effect with condition was found *F*(2, 85) = .04, *p* = .956. These ANCOVA’s showed that none of the covariates interacted with condition and that the covariates guilt, openness and GBJW produced only significant main effects on the dependent variable. As only three of the hypothesized covariates revealed small significant main effects on the dependent variable and no interaction effects were found, ANOVAs were conducted with condition as fixed factor and each hypothesized covariate as dependent variable. These ANOVAs revealed that the mean scores on all of the hypothesized covariates did not differ significantly across conditions (see table 3). Finally, in order to further explore the data, several independent samples t-tests were conducted on all of the hypothesized covariates, with gender as grouping variable. An interesting finding was that women tended to have more positive attitudes towards affirmative action (*M* = 12.21, *SD* = .36) than men (*M* = 9.42, *SD* = .75), *t*(89) *=* -3.512 *p =* .001. T-tests for the other covariates did not yield significant results.

**Discussion**

The results show a strong effect of condition on prosocial behavior. Participants in the affirmative action based reward condition clearly picked up more pencils than those in the deserved reward and random reward conditions. Therefore, the main hypothesis that people benefitting from affirmative action engage in more prosocial behavior than others is confirmed by the data. These results are in line with earlier research that showed that over-rewarded or undeservingly rewarded individuals engage in more prosocial behavior (e.g. Austin & Walster, 1975; Breij, 2011; Bartlett & DeSteno, 2006). The effect of condition was quite strong, even when controlling for all hypothesized covariates, reconfirming the large magnitude of the effect of condition on prosocial behavior found by Breij (2011). Given these results and support by earlier research, the relationship between benefiting from unfairness, or in this case affirmative action, and prosocial behavior are clear. Individuals who benefit from affirmative action display more prosocial behavior than those who do not. Interestingly, none of the hypothesized covariates affected the number of pencils picked up by participants significantly. Only when conducting ANCOVA’s that included only one of the hypothesized covariates at the time, GBJW, Openness and guilt were found to have a main effect on the dependent variable in addition to condition. No interaction effects of these covariates with condition were found. The direction of the correlations of the covariates with the dependent variable, indicated that the more open-minded participants were, the more pencils they helped pick up; the more guilt participants experienced, the more pencils they picked up; and the more they believed that the world is a just place, the less pencils they picked up. The question is now why only these three covariates had a small effect on the dependent variable, and why the other covariates did not have any effect at all. First of all, the big five personality traits, except for openness, have no effect on the number of pencils picked up by participants. This is remarkable, as previous research indicates that especially agreeableness and conscientiousness, but sometimes also extraversion, neuroticism and openness are related to prosocial behavior (Dovidio et al., 2006). A possible explanation for the different findings in the present study, is that the instrument used to measure personality in was different from those in previous research. The present study used the 60 item NEO-FFI, which is a shortened version of the original. This might be associated with a suboptimal representation of the actual personality traits in participants (or measurement error), that may have contributed to the difference in findings. However, the recent and highly similar study by Breij (2011) did find significant effects of the covariates extraversion, neuroticism and conscientiousness using the Ten Item Personality Inventory, an even less reliable instrument. An alternative explanation could be that the limited student sample in the present study contains too little variation in personality to obtain significant covariate effects for all of the big five traits. Then again, the sample used by Breij (2011) is even smaller and also consists solely of students as well. A third possible explanation could then be that the difference is caused by the manipulation that focused on affirmative action, as this is what makes the present study especially unique compared to previous research. Where normally agreeableness, conscientiousness, extraversion and neuroticism are also be related to prosocial behavior, the special affirmative action condition could cause only openness to have a small main effect on prosocial behavior. In previous research concerning personality traits and prosocial behavior, affirmative action was not in the manipulation. It could thus be the case that for affirmative action only openness of the big five traits is related to prosocial behavior. In that case an interaction effect with condition would be expected, which unfortunately was not present in the data. In conclusion, it would seem that a replication of the present study with a broader sample and a longer, more reliable instrument to measure personality should be conducted to fully establish what personality traits affect prosocial behavior in an affirmative action situation. The finding that openness as a covariate has a significant effect on prosocial behavior, should be interpreted with caution. The effect displayed by the data is very small and is only found when openness is the only covariate represented in the analysis. As no significant interaction with condition can be found, interpretation of the effect is limited to the direction of the effect as revealed by its correlation with prosocial behavior. Since this direction is positive, it indicates that the more open-to-experiences an individual is, the more prosocial behavior he or she displays. A possible explanation for this relationship could be that individuals who are more open-to-experiences are also more open to the experience of helping others, or are more open towards affirmative action. The latter should be reflected in a correlation between openness and attitudes towards affirmative action, but that proved to be non-significant. It should be noted that this finding is not very novel as earlier research frequently demonstrates this relationship (Coyne, Gundersen, Nelson & Stockdale, 2011; Dovidio et al., 2006; Kosek, 1995; Mlcak & Zaskodna, 2008). Thus, the conclusion regarding openness is that openness, as frequently demonstrated before, is positively related to prosocial behavior. With regards to the covariates attitudes towards affirmative action and attitudes towards equity, no significant covariate effects can be found. Attitudes towards affirmative action and equity do not seem to affect prosocial behavior nor the impact condition has on prosocial behavior. A possible explanation as to why these seem to be unrelated could be that the self-constructed scales did not adequately measure the intended attitudes. This however is not very likely as the internal consistency of both scales proves to be decent. Another explanation could then be that the items for both scales were formulated in a too general sense. For affirmative action for example, the focus of the items was not on gender but on affirmative action for all possible minority groups. This could have caused the affirmative action scale to be not closely related enough to the experimental situation to measure the attitude towards the affirmative action manipulation as administered. This does not seem likely however, as women tended to have more positive attitudes towards affirmative action than men, thus relating to the items as presented. Of course this difference in attitudes could be explained by the fact that women experience themselves as a minority, while men do not. A third possible explanation is that the attitudes were not salient at the moment of the prosocial behavior, thus not contributing to the behavior as often demonstrated in research on attitudes (e.g. Krosnick, 1988). Fourth, the strength of the attitudes measured could be to low for the hypothesized behavioral consequences to occur. Attitude strength is an important link in the attitude-behavior relationship (e.g. Fazio & Zanna, 1978), that may have caused the attitudes to be of no influence on prosocial behavior. In conclusion, several reasons can be provided as to why including attitudes towards affirmative action and equity as covariates did not have a significant effect on prosocial behavior. When looking at the fear of being envied items, again no significant effects can be found. As all hypothesized covariates, fear of being envied did not differ across conditions. Since fear of being envied was measured after the manipulation, looking at the low means reveals that the manipulation did not cause participants to fear being envied by others. Therefore, as participants generally did not fear being envied, the consequences on prosocial behavior as demonstrated by Van de Ven et al. (2010), should not be expected. There are multiple reasons why participants may not have feared being envied. First of all, contrary to in the experiment by Van de Ven et al. (2010), participants neither interacted with others, nor were they under the illusion that they did. As interaction with peers is essential for envy and thus also for fear of being envied, it is not surprising that participants in the present study did not experience this fear. Second, as participants did not interact with others, it was really easy to avoid the fear of being envied simply by not telling others that they had received a reward. Third, participants may not have seen participants of the opposing gender as relevant peers, thus causing the undeservingly obtained amount of money to not elicit a fear of being envied by them. Given these multiple reasons it would almost seem as though fear of being envied should not have been included in the questionnaires. However, the hypothesized situation in which participants in the affirmative action condition could have seen participants of the opposite gender as relevant and possibly envious peers (given the fact that they did not benefit from the unfairness), remains a possibility, thus requiring measurement of fear of being envied as a possible covariate. Nonetheless, participants did not fear being envied by others, and no significant effects of this covariate were found. When looking at GBJW, a significant relationship with prosocial behavior seems to exist. At first glance GBJW as a covariate did not have a significant effect on prosocial behavior. Incorporating GBJW as single covariate with condition as fixed factor and prosocial behavior as dependent variable, did however reveal a small main effect. Given the negative correlation between GBJW and prosocial behavior, a high score on GBJW is associated with helping to pick up fewer pencils. A similar effect was documented by Breij (2011), the only difference being that in that study GBJW interacted with condition to produce this effect. Given the absence of an interaction effect in the present study, the effect can be easily interpreted. Since GBJW relates to whether an individual thinks that world is a just place and that people generally get what they deserve, it makes perfect sense that people high in GBJW help less. According to equity theory people are motivated to maintain an equity balance. For those high in GBJW helping an individual that requires help could mean disturbing the equity balance, as those who require help deserve to be in that situation or have brought the misfortune they require help with upon themselves. Therefore, individuals high in GBJW engage less in prosocial behavior than those low in GBJW. As described earlier, Breij (2011) found an interaction effect of GBJW with condition. A similar effect was however not found in the present study. A possible explanation for this is that the present study measured GBJW after the manipulation, while Breij (2011) measured it before. This may have diminished the interaction effect of GBJW with condition as the GBJW participants reported in the present study may have been influenced by condition. There is however little evidence of this line of reasoning as GBJW did not differ significantly across conditions. Another possible reason could be that the affirmative action manipulation, by its nature, did not interact with GBJW the way the undeservingly over-rewarded condition in Breij (2011) did. This seems plausible but to fully establish what caused the difference in effects of GBJW, a hybrid study that combines the methods of the present paper and those of Breij (2011) is required. Finally, when looking at the covariate of mood, again no significant effects can be detected. Scores on the positive and negative affect subscales of the PANAS do not significantly affect the number of pencils participants pick up in any way. These results however, may provide an explanation as to why participants in the non-equity-violating conditions still helped to pick up pencils, similar to in Breij (2011). Previous research strongly suggests that individuals in a negative mood tend to help less (McMillen et al., 1977), and those in a positive mood tend to help more (Carlson, 1988). The present study reveals an equally low score on negative mood and an equally high score on positive mood across all conditions. Thereby, no differences in mood exist across conditions, and mood being generally positive may cause participants in all conditions to help. However they still helped more in the affirmative action condition, due to the success of the manipulation. This also explains why no interaction effect between mood and condition could be found, as mood was not affected by the manipulation. The surprising thing is now that no main effects of mood on prosocial behavior were found either. Literature suggests that mood in itself is related to prosocial behavior (Carlson, 1988; McMillen et al., 1977), which should thus be reflected in significant main effects or correlations between mood and prosocial behavior, however these prove to be non-significant in the present study. Breij (2011) documents a similar finding, although in this experiment mood was measured before the manipulation. No clear reasons for the lack of a relationship between mood and prosocial behavior can be found in the data, so only the possibility that mood in the experimental situation in both the present study and in Breij (2011) is not related to prosocial behavior. The individual PANAS guilt item however, does yield a small but significant main effect when incorporated in an ANCOVA as a single covariate with condition as fixed factor and prosocial behavior as dependent variable. This suggests that guilt as predicted, is related to prosocial behavior. Individuals are motivated to remove the negative affect associated with guilt, and use prosocial behavior as a means to do so. The magnitude of this effect is however very small, thus limiting the implications of the effect. Given the fact that this relationship has been documented before (e.g. Estrada-Hollenbeck & Heatherton, 1998), this finding is not very novel. Of the hypothesized covariates only openness, GBJW and guilt were related to prosocial behavior. These findings are surprising as most of the other hypothesized covariates should be related as well. Despite these results with regards to the covariates, a clear relationship between condition and prosocial behavior is confirmed by the data. This relationship suggests that affirmative action causes an individual to behave more prosocially than people who got the same outcomes deservingly or randomly. Therefore it can be concluded that affirmative action causes the individuals benefiting from it to behave more prosocially. Though the effect of affirmative action on prosocial behavior is clear, a limitation may arise when generalizing this finding to field settings. As this study was conducted in a lab to be able to minimize influences other than the manipulation and those represented in the covariates, the external validity is unclear. To investigate whether these findings generalize to, for example an organizational situation as described in the first section of this paper, further research is required. A possible example of such research could be conducting a survey under employees who have benefited from affirmative action and their coworkers, measuring how helpful the employee is considered and comparing that to employees that did not benefit from affirmative action. Another example could be comparing the quality and quantity of OCBs of employees that were hired based on affirmative action with those of other employees, in organizations were OCBs are formally recognized and rewarded (Becton et al., 2008). This would be a more objective investigation as this can be done independently of the employees. However, these types of research may pose some challenges as it will be difficult to control for possible covariates and confounding factors. In conclusion it should be said that given the strength of the effect it is likely that the findings generalize to non-experimental settings, however further research in organizational situations is required to fully establish this. A second limitation is that no mediating processes and moderators were found in this study. There is a clear relationship between affirmative action and prosocial behavior, but the data do not provide insights on the underlying mechanisms. The only underlying mechanism is equity theory, which basically states that individuals may engage in prosocial behavior to restore the equity balance that was disturbed by receiving an undeserved, affirmative action based reward (Dovidio et al., 2006). This mechanism is however not represented by any of the variables in the data and the other mechanisms that are represented in the data do not yield significant effects. Future research should therefore focus on identifying variables that may mediate the relationship between affirmative action and prosocial behavior, as equity theory, though providing a good explanation, remains abstract. A third possible limitation in this study is that it only focuses on affirmative action related to gender. To fully identify the consequences of affirmative action on prosocial behavior, future studies should include other minority groups (e.g. racial minorities) as well. The student sample used in the present study did not allow for this broader approach to the concept of affirmative action, since most of the participants were Dutch students. It seems however likely, given the strong effect gender-based affirmative action had in the present study, that these findings will generalize to affirmative action on trait-like characteristics other than gender as well, but further research may be needed to fully establish this. A fourth possible limitation may be that, although the effect is confirmed by previous research producing equally large effects (e.g. Breij, 2011), it is not possible to completely rule out experimenter effects. An experimenter effect may be possible as the entire experiment was conducted by one person. This means that the experimenter knew what condition the participants were in at the moment the pencils were picked up. Therefore, the possibility that the experimenter subconsciously influenced the participants to pick up more or less pencils through posture, exists. The standardized pencil-dropping method and rules for the experimenter to initiate picking up pencils however, were strictly followed to minimize the possibility of influencing the participants. In a future replication, the pencil-dropping should be performed by a ‘blind’ confederate to completely rule out experimenter effects. This was in the original design, but practical constraints limited the amount of available experimenters to only one. Given the magnitude of the effect and the fact that similar magnitudes were found in previous research however, it seems unlikely that experimenter effects were present. In conclusion, future studies on the relationship between affirmative action and prosocial behavior should focus on affirmative action in non-experimental settings, on identifying mediators and moderators, on broadening the focus using different samples and on ensuring the absence of experimenter effects by employing a blind confederate. Given the absence of strong covariates and the huge effect of affirmative action on prosocial behavior, the implications of the present paper are readily understandable. First of all, the finding that affirmative action is positively related to prosocial behavior, adds to the knowledge on the consequences of affirmative action. The unusual approach of looking at the behavioral consequences of the individual benefiting from affirmative action revealing prosocial behavior as a positive behavioral consequence, is one of the merits of this paper. Second, this new discovery provides a possibly valuable argument in the affirmative action debate, in favor of affirmative action. As the present paper shows, affirmative action is not only an unfair measure to promote diversity and ensure equality for minorities, it can also be a tool to increase prosocial behavior. Finally, using affirmative action in organizations may be associated with a positive working climate and financial benefits, as it may stimulate OCBs. Since OCBs are a form of prosocial behavior that is associated with such beneficial effects (Becton et al., 2008), implementing affirmative action procedures may be quite beneficial given that diversity is managed properly (Levi, 2010; Yukl, 2009), and that other employees not benefiting from it are not aware of it (e.g. Heilman et al., 1996). In conclusion, the present paper shows that affirmative action increases prosocial behavior. Therefore, rather than looking at affirmative action as an equity violating measure to ensure equality, people should also be aware of the positive side-effects in terms of prosocial behavior.

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Table 1

*Overview of F-values and p-values from the ANCOVA including all hypothesized covariates*

Variable F-value p-value

Agreeableness .025 .876

Conscientiousness .241 .625

Extraversion .283 .596

Neuroticism .107 .744

Openness 2.174 .145

Attitude Affirmative 2.007 .161

Attitude Equity 1.549 .217

GBJW 1.482 .227

Fear of being envied .064 .801

Negative Affect .838 .363

Positive Affect .001 .973

Guilt (PANAS) 2.739 .102

Condition 10.95 .000\*

*Note. \*p<.001*

Table 2

*Overview of correlations of all hypothesized covariates with the dependent variable*

Variable *r*(91) p-value

Agreeableness -.055 .602

Conscientiousness -.188 .080

Extraversion .039 .712

Neuroticism .068 .524

Openness .266\* .011

Attitude Affirmative -.113 .286

Attitude Equity -.151 .154

GBJW -.258\* .014

Fear of being envied -.065 .539

Negative Affect .096 .368

Positive Affect -.019 .861

Guilt (PANAS) .229\* .029

*Note. \*significant at p<.05*

Table 3

*Overview of F-values and means per condition (1 = Random, 2 = Deserved, 3 = Affirmative Action), from the ANOVA’s including all hypothesized covariates and the dependent variable*

Variable *F*-value *M*1 *M*2 *M*3

Agreeableness .20 43.20 43.93 43.26

Conscientiousness 2.76 40.00 43.97 41.57

Extraversion .71 40.63 42.29 42.17

Neuroticism .08 33.47 33.03 32.57

Openness .25 31.17 32.16 32.10

Attitude Affirmative .59 11.10 11.81 11.97

Attitude Equity .09 16.77 16.81 16.60

GBJW .47 23.50 24.61 23.60

Fear of being envied .51 4.50 4.64 4.17

Negative Affect 1.19 12.47 12.45 13.73

Positive Affect .21 31.60 32.55 31.97

Guilt (PANAS) .28 1.40 1.32 1.47

Number of pencils 11.43\* 9.70 9.10 15.63

*Note. \*significant at p<.001*

*Figure 1.* Average number of pencils picked up per condition.

Appendix A

Attitudes Towards Equity and Affirmative Action Scale Items

1. It is important to me that people get what they deserve

2. When someone works harder than someone else, the hard working person should get more

3. I think it is bad when people who work hard receive the same payment than people who do nothing all day

4. Everybody should receive the same, regardless of how much effort they put in

5. I think it is good when people who work hard receive the same payment as people who work less hard

6. People who do not work for their money, do not deserve the money they get from the government

7. \*It is a good thing that minorities (e.g. black people, women, or Muslims) get an advantage when soliciting for a job

 8.\* Affirmative action is a good thing

9.\* It is a good thing that to make up for ages of discrimination, minorities (e.g. black people, women or muslims) sometimes get a special treatment

10.\* When having to select an applicant I would be more likely to select someone from a 11. minority group (e.g. a black person, a woman or a muslim), because they have been treated unjust in the past.

11.\* I am in favor of affirmative action

\* Affirmative action items

Appendix B

List of Personal Lifestyle Items to Decrease Suspicion

1. How often to you play sports involving a ball?

2. How often do you play video games?

3. How often do you drive a car?

4. How often do you engage in puzzling activities (such as making sudoku’s, cross-word puzzles or any other puzzle)?

 5. How many units of alcohol do you consume every week on average?

6. How often do you take drugs (e.g. smoking weed, or using hard-drugs)?

7. How many hours do you study every week, when there are no exams?

8. How many hours do you study the week before the exam?

9. Did you consume more than three units of alcohol last night?

10. Did you consume any beverage or food product containing high amounts of sugar (e.g. sports drink, cola, energy drink, candy bars, etc.) less than two hours ago?

11. Did you consume any beverage or food product containing high amounts of caffeine (e.g. sports drink, coffee, cola, energy drink, Red Bull, etc.) less than two hours ago?

12. Did you take any drugs (e.g. weed or hard-drugs?) last night or today?

13. Are you on any special medication that may affect your finger dexterity, perceptual speed or brain functioning?

Appendix C

Manipulation Check Fairness Scale and Filler Task Motivation Enjoyment Items

1. Whether you received a reward or not, do you think you deserved the reward?

2. Whether you received a reward or not, do you think someone else deserved the reward more than you did?

3. Whether you received a reward or not, do you think it was fair how the reward was distributed?

4. Do you think it was fair that you did or did not get a reward?

5.\* Do you feel your motivation to perform well on the task depended on the reward?

6.\* How motivated did you feel to perform well on the task before it began?

7.\* To what extent do you feel you were motivated to perform well by the promise of the reward?

8.\* To what extent do you feel the reward was high enough to motivate you to perform well?

9.\* (Only answer when you did not receive a reward) How sad are you given the fact that you did not get a reward?

10.\* (Only answer when you did receive a reward) How happy are you given the fact that you did get a reward?

11.\* I thought the task was boring

12.\* I thought the task was difficult

\* Filler items