MASTER THESIS

The Rigged Monopoly Game: Observer's Attributions and Reactions to Unequal Allocation of Resources

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Contents

Abstract

An actor and observer differ in their perception. The present paper evaluates observers' reaction to unequal allocation of resources during a rigged Monopoly scenario. We tested participants' belief in a just world (BJW) and evaluated their attributions of success/failure and donated money. We used internal (effort, ability) and external (luck, mood) locus of control as well as their belief in an just world (high and low) as a measure. Further, we examined how would they allocate the money they (fictitiously) receive between themselves and a charity institution. We used the golden ratio in which recipient receives 38.2% and the actor will receive 61.8%. The study was carried by giving participants two fictitious online scenarios – the Rich (n∼52) and the Poor (n∼67) condition. In the rich condition players started with an advantage of 100 euros in an obviously unfair set of Monopoli game. The results showed effect on Effort. People in the rich condition believed more in effort as well as people who believed in a just world, believed that the game was won thanks to effort.


MONOPOLY

1. Introduction

In this demanding era, the issue of unequal allocation of resources is becoming more salient each and every day. The distribution of limited resources exists worldwide - in national economies, in courts, in politics and between people. On a broad scale, a resource is a source or supply from which benefit is produced. Foa and Foa (1974) defined a resource as anything that can be transmitted from one person to another. Given the complexity of uniting all resources possible, they further grouped them into six classes: love, status, information, money, goods, and services. In the Resource theory of Social Exchange Foa and Foa categorized: "*Money* as any coin, currency or token that has some standard unit of exchange value". Money, however, is the most likely of all resources to retain the same value and meaning regardless of the relation between, or characteristics of, the rein-forcing agent, the recipient or observer." Foa and Foa (1971, p.346-349)

Exchange between parties is described as a sequence of resource allocations: allocation of resources by one party is followed by or is simultaneous with allocation of resources by the other. An interaction in which resources are allocated is called an allocation event. An allocation event is instigated by an actor who has power to allocate a resource between himself and other(s)- recipients. In addition, the role of the observer has an important role to the situation of the allocation. Observers focus on the allocation decision, on the recipients and on the total event as they maybe affected by the allocation decision. Vermunt, (2014,p.2).

The Observer

As Vermunt describes in his book "The Good, The Bad and the Just" an allocation event consists of agents, namely - actors, recipients and observers. The actor's role is crucial, because he/she is an initiator of the allocation and is responsible for its outcome. Observers of the allocation event, although not actually receiving a part of the resource may be very significant for he final evaluation of the event, because they were past recipients or maybe become future recipients or they maybe affected by the allocation event, Vermunt (2014, p.2). Observers differ from the actors with regard to the justice and moral quality of the decision and often evaluate the allocation event differently. Observers take into account more or other aspects of the allocation event, they have more distant, but a relevant view as well. From Jones and

Nisbett research we also know, that actors attribute their actions to situational requirements, whereas observers tend to attribute the same actions to stable personal dispositions (1971, p.80). Furthermore, observers have interpersonal characteristics – beliefs, mood, self-esteem, experience, culture, cognitive style, thoughts, feelings and behaviors that affect perception. In addition, the characteristics that are prominent to this study and that are going to be measured are: their high or low belief in a just world and their attribution style. These characteristics are expected to affect their perception and interpretation when encountered with unequal allocation of resources (see hypotheses). It is therefore, becoming intriguing to understand - What is then the observer's reaction to unequal distribution? Or more precisely, what are the reactions when resources are obviously allocated unfairly?

Plan of the study

The question that will be answered in the present study is how observers who read a scenario about an unfair event will attribute success or failure of the fictitious actor, and whether the attribution is dependent or not on characteristics of the event (winning/losing) and/or characteristics of the observer (BJW).

Attributions – External/Internal Locus of Control

Attribution is the process by which individuals explain the causes of behavior and events. (Heider, 1958: Kelley, 1967-1973; Weiner, 1974). On that ground, attribution theory assumes to explain why people do what they do and to what do they assign their gains or loses. For example, people inevitably seek to understand why they succeed or fail. In doing so, they attribute success or failure to certain causes (Weiner, 1974). Weiner proposed that the most perceptually responsible causes for winning or losing are: ability, effort, task difficulty, luck and mood. Drawing from the writings of Rotter (1966) and Heider (1958), Weiner put forward two-dimensional taxonomy to categorize these causal elements. One of the elements, labeled locus of causality, refers to whether the elements are internal or external to the individual. The second dimension, termed stability, refers to those causal elements which are stable or unstable over time. Thus, each cause could be classified as either internal or external and stable or unstable. Respectively, ability and effort are viewed as internal factors that are more under control of the actor than internal factors like mood, while task difficulty and luck

are external factors that are hardly under control of the actor. Stable causes are assigned to ability and task difficulty, whereas the unstable are effort and luck.

BJW

The belief in a just world (BJW) concept is another well-known model “where just world beliefs act as a perceptual bias in which individuals maintain a belief in a universal justice, even when evidence to that effect is lacking” (Cropanzano & Mitchell, 2005, p.877). Lerner, (1980, p.14) in his research on the “just world” perceptions has proposed, that individuals have a need to believe that they live in a just world; they believe in a world where people get what they deserve and where people deserve what they get. Individuals believe, for instance, that those among us who work hard or who perform good acts obtain rewards for their actions, while the sinners and the laggards receive punishments instead. Similarly, individuals want to believe that positive outcomes, whether money, success or happiness, are obtained only by good people and conversely, that negative outcomes only happen to bad persons. This belief in a just world is invoked by Lerner as a possible explanation for our society's willingness to tolerate the suffering of many disadvantaged individuals (Lerner, 1970, Lerner & Matthews, 1967; Lerner & Simmons, 1966). The operation of system justification motive is consistent with the psychological assumption that people want to believe in a just world (e.g., Hafer & Begue, 2005; Kluegel and Smith, 1986; Major et al 2003). These beliefs are passed from parents to children, from media specifically, or from one's social economic status. The more people favor members of higher status groups over lower status groups (e.g. Jost, Pelham, & Carvallo, 2002) and blame members of lower status groups for their relative disadvantage, the deeper these beliefs are going to be incorporated. (Cozzarelli, Wilkinson, & Tagler, 2001; Crandall, 1994; Katz & Hass, 1988). One of many examples for instance, is the study of McCoy and Major (2006), which proved the hypothesis that activating meritocracy beliefs increases the extend to which individuals justify status inequalities, even when those inequalities are disadvantageous to themselves.

The Rigged Monopoly Game: winning and losing

An answer to the question “how would participants do and feel if they are forced to unequal allocation of money in the powerful situation” is given by the research of social psychologist

Paul Piff (2012, 2014 in press). The results of his sets of experiments in the study “Does money make you mean?” (in press) interestingly describe how the allocation of money is justified during a rigged Monopoly Game (MG). Instead of giving players an equal start, he randomly defined players as either rich or poor by flipping a coin. The rich player received two times the usual starting cash and rolled two dice instead of one dice. The poor player received half the usual starting cash, and had to roll one dice instead of the usual two. Obviously, in this circumstances the poor player loses quite quickly, except if the rich player is not interested in the game or the poor player has extreme luck, (1:1 000, e.g - American Dream). What is both striking and interesting in Piff's experiment is that the rich player instantly develops sense of entitlement and meritocracy. Piff lets participants play the game and they develop a (unrealistic) view of their skills: “I win, thus I must have been a clever player, worked for it and deserved to win”. Conversely, the poor player believes he lost because “I did not play well and did not deserve it”. At the end of the fifteen minutes game, he asked the (“winning”) players to talk about their experience during the game. Their justification was that they had played the game smartly and strategically, implying they deserved to win the game, without taking into account their starting advantage. Participants also talked about what they had done to “buy” those different Monopoly properties. They became far less attuned to all those different features of the situation, including that flip of a coin that had randomly gotten them into that privileged position in the first place. None of them actually said it was because of the unequal given start. This experiment confirms the previously stated beliefs that people tend to justify in their favor in highly (un)favorable conditions assigning abilities and hard work to themselves without this necessarily being true.

Most experiments in recent decades has been conducted to shed light into Ultimatum Bargaining Game (UBG) and the Dictatorship Game (DG). In this study, Monopoly Game (MG) scenarios are developed and chosen, to foresee observer's reactions, since they are consistent with the theoretical framework. Further, most experiments are conducted from the actor's perception and evaluation of the allocation event as it is in the case in Piff's research. His experiment is conducted entirely from the perspective of the actions and reactions that derive from the actor's point of view. Moreover, it is worth unraveling what are the observer's reactions to unequal allocation in a similar situation. Would they have agreed to the actor's justifications and how would they have evaluated the MG setting in Piff's experiment?

Contribution to existing literature is expected as the observer's reaction to unequal allocation of resources is far less investigated in comparison to the allocator's reaction. Three decades ago, Feather and O'Driscoll (1980) logically concluded that it is easier for an observer to pinpoint un/equality than for the allocator who has the actual involvement in the task. Their study similarly predicted that observers will tend to assume that an allocator with ability will be preferred to one that lacks ability. Ability and personal beliefs on how just is the world, are characteristics that Piff did not take into account when he conducted his study. The present research tend to contribute to his research and aims to explain why he got such surprising results. Greenberg studies from 1979 are another example of similar research. He took the protestant work ethic scale (PWE) - the belief that hard work leads to success - into account in order to distinguish between subjects that allocated fairly or unfairly. The outcome showed that people scoring high on PWE scale had the tendency to keep more as opposed to people that did not believe that hard work inevitably leads to success. The latter subjects were more likely to distribute equally regardless of their success or failure. The present research will use belief in a just word scale (BJW) in an attempt to prove from an observational point of view, high believers in a just world allocate less fairly as well. They develop sense of entitlement and deservingness along with construction of justification in order to defend their decision. In addition, the set of ideas behind the American dream suggests, that both poor and rich have equal chances to win and succeed, through effort and hard work, despite their given unequal start in life (social class), different environment, valuable access to resources and diverse forms of knowledge.

Golden Ratio Model – Donated money

As mentioned previously, Vermunt describes the allocation event as core human interaction, that depends on the “moving force that instigates it, the type of resources to be allocated and the rules that are developed”, Vermunt, (2014, p.192). He further describes that the allocation takes into account not only own but also the other position reasonably, which means that the allocator keeps in mind the needs of the recipient. Vermunt's psychological model of resource allocation defines a golden ratio of 100% in which recipient receives 38.2% and the actor will

receive 61.8%. It is assumed that a deviation from this proportion will cause a cascade of moral, psychological and physiological reactions: various attributions, construction of justifications, feelings of guilt, shame and stress. The model differs from excising literature showing that equal division is considered fair with regard to division where sense of deservingness is involved (e.g. in a task where people believe they have worked hard to win.) When a person in allocating money, allocates money fairly, s/he will lose money compared to allocating money egoistically. Usually people try to avoid losses as they are as twice as powerful psychologically as gains (Tversky and Kahneman, 1991). What are people's reactions to unequal allocation of money when they are the actors and what are their reactions when they are observers? How would they respond when allocating and receiving more or less of a resource (money)? These are central questions that will be investigated in this study.

Hypothesis

What Piff did not do is to previously determine what were the beliefs in a just world (BJW) of its participants, in order to deepen the surprising outcome of the experiment. Therefore, the proposition of this research is to previously assess through BJW test and a questionnaire in order to find out its effects on attitudes and behavior of observers.

We assume that BJW (Lerner, 1980) will show effect on observer's evaluation of an actor's success or failure. BJW states that the world is a just place where everyone gets what s/he deserves. Success of an actor will then be attributed to the positive deeds of the actor. Specifically, high believers in a just world will show this tendency as compared to low believers. Thus, despite the fact that the actor receives an advantageous starting position from the experiment, actor's success will be attributed to his/her personal qualities s/he has under control.

We state therefore, that high believers in a just world in the rich condition will attribute the actor's success more to his/her high ability and effort than to factors like luck and mood (Hypothesis 1a). Moreover, high believers in a just world in the rich condition will attribute the actor's failure more to his/her low ability and effort than to factors like luck and mood (Hypothesis 1b). In addition, low believers in a just world in the poor condition attribute actor's success to several factors in equal amounts: mood, luck, ability, effort (Hypothesis 2a).

Low believers in a just world in the poor condition attribute actor's loss to several factors in equal amounts: mood, luck, ability, effort (Hypothesis 2b).

Another interesting research question is how observers of Monopoly Game players will allocate the money they (fictitiously) receive between themselves and a charity institution. High BJW observers are convinced that the actor has won the money with showing ability and/or effort, thus deserves to keep the money for his/her own./ Low believers in a just world are not convinced that the actor deserves the money and will easier be prepared to allocate money to the charity institution. We state, therefore, that high BJW observers will donate less money to charity than low BJW observers *(Hypothesis 3a)*. Respectively low believers in a just world concept would allocate more fairly *(Hypothesis 3b)*. Allocating fairly or unfairly refers to the golden allocation ratio of 100% of Vermunt in which recipient receives 38.2% and the actor will receive 61.8%. The rich player will deviate more from the golden ratio in comparison to the poor player. Deviation means that the actor will keep more than 62% of the 100 euros and will donate less than 38%.

2. Methods Overview

Procedure/Measures/Questionnaire

The research was conducted via online questionnaire. The study used an experimental set up by two groups design with computerized assessment and was distributed electronically via the website thesis tools http://www.qualtrics.com, using the university account. Approval for the study was obtained from the "Commissie Ethiek Psychologie" at Leiden University. Online call for participation was placed at the online bulletin board for students http://studentenberichten.weblog.leidenuniv.nl/ at the faculty of Social and Behavioral Sciences as well as distributed randomly via the Social Media.

The online scenario was filled in by participants in 2 separate random groups and each group received either the rich or the poor condition. The groups were not aware about the existence of a second scenario. Internet Protocol Addresses was monitored to prevent double participation.

Subjects were given an Internet link to the experiment explaining they are at the start of it. Informed consent was included describing procedures and affirming their voluntary participation. In order to illustrate the MG and to make the scenario study more interactive, first subjects saw MG played by two players (Tim and Bob) for not more than 1 minute. Then participants imagined they observe the following interaction between two persons and were brought to read the scenario carefully.

The scenario

Both groups read the following instructions:

"Imagine now that Tim and Bob start playing a game of Monopoly as well. They agree to apply the following rules: The player who plays first is given more Monopoly euros in comparison to the other to start with, and may roll the dice twice throughout the game, while the other player rolls only once. Both players flip a coin to randomly select which of them will start first.

Thereafter, the two groups read a different text:

Group A (n~52; Tim rich condition) read:

Tim tossed the coin and started first. In 15 minutes, Tim bought all major streets and won the game. He earned a prize of 100€. When asked about his success, Tim says that he played smart, strategically, and made use of his mathematical skills in order to outperform Bob."

Group B (n~67; Bob poor condition) read:

Bob tossed the coin and started second. In 15 minutes, Bob could not buy major streets and lost the game. But he still earned a prize of 100€. When asked about his loss, Bob says that even though he tried to play smart and strategically, and to make use of his mathematical skills, he could not succeed."

Thus, half of the participants received information about Tim who clearly receives an advantage starting position and wins the game. The other half of the participants received information about Bob who clearly receives a disadvantageous starting position from the start and loses. Subjects were expected to understand (or not) their (under) privileged situation according to the different rules in the scenarios.

Participants took the role of observers who read the scenario and were asked to attribute the success or failure of the game to Weiner's causes (the dependent variables: skills, effort, luck, mood and task difficulty). Subsequently, they performed the BJW test. The BJW Scale is a 20-item scale measuring the extent to which respondents believe that individuals deserve their

fates (i.e., that the world is just). Although, Lipkus (1991) has created a new version (the Global Belief in a Just WorldScale), we used the original version of Rubin & Peplau (1975), which has been used more frequently. Responses to all items were made on six-point scales with endpoints ranging from 1 “Strongly disagree” to 6 “Strongly agree”. Continuing, the participants were turned into “actors” and asked to decide how much of their 100 euro prize will they donate (allocate) to a charitable association. Lastly, some demographic questions were filled in. The whole procedure did not take more than 10 min.

Scenario Manipulation check:

As a selection criteria, we included 3 manipulation questions to ensure the reliable subject's responses: *“Who won/lost the game?”*(1) and “*Who played first/second?”*(2). We also included the confirmatory question *“Have you ever played Monopoly game”*(3) to achieve optimal answers, respectively for both rich and poor condition. Further, we excluded questionnaires responses which were not finished or finished too quickly (181, <240 sec.) or showed signs of not reading carefully, being too extreme scores were additionally left out.

Participants/Demographics

Overall, 332 participants finished the online experiment. A total of 119 respondents turned out to be useful for the purposes of this research. Questionnaires that were not finished or finished too quickly (181) were excluded. Other participants failed one of the manipulation questions or gave too extreme scorers (outliers 32). The only missing values were related to the Gender variable: 5 subjects preferred not to state their gender. The 119 respondents came from 108 different countries, (92 were from EU, while 27 were from non EU origin) 65 were female, 54 were male. Within this group 44 were students, 18 did not work and the others worked for both private and public companies. The core of the group, 63%, was between the age of 26-35, seventeen people were 36 or older. They received no compensation or university credits for participation. The approximate average age was 30.16. The age of the participants ranged from 16 to more than 65. (see Figure 1, Appendix II)

3. Results

A statistical alpha of 0.05 (two-tailed) was applied and partial eta square as estimates of effect sizes. SPSS 19.0 was used to carry out the analysis. To test the hypotheses, we conducted a 2 (BJW high/low) x 2 (Rich vs. Poor conditions) x 2 (Team vs. Individual) (not introduced previously) for multivariate analyses of variance (M)ANOVA with evaluation for skills, mood, luck, effort and task difficulty as dependent variables. Firstly, we tested the reliability of BJW test, following by calculating the means – low and high scores on BJW test. Afterwards, subjects were attributed to the high BJW group or the the low BJW group. The main objective was to determine if the response variables, are altered by the observer's manipulation of the independent variables. There are several questions that may be answered: What are the main effects of the independent variables? What are the interactions among the independent variables and what is the importance of the dependent variables.

Reliability analysis of BJW

Prior to the reliability analysis, reverse coded items were recoded. The Cronbach's alpha is a measure of internal consistency and it is generally used as a measure of reliability of a psychometric tool. The general rule of thumb is that a value of 0.7-0.8 is an acceptable value for Cronbach's alpha; lower values indicate an unreliable scale. Kline (1999) noted that although the generally accepted value of 0.8 is appropriate for cognitive tests such IQ tests, while for ability tests a cut-off point of 0.7 is more suitable. Moreover, he noted that when dealing with psychological constructs values even below 0.7 can realistically be expected because of the diversity of the constructs being measured. However, Cortina (1993) noted that such guidelines need to be used carefully because the value of alpha partially depends on the number of items on the scale and on the magnitude of the correlations among the items.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standard-ized Items	N of Items
,664	,650	20

Table 1:Reliability Statistics considering 20 items

When the reliability analysis was run on all the 20 items, we obtained a Cronbach's alpha equal to 0.664. By deleting items 4 - (*"Careful drivers are just as likely to get hurt in traffic accidents as careless ones"),* 19 - (*"Crime doesn't pay"*), 20 (*"Many people suffer through absolutely no fault of their own"*), 16 - (*"American parents tend to overlook the things most to be admired m their children"*) and 10 - *("In professional sports. many fouls and infractions never get called by the referee")* we obtained a Cronbach's alpha equal to 0.704. The deleted items were chosen because they presented a low correlation with other items and a higher value of the Cronbach's alpha if item deleted.

This leaves us 15 items on the BJW scale (see Table 2: Reliability statistics with 15 items.) The Cronbach's alpha based on standardized items was equal to 0.700 and this means that whether we increase the number of items, the Cronbach's alpha will take the value of 0.700. Scale Statistics gives the scores that are related to the scale's entirety, which presents a mean of the class of 55.27 and a standard deviation of the class of 8.688 units. The histogram of the BJW scale is shown in Figure 2.

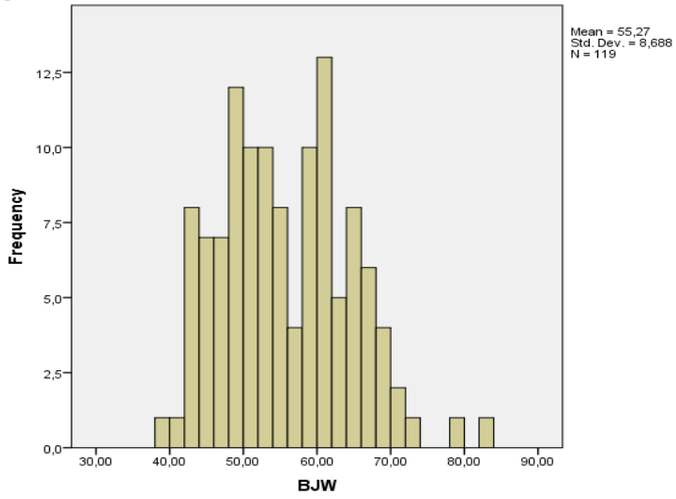


Figure 2: Histogram of Believe in Just Word

From the item total Statistics of BJW test (Table 7 in the appendix) we can also notice that all these items correlate with the total scale to a good degree (higher than r = 0.2). The best item in terms of correlation with the rest of the items seems to be *"By and large, people deserve what they get"* with an item-total correlation of r = 0.527. As indicated in the last column, the removal of any item, except number 18, would result in a lower Cronbach's alpha. Therefore, we would not want to remove this item because it will lead to a small improvement in Cronbach's alpha (0.706). Moreover, if we look at the Corrected Item-Total Correlation value for this item, we can see that it is low (0.150).

Once obtained the BJW scale we decided to turn it into a binary variable using as cutoff point its median (median = 54), so people who scored less than 54 were considered having a low BJW, while people scoring higher than 54 were considered to have a high BJW. We obtain in this way two groups of size: $n_{low}=60$, $n_{high}=59$.

Means of the dependent variables per independent variable

RichVSPoor

A. Skills B. Luck C. Mood D. Efforts E. Easy game * RichVSPoor

RichVSPoor		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
,00	Mean	**1,85**	**3,54**	**1,81**	**2,02**	**3,83**
	N	52	52	52	52	52
	Std. Deviation	1,109	1,662	1,155	1,260	1,396
1,00	Mean	**2,31**	**4,01**	**2,24**	**2,73**	**2,75**
	N	67	67	67	67	67
	Std. Deviation	1,351	1,779	1,478	1,503	1,770
Total	Mean	2,11	3,81	2,05	2,42	3,22
	N	119	119	119	119	119
	Std. Deviation	1,268	1,738	1,358	1,441	1,698

Table 4: Means of the dependent variables per independent variable

From the table above we can note that the means assigned by the two groups (Rich VS Poor) to the dependent variables look quite similar. The rich group tend to underestimate *Skills* respect to the poor group (1,85 versus 2,31) as well as they tend to assign a lower score to *Luck* respect to the poor group (3,54 versus 4,01) as well as regarding the *Mood* variable (1,81 versus 2,24). The rich group tends to give a mean score of 3,83 (s.d. 1,396) to *Easy game* respect to the poor group that tends to on average give a score to *Easy game* equal to 2,75 (s.d. 1,770). Moreover it also seems that people in the Rich group tends to underestimate a bit *Effort* respect to the poor group people.

Team focus

A. Skills B. Luck C. Mood D. Efforts E. Easy game * Teamfocus (Binned)

Teamfocus (Binned)		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
Individual focus	Mean	**2,22**	**3,72**	**2,05**	**2,45**	**3,22**
	N	83	83	83	83	83
	Std. Deviation	1,307	1,699	1,315	1,459	1,690
Team focus	Mean	**1,86**	**4,00**	**2,06**	**2,36**	**3,22**
	N	36	36	36	36	36
	Std. Deviation	1,150	1,836	1,472	1,417	1,742
Total	Mean	2,11	3,81	2,05	2,42	3,22
	N	119	119	119	119	119
	Std. Deviation	1,268	1,738	1,358	1,441	1,698

Table 5: Team Focus: means of the dependent variables per independent variable

Also when we look at the means of the dependent variables according to the Team focus vs Individual focus, they seem to be very close. The group of individual focus tends to assign a higher score to S*kills* respect to the team focus group (2,22 versus 1,86) and a lower score to *Luck* (3,72 versus 4,00) but the two groups behave almost in the same way for the remaining dependent variables.

BJW

A. Skills B. Luck C. Mood D. Efforts E. Easy game * BJW_lowhigh

BJW_lowhigh		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
,00	Mean	**2,20**	**3,93**	**2,23**	**2,72**	**3,13**

	N	60	60	60	60	60
	Std. Deviation	1,312	1,686	1,419	1,451	1,589
	Mean	**2,02**	**3,68**	**1,86**	**2,12**	**3,31**
1,00	N	59	59	59	59	59
	Std. Deviation	1,225	1,795	1,279	1,378	1,812
	Mean	2,11	3,81	2,05	2,42	3,22
Total	N	119	119	119	119	119
	Std. Deviation	1,268	1,738	1,358	1,441	1,698High

Table 6: BWJ: means of the dependent variables per independent variable

High and Low BJW groups move quite similarly. The low BJW group tend to assign a higher score to all the dependent variables except from *Easy Game* with respect to the high BJW group.

Correlation analysis

According to the often cited publications by Cohen (1988) Pearson correlation values of r ± . 50 are considered strong, r ± .30 are considered moderate and r ± .10 logically are considered weak. Cohen's classification of a correlation of ± .50 as a strong comes from his assertion that “workers in personality social psychology both pure and applied, normally encounter correlation coefficients above the .50-.60 range only when the correlations are measurement re liability coefficients”. Cohen, (1988, p.75).

Before we describe hypothesis testing results, some overall correlations between demographic variables and (in)dependent variables.

Age and Gender

The correlation results[1] suggested that there is a moderate positive correlation between the Age of the participants and their attribution to *Luck* towards the game. *(Age – Luck r = **0.295** p-value = 0.01)*. Therefore, older people tend to attribute success or failure more to *Luck* that

1. Correlations of 0.295 and higher were perceived as to rounded to 0.3.

any other attribution. With regard to Age, a second positive relationship was observed - for *donated money*. Older people tend to donate more money in comparison to younger *(r =**0.239** p = 0.01)*. Concerning gender, more females happened to be in the rich condition (r =-**0.252** p = 0.01).

The team focused participants opt to modestly attribute to *Skills* (*r = 0.221 p = 0.05)*. The more they indicated they are team players, the more they attributed success/failure to *Skills*. People who tend to believe it was an *Easy game* tend to donate more money: *Easy game* – Donated money *(r = **0.201** p = 0.05)*. An unexpected correlation was detected between the variables *Skills* and *Mood (r =**0.427** p = 0.01),* meaning: the more participants attributed success/failure in the rigged Monopoly game to *Skills*, the more also s/he attributes it to *Mood*. Furthermore, the strong positive correlation between the internal traits - *Effort* and *Skill* tends to show that observers who agreed with the fact that the game is won/lost by efforts also agreed with the fact that the game was won thanks to *Skills*. (*r= 0.423 p = 0.01)*.

In addition subjects showed preference to both attributes *Effort* and *Luck* when judging the scenario game *(r = 0.250 p = 0.01),* suggesting that part of the people might have found out that the game was won due to luck/chance (with the random flip of a coin), irrespective of the efforts of the players. For more information see Discussion part. Another pair of variables that moved together were *Mood* and *Effort (r = **0.385** p = 0.01),* indicating that the more participants attributed success/failure to *Effort* the more they attributed it to *Mood*. Whilst the negative correlation of *Mood* and *Fairness (r = -0.276 p = 0.01)* implied that the more participants attributed success/failure to *Mood* the lower the perceived fairness.

The correlation between *Effort* and *BJW* appeared to be weaker than we expected yielding only significance of *(r = **0.184** p = 0.05)*. It means that the more people believed in a just world the more they attributed success in the game to *Effort*. However, in the given sample success/failure was attributed more to *Effort* in the poor condition - (*Effort - RichVSPoor r = **-0.229** p = 0.05)* as opposed to the rich. Lastly, participants attributing higher effort together with lower fairness towards the unfair game. *(Effort – Fairness r = **-0.184** p = 0.05)*

The three-way multivariate analysis of variance (three-way MANOVA) is used to determine whether there are any difference between independent groups on more than one dependent variable. In our case the model considers the following independent variables (all dichoto-

mous): BJW, RichVSPoor, Team vs Ind and their 2-way and 3-way interactions, and, of course, the intercept. In this way, we can explore the multivariate effect (how the independent variables have an impact upon the (combination of dependent variables) and the univariate effect (how the mean score of each dependent variable varies across the independent variables groups). First we checked for correlations between the dependent variables: Skill, Luck, Mood, Effort and Easy game. Correlations, shown in Table 8, are within acceptable limits for MANOVA outcomes.

According to the Box's M test we cannot reject the hypothesis that the observed covariance matrices of the dependent variables across the groups are equal ($F = 1.132$, p-value $= .187$). For this reason the homogeneity of variances assumption and the normality assumption of the MANOVA seem to be not violated.

Correlations

		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
A. Skills	Pearson Correlation	1	,164	,597**	,527**	-,082
	Sig. (2-tailed)		,076	,000	,000	,375
	N	119	119	119	119	119
B. Luck	Pearson Correlation	,164	1	,216*	,314**	,126
	Sig. (2-tailed)	,076		,018	,001	,171
	N	119	119	119	119	119
C. Mood	Pearson Correlation	,597**	,216*	1	,444**	-,108
	Sig. (2-tailed)	,000	,018		,000	,244
	N	119	119	119	119	119
D. Efforts	Pearson Correlation	,527**	,314**	,444**	1	,111
	Sig. (2-tailed)	,000	,001	,000		,229
	N	119	119	119	119	119
E. Easy game	Pearson Correlation	-,082	,126	-,108	,111	1
	Sig. (2-tailed)	,375	,171	,244	,229	
	N	119	119	119	119	119

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 8: Correlations between dependent variables

In the first analysis, the 2-way and 3-way interactions between the three independent variable were not significant, so we decided to remove them from the model. The new model then considers only the main effects of the three predictors: BJW, RichVSPoor and TeamVSIndv.

Between-Subjects Factors

		Value Label	N
RichVSPoor	,00		52
	1,00		67
Teamfocus (Binned)	1	Individual focus	83
	2	Team focus	36
BJW_lowhigh	,00		60
	1,00		59

Table 9: Description of the factors considered in the analysis

It should be noted that the groups are relatively small for MANOVA, resulting in small power. This implies that by repeating this analysis the results could be very different, as compared to a larger sample.

We have obtained a significant multivariate effect for the combined dependent variables (*Skill, Luck, Mood, Effort* and *Easy game*) with respect to the group the participant was included (*Rich* or *Poor*) : $Wilks'\lambda = 0.797, F(5,111) = 5.650, p < 0.01$,

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's Trace	,891	182,396[b]	5,000	111,000	,000	,891
Wilks' Lambda	,109	182,396[b]	5,000	111,000	,000	,891
Hotelling's Trace	8,216	182,396[b]	5,000	111,000	,000	,891
Roy's Largest Root	8,216	182,396[b]	5,000	111,000	,000	,891
Pillai's Trace	,203	5,650[b]	5,000	111,000	,000	,203
Wilks' Lambda	,797	5,650[b]	5,000	111,000	,000	,203
Hotelling's Trace	,254	5,650[b]	5,000	111,000	,000	,203

Roy's Largest Root	,254	5,650[b]	5,000	111,000	,000	,203
Pillai's Trace	,048	1,125[b]	5,000	111,000	,351	,048
Wilks' Lambda	,952	1,125[b]	5,000	111,000	,351	,048
Hotelling's Trace	,051	1,125[b]	5,000	111,000	,351	,048
Roy's Largest Root	,051	1,125[b]	5,000	111,000	,351	,048
Pillai's Trace	,058	1,363[b]	5,000	111,000	,244	,058
Wilks' Lambda	,942	1,363[b]	5,000	111,000	,244	,058
Hotelling's Trace	,061	1,363[b]	5,000	111,000	,244	,058
Roy's Largest Root	,061	1,363[b]	5,000	111,000	,244	,058

Table 10: Multivariate Tests

Since the correlations between the dependent variables were not too high we proceed with the univariate tests. Three of the dependent variables (*Skill, Effort* and *Easy game*) differ significantly with respect to the independent variable RichVsPoor: *Skills* - $F(1, 115) = 5.164$, $p = 0.019$, *Effort* – $F(1, 115) = 8.080$, $p = 0.005$ *Easy game*: $F(1, 115) = 13.434$, $p = 0.000$. Moreover, it seems that the dependent variable *Effort* differs significantly between the high and low believers in a just world - respect of the independent variable BJW- $F(1, 115) = 9.829$, $p = 0.025$.

Estimated marginal means from MANOVA model.

The estimated marginal means give us the mean response of the dependent variable for each factor, adjusted for any other variables in the model. The following table is useful to explore the differences between the mean scores per dependent variable.

Grand Mean

Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
A. Skills	1,977	,126	1,727	2,227
B. Luck	3,812	,177	3,461	4,163
C. Mood	2,001	,137	1,729	2,272
D. Efforts	2,317	,140	2,039	2,595
E. Easy game	3,343	,166	3,015	3,671

Table 11: Grand Mean

From Table 11 above we can notice that it seems that *Skills* and *Mood* receive a lower mean score than the other dependent variables.

Estimates

Dependent Variable	RichVSPoor	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
A. Skills	,00	1,699	,189	**1,325**	**2,073**
	1,00	2,255	,154	**1,949**	**2,560**
B. Luck	,00	3,595	,265	3,071	4,120
	1,00	4,029	,216	3,600	4,457
C. Mood	,00	1,782	,205	1,376	2,188
	1,00	2,219	,167	1,888	2,551
D. Efforts	,00	1,946	,210	**1,530**	**2,362**
	1,00	2,688	,172	**2,348**	**3,028**
E. Easy game	,00	3,907	,248	**3,416**	**4,397**
	1,00	2,779	,202	**2,379**	**3,180**

Table 12: RichVSPoor

From the table above we can note that while for *Skills, Luck* and *Mood* the means for the Rich vs Poor are similar. However, for the dependent variables *Skills, Effort* and *Easy game* they look different (the 95% confidence intervals do not overlap or overlap just a bit). The rich group participants tend to give a smaller score to *Skills* and *Efforts* and more to *Easy game* respect to

the poor group participants. The post hoc pairwise comparison (using the Bonferroni correction for multiple testing) seems to confirm this result as well as the univariate tests does. In general, this results led us to think that the people in rich condition tend think the actor won because the game was easy, contrary to what we hoped for.

Estimates

Dependent Variable	Teamfocus (Binned)	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
A. Skills	Individual focus	2,221	,136	1,952	2,491
	Team focus	1,733	,213	1,311	2,155
B. Luck	Individual focus	3,727	,191	3,349	4,105
	Team focus	3,897	,299	3,305	4,489
C. Mood	Individual focus	2,053	,148	1,760	2,346
	Team focus	1,949	,231	1,490	2,407
D. Efforts	Individual focus	2,454	,151	2,154	2,754
	Team focus	2,180	,237	1,711	2,650
E. Easy game	Individual focus	3,209	,178	2,856	3,563
	Team focus	3,476	,279	2,923	4,030

Table 14: Teamfocus (Binned)

For Team focus all the estimated means look to be equal (the confidence intervals around the group means always overlap) and this is confirmed by the post hoc pairwise comparison.

Estimates

Dependent Variable	BJW_lowhigh	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
A. Skills	,00	2,064	,169	1,730	2,399
	1,00	1,890	,171	1,551	2,229
B. Luck	,00	3,928	,237	3,459	4,398
	1,00	3,696	,240	3,221	4,171
C. Mood	,00	2,178	,183	1,815	2,541
	1,00	1,824	,186	1,456	2,192

D. Efforts	,00	2,605	,188	**2,233**	**2,977**
	1,00	2,029	,190	**1,652**	**2,406**
E. Easy game	,00	3,276	,222	2,837	3,715
	1,00	3,409	,224	2,965	3,854

Table 16: BJW_lowhigh

From Table 16 we can see that there seems to be a difference for *Effort* in low BJW group and high BJW group (the 95% confidence intervals around the means partially overlap). The post hoc pairwise comparison confirm this since the Bonferroni adjusted p-value for *Effort* is $p=0.025$ (that is < 0.05).

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	A. Skills	12,914[a]	3	4,305	2,802	,043	,068
	B. Luck	8,999[b]	3	3,000	,993	,399	,025
	C. Mood	9,379[c]	3	3,126	1,726	,166	,043
	D. Efforts	26,282[d]	3	8,761	4,606	,004	,107
	E. Easy game	36,386[e]	3	12,129	4,589	,005	,107
Intercept	A. Skills	376,704	1	376,704	245,214	,000	,681
	B. Luck	1400,534	1	1400,534	463,413	,000	,801
	C. Mood	385,820	1	385,820	212,988	,000	,649
	D. Efforts	517,406	1	517,406	272,057	,000	,703
	E. Easy game	1076,991	1	1076,991	407,504	,000	,780
RichVSPoor	A. Skills	8,624	1	8,624	5,614	,019	,047
	B. Luck	5,248	1	5,248	1,736	,190	,015
	C. Mood	5,330	1	5,330	2,942	,089	,025
	D. Efforts	15,366	1	15,366	8,080	,005	,066
	E. Easy game	35,506	1	35,506	13,434	,000	,105
TeamvsIndv	A. Skills	5,720	1	5,720	3,724	,056	,031
	B. Luck	,695	1	,695	,230	,632	,002
	C. Mood	,261	1	,261	,144	,705	,001
	D. Efforts	1,792	1	1,792	,942	,334	,008
	E. Easy game	1,712	1	1,712	,648	,423	,006
BJW_lowhigh	A. Skills	,901	1	,901	,587	,445	,005
	B. Luck	1,608	1	1,608	,532	,467	,005
	C. Mood	3,720	1	3,720	2,053	,155	,018

	D. Efforts	9,829	1	9,829	5,168	,025	,043
	E. Easy game	,527	1	,527	,199	,656	,002
Error	A. Skills	176,666	115	1,536			
	B. Luck	347,555	115	3,022			
	C. Mood	208,318	115	1,811			
	D. Efforts	218,710	115	1,902			
	E. Easy game	303,933	115	2,643			
Total	A. Skills	719,000	119				
	B. Luck	2081,000	119				
	C. Mood	718,000	119				
	D. Efforts	942,000	119				
	E. Easy game	1573,000	119				
Corrected Total	A. Skills	189,580	118				
	B. Luck	356,555	118				
	C. Mood	217,697	118				
	D. Efforts	244,992	118				
	E. Easy game	340,319	118				

Table 19: Univariate outcome

Since the assumption of homogeneity of between-group variance is rejected for *Skills, Luck* and *Mood*, we decided to use independent one-way ANOVA to explore the univariate outcome, by additionally employ Brown–Forsythe F and Welch's F test.

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
A. Skills	1,314	7	111	,250
B. Luck	,642	7	111	,721
C. Mood	1,643	7	111	,131
D. Efforts	1,942	7	111	,070
E. Easy game	3,170	7	111	,004

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + RichVSPoor + TeamvsIndv + BJW_lowhigh

Table 20: Leven's Test for equality of variances

Univariate ANOVA:

We performed separate analyses of variance (ANOVA) to check further relationships between independent and dependent variables. For the design was Skills x RichVsPoor, the analyses did not show significant difference for the dependent variable Skills per Rich and Poor groups. Welch: F (1, 166..885) = 2.155, p = 0.145. This is due to the fact that the violation of homogeneity hypotheses poses threat to the validity of the previous result. (See appendix VII).

Regarding the analyses of ANOVA Effort x RichVsPoor, the results confirm that there is still a highly significant difference in Effort per Rich and Poor participants groups Welch: F(1, 166.920) = 6.919, p = 0.010.

ANOVA means

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
A. Skills (Binned)	,00	52	,13	,345	,048	,04	,23
	1,00	67	,24	,430	,052	,13	,34
	Total	119	,19	,397	,036	,12	,27
D. Efforts (Binned)	,00	52	,15	,364	,051	,05	,26
	1,00	67	,36	,483	,059	,24	,48
	Total	119	,27	,445	,041	,19	,35
E. Easy game (Binned)	,00	52	,63	,486	,067	,50	,77
	1,00	67	,36	,483	,059	,24	,48
	Total	119	,48	,502	,046	,39	,57

Table 21: RichVSPoor

Table 24 shows the ANOVA means for the three dependent variables Skills, Effort and Easy game and the independent variable RichVSPoor. From this table we can notice that people in the rich group tend to give lower scores to *Skills* and *Effort* respect to people in the poor group, while they tend to give a higher score to *Easy game*.

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
D. Efforts (Binned)	,00	60	,35	,481	,062	,23	,47
	1,00	59	,19	,393	,051	,08	,29
	Total	119	,27	,445	,041	,19	,3

Table 26: BJW_lowhigh

The table above shows the ANOVA means for *Effort* and the independent variable BJW_lowghigh. From Table 21 we notice that people in the low BJW group assign a higher score to Efforts respect to people in the high BJW group, even if the 95% confidence intervals overlap a little bit.

Continuing, *Easy game* x RichVsPoor confirm that there is a significant difference in *Easy game* per Rich and Poor participants groups Welch: $F(1,\ 102.961) = 3.859$, $p = 0.052$. (see Appendix VIII, table 15 and 16). When considering *Effort* x BJW Table 17 and Table 18 confirm that there is still a highly significant difference in *Effort* per BJW (low and high) groups. Welch: $F(1,\ 113.201) = 4.134$, $p = 0.044$.

Donated Money

The research question is how an observer of an Monopoly Game player will allocate the money they (fictitiously) receive between themselves and a charity cause if they were in the position as player. High BJW observers are convinced that the actor has won the money with showing ability and/or effort, thus deserves to keep the money for his/her own. Or lack of ability (Skill, Effort) when failing Low believers in a just world are not convinced that the actor deserves the money and will easier be prepared to allocate money to the charity institution. To test this hypothesis we performed the chi-square test for independence between the two categorical variables Donated Money and BJW. We obtained the following results.

BJW_lowhigh * Donated Money (Binned) Crosstabulation

			Donated Money (Binned)				Total
			No donated money	Less than 32.7	between 32.8 and 66.4	more than 66.5	
BJW_lowhigh	,00	Count	13	15	21	10	59
		% within BJW_lowhigh	22,0%	25,4%	35,6%	16,9%	100,0%
		% within Donated Money (Binned)	37,1%	50,0%	61,8%	52,6%	50,0%
		% of Total	11,0%	12,7%	17,8%	8,5%	50,0%
	1,00	Count	22	15	13	9	59
		% within BJW_lowhigh	37,3%	25,4%	22,0%	15,3%	100,0%
		% within Donated Money (Binned)	62,9%	50,0%	38,2%	47,4%	50,0%
		% of Total	18,6%	12,7%	11,0%	7,6%	50,0%
Total		Count	35	30	34	19	118
		% within BJW_lowhigh	29,7%	25,4%	28,8%	16,1%	100,0%
		% within Donated Money (Binned)	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	29,7%	25,4%	28,8%	16,1%	100,0%

Table 27: Crosstabulation Donated money and BJW

Table 27 allows us to understand that low believers tend to donate an amount of money between 32.8 and 66.4, while high believers tend to do not donate any money.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,190	,236
	Cramer's V	,190	,236
N of Valid Cases		118	

Table 28: Symmetric measure

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,249[a]	3	,236
Likelihood Ratio	4,293	3	,231

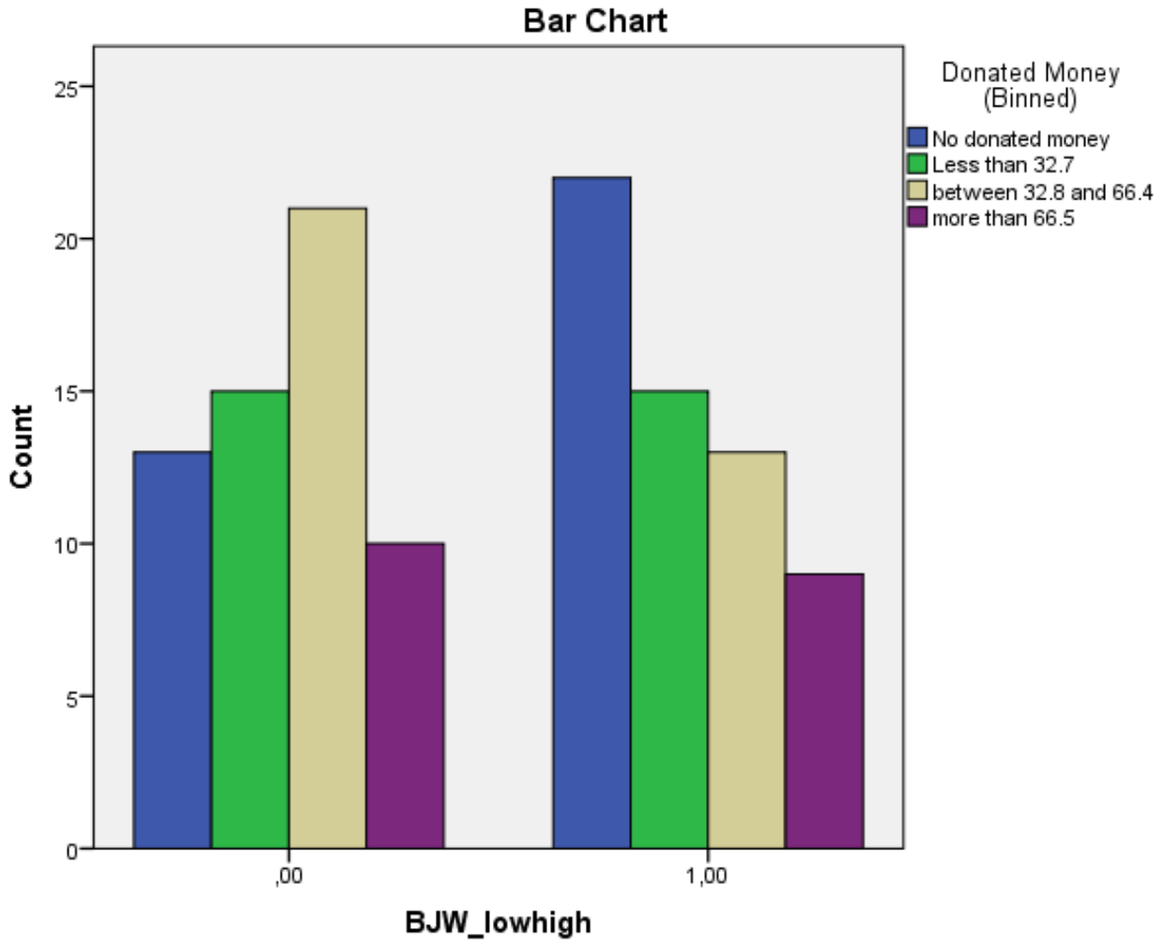
Linear-by-Linear Association	2,683	1	,101
N of Valid Cases	118		

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,50.

Table 29: Chi-square test

Table 27 shows us that there is no statistically significant association between Donated Money and BJW, $\chi^2 = 4.249$, $p = 0.236$

Phi and Cramer's V are both test of the strength of association between 2 categorical variables. As we can see from Table 28, the association between the variables is very weak.



As can we notice from Figure 3 and the bar chart even if it seems that low believers prefer to donate a particular amount of money while high believers prefer to do not allocate any money, since we have no statistically significant association between these 2 variables, we expect that by repeating the experiment the results may vary a lot.

4. Discussion

In the present study observer's reactions (attributions of success/failure/donated money) of winning and losing in a rigged Monopoly scenario were examined as they are affected by observer's BJW and advantage and disadvantage in players starting position.

We expected that high believers in a just world will be convinced that the actor's success is due to *Skills* and *Effort*, more than other attributes like *Luck, Easy Game* or *Mood.* Specifically, we hypothesized that this will happen in the rich (advantage condition), where the actor was in advantageous position (started with 100€). In addition, observers in both conditions were turned into actors and asked to donate the won money to a charity institution of their choice: we predicted that high believers in a just world would allocate less fairly. In regards to the low believers in the rich condition, we assumed that subjects will not believe the player deserved to win and therefore would allocate success to the factors of *Mood*, *Luck* and *Easy game* and less to *Skills* and *Effort*.

Rich people believed more in effort; High on BJW people believed more in effort

The results of this study showed that BJW and Rich vs Poor has an effect on *Effort*, but not on *Skills*. However, according to Rotter's theory, both skills and effort are internal causes and should therefore have similar consequences in terms of expectancies. In particular, we found

that observer's attribution to *Effort*, to explain success or failure was high in comparison to the rest of the attributions. Furthermore, the strong positive correlation between the internal traits - *Effort* and *Skill* tends to show that observers who agreed with the fact that the game is won/lost by efforts also agreed with the fact that the game was won thanks to *Skills*. Consistent with the present study Weiner (1994), also found that although there may be an almost infinite number of determinants of academic success and failure, perceived causes

among students are mostly attributed to ability and effort and commonly to task difficulty and luck. (Weiner,1994).

In our examined sample, observers that scored high on belief in a just world attributed actor's behavior to the internal/unstable cause of *Effort*. *Effort* is more variable and can change from situation to situation. As expected our subjects tended to attribute *Effort* to success in an obviously unfair Monopoly game. In fact, results are congruent with the early study made by Lerner in 1965, where he explained to observers that the fairest way of selecting one worker for payment is by chance and that the workers had to drawn numbers from a hat to decide whether they belonged to the paid or the unpaid group. Next, the observers listened how the workers solved anagrams, and then they rated the performance and personal characteristics of both workers. Consistent with a belief in a just world, observers rated the performance of the paid worker as superior to that of the unpaid worker. In the present study a new element was introduced. Observers did not rate actors performance, but they “judged” their attribution of success and failure, attributing it to different causes. In Lerner's study, subjects imposed justice on the situation by persuading themselves that the paid worker deserved to be rewarded — “he must have contributed more than the unpaid worker”. Similar happened in our study: observers tend to believe that thanks to their *Effort*, actors in the rich, but unfair condition, won the game.

Deriving from Lerner's research we can explain that observers' reactions to unequal allocation of resources can be influenced by individual's outcomes even when those outcomes occur by chance. But what about the individual who receives such a chance outcome? The connection with Piff's experiment is apparent: as laid out in the introduction his investigation was executed from actor's point of view, without determining attributional style or system

justifying beliefs. It seems that in his research the perceptions of actor's own behavior were influenced by situational outcomes, while in our study observers perceived behavioral outcomes – their *Effort*. In our sample, we provide some evidence for *Effort* attribution, when observers score high on BJW and starting unfairly the game (rich condition). Further, Jones and Nisbett's (1971) gave an answer in their analysis of the perception of the causes of behavior. They contend that observers watching an actor focused primarily on the actor's behavior, while the actor's attention focuses on his environment. An observer attending closely to a recipient's behavior, for instance, may miss situational cues involving the arbitrary nature

of a chance outcome and, instead, "see" an explanation for the outcome within the recipient.

As predicted, the low BJW group tend to assign a higher equal score to all the dependent variables except from *Easy Game* with respect to the high BJW group. Participants did not attribute *Mood, Skill, Luck* differently in the experimental conditions (starting rich or poor:-, high or low in BJW) to explain success or failure. The effects of the interaction between these independent variables on attribution and donation were not significant and were deleted in order not to lose analysis power. The negative correlation between *Fairness* and *Skill* implicates that probably participants who evaluated the game as being won/lost thanks to high *Skills* evaluated the game to be less fair. One reasonable and probable answer would be that subjects understood the unfair rules with which the game started and that a better scenario set up must be examined.

Rich/Poor did not differentiate between *Skills*. Observers in both conditions attributed success as well as failure in even amounts to *Skills* or the lack of skill. It might be that participants evaluated the game as more unfair the more they thought that *Skills* - mostly out of control of the actor – was so important to win/loose the game.

Although, our hypothesis about money donation was not statistically significant, low believers tend to donate an amount of money between 32.8€ and 66.4€, (consistent with the golden ratio of Vermunt) while high believers showed tendency of not donating money. Regardless of which condition, older observers donated more money on average, which can be explained by them having more stable financial situation. Logically, team focused subjects donated more money, than individuals. Since the relationship within the team is important to them - team

focused people opt to organize more donating initiatives and are aware of greater number of charity organizations and causes. (e.g., Erez & Earley, 1987; Hofstede 2001; Wagner,1995). Moreover, from the correlation analyses we can see that people who tend to believe it was an *Easy game* showed tendency to donate more money in general. This could lead us to believe that individuals who do not perceive high *Effort* are more prone to donate in comparison to people who really believed they deserved the money because of their high effort. Consistent with Piff, people who believe they perform better and involve more effort develop entitlement believing they deserve it and have the right to it. They are more likely to believe that greed and self-interest is a moral and good thing, therefore less prone to donate.

Finally, there are many errors that can occur while making attributions of success or failure. And many aspects of this study could have been done better. Our participants are not excluded from the possibility of being biased by actor-observer effect for instance. Past achievements also contribute to the mind set of deservningness and achievement regardless the given culture of the situation, so its possible that subjects got biased. The work of McClelland, Clark, Lowell and Atkinson (1953) working primarily with adults, suggests that people who are high on the need for achievement, have some belief in their own ability or skill to determine the outcome of their efforts.

A number of limitations should be considered when interpreting the results. Most notably, the nature of the sample used in such an investigation may limit the extent to which these findings can be generalized. The application of the study was only applied to a certain self chosen group. The study among mostly students must be replicated among individuals sampled from a wider population group. We also assume that if we were to include a mood scale in order to determine the positive or negative mood, our participants could have revealed different results, as substantial amount of literature states that mood influences attributions. (see Bower, 1981). Likewise, the scale of self-esteem would have probably yield more detailed outcome to complete the picture of allocation, attribution and justifications. Lastly, post examination of feelings about money allocation should be included too to check people's satisfaction when allocating money to their favorable charity cause.

In addition, various response biases could have occurred - some subjects may have a tendency

to give affirmative responses; negative responses; extreme responses; uncertain responses or socially desirable responses. It has been found, for example, that blacks are more likely than whites to give extreme responses in Likert-type questionnaires (Bachman & O'Malley, 1984). Furthermore, although all the subjects of the study had a good command of English, some do not have English as their native language, and certain expressions may have different connotations for different language groups. Especially, when filling in the BJW scale where American expressions were predominant. It is important to note, the subjects of the study were not remunerated or given credits, and it is therefore possible that the most unmotivated members of the population may have been elected. Moreover, the sample size was too small, future studies should include bigger samples. Given the fact of marginal significance, we reckon that if all 332 participants filled in the questionnaire correctly, we would have obtained more significant results.

The present paper is the first step to study a newly developed scenario of rigged Monopoly game and how observers deal with inequality during allocation processes. We are aware that a deeper examination of this question requires additional avenues of research. A possible approach to our experiment and strongly recommended one is to execute it with a bigger randomly selected sample as well as executing it in lab settings, rather than online.

The question of unequal allocation of resources and the concept of just/unjust is deeply entrenched in our everyday morality. In the past, the focus lied on the actor, fortunately today's society is slowly starting to realize that observer's reactions are as significant. Citizens play observers, actors and recipients in every day allocation processes. We often say that effort deserves success, virtue deserves happiness and misbehavior deserves punishment. We think that what people deserve is what they get and that it is just, without considering their unequal starting position. We assume, too, that it is mistaken to treat people better or worse than they deserve. Consequences of similar thoughts have implication of how we perceive the world. The presented investigation is one grain of sand, but the notion of it is essential, in order to adjust the tact of our moral clock.

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APPENDICES I

BJW Scale:

1. Just World Scale by Z. Rubin & L. A. Peplau - Just world scale (1975)

Instructions:

Indicate your degree of agreement or disagreement with each of the following statements in the blank space next to each item. Respond to every statement by using the following code.[2]

5 = strongly agree
4 = moderately agree
3 = slightly agree
2 = slightly disagree
1 = moderately disagree
0 = strongly disagree

1 . I've found that a person rarely deserves the reputation he has.
2. Basically, the world is a just place.
3. People who get "breaks" have usually earned their good fortune.
4. Careful drivers are just as likely to get hurt in traffic accidents as careless ones.
5. It is a common occurrence for a guilty person to get off free American courts.
6. Students almost always deserve the grades they receive in school.
7 Men who keep in shape have little chance of suffering a heart attack.
8. The political candidate who sticks up for his principles rarely gets elected.
9. It is rare for an innocent man to be wrongly sent to jail.
10. In professional sports. many fouls and infractions never get called by the referee.
11. By and large, people deserve what they get
12. When parents punish their children. it is almost always for good reasons.
13. Good deeds often go unnoticed and unrewarded.
14.Although evil men may hold political power for a while in the course of history, good wins out
15. In almost any business or profession. people who do their job well rise to the top.
16. American parents tend to overlook the things most to be admired m their children.
17. It is often impossible for a person to receive a fair trial in the USÆ
18. People who meet with misfortune have often brought it on themselves.
19. Crime doesn't pay.
20. Many people suffer through absolutely no fault of their own.

2Re-coded

APENDIX II

Figure 1: Age category

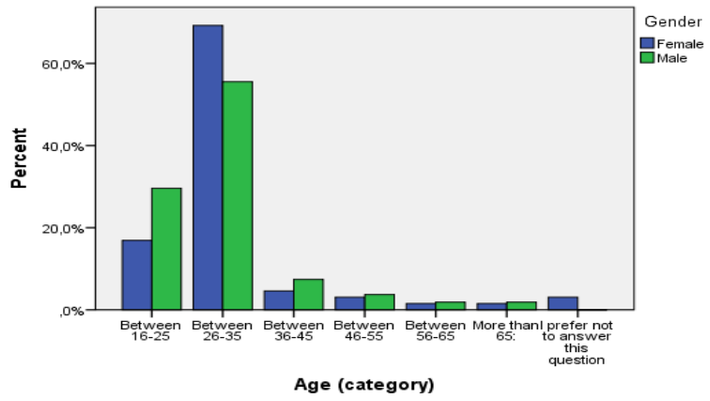

Table 1:Reliability Statistics considering 20 items

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,664	,650	20

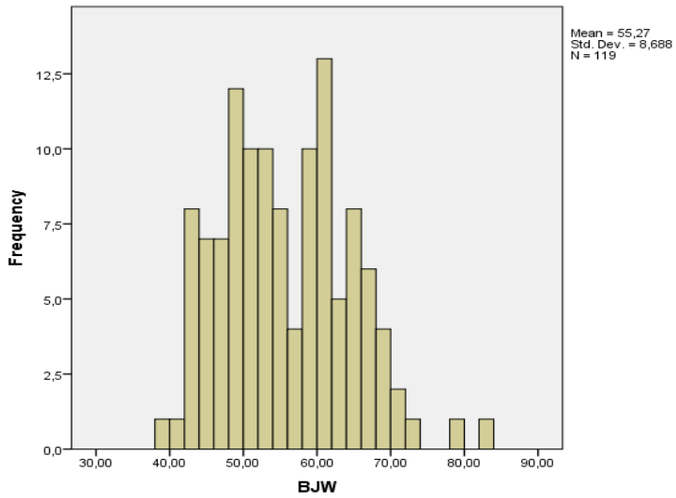

Figure 2: Histogram of Believe in Just Word

Means of the dependent variables per independent variable

RichVSPoor

A. Skills B. Luck C. Mood D. Efforts E. Easy game * RichVSPoor

RichVSPoor		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
,00	Mean	**1,85**	**3,54**	**1,81**	**2,02**	**3,83**
	N	52	52	52	52	52
	Std. Deviation	1,109	1,662	1,155	1,260	1,396
1,00	Mean	**2,31**	**4,01**	**2,24**	**2,73**	**2,75**
	N	67	67	67	67	67
	Std. Deviation	1,351	1,779	1,478	1,503	1,770
Total	Mean	2,11	3,81	2,05	2,42	3,22
	N	119	119	119	119	119
	Std. Deviation	1,268	1,738	1,358	1,441	1,698

Table 4: Rich vs Poor: means of the dependent variables per independent variable

Team focus

A. Skills B. Luck C. Mood D. Efforts E. Easy game * Teamfocus (Binned)

Teamfocus (Binned)		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
Individual focus	Mean	**2,22**	**3,72**	**2,05**	**2,45**	**3,22**
	N	83	83	83	83	83
	Std. Deviation	1,307	1,699	1,315	1,459	1,690
Team focus	Mean	**1,86**	**4,00**	**2,06**	**2,36**	**3,22**
	N	36	36	36	36	36

	Std. Deviation	1,150	1,836	1,472	1,417	1,742
Total	Mean	2,11	3,81	2,05	2,42	3,22
	N	119	119	119	119	119
	Std. Deviation	1,268	1,738	1,358	1,441	1,698

Table 5: Team Focus: means of the dependent variables per independent variable

BJW

A. Skills B. Luck C. Mood D. Efforts E. Easy game * BJW_lowhigh

BJW_lowhigh		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
,00	Mean	**2,20**	**3,93**	**2,23**	**2,72**	**3,13**
	N	60	60	60	60	60
	Std. Deviation	1,312	1,686	1,419	1,451	1,589
1,00	Mean	**2,02**	**3,68**	**1,86**	**2,12**	**3,31**
	N	59	59	59	59	59
	Std. Deviation	1,225	1,795	1,279	1,378	1,812
Total	Mean	2,11	3,81	2,05	2,42	3,22
	N	119	119	119	119	119
	Std. Deviation	1,268	1,738	1,358	1,441	1,698

Table 6: BWJ: means of the dependent variables per independent variable

APPENDIX III

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I have found that a person rarely deserves the reputation he has.	51,97	69,042	,235	,296	,697
Basically, the world is a just place.	51,06	62,158	,405	,218	,675
People who get breaks (fortunate event) have usually earned their good fortune.	51,59	69,736	,211	,240	,699
It is a common occurrence for a guilty person to get off free from court.	51,95	68,692	,251	,227	,695
Students almost always deserve the grades they receive in school.	51,58	68,754	,228	,157	,698
Men who keep in shape have little chance of suffering a heart attack.	52,14	68,564	,241	,214	,697
The political candidate who sticks up for his principles rarely gets elected.	51,48	69,201	,226	,327	,698
It is rare for an innocent man to be wrongly sent to jail.	51,50	68,744	,216	,334	,700
By and large, people deserve what they get	51,58	62,907	,511	,455	,664
When parents punish their children it is almost always for good reasons.	51,45	65,996	,363	,295	,682
Good deeds often go unnoticed and unrewarded.	51,26	66,906	,320	,343	,687
Although evil men may hold political power for a while in the general course of history, good wins out.	51,19	61,649	,527	,467	,660

In almost any business or profession people who do their job well rise to the top.	51,75	64,800	,494	,335	,669
It is often impossible for a person to receive a fair trial.	52,01	69,093	,226	,390	,698
People who meet with misfortune have often brought it on themselves.	51,25	71,004	,150	,334	,706

Table 7: Item-Total statistics

Table 8: Correlations between dependent variables

Correlations

		A. Skills	B. Luck	C. Mood	D. Efforts	E. Easy game
A. Skills	Pearson Correlation	1	,164	,597**	,527**	-,082
	Sig. (2-tailed)		,076	,000	,000	,375
	N	119	119	119	119	119
B. Luck	Pearson Correlation	,164	1	,216*	,314**	,126
	Sig. (2-tailed)	,076		,018	,001	,171
	N	119	119	119	119	119
C. Mood	Pearson Correlation	,597**	,216*	1	,444**	-,108
	Sig. (2-tailed)	,000	,018		,000	,244
	N	119	119	119	119	119
D. Efforts	Pearson Correlation	,527**	,314**	,444**	1	,111
	Sig. (2-tailed)	,000	,001	,000		,229
	N	119	119	119	119	119
E. Easy game	Pearson Correlation	-,082	,126	-,108	,111	1
	Sig. (2-tailed)	,375	,171	,244	,229	
	N	119	119	119	119	119

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 9: Description of the factors considered in the analysis

Between-Subjects Factors

		Value Label	N
RichVSPoor	,00		52
	1,00		67
Teamfocus (Binned)	1	Individual focus	83
	2	Team focus	36
BJW_lowhigh	,00		60
	1,00		59

APPENDIX IV

Correlations

		Age (category)	Gender	A. Skills (Binned)	B. Luck (Binned)	C. Mood (Binned)	D. Efforts (Binned)	E. Easy game (Binned)	Donated Money (Binned)	BJW lowhigh	RichVSPoor	Teamfocus	Fairness (Binned)
Age (category)	Pearson Correlation	1	-,097	,044	,295**	-,009	,156	,018	,239**	,001	,004	,141	,007
	Sig. (2-tailed)		,293	,634	,001	,924	,089	,846	,009	,993	,968	,126	,941
Gender	Pearson Correlation	-,097	1	-,024	-,073	,014	-,094	-,050	-,053	-,026	-,252**	,008	,008
	Sig. (2-tailed)	,293		,795	,432	,878	,307	,593	,567	,778	,006	,932	,929
A. Skills (Binned)	Pearson Correlation	,044	-,024	1	,094	,427**	,423**	-,131	-,056	,017	-,131	,221*	-,359**
	Sig. (2-tailed)	,634	,795		,308	,000	,000	,156	,545	,853	,156	,016	,000
B. Luck (Binned)	Pearson Correlation	,295**	-,073	,094	1	,208*	,250**	,091	,151	,112	-,094	-,026	-,050
	Sig. (2-tailed)	,001	,432	,308		,023	,006	,323	,103	,226	,310	,776	,589
C. Mood (Binned)	Pearson Correlation	-,009	,014	,427**	,208*	1	,385**	-,113	-,159	,099	-,163	,053	-,276**
	Sig. (2-tailed)	,924	,878	,000	,023		,000	,219	,085	,285	,076	,569	,002
D. Efforts (Binned)	Pearson Correlation	,156	-,094	,423**	,250**	,385**	1	,119	,039	,184*	-,229*	,083	-,184*
	Sig. (2-tailed)	,089	,307	,000	,006	,000		,199	,676	,045	,012	,370	,045
E. Easy game (Binned)	Pearson Correlation	,018	-,050	-,131	,091	-,113	,119	1	,201*	,082	,181*	-,005	-,002
	Sig. (2-tailed)	,846	,593	,156	,323	,219	,199		,029	,373	,049	,955	,985
Donated Money (Binned)	Pearson Correlation	,239**	-,053	-,056	,151	-,159	,039	,201*	1	-,113	,117	,226*	-,051
	Sig. (2-tailed)	,009	,567	,545	,103	,085	,676	,029		,222	,207	,014	,584
BJW lowhigh	Pearson Correlation	,001	-,026	,017	,112	,099	,184*	,082	-,113	1	-,041	-,007	-,158
	Sig. (2-tailed)	,993	,778	,853	,226	,285	,045	,373	,222		,656	,936	,086
RichVSPoor	Pearson Correlation	,004	-,252**	-,131	-,094	-,163	-,229*	,181*	,117	-,041	1	,045	,056
	Sig. (2-tailed)	,968	,006	,156	,310	,076	,012	,049	,207	,656		,627	,547
Teamfocus	Pearson Correlation	,141	,008	,221*	-,026	,053	,083	-,005	,226*	-,007	,045	1	,007
	Sig. (2-tailed)	,126	,932	,016	,776	,569	,370	,955	,014	,936	,627		,939
Fairness (Binned)	Pearson Correlation	,007	,008	-,359**	-,050	-,276**	-,184*	-,002	-,051	-,158	,056	,007	1
	Sig. (2-tailed)	,941	,929	,000	,589	,002	,045	,985	,584	,086	,547	,939	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 10: Multivariate Test

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,891	182,396[b]	5,000	111,000	,000	,891
	Wilks' Lambda	,109	182,396[b]	5,000	111,000	,000	,891
	Hotelling's Trace	8,216	182,396[b]	5,000	111,000	,000	,891
	Roy's Largest Root	8,216	182,396[b]	5,000	111,000	,000	,891
RichVSPoor	Pillai's Trace	,203	5,650[b]	5,000	111,000	,000	,203
	Wilks' Lambda	,797	5,650[b]	5,000	111,000	,000	,203

	Hotelling's Trace	,254	5,650[b]	5,000	111,000	,000	,203
c	Roy's Largest Root	,254	5,650[b]	5,000	111,000	,000	,203
h v s							
T	Pillai's Trace	,048	1,125[b]	5,000	111,000	,351	,048
e	Wilks' Lambda	,952	1,125[b]	5,000	111,000	,351	,048
a	Hotelling's Trace	,051	1,125[b]	5,000	111,000	,351	,048
m v s	Roy's Largest Root	,051	1,125[b]	5,000	111,000	,351	,048
h d v							
B	Pillai's Trace	,058	1,363[b]	5,000	111,000	,244	,058
U	Wilks' Lambda	,942	1,363[b]	5,000	111,000	,244	,058
W	Hotelling's Trace	,061	1,363[b]	5,000	111,000	,244	,058
- b w h	Roy's Largest Root	,061	1,363[b]	5,000	111,000	,244	,058
g h							

Table 11: Grand Mean

1. Grand Mean

Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
A. Skills	1,977	,126	1,727	2,227
B. Luck	3,812	,177	3,461	4,163
C. Mood	2,001	,137	1,729	2,272
D. Efforts	2,317	,140	2,039	2,595
E. Easy game	3,343	,166	3,015	3,671

Table 12: RichVSPoor

Estimates

Dependent Variable	RichVSPoor	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
A. Skills	,00	1,699	,189	**1,325**	**2,073**
	1,00	2,255	,154	**1,949**	**2,560**
B. Luck	,00	3,595	,265	3,071	4,120
	1,00	4,029	,216	3,600	4,457
C. Mood	,00	1,782	,205	1,376	2,188
	1,00	2,219	,167	1,888	2,551
D. Efforts	,00	1,946	,210	**1,530**	**2,362**
	1,00	2,688	,172	**2,348**	**3,028**
E. Easy game	,00	3,907	,248	**3,416**	**4,397**
	1,00	2,779	,202	**2,379**	**3,180**

Pairwise Comparisons

Dependent Variable	(I) RichVSPoor	(J) RichVSPoor	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
A. Skills	,00	1,00	-,556*	,235	,019	-1,020	-,091
	1,00	,00	,556*	,235	,019	,091	1,020
B. Luck	,00	1,00	-,433	,329	,190	-1,085	,218
	1,00	,00	,433	,329	,190	-,218	1,085
C. Mood	,00	1,00	-,437	,255	,089	-,941	,068
	1,00	,00	,437	,255	,089	-,068	,941
D. Efforts	,00	1,00	-,742*	,261	,005	-1,259	-,225
	1,00	,00	,742*	,261	,005	,225	1,259
E. Easy game	,00	1,00	1,127*	,308	,000	,518	1,737
	1,00	,00	-1,127*	,308	,000	-1,737	-,518

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 13: Pairwise Comparisons

Table 14:Teamfocus (Binned)

Estimates

Dependent Variable	Teamfocus (Binned)	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
A. Skills	Individual focus	2,221	,136	1,952	2,491
	Team focus	1,733	,213	1,311	2,155
B. Luck	Individual focus	3,727	,191	3,349	4,105
	Team focus	3,897	,299	3,305	4,489
C. Mood	Individual focus	2,053	,148	1,760	2,346
	Team focus	1,949	,231	1,490	2,407
D. Efforts	Individual focus	2,454	,151	2,154	2,754
	Team focus	2,180	,237	1,711	2,650

E. Easy game	Individual focus	3,209	,178	2,856	3,563
	Team focus	3,476	,279	2,923	4,030

Pairwise Comparisons

Dependent Variable	(I) Teamfocus (Binned)	(J) Teamfocus (Binned)	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
						Lower Bound	Upper Bound
A. Skills	Individual focus	Team focus	,488	,253	,056	-,013	,990
	Team focus	Individual focus	-,488	,253	,056	-,990	,013
B. Luck	Individual focus	Team focus	-,170	,355	,632	-,874	,533
	Team focus	Individual focus	,170	,355	,632	-,533	,874
C. Mood	Individual focus	Team focus	,104	,275	,705	-,440	,649
	Team focus	Individual focus	-,104	,275	,705	-,649	,440
D. Efforts	Individual focus	Team focus	,273	,282	,334	-,284	,831
	Team focus	Individual focus	-,273	,282	,334	-,831	,284
E. Easy game	Individual focus	Team focus	-,267	,332	,423	-,925	,390
	Team focus	Individual focus	,267	,332	,423	-,390	,925

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Table 15: Pairwise Comparisons

Table 16: BJW_lowhigh

Estimates

Dependent Variable	BJW_lowhigh	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
A. Skills	,00	2,064	,169	1,730	2,399
	1,00	1,890	,171	1,551	2,229
B. Luck	,00	3,928	,237	3,459	4,398
	1,00	3,696	,240	3,221	4,171
C. Mood	,00	2,178	,183	1,815	2,541
	1,00	1,824	,186	1,456	2,192
D. Efforts	,00	2,605	,188	**2,233**	**2,977**
	1,00	2,029	,190	**1,652**	**2,406**
E. Easy game	,00	3,276	,222	2,837	3,715
	1,00	3,409	,224	2,965	3,854

Pairwise Comparisons

Dependent Variable	(I) BJW_lowhigh	(J) BJW_lowhigh	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
A. Skills	,00	1,00	,174	,228	,445	-,276	,625
	1,00	,00	-,174	,228	,445	-,625	,276
B. Luck	,00	1,00	,233	,319	,467	-,399	,865
	1,00	,00	-,233	,319	,467	-,865	,399
C. Mood	,00	1,00	,354	,247	,155	-,135	,843
	1,00	,00	-,354	,247	,155	-,843	,135
D. Efforts	,00	1,00	,575*	,253	,025	,074	1,077
	1,00	,00	-,575*	,253	,025	-1,077	-,074
E. Easy game	,00	1,00	-,133	,298	,656	-,724	,458
	1,00	,00	,133	,298	,656	-,458	,724

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 17: Pairwise Comparisons

APPENDIX V

Table 18: Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,891	182,396[b]	5,000	111,000	,000	,891
	Wilks' Lambda	,109	182,396[b]	5,000	111,000	,000	,891
	Hotelling's Trace	8,216	182,396[b]	5,000	111,000	,000	,891
	Roy's Largest Root	8,216	182,396[b]	5,000	111,000	,000	,891
RichVSPoor	Pillai's Trace	,203	5,650[b]	5,000	111,000	,000	,203
	Wilks' Lambda	,797	5,650[b]	5,000	111,000	,000	,203
	Hotelling's Trace	,254	5,650[b]	5,000	111,000	,000	,203
	Roy's Largest Root	,254	5,650[b]	5,000	111,000	,000	,203
TeamvsIndv	Pillai's Trace	,048	1,125[b]	5,000	111,000	,351	,048
	Wilks' Lambda	,952	1,125[b]	5,000	111,000	,351	,048

	Hotelling's Trace	,051	1,125[b]	5,000	111,000	,351	,048
	Roy's Largest Root	,051	1,125[b]	5,000	111,000	,351	,048
BJW_lowhigh	Pillai's Trace	,058	1,363[b]	5,000	111,000	,244	,058
	Wilks' Lambda	,942	1,363[b]	5,000	111,000	,244	,058
	Hotelling's Trace	,061	1,363[b]	5,000	111,000	,244	,058
	Roy's Largest Root	,061	1,363[b]	5,000	111,000	,244	,058

APPENDIX VI

Table 19: Univariate outcome

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	A. Skills	12,914[a]	3	4,305	2,802	,043	,068
	B. Luck	8,999[b]	3	3,000	,993	,399	,025
	C. Mood	9,379[c]	3	3,126	1,726	,166	,043
	D. Efforts	26,282[d]	3	8,761	4,606	,004	,107
	E. Easy game	36,386[e]	3	12,129	4,589	,005	,107
Intercept	A. Skills	376,704	1	376,704	245,214	,000	,681
	B. Luck	1400,534	1	1400,534	463,413	,000	,801
	C. Mood	385,820	1	385,820	212,988	,000	,649
	D. Efforts	517,406	1	517,406	272,057	,000	,703
	E. Easy game	1076,991	1	1076,991	407,504	,000	,780
RichVSPoor	A. Skills	8,624	1	8,624	5,614	,019	,047
	B. Luck	5,248	1	5,248	1,736	,190	,015
	C. Mood	5,330	1	5,330	2,942	,089	,025

	D. Efforts	15,366	1	15,366	8,080	,005	,066
	E. Easy game	35,506	1	35,506	13,434	,000	,105
TeamvsIndv	A. Skills	5,720	1	5,720	3,724	,056	,031
	B. Luck	,695	1	,695	,230	,632	,002
	C. Mood	,261	1	,261	,144	,705	,001
	D. Efforts	1,792	1	1,792	,942	,334	,008
	E. Easy game	1,712	1	1,712	,648	,423	,006
BJW_lowhigh	A. Skills	,901	1	,901	,587	,445	,005
	B. Luck	1,608	1	1,608	,532	,467	,005
	C. Mood	3,720	1	3,720	2,053	,155	,018
	D. Efforts	9,829	1	9,829	5,168	,025	,043
	E. Easy game	,527	1	,527	,199	,656	,002
Error	A. Skills	176,666	115	1,536			
	B. Luck	347,555	115	3,022			
	C. Mood	208,318	115	1,811			
	D. Efforts	218,710	115	1,902			
	E. Easy game	303,933	115	2,643			
Total	A. Skills	719,000	119				
	B. Luck	2081,000	119				
	C. Mood	718,000	119				
	D. Efforts	942,000	119				
	E. Easy game	1573,000	119				
Corrected Total	A. Skills	189,580	118				
	B. Luck	356,555	118				
	C. Mood	217,697	118				
	D. Efforts	244,992	118				
	E. Easy game	340,319	118				

Table 20: Leven's Test for equality of variances

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
A. Skills	1,314	7	111	,250
B. Luck	,642	7	111	,721
C. Mood	1,643	7	111	,131
D. Efforts	1,942	7	111	,070
E. Easy game	3,170	7	111	,004

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + RichVSPoor + TeamvsIndv + BJW_lowhigh

ANOVA means

RichVSPoor

Table 21: Means Rich VS Poor

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
A. Skills (Binned)	,00	52	,13	,345	,048	,04	,23
	1,00	67	,24	,430	,052	,13	,34
	Total	119	,19	,397	,036	,12	,27
D. Efforts (Binned)	,00	52	,15	,364	,051	,05	,26
	1,00	67	,36	,483	,059	,24	,48
	Total	119	,27	,445	,041	,19	,35
E. Easy game (Binned)	,00	52	,63	,486	,067	,50	,77
	1,00	67	,36	,483	,059	,24	,48
	Total	119	,48	,502	,046	,39	,57

APPENDIX VII

Table 22: Unadjusted ANOVA, Skills - RichVSPoor

ANOVA

A. Skills (Binned)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,318	1	,318	2,039	,156
Within Groups	18,237	117	,156		
Total	18,555	118			

Table 23: Adjusted outcome for homogeneity of variance, Skills – RichVSPoor

Robust Tests of Equality of Means

A. Skills (Binned)

	Statistic[a]	df1	df2	Sig.
Welch	2,155	1	116,855	,145
Brown-Forsythe	2,155	1	116,855	,145

a. Asymptotically F distributed.

Table 24: Unadjusted ANOVA, Easy game - RichVSPoor

ANOVA

E. Easy game (Binned)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,883	1	,883	3,974	,049
Within Groups	25,991	117	,222		
Total	26,874	118			

Table 25: Adjusted outcome for homogeneity of variance, Easy game - RichVSPoor

Robust Tests of Equality of Means

E. Easy game (Binned)

	Statistic[a]	df1	df2	Sig.
Welch	3,859	1	102,961	,052
Brown-Forsythe	3,859	1	102,961	,052

a. Asymptotically F distributed.

Table 26: Means BJW_lowhigh

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
D. Efforts (Binned)	,00	60	,35	,481	,062	,23	,47
	1,00	59	,19	,393	,051	,08	,29
	Total	119	,27	,445	,041	,19	,35

Table 27: Crosstabulation Donated money and BJW

BJW_lowhigh * Donated Money (Binned) Crosstabulation

			Donated Money (Binned)				Total
			No donated money	Less than 32.7	between 32.8 and 66.4	more than 66.5	
BJW_lowhigh	,00	Count	13	15	21	10	59
		% within BJW_lowhigh	22,0%	25,4%	35,6%	16,9%	100,0%
		% within Donated Money (Binned)	37,1%	50,0%	61,8%	52,6%	50,0%
		% of Total	11,0%	12,7%	17,8%	8,5%	50,0%
	1,00	Count	22	15	13	9	59
		% within BJW_lowhigh	37,3%	25,4%	22,0%	15,3%	100,0%
		% within Donated Money (Binned)	62,9%	50,0%	38,2%	47,4%	50,0%
		% of Total	18,6%	12,7%	11,0%	7,6%	50,0%
Total		Count	35	30	34	19	118
		% within BJW_lowhigh	29,7%	25,4%	28,8%	16,1%	100,0%
		% within Donated Money (Binned)	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	29,7%	25,4%	28,8%	16,1%	100,0%

Table 28: Symmetric measure

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,190	,236
	Cramer's V	,190	,236
N of Valid Cases		118	

Table 29: Chi-square test

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,249[a]	3	,236
Likelihood Ratio	4,293	3	,231
Linear-by-Linear Association	2,683	1	,101
N of Valid Cases	118		

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,50.

Figure 3: Bar chart of Donated money for BJW categories