Are Individuals Luck Egalitarians? An Experiment on the Influence of Brute and Option Luck on Social Preferences

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Are Individuals Luck Egalitarians?
– An experiment on the influence of brute and option luck on social preferences

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Abstract

According to luck egalitarianism, inequalities should be deemed fair as long as they follow from individuals’ deliberate and fully informed choices, i.e. option luck – while inequalities should be deemed unfair if they follow from choices over which the individual has no control, i.e. brute luck. This study investigates if individuals’ fairness preferences correspond with the luck egalitarian fairness position. More specifically, in a laboratory experiment we test how individuals choose to redistribute gains and losses that stem from option luck compared to brute luck.

A two-stage experimental design with real incentives was employed. In total, 226 subjects were randomly assigned to either the brute luck or option luck treatment. Treatments were identical except for how monetary compensation for participation in the experiment was settled in stage one. In the option luck treatment, subjects were given the option to chose between a safe option (50 SEK) and a risky option (a 50/50 gamble between 0 SEK and 150 SEK). In the brute luck treatment no such choice was given, instead all subjects were compensated based on outcome of the risky option. In the second stage, subjects were asked to distribute additional endowments (100 SEK) in an anonymous dictator game using the strategy method, i.e. making decisions contingent on the recipient losing or winning in the gamble.

Individuals change their action associated with re-allocation depending on the underlying conception of luck. Subjects in the brute luck treatment equalized outcomes to larger extent (p=0.0069). Thus, subjects redistributed a larger amount to unlucky losers and a smaller amount to lucky winners compared to equivalent choices made in the option luck treatment.

We find strong support for people having a fairness preference not just for outcomes, but also for how those outcomes are reached. Our findings are potentially important for understanding the role citizens assign individual responsibility for life outcomes, i.e. health and wealth.

Keywords: fairness, luck egalitarianism, brute luck, option luck, dictator game, laboratory experiment.
1. Introduction

How to deal fairly with the burdens and benefits that follow from individuals’ fortune and misfortune has long been a prominent topic in philosophy (Nagel 1979, Williams 1981, Levy 2011). This discussion is also closely linked with policy issues such as: when should individuals be held financially responsible for their own ill health?; to what extent should society level out the inequalities in financial wealth? This paper seeks to investigate how different types of luck influence social preferences in a behavioral experiment.

1.1 Brute and option luck

It is evident that aspects of luck significantly affect outcomes in many spheres of life. The genes that we are equipped with at birth are highly influential in determining the extent to which we will be able to live a long and healthy life. The social environment that we are born into heavily influences our future wealth, etc. Such outcomes can be ascribed to brute luck, i.e. how risks fall out that are not in the sense deliberate choices. However, not all of life’s outcomes are simply due to such unforeseeable brute luck. In fact, most choices that we make involve deliberate risk-taking e.g. buying a lottery ticket, biking in traffic, and smoking cigarettes. The outcomes associated with such choices are a matter of how deliberate choices that involve risk-taking turn out – whether or not our option luck is good or bad. The extent to which society should seek to eliminate inequalities that are due to these two different types of luck is a recurrent topic in philosophy and public policy. However, to our knowledge, no experiment has investigated the extent to which individuals’ fairness preferences about inequalities change due to different types of luck.

The distinction between brute luck and option luck was first introduced by Ronald Dworkin (Dworkin 1981), who stated that:

Option luck is a matter of how deliberate and calculated gambles turn out – whether someone gains or loses through accepting an isolated risk he or she should have anticipated and might have declined. Brute luck is a matter of how risks fall out that are not in the sense deliberate gambles. (Dworkin 1981:293)\ldots If I buy a stock on the exchange that rises, then my option luck is good. If I am hit by a falling meteorite whose
course could not have been predicted, then my bad luck is brute (even though I could have moved just before it struck if I had had any reason to know where it would strike) (Dworkin 1981:73).

The concept of brute luck and option luck later became closely associated with what is sometimes labeled as luck egalitarianism (Arneson 1989, Cohen 1989). The standard formulation of this doctrine is that a person should not be worse off than anyone else, in respect to some metric or currency of goods, as a result of brute luck. Thus, inequalities for which individuals have had no possibility to influence through their own choices should be deemed unfair and therefore equalized, while inequalities that follow from individuals’ deliberate and fully informed choices should be deemed fair.

1.2 Previous experiments

Behavioral experiments have consistently established that individuals care not only about their own material payoff, but they also care about other-regarding aspects (Forsythe et al. 1994, Andreoni, Harbaugh and Vesterlund 2003, Camerer 2003, Engel 2011). The dictator game is a workhorse for studying fairness preferences in experiments since it involves no strategic concerns related to behavior. The first dictator game with real stakes was conducted by Forsythe et al. (1994) who found that around 60% of participants shared a positive amount of money, with the mean transfer at roughly 20% of the endowment. These findings of the standard dictator game have since been replicated numerous times and appear to be fairly robust also across cultures (Henrich et al. 2001). The growth of this empirical literature has fueled theoretical advances in economic models that aim to explain observed non-selfish behavior. The inequity-aversion models of Fehr and Schmidt (1999) and Bolton and Ockenfels (2000) have been established as the paramount theoretical models to explain so-called social preferences in dictator games (Fehr and Schmidt 1999, Bolton and Ockenfels 2000). These models focus on individuals’ relative position to explain non-selfish behavior. Another category of fairness models assigns a major behavioral role to reciprocity (e.g.

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* The game typically involves two players; a dictator and a receiver. The anonymous dictator makes an initial choice on how to allocate (split) some endowment and the anonymous receiver passively receives the remainder of the endowment. The strategy for a person motivated purely by material self-interest would be to keep the entire endowment and leave the receiver with nothing.

† At the time of writing this article, the empirical literature on dictator games comprises more than 129 published articles; see Engel (2011) for a meta-study.
However, both the inequity-aversion and reciprocity models have maintained a consequentialist perspective, focusing on distributive fairness concerns while largely neglecting the fact that individuals also have preferences regarding how these outcomes are reached – procedural fairness concerns

Most experimental studies that have investigated individuals’ concerns for procedural fairness have been designed to examine how effort and ability influence distributive choices. This is typically done in a two-person bargaining game by assigning a proposer based on some form of unrelated ability or effort measure. The assigned responder then gets to allocate an initial entitlement between himself/herself and a respondent who may accept or decline this offer. The experiments by Hoffman and Spitzer (1985) and Burrows and Loomes (1994) explicitly examine how individuals’ allocation choices are influenced in cases when an initial endowment is assigned based on effort/ability versus pure randomness (e.g. see (Hoffman and Spitzer 1985, Burrows and Loomes 1994). Their general finding is that when the proposer is assigned based on some form of unrelated effort or ability measure (e.g. hash-mark game or a word-search task), he/she allocates less of the initial endowment to the respondent. Hoffman and Spitzer (1985) draw the conclusion that subjects behave as if they adhere to a form of earnings-based notion of fairness where individuals should be compensated for their “intrinsic inputs”. However, given that the experiments are two-person bargaining games with face-to-face communication, subjects also have strategic considerations that are hard to separate from fairness preferences. Related to this, studies at the macro level have found a strong correlation between how much a country spends on social programs and its citizens’ beliefs about whether luck or effort determines wealth (Fong 2001, Alesina and Angeletos 2005, Isaksson and Lindskog 2009).

Some aspects of effort and ability, and how they may influence fairness preferences, have received attention in previous micro-level experiments. However, less interest has been devoted to different aspects of luck and how this may influence an individual’s fairness preferences. The study by Cappelen et al. (2013) is the one that comes closest to the study we present

\[\text{‡}
\text{We here define procedural fairness broadly; as concerns how the distribution of individuals’ prospects or opportunities should be allowed to causally influence material outcomes. It could be argued that}
\]
here. They employed a two-stage experiment to study fairness views about risk-taking. The first phase involved participants making a sequence of choices between risky and safe alternatives in a gambling situation. In the second phase, participants were paired and the earnings of each pair were pooled. Participants were informed about the choices and outcome of the risk-taking phase for both parties and were asked to distribute total earnings. Cappelen et al. (2013) concluded that most participants in their sample endorsed ex post redistribution between lucky and unlucky risk takers, but not between risk-takers and participants who avoided risk and chose a safe alternative. They label this fairness position choice egalitarianism.

Although choice egalitarianism is closely related to luck egalitarianism, the design employed by Cappelen et al. (2013) did not allow for the essential comparisons between different types of luck and how this influences individuals’ preferences for redistribution. To do this, it is necessary to incorporate aspects of voluntary and involuntary risk-taking. Against this background, the main objective of this study is to investigate the extent to which individuals’ preferences for redistribution correspond with the luck egalitarian fairness position. The primary hypotheses, which we set out to test, are:

**Hypothesis 1a:** Individuals equalize inequalities resulting from brute luck to a greater extent compared to inequalities resulting from option luck.

**Hypothesis 1b:** Individuals redistribute a larger share of their own endowment to individuals who have suffered bad brute luck compared to bad option luck.

In addition to this these hypotheses, which follows directly from luck egalitarianism and primarily focus on different types of bad luck, we also set out to investigate if different types of good luck influence individuals’ preferences for redistribution. This matter is less frequently discussed. However, if individuals choose to redistribute less money to individuals who suffer bad option luck it would be analogous if individuals were also more willing to redistribute money to individuals who enjoy good option luck, given that these are also outcomes from deliberate choices. Also, in capitalist market economies, taking economic risks is an essential part of the role of entrepreneur. Hence, we also want to investigate if individuals reward successful, deliberate risk-taking.
Hypothesis 2: Individuals redistribute a larger share of their own monetary endowment to individuals who have enjoyed good option luck compared to good brute luck.

Finally, we set out to investigate if fairness views related to luck is dependent on individuals being involved in the actual experiment. Previous studies have proposed that differences in stakeholder-view make little difference for individuals when making fairness judgment (Konow 2000, 2009). However empirical evidence on this matter remain scarce. By comparing the fairness behavior between impartial spectators and individuals actually taking part in the decision making phase, we aim to examine the extent to which fairness views of stakeholders deviate from impartial spectators with regards to brute and option luck.

The remainder of the paper is organized as follows. The next section describes the basic design of the experiments and the data collection procedure. Section III presents the results from our experiment. Section IV discusses policy implications and potential caveats associated with our experimental design.

2. Methods and Procedure

Two separate experiments to investigate how different types of luck influence social preferences were conducted. These experiments were identical except that experiment 1 relied on fairness judgments made by participants with personal stake related to the outcome of the luck related task involved in the experiment, while experiment 2 included third-party participants to make the equivalent fairness judgment.

2.1 Experiment 1

Participants were recruited among students at the Department of Management and Engineering at Linköping University. In total, 126 subjects (49% Females; Mean age 22) participated in 16 experimental sessions that lasted approximately 20 minutes. No one participated more than once, and individuals with prior knowledge about the experiment were excluded from the experiment. Prior to the experiment, subjects were randomly assigned to either option luck or brute luck treatment. We ran equal numbers of brute and option luck experiment sessions on a given day. Every second session was either option or brute luck treatment. Subjects were allowed to specify if there
were any particular times when they were unable to participate. No information concerning payment for participating in the experiment was given beforehand. The experiment was single blind, i.e. the participant could not associate any decisions with particular subjects, but one experimenter oversaw the decisions in order to arrange payments. Payments were made in cash in a marked envelope at the end of the experiment.

Before each experimental session we randomly paired two individuals and assigned them to a role of either dictator or recipient in the dictator game. Hence, we employed a random dictator rule where each person had an equal chance of dictating the result, and strategic considerations were eliminated. All instructions were presented in written form. Subjects were asked not to talk to other participants during the experiment, but were encouraged to raise questions to the experiment leader if anything was unclear. Complete instructions for the experiment are available from the authors upon request (see Appendix A).

The experiment was divided into three phases; the initial treatment phase where subjects were presented with instructions associated with either option or brute luck, the strategy phase where subjects made allocation decisions before the actual outcome of the experiment was disclosed, and the final outcome phase where a coin toss was used to separate lucky winners and unlucky losers.

At the outset of the experiment, subjects in the option luck treatment were given a two-option choice for how they would be compensated. If subjects chose the safe option they received 50 SEK for participating in the experiment. If they chose the risky option a coin toss (executed by the experiment leader) would settle if the subject would receive 150 SEK or 0 SEK for participating in the experiment. Hence, the expected value of the risky option was 75 SEK. At the outset of the experiment, subjects in the brute luck treatment were told that their compensation would be settled through a coin toss (150 SEK or 0 SEK) at the end of the experiment. Hence, the expected value associated with participating was 75 SEK.

In the strategy phase, subjects were informed that they were anonymously and randomly paired with another participant, and that one participant in each pair would randomly be awarded an additional 100 SEK. The subject was asked to specify how he/she would distribute these additional 100 SEK
between himself/herself and the anonymous partner by means of the strategy method, i.e. subjects were asked to specify their actions for every possible scenario in the experiment prior to knowing the outcome of the coin toss. This allowed us to collect data on a subject’s complete strategy. In the brute luck treatment the two potential scenarios were that the subject was paired with a winner (150 SEK) or a loser (0 SEK). Subjects in the option luck treatment faced the same potential scenarios, but in addition they were also asked to specify how they would distribute 100 SEK in a scenario where they were paired with someone who had chosen the safe alternative (50 SEK) in the initial treatment phase. Given that this was a one-shot experiment, subjects did not have to consider how their distribution could potentially affect future outcomes.

When everyone had specified their dictator strategies, these were collected and a coin toss was used to separate lucky winners from unlucky losers. The experimenter publicly executed the coin toss. Once this was done, the subjects were asked to fill out an unrelated questionnaire while one of the experimenters went to a separate room to arrange envelopes with correct payment, based on the strategies revealed.

2.2 Experiment 2
The procedure and methods used in experiment 2 followed the same structure as in experiment 1. The only difference in design between experiment 1 and experiment 2 concerned the inclusion of third-party dictators to make the allocation decision. Thus the strategy phase in experiment 2 was conducted with impartial subjects who did not themselves participate in the actual task involving different types of luck. In total, 200 subjects (37% Females; Mean age 22) participated in 4 sessions that lasted approximately 15 minutes.

Subjects were randomly assigned to one of four possible roles; Brute Luck Receiver; Option Luck Receiver; Brute Luck Dictator, Option Luck Dictator. Participants with respective roles conducted the experiment in separate rooms. Dictators were randomly paired with a receiver from their respective treatment. Dictators received 50 SEK as a show-up fee and did the same unrelated fill-in task as all other participants in the experiment. Finally, dictators were asked to split 100 SEK between themselves and their randomly assigned partner according to the same strategy method used in experiment 1.

Analysis

§ 100 subjects participated as receivers only in the specially designed version of the dictator game.
To test our hypothesis with regard to the difference in redistribution rates between the brute luck and the option luck treatments, an unpaired two-sample t-test was conducted. To test differences with regard to the difference in redistribution rates between gamblers and non-gamblers in the option luck treatment a paired two-sample t-test was conducted. The results from the t-tests were confirmed via a non-parametric bootstrap analysis.

3. Results

Table 2 presents descriptive results from experiment 1 and 2. The pooled results clearly show that procedural justice concerns related to option and brute luck influence an individual’s preferences for redistribution. On average subjects in the option luck treatment made significantly (p=0.0069) less difference (11.7 %) between unlucky losers and lucky winners when making redistribution. Thus, subjects redistributed a larger amount to unlucky losers in the brute luck treatment but less to lucky winners compared to redistribution made in the option luck treatment.

As shown in Table 1, the average redistribution rates that subjects chose for participants who lost the coin toss (unlucky losers) was higher (p=0.0839) in the brute luck treatment (42%) compared to the option luck treatment (36%), suggesting stronger social preferences for individuals who suffer bad brute luck compared to bad option luck. This result is in line with hypothesis 2 that individuals redistribute a larger share of their own endowment to individuals who have suffered bad brute luck compared to bad option luck.

As regards to hypothesis 3, Table 1 also shows that participants redistribute higher amounts to winners of the coin toss (lucky winners) in the option luck treatment (24%) compared to the brute luck treatment (18%). Albeit not significant, this result is in line with our hypothesis, suggesting that outcomes due to good option luck are deemed to offer greater fairness than outcomes due to good brute luck.

Looking at the results from experiment 2 alone we see that the difference between treatments are no longer significant (p=0.1718). Hence our results indicate that individuals’ fairness views is likely to reflect some degree of self-serving bias, even though redistribution decisions in experiment 1 was made ex ante before individuals knew the outcome of their risk-taking. Importantly,
however, all effect signs in experiment 2 go in the same direction as in study 1, indicating that stakeholders and spectators in general act on the same fairness views. In addition we also see that impartial dictators give significantly less to both losers (p=0.0368) and winners (p=0.0242) compared to dictators in experiment 1. Thus, impartial dictators show weaker altruistic preferences.

Table 1. Redistribution in the dictator game for option and brute luck.

<table>
<thead>
<tr>
<th></th>
<th>Brute luck (mean SEK)</th>
<th>Option luck (mean SEK)</th>
<th>Difference (Brute luck-Option luck)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiment 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlucky losers (0 SEK)</td>
<td>47.0</td>
<td>38.1</td>
<td>8.9</td>
<td>0.0733</td>
</tr>
<tr>
<td>Lucky winners (150 SEK)</td>
<td>21.6</td>
<td>27.3</td>
<td>-5.6</td>
<td>0.2533</td>
</tr>
<tr>
<td>Difference (losers-winners)</td>
<td>25.3</td>
<td>10.8</td>
<td>14.5</td>
<td>0.0191</td>
</tr>
<tr>
<td><strong>Experiment 2 (Impartial dictator)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlucky losers (0 SEK)</td>
<td>36.3</td>
<td>33.6</td>
<td>2.8</td>
<td>0.5983</td>
</tr>
<tr>
<td>Lucky winners (150 SEK)</td>
<td>13.7</td>
<td>19.1</td>
<td>-5.4</td>
<td>0.2810</td>
</tr>
<tr>
<td>Difference (losers-winners)</td>
<td>22.7</td>
<td>14.5</td>
<td>8.2</td>
<td>0.1718</td>
</tr>
<tr>
<td><strong>Pooled</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlucky losers (0 SEK)</td>
<td>42.4</td>
<td>36.1</td>
<td>6.3</td>
<td>0.0839</td>
</tr>
<tr>
<td>Lucky winners (150 SEK)</td>
<td>18.2</td>
<td>23.6</td>
<td>-5.4</td>
<td>0.1268</td>
</tr>
<tr>
<td>Difference (losers-winners)</td>
<td>24.2</td>
<td>12.5</td>
<td>11.7</td>
<td>0.0069</td>
</tr>
</tbody>
</table>

Table 2 shows that subjects in experiment 1 chose to redistribute significantly less to non-gambling individuals compared to both unlucky losers and lucky winners. Consequently, non-gamblers were punished by participants as a consequence of their cautious behavior. These findings are in line with the findings from Cappelen et al. (2013) who found that people equalized earnings significantly less in distributive situations in which risk takers were paired with participants choosing a safe option. In experiment 2 we see the same effect when comparing non-gambling individuals with unlucky losers. However, for lucky winners the effect surprisingly goes in the opposite direction (albeit not significant) compared to experiment 1, i.e. impartial dictators give more to non-gamblers than lucky winners.
Table 2. Redistribution to non-gamblers compared to winners and losers in the option luck treatment.

<table>
<thead>
<tr>
<th>Experiment 1</th>
<th>Value</th>
<th>Diff</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-gamblers - Unlucky losers</td>
<td>18.4 - 38.1</td>
<td>-19.7</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Non-gamblers - Lucky winners</td>
<td>18.4 - 27.3</td>
<td>-8.9</td>
<td>0.0245</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experiment 2</th>
<th>Value</th>
<th>Diff</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-gamblers - Unlucky losers</td>
<td>24.6 - 33.6</td>
<td>-9.0</td>
<td>0.0059</td>
</tr>
<tr>
<td>Non-gamblers - Lucky winners</td>
<td>24.6 - 19.1</td>
<td>5.6</td>
<td>0.1009</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experiment 1 &amp; Experiment 2 (Pooled)</th>
<th>Value</th>
<th>Diff</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-gamblers - Unlucky losers</td>
<td>21.2 - 36.0</td>
<td>-14.9</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Non-gamblers - Lucky winners</td>
<td>21.2 - 23.6</td>
<td>-2.4</td>
<td>0.3644</td>
</tr>
</tbody>
</table>

In experiment 1, ten participants in the option luck treatments chose not to gamble. From Table 3 we can see that gamblers and non-gamblers redistributed similar average amounts to both losers and winners in the dictator game in experiment 1. However, non-gamblers redistributed significantly (p=<.0001) more to other non-gamblers than what gamblers did. This suggests that individuals have stronger social preferences toward individuals who act similar to them.

Table 3. How do fairness preferences differ between non-gamblers and gamblers in experiment 1?

<table>
<thead>
<tr>
<th></th>
<th>Non-gamblers (n=10)</th>
<th>Gamblers (n=52)</th>
<th>Difference (non-gamblers - gamblers)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-gamblers</td>
<td>44.00</td>
<td>13.46</td>
<td>30.54</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Unlucky losers</td>
<td>41.00</td>
<td>37.50</td>
<td>3.50</td>
<td>0.6646</td>
</tr>
<tr>
<td>Lucky winners</td>
<td>27.00</td>
<td>27.31</td>
<td>-0.31</td>
<td>0.9732</td>
</tr>
</tbody>
</table>

4. Discussion

Which inequalities among individuals should be considered unjust and therefore equalized? The doctrine of luck egalitarianism proposes that when individuals are worse off than others because of bad brute luck, they should have a claim to compensation, whereas if their disadvantage can be traced back to specific choices they made deliberately, then the inequality appears justified. Although this idea of luck egalitarian justice has been a prominent topic in both the philosophical literature and political discourse there has, as far as we are aware of, been no empirical research or experiments on individuals’ social preferences in this context. In pursuit of empirical insight on these issues, we designed an experiment that imposed an exogenous difference in the role of option luck versus brute luck at the outset of the
experiment and employed incentive-compatible real stakes in a one-shot dictator game.

To many solidarity reaches its limit when neediness is self-inflicted. However our results show that this is true also for risky behavior. Individuals do not only judge the same outcome distribution differently, but change their action associated with re-allocation depending on the underlying conception of luck. This study provides better understanding for how individuals evaluate social outcomes where luck has been at play, but where factors of merit/effort and entitlement have been excluded.

4.1 Main Findings

From a general point of view, the results from this experiment are in line with previous studies, which suggested that process-related fairness plays an important role when forming social preferences, e.g. (Frohlich, Oppenheimer and Eavey 1987, Bolton, Brandts and Ockenfels 2005, Cappelen et al. 2007). In this respect our results also cast serious doubt on the consequentialistic practice inherent in standard economic theory that focuses solely on utility related to outcomes while neglecting the underlying process.

From a more specific point of view, the findings from this experiment demonstrate that individuals change their behavior depending on the type of luck underlying inequalities. Moreover, we see a behavioral pattern that redistribution is higher when inequalities are due to brute luck. This suggests that the general luck egalitarian fairness view is not just a philosophic endeavor, but also a theory that is in accordance with the fairness judgments made by a non-negligible fraction of the population in our sample.

Hypothesis 1a focused on inequalities due to bad luck, suggesting that individuals have stronger social preferences toward individuals who have suffered bad brute luck compared to bad option luck. The results show higher redistribution among individuals randomly assigned to the brute luck treatment, suggesting stronger other-regarding preferences toward individuals who suffer bad brute luck compared to bad option luck in our study sample. Hypothesis 1b focused on different types of good luck and redistributive preferences. Although the detected effect was in line with the hypothesis that individuals redistribute more money to lucky winners that
have deliberately chosen to gamble, it was not sufficiently strong for us to reject the null.

As noted in the introduction, our analysis relates to the study by Cappelen et al. (2013) who investigated the impact of risk-taking on social preferences. However, Cappelen et al. investigated social preferences in a context of ex ante equality in opportunities, but ex post inequalities in earnings. By imposing an exogenous shift between option and brute luck, the design of this study allows us to take the opposite approach and investigate social preferences in a context of ex ante inequality in opportunities and equality in ex post earnings. The findings by Cappelen et al. show that inequalities between lucky and unlucky risk takers are deemed more acceptable than inequalities between risk takers and people choosing the safe alternative – a finding that is in line with what we find in our option luck treatment.

Although observed patterns with regards to other-regarding preferences are similar in experiment 1 and experiment 2, it should be noted that fairness preferences are less strongly in line with luck egalitarianism in experiment 2 where we employ impartial dictators. This suggests that individuals do not treat luck for themselves and others in the same way. Especially for cases of good luck, subjects tend to move towards a more outcome-based view of fairness when acting as impartial dictators. Interestingly we also find that impartial spectators show less altruistic preferences when redistributing money in the dictator game compared to dictators who make identical decisions from a stakeholder view. This finding is robust across experimental treatments and goes against to previous studies by Konow (2000, 2009) and Cappelen et al (2013) who have argued that differences in stakeholder-view make little difference for individuals when making fairness judgment.

4.2 Policy Implications

As stated at the outset of this paper, the issues we address are in essence normative. Still, empirical insight concerning how individuals’ social preferences for inequalities are formed and influenced is key for understanding the formation and sustainability of any welfare system. If policies that seek to level inequalities that most individuals think are fair is implemented, it could potentially erode the feeling of solidarity necessary for a well functioning welfare system. Hence, the findings from this study are relevant for understanding a wide range of public choices where aspects of
luck are in play, e.g. public bailouts in situations of financial crisis and financial redistribution for different types of income.

The other side of the influence of luck is, of course, responsibility. To what extent should individuals be held responsible for favorable/unfavorable outcomes? For luck egalitarians the response is that any outcome not derived from brute luck should be attributed to individual responsibility. However, in real life it is not easy to make a clear distinction between brute and option luck. Much of the political discourse on funding for health care has centered on the role of individual responsibility in healthcare financing (Buyx 2008, Tinghög, Carlsson and Lyttkens 2010). Is a cancer patient with a history of heavy smoking less entitled to public insurance compared to a non-smoking cancer patient? The results from our experiment by no means settle complicated questions like these. But the experiment provides empirical background, which could feed the normative debate. Our study might, however, shed some light on why there seems to be an increasing trend toward assigning individual responsibility an explicit role in public policy. Obviously, luck egalitarian thinking underlies the taxation of risky activities that could potentially lead to outcomes costly for society, e.g. use of tobacco, alcohol, and unhealthy food. Moreover, insurance policies is in principle a structured arrangement where the lucky compensate the unlucky.

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