Rolling Dice and Being Nice: Using Behavioural Economics to Understand the Link between Socioeconomic Status and Prosocial Behaviour

Jamie Haley

This paper applies behavioural economics using the board game *Monopoly* in order to examine how socioeconomic status -determined by income, occupation, and education- affects prosocial behaviour -activity that benefits the wellbeing of others. Existing literature was surveyed to establish a hypothesis and then an experiment was conducted to test against it. *Monopoly* was used as a proxy for real life with competitors playing multiple 1v1 rounds with winners awarded £5 per win and an opportunity to make donations to charity. Rules of the game were amended to create high and low in-game socioeconomic statuses (SES). Logistic and linear regression modelling was used to assess how in-game SES, real-life SES, and other factors affected propensity to donate and size of donations. Analyses found mixed results and a weak conclusion was formed suggesting a negative correlation between SES and prosocial behaviour, both in probability and donation size.

1. Introduction

Socioeconomic status (SES) is a nebulous term, and despite numerous publications attempting to define or measure it[1] a shared, concrete definition does not exist. However, a trio of measurements is usually present: income, education, occupation. The link between income and SES is obvious, money grants power and power grants status. The relationship between education and status goes as far back as Plato, who advocated a three-tiered system reserving better education for society's upper echelons. The association between occupation and class also greatly outdates modern society, with feudalism a prime example of a time when class was tied to occupation. This dissertation will consider SES as a composite of these characteristics. Any behaviour that brings benefit to others can be defined as prosocial. Prosociality differs from altruism by being a purely consequentialist concept, whereas altruism is concerned with intent (Staub, 1978). The notion of *noblesse oblige* builds on the above concepts, regarding the idea that those of a high status have a duty to care for those below them, and existed as long ago as Homer's *Odyssey* (Griffin, 1987, p.73). Does noblesse oblige hold relevance today? That is essentially what this dissertation sets out to answer.

This study investigates how SES affects: 1) the likelihood of donating to charity, and 2) how much is donated to charity. It does so through behavioural economics. Experiments were conducted using *Monopoly* as a proxy for real life with modified rules creating in-game status disparities. After each game, participants were given opportunities to make charitable donations with real winnings, allowing the link between SES and prosociality to be examined. After an introduction, a literature review surveys existing observational and experimental research and considers explanations behind the trends shown. The next section discusses the methodology behind the experiment and data analysis. Afterwards, a comparison of means alongside logistic and linear regression models are used to answer the above questions, and implications are discussed. Finally, the findings are summarised in the conclusion.

[1] See Diemer *et al* 2013; Braverman *et al* 2005; Rose, 2005; and Cirino, 2002.

2. Literature Review

This review comprises of four sections: observational studies, experimental studies, explanations, and a summary. The majority of literature relating to the link between socioeconomic status and prosociality is observational, with a much smaller quantity of experimental studies. Sufficient availability of observational studies allows a focus on the link between SES and charity, whereas limited experimental research means a broader review is required, focussing on SES and prosocial behaviour.

2.1. Observational Studies

A UK paper by the Centre for Charitable Giving and Philanthropy (2011) assessed changes in household donations from 1978 to 2008, showing patterns of giving by household expenditure deciles. Over this time, donations relative to total spending varied between 2% and 3.6% for the lowest decile and 0.5% to 1.3% for the highest. It is worth stressing that these figures only consider households that donated. The percentages of households who donated were actually far higher for the top decile, ranging between 39% and 47.2% compared to 10.7% and 16.8% at the bottom. Donations proportional to household expenditure for *all* households shows the top decile ranges between 0.2% and 0.6%, while the bottom ranges between 0.2% and 0.4%. The wider findings of the paper are important as they illustrate that correlations between charity and other variables can fluctuate over time, which presents a limitation to the implications of the present, static experiment.

Schervish and Havens (1995) considered four macro-measures of US contributions to charity by income level. They first concluded that of 13 income categories in 1989/1991, households in the upper five contributed significantly more to total donations (65%/66%) than the lower eight (35%/34%). They then looked at objective contributions for households at different income levels, finding the rich gave more. The next measure essentially repeated the first but compared income- quintiles and found the same result. The final consideration was less predictable. They calculated ratios for share of total donations to share of total income and reported it to inform that low-income households were relatively less generous. This conclusion is questionable; of the lowest five income categories, only the first has a ratio below one – indicating a lower share of donations relative to share of income – whereas only the top two of the five highest categories had a ratio *over* one. Considering there is an unavoidable minimum level of spending (food, bills, etc.) and this minimum will likely occupy a considerable share of the lowest category's income, it is fair to assume many of the lowest are simply unable to donate as much of their remaining income. It then appears the authors' conclusion

misrepresents the data; actually, the poor are relatively *more* generous. Other findings in the paper are consistent with the study above, that of those who donate, the poor give more, but when considering all households there is little difference.

Evidence of those with higher SES -mainly income and education but some reference to occupation- being more likely to donate can be found in the UK (Banks and Tanner, 1996; Belfield and Beney 2010; Schlegelmilch *et al,* 1997), Ireland (Newman *et al,* 2005), Netherlands (Wiepking and Maas, 2009), Europe (Glanville *et al*, 2015), US (Clotelfter, 1985; Brown and Ferris 2007; Houston, 2006; Hrung, 2004), Canada (Rajan *et al*, 2008; Reed and Selbee 2001), Australia (Lyons and Nivison-Smith, 2006), Korea (Park and Park, 2004), Taiwan (Chang, 2008; Lee and Chang, 2005), and Singapore (Chua and Wong, 1999).

Findings that the rich give objectively more are consistent across the literature but who gives relatively more is contested. The first two paragraphs of this subsection suggest the poor do. Additional supportive findings come from the UK (Jones and Posnett, 1991; Pharoah and Tanner, 1997), US (Greve, 2009; Johnston, 2005; Tiehen, 2001), Canada (Apinunmahakul and Devlin, 2004), Netherlands (Wiepking, 2007), and Nicaragua and El Salvador (Vázquez, 2011). Additionally, Smith *et al* (1995) found no correlation between US income and likelihood of donating but did find that high- income donors gave absolutely more. Wiepking (2007) corroborates Smith's results with the additional finding that high-income donors give *relatively* less. Lunn *et al* (2001) found an almost unitary coefficient on the effect of income on religious donations. 22 of the papers reviewed considered sex. 16 found females to be more likely to donate and one found indifference. Of those where females were less likely, one considered heads-of-households (male heads tend to have higher income) and one only concerned religious donations. In none of the literature does Education appear to have a negative effect on prosociality. Okten and Osili (2004) note in Indonesia the effect that individual or household income has on to donation size is outweighed by the level of community income. This finding is particularly interesting as it shows that culture is a determinant of prosociality (also see Henrich *et al*, 2005).

2.2. Experimental Studies

Piff *et al* (2010) conducted four studies into the influence of class on prosocial behaviours; generosity, charity, trust, and helpfulness. In the first, having indicated their subjective SES (ranked 1-10) one week prior, 115 participants played anonymous dictator games. After controlling for demographic variables, a significant negative correlation between status and generosity was found. The second

involved inducing 81 undergraduates into momentary experiences of different SES before answering surveys on how annual salaries should be spent. Those induced into low-SES mindsets on average proposed 4.65% should be donated, compared to 2.95% for high-SES. Objective SES was accounted for and found to also negatively correlate with proposed donations. The third study involved a trust game and social-value measurement exercise. Participants' SES was measured by income and education. They found lower-SES participants displayed more trust, which was explained by their tendency towards egalitarian/cooperative values displayed in the second exercise. Finally, 91 participants were brought to a compassionate or neutral state before being tested for helpfulness. Helpfulness regressed onto SES (measure by income) using a linear model showed lower-class participants were more helpful, indicated by a coefficient of -0.43. In a compassion- induced position this variation was reduced significantly. Collectively these studies establish a causality between lower SES and increased prosociality.

Piff *et al* (2012) used seven studies to test how class predicts unethical behaviour. In studies 1 and 2, vehicles were observed for their propensity to cut off other cars and pedestrians. Using logistic regression models, they found upper-class drivers significantly more likely behave unethically. Class was assessed by characteristics of the vehicles observed, which could be problematic as it assumes all observed drivers own the cars they were in. In study 3, participants gave their subjective SES (scaled 1-10) then considered eight scenarios posing morally-questionable behaviours and were asked how they would behave in said scenarios. High-SES participants tended towards unethical answers. A caveat is the 'ethical' responses are the researchers' normative judgements. One scenario involves cheating on an exam. If the respondent feels exams are an unfair assessment of knowledge they might cheat in moral protest. Another involves being over-changed in Starbucks. If the participant view Starbucks as a bad corporate citizen, maybe due to tax avoidance (Campbell and Helleloid, 2016), they might see karmic vindication. Such participants would belong in the latter stages of Kohlberg's moral development (1963). Study 4 involved inducing varying socioeconomic statuses, and monitoring how this affected the amount of sweets participants took from a jar intended for children. Congruent with the other studies, high-status individuals took more. Study 5 involved another scenario to assess greed. High-status subjects were more willing to deceive to advance their position but this again is subject to normative judgements. Study 6 used a dice-game to find high-status players more likely to cheat, which they attributed to greedier tendencies. Study 7 used more scenarios to find high-status participants behaved more unethically, but when primed to be greedy, low-status behaviour became comparable. More experiments with a less direct focus are discussed below.

2.3. Explanations

Why do the rich give objectively more? The obvious answer is they have more. Beyond this, Kitchen and Dalton (2006) argue a likely explanation is tax savings from donations increase with income, so it costs them relatively less. Tiehen (2001) supports this, reporting that those earning upwards of $100,000 are over 20% more likely to donate for tax-motivated reasons. Furthermore, Lwin *et al* (2013) found no significant correlation between income and donating in Brunei, where the tax rate is zero. Wiepking (2007) reasoned the rich in the Netherlands might give relatively less because of a shared nominal giving standard across income groups.

A locus of control (LoC) describes the power one perceives over events in their life. An internal (external) locus reflects a belief that outcomes are primarily contingent upon personal efforts - external forces- (Robinson, 1991). By definition, those with higher SES have more income and education. As these properties provide opportunities and therefore freedom to act as desired, higher statuses internalise loci of control. Kraus *et al* (2012) theorise that the features of an internal locus lend themselves to solipsistic social-cognitive tendencies or an individualistic, self-sufficient temperament. Characteristics of external loci such as uncertainty and constraint promote a contextualist outlook and a greater dependency on others. Stephens *et al* (2007) enforce this concept with five studies. Studies 1-4 utilised experiments and interviews, collectively displaying that individuals from a middle-class (high-status) background have an inclination to differentiate themselves from others, while working-class (low-status) individuals showed a preference for similarity. The final study surveyed 156 car advertisements and found those targeting working-class customer to emphasise social characteristics, and those targeting middle-class customers to highlight uniqueness. Further support is given by Kraus and Keltner (2009) who recorded one-on-one conversations between undergraduate strangers of varying SES (measured by parent's income and education) and had them analysed by trained coders and assessed by naive observers. They found that lower (higher) SES participants tended to give cues of non-verbal engagement (non- engagement) and with these cues untrained observers were able to reliably identify participants' SES. This bolsters the argument that lower status drives more social tendencies. Moreover, Kraus *et al* (2009) conducted four studies into how SES affects social explanations. They were able to confirm their hypothesis that those with low SES are more likely to hold contextualist explanations. This was especially true of subjective (or perceived) SES, which had a greater influence than objective SES. In two of the studies, objective SES was unrelated to contextualism. Kraus *et al* (2012) make the case that engaging with others and building social relationships is an effective strategy to overcome the environmental forces someone with a contextualist disposition lacks control over. It is from this

adaptation to contextualism that the lower class behaves more prosocially, as was observed in the above paper by Piff *et al* (2010).

2.4. Summary

Combining the sub-sections above, it is apparent that generally those with greater income and more education are more likely to donate and give more in absolute terms. More education also suggests greater relative donations. The correlation between income and relative generosity is less clear but seems to be negative. The reason for this is understood to be that low-status individuals have external loci on control. This in turn creates a contextualist outlook, which necessitates social cooperation to mitigate the perceived threats it causes.

3. Methodology

This chapter will firstly explain the specifics of how the experiment was carried out. It will then explain and justify the methods used to analyse the data (means comparison and regression analyses). Finally, it discusses ethical considerations.

3.1. Theoretical Perspective

Behavioural economics is an interdisciplinary field that seeks to explain economic decision making with the use of psychological understanding. This often occurs in the form of experiments, where researchers create hypothetical situations in a controlled environment allowing a specific behaviour to be monitored. This gives greater insight into in to how, and why, that behaviour occurs. Some excellent examples of behaviour economics in practice can be found in *Thinking, Fast and Slow* (Kahneman, 2012), *Predictably Irrational* (Ariely, 2010, and *Mindless Eating* (Wansink, 2007).

As the literature review shows, studies describing the correlation between SES and charitable behaviour are readily available. However, research concerning the direct causality of this link is scarce. Myriad factors affect every decision we make in ways we might not perceive. Judges' rulings become increasingly unfavourable as they approach food breaks (Danziger *et al* 2011) and people are more likely to end up in relationships with someone who has a similar name (Nuttin Jr., 1985). The number of invisible influences we are exposed to is immeasurable, but in a controlled environment this number is certainly supressed. By employing behavioural economics, it allows for a more precise understanding than relying on observing correlations alone. The same participant can be assigned different levels of status and donations at different levels can be compared.

3.2. Experiment

The purpose of the experiment is to look at how different levels of SES affect charitable behaviour. This is done by using *Monopoly* to act as a proxy for real life. Because of the nature of the game and the role that money plays in it, the rules can easily be manipulated to create a status disparity between players (a copy of the rules can be found in Appendix A). By awarding money to the winner of each game and an opportunity to donate a portion to charity, the effect of a winner's SES on their propensity to donate (if they do and how much) can be measured. Sessions were hosted where two participants played three 1v1 games of varying in-game status and were awarded £5 for each win, with an opportunity to donate a portion to charity.

3.2.1. Monopoly as a Proxy for Real Life

Both in real life and in Monopoly, there are events you cannot control and events you can. You do not choose to roll a seven, but you choose to buy Mayfair. You do not choose to be born poor, but you choose to work hard. It is the combination of these events – or chance and strategic decision-making – that determines your outcome. By modifying the rules it can be made so that in Monopoly, like in real life, Monopoly money, like real money, is distributed in a way so through no real effort of their own, one individual is in a better position than the next. It can also be made so that there is an opportunity for social mobility, so despite the unfair disadvantage one begins with, they have an opportunity to do well.

Additional benefits of using Monopoly are that it is easy to find participants who know how to play and that it has a reputation for being a game that people get emotionally invested in. This is also the reason why a prize was only awarded to the winner, to encourage more emotional investment in the game, and therefore their in-game status.

To what extent different in-games statuses affected how the player felt is difficult to manage. One played announced "I finally understand why rich people do dumb s**t" which implies that they were experiencing a different perspective. Visible differences in participants' body language and behaviour between different statuses also suggests success. However, after losing a game, one player wrote "Because of how badly my luck went it was actually quite funny so I am not that unhappy." If in real life they had lost all of their money, the bank had seized their house, and they were sent to jail, they probably would not be laughing[2]. This serves as a reminder that Monopoly is only a proxy, not an emulation of real life.

3.2.2. Incomplete Disclosure

To promote scientific validity and prevent biased behaviour, the focus of the study remained undisclosed until sessions had finished. Participants were told the study was investigating the link between SES and happiness. Questionnaires relating to happiness were filled out before and after each round (see Appendix B) to maintain the pretense.

[2] At a later, chance interaction, he informed me he had been burgled but despite losing a considerable amount of valuables, only seemed troubled by having to redo coursework. So perhaps this individual would laugh. This shows the idiosyncrasy of people and subsequently the importance of sample size.

3.2.3. Procedure

Each session lasted two hours and contained three 30-minute games between two players. The remaining 30 minutes was set aside to brief participants, answer any questions, fill out consent forms/questionnaires, and to allow for contingencies. Sessions were hosted primarily on campus.

The sessions proceeded as follows. Participants arrive and fill out consent forms. Participants are briefed and complete the OHQ[3]. Before and after every game, both players fill out questionnaires relating to their happiness. For every game a player wins they are awarded £5. Post-game questionnaires provide an opportunity for the winner to donate a portion of their winnings to a children's charity. To encourage donating, participants are informed all donations are matched. Game 1 is played and both players start with equal SES. The winner (loser) of Game 1 begins Game 2 in the high (low) SES position. In Game 3 these roles are reversed. After all three games have been played, participants are debriefed (including disclosure of the true study) and given an opportunity to ask questions.

By the end, both players have experienced low, neutral, and high SES positions. Players with high SES in Game 2 assume a role representative of someone who is 'self-made' in real life, having earned their status from winning Game 1. Players with high SES in Game 3 represent those born into their status, having had it given to them.

3.3. Subjects

Every individual that took part was an undergraduate or masters student. This was advantageous in that students are time-flexible, somewhat homogenous, and plentiful in numbers. Arguments have been made against the prolific use of student samples (especially Sears, 1986). A well-thought-out experiment by Exadaktylos *et al* (2012) gives evidence that self-selected students are a reliable subject pool. Druckman and Kam (2009) also refute such arguments convincingly. Regardless of who is correct, the logistic and pragmatic benefits of using a student sample made them appropriate for this study.

3.3.1. Recruitment

Participants were approached on the university campus and recruited in person using an electronic form to collect contact and availability details. The benefits to this approach over advertisements are increased control over responses, the ability to immediately answer questions and clear up

[3] The Oxford Happiness Questionnaire (Hill and Argyle, 2002) consists of 29 statements that are agreed with to some extent on a six-point Likert scale. The outcome is a number between one and six denoting happiness. The benefits of using the OHQ are two-fold; it distracts from the true focus of the study, and allows happiness to be used as a control variable in the regression models.

uncertainty, and the ability to harness the 'science of persuasion' (Cialdini, 2001) to ensure commitments to participate were honoured.

3.3.2. Real-life Status

Even if the experiment incorporated virtual reality technology and fully immerse the participants into their in-game statuses, their behaviour would still be skewed by their real-life status. This inescapable determinant of behaviour is something that must be accounted for. As mentioned previously, SES can be considered a combination of income, occupation, and education. By using a sample group of exclusively full-time students, it minimises variability in occupation and education, and reduces variability in income. Because the subjects were students with little life-experience outside of education, information was collected regarding parents' income (in quintiles of national household income), occupation (classified by the NS-SeC[4]), and education (measured by the highest level of educational attainment).

3.3.3. Omission of Economic Students

A decision was made not to permit economics students to partake in the study. A number of experiments provide evidence that economics students have a tendency to behave differently to students of other disciplines. Carter and Irons (1999) used ultimatum games to show that economics students tend to offer and accept less money than non-economists. Marwell and Ames (1981) found economists to be considerably more likely to free-ride with public goods. Selten and Ockenfels (1998) showed that economics students who received money due to luck were less willing to share their it with losers of the game – a behaviour only observed in male players but relevant to this study nonetheless. Frank *et al* (1993) discovered that when playing prisoner's dilemma games with certainty their partner would cooperate, economists were more likely to defect. Collectively, these findings demonstrate that economics students behave in a more – as an economist would describe – 'rational' manner[5]. Therefore, the implications of including economics students in the present study would be to distort findings, especially given its small sample size.

3.3.4. Opponent Pairings

All pairings were same-sex. Karremans *et al* (2009) conducted two experiments into one-on-one same-sex and mixed-sex interactions to gauge their effects on cognitive performance, using different

[4] The National Statistics Socioeconomic Classification is used to assess SES by considering employment relations and conditions of occupations. Different versions exists with varying amounts of classes, this study used the eight-class version.

[5] Carter and Irons (1997) also compared behaviour of senior and freshman students to determine if this 'rationality' is taught to economists or is an innate character trait that draws them to the subject, concluding the latter. See Bauman and Rose (2009) for a conflicting argument.

performance measures in each experiment. Both studies supported the prediction that male cognitive impairment would occur following interactions with females but not males. A paper by Nauts *et al* (2011) extends these findings with two similar experiments. This time cognitive impairment was present in males after text-based 'pseudo-interactions' through a computer with what they understood to be a woman (but not present with male interactions). The second study involved no interaction at all, only the anticipation of one, and again male cognition was impaired. All experiments had average participant ages of around 21, similar to the ages of participants in the present experiment.

3.4. Analysis

There are two points of interest in this study: how likely a winner is to donate and how much they donate. Initially, both points will be considered by comparing means across different groups of winners (grouped by initial starting position). Following this, two types of regression models will be used to see what might determine the points of interest. Because the act of donating is binary – either a donation is made or it is not – a logistic regression model is use. The second dependent variable – how much is donated – is continuous so a linear regression model is used.

3.5. Models

3.5.1. Likelihood of donating

The logistic regression model used to find the probability of donating for the different groups of winners can be defined as below:

$$(Y = 1 \mid X_1, X_2, X_3) = \beta_1 RLSES + \beta_2 Sex + \beta_3 Happiness + \mu \quad (1)$$

where Y is the act of donation and $RLSES$ denotes real-life socioeconomic status[6]. Y equals 1 when a donation is made and 0 when no donation is made. $RLSES$ and Sex are dichotomous variables; a value of 1 denotes high-status and male sex while a value of 0 denotes low-status and a female sex, respectively. Happiness is a continuous variable and its value obtained from the Oxford Happiness Questionnaire. μ is the error term.

The model is adapted when considering all winners together:

[6] Real-life socioeconomic status here is a composite measure that consists of participants' parents' incomes, education, and occupation. They have been compiled into a single measure to reduce the number of predictor variables and therefore increase statistical validity of the model.

$$(Y = 1|X_1, X_2, X_3, X_4) = \beta_1 RLSES + \beta_2 Sex + \beta_3 Happiness + \beta_4 IGSES + \mu \ (2)$$

where $IGSES$ is a dichotomous variable and denotes in-game socioeconomic status. A value of 1 corresponds to a high-status starting position and a value of 0 corresponds to a neutral-status starting position.

From these Models Marginal Effects (ME) are computed. The ME of a dichotomous predictor variable informs how much having a value of 1 will have on the probability of the dependent variable. The ME of a continuous variable measures the instantaneous rate of change of a unit of that variable on the probability of the dependent variable.

3.5.2. Amount Donated

The linear regression model used to estimate donation size can be defined as below:

$$Donation = b_0 + b_1 RLSES + b_2 Sex + b_3 Happiness + \varepsilon \ (3)$$

where $Donation$ is the dependent variable and corresponds to a monetary value. The intercept is b_0 and b_1, b_2, $and\ b_3$ are the coefficients on $RLSES$, Sex, $and\ Happiness$, respectively. ε gives the error term.

Again, the model is adapted when all winners are considered together:

$$Donation = b_0 + b_1 RLSES + b_2 Sex + b_3 Happiness + b_4 IGSES + \varepsilon \ (4)$$

All independent variables in these models retain their meanings from the logistic regression models. For clarification, refer to Appendix C.

3.6. Ethics

3.6.1. Participants

Participants were given information sheets (Appendix D) about what to expect from the experiment when they filled out the sign-up form. Consent forms were signed at the beginning of each session. At all times they had the opportunity to withdraw participation and were debriefed at the end of the session to clarify what they had taken part in. The experiments posed no physical or psychological risk to participants. Any data collected was anonymised and kept confidential.

3.6.2. Incomplete Disclosure

The Belmont Report (1979) states that use of incomplete disclosure is only justified when it is 1) necessary to accomplish the goals of the research, 2) undisclosed risks are minimal, and 3) an adequate debriefing plan is in place.

In response, 1) knowledge of the variables of focus would have likely influenced behaviour and therefore compromised findings. 2) No risks existed. 3) Subjects were debriefed at the end of the sessions.

4. Data Analysis

This section analyses the findings of the experiment. Five different groups of winners are considered and divided according to the starting position of game in which they won. Neutral winners (group N) won Game 1 and began with no status-advantage over their opponent. Earned high status (HS1) winners began in a high-status position as a consequence of winning the first game so had 'earned' their status. Given high status (HS2) were assigned high status through no effort of their own so were 'given' high status. Collective high status (HS3) is a combination of HS1 and HS2, and Total (T) contains every observation. For clarification, all winners in HS1 had previously won one game from a neutral position while all winners in HS2 and no previous victories. A means comparison across groups considers all winners (donators and non-donators), and donators only. Excluding the non- donators significantly reduces the group sizes making regression models unsuitable, therefore only groups that collate donators and non-donators are used for regressions.

4.1. Comparison of Means

Table 4.1 summarises the behaviour within different groups, both in terms of how many winners made donations and how much they donated.

4.1.1. Likelihood of Donating

N was the only group with a ratio above 1 (i.e. more winners chose to donate than didn't). At 1.5, it was roughly double the collective high status group's ratio (0.73). This suggests that that those in higher-status positions are less likely to donate, conflicting with the consensus in the literature review.

A likely reason is down to the size of the sample. In *Thinking, Fast and Slow,* Kahneman explains that in the US the counties with the lowest rates of kidney cancer are rural, sparsely populated, and generally Republican. He then explains that the counties with the *highest* incidences of kidney cancer are rural, sparsely populated, and generally Republican. The key characteristic is being 'sparsely populated', as this increases the probability the county will display a trend that varies from the greater population. The same applies here. Another consideration is that many of the participants expressed a preference for playing in the neutral or low-status positions over high status. They reasoned that playing with high status wasn't challenging enough. It is then possible that high-status winners found those games more tedious and saw keeping the money as compensation for their participation, whereas those who enjoyed the game more felt no need for remuneration. Moreover, the real life decision to donate or not is a consequence of financial constraint whereas the in-game status

experienced here does not have a real impact on the winners' quality of life.

Those who had earned their high status were less likely to donate than those who were given it. A possible reason can be understood by considering that all of the donators in HS1 had donated in group N. This means that a third of group N winners had donated only on their first win but not second. Perhaps they saw it as their 'good deed for the day' and felt less obliged on the second win. This could explain why those in HS2, who had only won once, were more likely to donate. Alternatively, earning their status and its accompanying benefits might have primed a feeling of deservedness for HS1, beyond what was felt when winning the first game, tempting them to retain more of their winnings. A third reason stems from the theory in the explanation section of the literature review. Experiencing the previous round with low status could have caused a feeling of helplessness and a lasting contextualist impression that encouraged a more empathetic, prosocial frame of mind when considering to donate. Sample size is also a probable factor in determining the results.

4.1.2. Size of Donation

The findings here are congruent with the literature in that the lower-status (group N) winners donated a higher portion of winnings to charity than did high-status winners (HS3). This trend persisted when observing just those that donated, and all winners. However, when observing donators only, and dividing the high-status donators into earned and given groups, neutral winners are no longer the most generous. The mean donation for HS2 was £4.13 compared to £4.00 for N and £2.88 for HS1. Of those who donated after both Game 1 and Game 2 (groups N and HS1), only one gave differing amounts of money, £5 after Game 1 and £2.50 after Game 2. The explanation used earlier that suggested people would be less likely to act altruistically when presented with a second opportunity, having already satisfied their philanthropic obligations, is probably not valid here. Those with relatively low donations usually gave the same amount in their first donation. It could, though, partially be applied to HS2. Being this group's first opportunity to act altruistically might explain their higher mean. Once again, sample size must be considered.

4.1.3. Considerations

Aside from non-donations, the most common amount that winners opted to give was the full £5. This limits the understanding that can be drawn from the experiment as it impossible hard to gauge what the true upper bounds of how much different groups are willing to donate would be. One group could have an upper bound several factors higher than the other but capping the maximum donation at £5 eliminates the opportunity to measure this. However, because of financial constraints the compromise

that would have to be made to lift this boundary would come at the expense of the sample size.

Donations were not public but were visible to the researcher. There is a possibility that this might have had an impact on how players chose to donate. The 'spotlight effect' is a cognitive bias that causes us to overestimate the extent to which others consider our behaviour (Gilovich *et al*, 2000). Becker has argued "apparent "charitable" behaviour can also be motivated by a desire to avoid the scorn of others or to receive social acclaim" (2004, p.1083). Combining these points, it is possible that self-conscious participants might adapt their behaviour to avoid judgement. But, if such individuals do donate in real life with the same motives then this is not an issue. It should also be noted that one winner opted to donate £1.50 and then retracted his decision in order to buy himself lunch, so clearly this does not apply to all.

In the first three sessions, questionnaires failed to inform that donations would be matched by the researcher. Zero donations were made in these sessions. In Methodology 3.1, it was explained that invisible influences affect the decisions we make. Thaler and Sunstein (2008) argue that an environment can be constructed that utilises invisible influences to 'nudge' us towards a certain decision. They call this 'choice architecture' and note that 'nudging' must never restrict freedom or be forceful. By matching any donations it increased the opportunity cost – relevant to the welfare of the charity recipients – of not giving and nudged winners towards making donations. After this introduction no session was void of donation[7]. The questionnaires used in the first session did not specify the nature of the charity, only its misleading name, *The Flying Seagull Project*. Although a player did ask about the charity after the first game, meaning participants were informed at all decisions, framing it in such a way might have had an effect.

[7] This increased the cost per session and reduced the total number of sessions that could be played. Given the nature of the nudge, it only increased costs when donations were made so was an effective amendment. A positive externality was the charity received more money.

Table 4.1. *Summary of Behaviour Across Groups*

	Neutral (N)	**Earned high status (HS1)**	**Given status (HS2)**	**highCollective status (HS3)**	**highTotal (T)**
Donation made?					
	(N=10)	**(N=10)**	**(N=9)**	**(N=19)**	**(N=29)**
Yes	6	4	4	8	14
No	4	6	5	11	15
Mean (where yes =1, 0 = no)	0.6	0.4	0.44	0.42	0.48
Donator/non-donator ratio	1.5	0.67	0.8	0.73	0.93
Size of donation					
All winners	**(N=10)**	**(N=10)**	**(N=9)**	**(N=19)**	**(N=29)**
Mean donation	£2.40	£1.15	£1.83	£1.47	£1.79
	(2.41)	(1.76)	(2.42)	(2.07)	(2.20)
Max donation	£5.00	£5.00	£5.00	£5.00	£5.00
Min donation	£0	£0	£0	£0	£0
Winners that donated	**(N=6)**	**(N=4)**	**(N=4)**	**(N=8)**	**(N=14)**
Mean donation	£4.00	£2.88	£4.13	£3.50	£3.71
	(1.67)	(1.65)	(1.75)	(1.71)	(1.65)
Max donation	£5.00	£5.00	£5.00	£5.00	£5.00
Min donation	£1.00	£1.00	£1.50	£1.00	£1.00

Note: () denotes standard deviation.

4.2. Logistic Regression

4.2.1. Interpretation

Table 4.2 shows the ME of various independent variables on the likelihood of donating for the different groups of winners discussed above. The means comparison showed that when in-game status increased, the likelihood of donating fell. This model supports these findings showing a negative ME in group T for the in-game SES independent variable. Real-life SES tells a different story. Correlating more closely with the literature, it showed positive MEs in all groups but HS2, which had only a small effect of -0.072. Possible reasons why high in-game SES might reduce the likelihood of donating were discussed above.

Happiness was the only variable found to have a consistent effect across all groups, it always decreased the probability of donating. An explanation for this lies in the literature review (2.3), which explained that those with low status tend to have an external LoC, encouraging a contextualist perspective, greater empathy, and more prosocial behaviour. In *The Happiness Advantage,* Achor (2011) argues that those who have an external LoC are less happy. It then makes sense that those who are unhappy are more likely to donate, especially as they have greater compassion for others. However, the same book, and other happiness literature, suggests that the correlation between altruism and happiness is positive (Dunn *et al*, 2008; Post, 2005), although this is a causal relationship in the opposite direction. It is possible that individuals go through cycles where they begin unhappy, act prosocially, become happy, act less prosocially, and return to the beginning. The literature review does support variations in donating behaviour over time, but this is a complex link and goes beyond the scope of this dissertation.

A final consideration is sex. The literature suggests women have a greater likelihood of donating. The model weakly supports this as group T suggests that overall females are slightly more likely to donate (ME = 0.062). However, this effect is negative for N and HS1.

***Table 4.2**. Logistic Regression*

Dependent variable: likelihood of donating					
Independent variable	**Neutral (N) (N=10)**	**Earned high status (HS1) (N=10)**	**Given high status (HS2) (N=9)**	**Collective high status (HS3) (N=19)**	**Total (T) (N=29)**
Real-life SES	0.501	0.631	-0.072	0.108	0.0053
	(0.376)	(0.459)	(0.379)	(0.264)	(0.201)
	[0.183]	[0.169]	[0.849]	[0.682]	[0.979]
Sex	-0.240	-0.184	0.323	0.229	0.062
	(0.391)	(0.443)	(0.420)	(0.240)	(0.216)
	[0.539]	[0.678]	[0.442]	[0.340]	[0.774]
Happiness	-0.101	-0.600	-0.278	-0.122	-0.092
	(0.538)	(0.675)	(0.268)	(0.246)	(0.209)
	[0.851]	[0.374]	[0.299]	[0.621]	[0.659]
In-game SES	-	-	-	-	-0.170
					(0.201)
					[0.396]
Pseudo R^2	0.161	0.196	0.064	0.064	0.028

Note: () denotes standard error, [] denotes p-values, red highlights negative values.

4.3. Linear Regression

4.3.1. Interpretation

Table 4.3 shows the coefficients belonging to different predictor variables for donation size. Group T displays a negative coefficient on in-game SES. Conversely, real-life SES is accompanied by positive coefficients across almost all groups. Seemingly then, high status causes people to be more generous and less generous simultaneously. This implies contradiction, but upon further consideration, it might be that the data tells only some of the story. First, consider that participants who meet the requirements for the high real-life SES classification are likely to be better off financially as one of its components is parent's income. Although each win equally awards £5, the marginal utility of this £5 will likely be less for those in higher-status positions, which then means the relative cost of donating is actually lower for them. Therefore, a low relative generosity might be concealed by objective measurements (again, a prize greater than £5 might give the necessary insight). However, this is only conjecture and cannot be confirmed without additional information.

Unlike the literature, the present data implies that females donate less money. The most likely reason

behind this difference is sample size. The study only features six female participants, two of whom received questionnaires that had not been amended with the donation-matching nudge.

Happiness appears to not only negatively correlate with the likelihood of donating but also the amount donated. Negative happiness coefficients are present in all groups but N, where there is a small positive coefficient (0.0548). Reasons given in the logistic model are likely to hold true here.

Table 4.3. *Linear Regression*

Dependent variable: size of donation					
Independent variable	**Neutral (N) (N=10)**	**Earned high status (HS1) (N=10)**	**Given high status (HS2) (N=9)**	**Collective high status (HS3) (N=19)**	**Total (T) (N=29)**
Real-life SES	1.109	0.649	0.260	0.528	0.118
	(1.866)	(1.394)	(1.996)	(1.141)	(0.977)
	[0.574]	[0.658]	[0.901]	[0.650]	[0.905]
Sex	-1.593	-0.965	2.602	0.545	-0.168
	(1.981)	(1.480)	(2.142)	(1.0523)	(0.931)
	[0.452]	[0.538]	[0.279]	[0.612]	[0.858]
Happiness	0.0548	-0.868	-1.225	-0.340	-0.946
	(0.538)	(1.932)	(1.720)	(1.022)	(0.909)
	[0.984]	[0.669]	[0.508]	[0.744]	[0.309]
In-game SES	-	-	-	-	-0.552
					(0.977)
					[0.549]
Constant	2.789	5.172	5.463	2.333	3.358
	(11.041)	(8.249)	(7.577)	(4.461)	(4.033)
	[0.813]	[0.554]	[0.503]	[0.609]	[0.413]
R^2	0.1283	0.0902	0.2822	0.0459	0.0569
F-test statistic	0.29	0.20	0.66	0.24	0.36
Prob > F	0.1283	0.8939	0.6134	0.8666	0.8330

Note: () denotes standard error, [] denotes p-values, red highlights negative values.

4.4. Fit of Regression Models

Pseudo-R^2 and R^2 values, shown in tables 4.2 and 4.3, respectively, were relatively low. This was to be

expected for two reasons. Firstly, human behaviour is complex and therefore difficult to explain with a model. Secondly, the sample size and ratio of predictors to sample size was relatively low.

4.4.1. Summary of Results

The purpose of this experiment was two answer two questions: 1) does socioeconomic status affect the likelihood that one donates to charity? And, 2) does socioeconomic status affect how much one is willing to donate to charity?

Existing literature suggests that the answer to 1) is higher status increases the likelihood of donations. The means comparison of the experiment's outcomes does not support this. It found that the lowest status group was the most likely to donate. The logistic model corroborates this, finding that those who won from a high-status position were less likely to donate. However, when considering the role of real-life status, MEs suggest that those with higher status are more likely to donate. This is consistent with the literature. Possible explanations for the findings were discussed, some drawing on the literature and others specific to the experiment.

The literature review revealed the answer to 2) to be that high and low status positively correlate with objective and relative donation size, respectively. Comparing means in the present study found that of their £5 winnings, those who won from low status positions were more generous. The linear regression found that high in-game status was linked with lower donation sizes but high-real life status linked with higher donation sized. However, lack of detailed information about participants' real-life income meant measuring if larger portions of the £5 scaled with larger portions relative to their actual income was not possible.

In sum, the data have produced mixed findings. Some of the results are coherent with the existing literature, while some contradict it. Additionally, in the regression models, real-life and in-game status were found to have effects in opposing directions. In regressions of T, the effect of in-game SES was considerably stronger than in real-life SES. Therefore, a weak conclusion from this data is that SES generally has a negative correlation with prosocial behaviour, a finding consistent with the literature. A stronger conclusion is that subjective SES has a negative correlation with prosocial behaviour, this supports the paper cited earlier by Kraus *et al* (2009) which showed induced subjective SES had a dominant effect on behaviour compared to objective SES. Finally, the size of the sample is a major limitation in making reliable inferences to the wider population. The study should be repeated with a larger sample size in order to reach a more reliable conclusion.

5. Conclusions

The purpose of this study was to gain insight into the relationship between SES and prosocial behaviour, focusing on charity. Specifically, it explored how different levels of SES affected the likelihood of donating, and the amount donated. To achieve this, *Monopoly* was used as a proxy for real life and rules were modified to create disparities in in-game status. Every win awarded £5 and an opportunity to donate a portion to charity, with the study's true nature concealed. The literature review assessed the existing observational research and found consensuses of varying strength. Indisputably, those with high status give objectively more. Most evidence suggested that high status is linked with an increased likelihood of donating and low status donators appear to be more relatively generous. Experimental studies, which give more insight into causality, were also considered. It also discussed possible causal reasons. The methodology section detailed and justified how the experiment was carried out, including the theory behind it, use of Monopoly, the procedure, and subject selection. It also explained the methodology used to analyse the experiment's findings and described the different logistic and linear regression models that were used.

Finally, this dissertation discussed ethical considerations. The analysis section that followed used a combination of means comparison, logistic regression, and linear regression to gain an understanding of the data collected. Initially, means comparisons were used to assess how in-game status affected both the likelihood of donating and the amount. Logistic and linear regressions were then used for a more in-depth look at how probability and donation size were respectively effected by status. This allowed real-life status, sex, and happiness to be accounted for. The results of the analysis were mixed, some measurements supported the literature, while some did not. A weak conclusion was made suggesting that SES tends to negatively correlate with prosociality, both in terms of likelihood and donation size. The section ended noting the small sample size is a key limitation of the study and that its results should be interpreted with caution.

6. Appendices

Appendix A: Rules

Three 30-minute 1v1 games are played. Property can be bought from the first roll.

Negotiations for property can be made at any stage in the game.

If a player lands on 'Go' they receive twice what they would for passing it.

Brown, light blue, pink, and orange properties require four houses before a hotel can be purchased. Red and yellow properties require three houses before a hotel can be purchased. Green and dark blue properties require two houses before a hotel can be purchased.

Any payments made by a player (excluding those directly made to other players) as a result of landing on 'Chance' and 'Community Chest' cards or 'Income Tax' and 'Super tax' are paid into the middle of the board. If a player lands on 'Free Parking' they receive any money in the middle of the board.

<u>Round 1</u>

Both players begin in a neutral position (no change from the normal starting position).

If a player acquires 10 properties (mortgaged properties are not counted) they receive the added bonuses of increased income from passing 'Go' ($250), being exempt from paying 'Income Tax' (usually $200), and picking up one 'Community Chest' card.

If a player has 10 properties and over $1,000 in cash, they can then use the third, red die for as long as they meet those requirements.

<u>Round 2</u>

The winner of round 1 begins in a high-status position. This means they start with $3,000, get $250 from passing 'Go', and are exempt from 'Income Tax'. They also roll with the red die for as long as their cash remains above $1,000.

The loser of round 1 begins in a low-status position. This means that they start with $1,000, only $100 from passing 'Go' and have only one white die to roll with. If they acquire five properties they then get $200 from passing 'Go', use two white dice when rolling, and pick up a 'Chance' card. These conditions persist for as long as the player owns five un-mortgaged properties. The benefits of acquiring 10 properties and having over $1,000 cash are also available to the player.

<u>Round 3</u>

The same rules apply but the winner of round 1 is now in a low-status position and the loser of round 1 is now in a high-status position.

Red Die

The red die has three numbered sides and three pictured sides.

The numbered sides are 1, 2, and 3 and function as the white dice do. For a player to roll a double, only the white dice are considered.

If a player rolls a triple they can choose to move to any space on the board. They do not roll again. If a player rolls two doubles and then a triple, they do not go to jail.

The pictured sides include two Mr. Monopolies and one Bus.

Rolling a Mr. Monopoly allows the player to take their move as normal and then move to the next unowned property on the board (unless they are sent to jail in which case the turn ends. If all properties are owned then roll the red die again.

Rolling a Bus allows the player to select between using one or both of the white dice. E.g. if a 2, 4, and Bus is rolled the player can move forward two, four, or six spaces.

The red die is not used when in jail.

Any rules not covered can be assumed to be the same as the official Monopoly rules.

Appendix B: Post-game Questionnaire Example

Post-game Questionnaire for Game 3

Please take some time to answer the following questions considering the game you just played. For each question, circle the answer that you believe to be correct.
If you are unsure about one of the questions or have any other issues, please ask for help.

1. What was your game piece? _____

2. Did you win or lose the last game and why do you think that was the outcome?

   Win Lose

_____

_____

_____

3. Consider that the outcome was due to either strategic decisions made by you, chance beyond your control, or some combination of the two. On the scale below where 0 indicates that the outcome was entirely down to chance and 10 indicates that the outcome was entirely down to you, where would you position the cause(s) of the outcome of the game?

   1 2 3 4 5 6 7 8 9 10

4. How would you describe your current level of happiness relating to the game you just played?

Very happy	Happy	Somewhat happy	Neutral	Somewhat unhappy	Unhappy	Very Unhappy

5. How happy would you say that you are in comparison to the second game?

Much	Happier	Somewhat	Equal	Somewhat	Unhappier	Much

happier	happier	unhappier	Unhappier

6. Compared to the second game, how happy would you say that you were with your starting position (how much money you started with)?

Very happy	Happy	Somewhat happy	Neutral	Somewhat unhappy	Unhappy	Very Unhappy

7. How happy would you say that you are in comparison to the first game?

Much happier	Happier	Somewhat happier	Equal	Somewhat unhappier	Unhappier	Much Unhappier

8. Compared to the first game, how happy would you say that you were with your starting position (how much money you started with)?

Very happy	Happy	Somewhat happy	Neutral	Somewhat unhappy	Unhappy	Very Unhappy

9. How happy are you with the outcome of the game?

Very happy	Happy	Somewhat happy	Neutral	Somewhat unhappy	Unhappy	Very Unhappy

If your happiness level has changed between finishing the 2nd and 3rd games, please explain why you think this is.

_____

_____

_____

_____

_____

If you won the game, you may opt to donate a portion of you winnings (£5) to a children's charity (The Flying Seagull Project), if you would, please write how much you would like to donate. The researcher will match any donations made. Note: this is optional.

_____

Appendix C: Variable dictionary

Variable	**Definition and interpretation**
Donated	1 if a donation was made 0 if no donation was made
Donation	Amount of winning donated to charity (max £5)
Real-life socioeconomic status (SES)	1 if considered high status 0 if considered low status
Sex	1 if male 0 if female
Happiness	Continuous variable between 1 and 6, higher numbers indicating greater happiness
In-game socioeconomic status (SES)	1 if started from high position 0 if started from neutral position

Appendix D: Information sheet

Information Sheet

The nature of the link between socioeconomic status and happiness.

Thank you for signing up to take part in my research project. Signing up does not mean you have committed to participating, it simply means you have expressed interest. Please take some time to read the following information. If there is anything you are unsure about then feel free to ask about it.

Purpose

The aim of this study is to understand how socioeconomic status and happiness might be linked.

Why have you been selected?

Because you are studying for a degree in a non-economics discipline and so are suitable to participate in a behaviour experiment. Participation will involve one other participant.

Do you have to participate?

Participation is completely voluntary. If at any point from now until the end of the experiment, including during it, you decide you no longer wish to take part, that is fine. You do not need to give a reason and there will not be negative consequences. Any winnings, however, will be forfeited.

What does it involve and how long will it take?

The experiment will last for a total of two hours. During which you will play three 30-minute games of Monopoly against one other player. The rules will differ somewhat from the conventional rules but are not difficult to follow. For every round you win, you will receive £5 to be delivered via bank transfer. Two questionnaires will be filed out relating to each game, one before and one after. One other questionnaire will be filled out at the start of the session to assess your level of happiness.

What will happen to the data collected about you?

Any data collected from you will be kept confidential. It will be anonymised and used for analysis purposes only. You will not be recognisable in any presentation of your data. It will be stored securely

on a portable memory stick.

What are the possible risks of participating?

There are no risks involved with participating.

What are the possible benefits of taking part?

For every game you win you will receive £5.

Contact details

If you have any questions about the experiment then please contact me either by email or phone.

Thank you for expressing interest in participation and reading this information. I will be in touch soon regarding the scheduling of a session. Consent forms will be provided at the session to be signed.

I look forward to seeing you in the future, Jamie Haley,
University of Leeds

7. References

Achor, S. (2011), *The happiness advantage: The seven principles of positive psychology that fuel success and performance at work*. Random House.

Apinunmahakul, A. and Devlin, R.A. (2004), Charitable giving and charitable gambling: an empirical investigation, *National Tax Journal,* **57**(1), pp.67-88.

Ariely, D. (2010), *Predictably Irrational: the hidden forces that shape our decisions*. New York, Harper Perennial.

Auten, G. and Rudney, G. (1990), The variability of individual charitable giving in the US, *Voluntas: International Journal of Voluntary and Nonprofit Organizations,* **1**(2), pp.80-97.

Banks, J. and Tanner, S. (1999), Patterns in household giving: Evidence from UK data, *Voluntas: International Journal of Voluntary and Nonprofit Organizations,* **10**(2), pp.167-178.

Bauman, Y. and Rose, E. (2009), Why are economics students more selfish than the rest? *SSRN*. Retrieved 6 April 2017 from Stand up Economist Website: http://www.standupeconomist.com/pdf/papers/econ-selfish.pdf

Becker, G.S. (1974), A theory of social interactions, *Journal of political economy,* **82**(6), pp.1063-1093.

Belfield, C.R. and Beney, A.P. (2000), What determines alumni generosity? Evidence for the UK, *Education Economics*, **8**(1), pp.65-80.

Braveman, P.A., Cubbin, C., Egerter, S., Chideya, S., Marchi, K.S., Metzler, M. and Posner, S. (2005), Socioeconomic status in health research: one size does not fit all, *Jam,*. **294**(22), pp.2879-2888.

Brown, E. and Ferris, J.M. (2007), Social capital and philanthropy: An analysis of the impact of social capital on individual giving and volunteering, *Nonprofit and Voluntary Sector Quarterly,* **36**(1), pp.85-99.

Campbell, K. and Helleloid, D. (2016), Starbucks: Social responsibility and tax avoidance, *Journal of Accounting Education,* **37**, pp.38-60.

Carroll, J., McCarthy, S. and Newman, C. (2005), An econometric analysis of charitable donations in the Republic of Ireland, *Economic and Social Review,* **36**(3), p.229.

Carter, J.R. and Irons, M.D.(1991), Are economists different, and if so, why?, *The Journal of Economic Perspectives,* **5**(2), pp.171-177.

Chang, W.C. (2005), Religious giving, non-religious giving, and after-life consumption, *The BE Journal of Economic Analysis & Policy, **5***(1).

Chua, V.C. and Ming Wong, C. (1999), Tax incentives, individual characteristics and charitable giving in Singapore, *International Journal of Social Economics,* **26**(12), pp.1492-1505.

Cialdini, R.B. (2001), Harnessing the science of persuasion, *Harvard Business Review,* **79**(9), pp.72-81.

Cirino, P.T., Chin, C.E., Sevcik, R.A., Wolf, M., Lovett, M. and Morris, R.D. (2002), Measuring socioeconomic status: reliability and preliminary validity for different approaches, *Assessment,* **9**(2), pp.145-155.

Clotfelter, C.T. (1985), Contributions by Individuals: Estimates of the Effects of Taxes. In *Federal Tax Policy and Charitable Giving*. University of Chicago Press, pp.16-99.

Cowley, E., McKenzie, T., Pharoah, C. and Smith, S. (2011), *The new state of donation: Three decades of household giving to charity*. Retrieved 6 April 2017 from the CGAP Website: http://www.cgap.org.uk/uploads/reports/Executive_Summary%20new%20state%20of%20donation.pdf

Danziger, S., Levav, J. and Avnaim-Pesso, L. (2011), Extraneous factors in judicial decisions, *Proceedings of the National Academy of Sciences,* **108**(17), pp.6889-6892.

Diemer, M.A., Mistry, R.S., Wadsworth, M.E., López, I. and Reimers, F. (2013), Best practices in conceptualizing and measuring social class in psychological research, *Analyses of Social Issues and Public Policy,* **13**(1), pp.77-113.

Druckman, J.N. and Kam, C.D., (2009), Students as Experimental Participants: A Defense of the 'Narrow Data Base'. SSRN. Retrieved 6 April 2017 from the SSRN Website: https://ssrn.com/abstract=1498843 or http://dx.doi.org/10.2139/ssrn.1498843

Dunn, E.W., Aknin, L.B. and Norton, M.I., (2008), Spending money on others promotes happiness. *Science*, **319**(5870), pp.1687-1688.

Exadaktylos, F., Espín, A.M. and Branas-Garza, P., (2013), Experimental subjects are not different.

Scientific reports, **3**, p.1213.

Frank, R.H., Gilovich, T. and Regan, D.T. (1993), Does studying economics inhibit cooperation?. *The Journal of Economic Perspectives,* **7**(2), pp.159-171.

Gilovich, T., Medvec, V.H. and Savitsky, K.(2000), The spotlight effect in social judgment: an egocentric bias in estimates of the salience of one's own actions and appearance, *Journal of personality and social psychology,* **78**(2), p.211.

Glanville, J.L., Paxton, P. and Wang, Y. (2015) Social Capital and Generosity: A Multilevel Analysis. *Nonprofit and Voluntary Sector Quarterly,* **45**(3), pp.526-547.

Greve, F. (2009), America's poor are its most generous donors. *Seattle Times*. Retrieved 23 May 2017 from the Seattle Times Website: http://www.seattletimes.com/nation-world/americas-poor-are-its-most-generous-donors/

Griffin, J. (1987), *Homer: The Odyssey.* Cambridge: University Press

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., McElreath, R., Alvard, M., Barr, A., Ensminger, J. and Henrich, N.S. (2005), "Economic man" in cross-cultural perspective: Behavioral experiments in 15 small-scale societies. Behavioral and brain sciences, **28**(06), pp.795-815.

Hills, P. and Argyle, M. (2002), The Oxford Happiness Questionnaire: A compact scale for the measurement of psychological well-being, *Personality and individual differences,* **33**(7), pp.1073-1082.

Houston, D.J. (2006), "Walking the walk" of public service motivation: Public employees and charitable gifts of time, blood, and money. *Journal of Public Administration Research and Theory,* **16**(1), pp.67-86.

Hrung, W.B. (2004), After-Life Consumption and Charitable Giving, *American Journal of Economics and Sociology,* **63**(3), pp.731-745.

James III, R.N. and Sharpe, D.L. (2007), The nature and causes of the U-shaped charitable giving profile. *Nonprofit and Voluntary Sector Quarterly,* **36**(2), pp.218-238.

Johnston, D.C. (2005), Study Shows the Superrich Are Not the Most Generous. *New York Times*. Retrieved 18 April 2017 from the New York Times Website: http://www.nytimes.com/2005/12/19/us/study-shows-the-superrich-are-not-the-most-

generous.html?_r=0

Jones, A. and Posnett, J. (1991), Charitable donations by UK households: evidence from the Family Expenditure Survey, *Applied Economics,* **23**(2), pp.343-351.

Kahneman, D. (2011), *Thinking, Fast and Slow.* 1st Ed. New York: Farrar, Straus and Giroux.

Karlan, D. and List, J.A. (2007), Does price matter in charitable giving? Evidence from a large-scale natural field experiment, *The American Economic Review,* **97**(5), pp.1774-1793.

Karremans, J.C., Verwijmeren, T., Pronk, T.M. and Reitsma, M. (2009), Interacting with women can impair men's cognitive functioning, *Journal of Experimental Social Psychology,* **45**(4), pp.1041-1044.

Kitchen, H. and Dalton, R. (1990), Determinants of charitable donations by families in Canada: a regional analysis, *Applied Economics,* **22**(3), pp.285-299.

Kohlberg, L. (1963), The development of children's orientations toward a moral order, *Human Development,* **6**(1-2), pp.11-33.

Kraus, M. and Keltner, D. (2009), Signs of Socioeconomic Status, *Psychological Science,* **20**(1), pp.99-106.

Kraus, M.W., Piff, P.K. and Keltner, D. (2009), Social class, sense of control, and social explanation. Journal of personality and social psychology, **97**(6), p.992.

Kraus, M.W., Piff, P.K. Mendoza-Denton, R., Rheinschmidt, M.L. and Keltner, D.(2012), Social class, solipsism, and contextualism: how the rich are different from the poor. *Psychological Review,* **119**(3), p.546.

Lee, Y.K. and Chang, C.T. (2008), Intrinsic or extrinsic? Determinants affecting donation behaviours. *International Journal of Educational Advancement,* **8**(1), pp.13-24.

Lunn, J., Klay, R. and Douglass, A. (2001), Relationships among giving, church attendance, and religious belief: The case of the Presbyterian Church (USA), *Journal for the Scientific Study of Religion,* **40**(4), pp.765-775.

Lwin, M., Phau, I. and Lim, A. (2013), Charitable donations: empirical evidence from Brunei. *Asia-Pacific Journal of Business Administration,* **5**(3), pp.215-233.

Lyons, M. and Nivison-Smith, I. (2006), Religion and giving in Australia, *The Australian Journal of Social Issues,* **41**(4), p.419.

Marwell, G. and Ames, R.E. (1981), Economists free ride, does anyone else?: Experiments on the provision of public goods, IV. *Journal of Public Economics,* **15**(3), pp.295-310.

Nuttin, J.M. (1985), Narcissism beyond Gestalt and awareness: The name letter effect, *European Journal of Social Psychology,* **15**(3), pp.353-361.

Office for Human Research Protections. (1979), *The Belmont Report*. US: Office of the Secretary.

Office for National Statistics. (2010), *SOC2010 volume 3: the National Statistics Socio-economic classification***.** Retrieved 27 April 2017 from the National Archives Website:http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/guide- method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on- soc2010--user-manual/index.html

Okten, C. and Osili, U.O. (2004), Contributions in heterogeneous communities: Evidence from Indonesia, *Journal of Population Economics.* **17**(4), pp.603-626.

Pharoah, C. and Tanner, S. (1997), Trends in charitable giving, *Fiscal Studies,* **18**(4), pp.427-443.

Piff, P. (2014), Wealth and the Inflated Self: Class, Entitlement, and Narcissism. Personality and Social *Psychology Bulletin,* **40**(1), pp.34-43.

Piff, P., Kraus, M., Côté, S., Cheng, B. and Keltner, D. (2010), Having less, giving more: The influence of social class on prosocial behavior, *Journal of Personality and Social Psychology,* **99**(5), pp.771-784.

Piff, P., Stancato, D., Cote, S., Mendoza-Denton, R. and Keltner, D. (2012), Higher social class predicts increased unethical behavior, *Proceedings of the National Academy of Sciences,* **109**(11), pp.4086-4091.

Post, S.G. (2005), Altruism, happiness, and health: It's good to be good. *International Journal of Behavioral Medicine,* **12**(2), pp.66-77.

Rajan, S.S., Pink, G.H. and Dow, W.H. (2009), Sociodemographic and personality characteristics of Canadian donors contributing to international charity, *Nonprofit and Voluntary Sector Quarterly.* **38**(3), pp.413- 440.

Reed, P.B. and Selbee, L.K. (2001), The civic core in Canada: Disproportionality in charitable giving, volunteering, and civic participation, *Nonprofit and Voluntary Sector Quarterly*, **30**(4), pp.761-780.

Robinson, J.P. ed. (1991), *Measures of personality and social psychological attitudes (Vol. 1).* Elsevier.

Rose, D. (2005), July. Socio-economic classifications: classes and scales, measurement and theories. In *First*

Conference of the European Survey Research Association, Pompeu Fabra University, Barcelona (pp. 18-22).

Schervish, P.G. and Havens, J.J. (1995), Wherewithal and beneficence: Charitable giving by income and wealth, *New Directions for Philanthropic Fundraising,* **8**, pp.81-109.

Schlegelmilch, B.B., Diamantopoulos, A. and Love, A. (1997), Characteristics affecting charitable donations: Empirical evidence from Britain, *Journal of Marketing Practice: Applied Marketing Science,* **3**(1), pp.14-28.

Sears, O. (1986), College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature, *Journal of Personality and Social Psychology,* **51**(3), pp.515-530.

Selten, R. and Ockenfels, A. (1998), An experimental solidarity game, *Journal of Economic Behavior & Organization,* **34**(4), pp.517-539.

Smith, V.H., Kehoe, M.R. and Cremer, M.E. (1995), The private provision of public goods: Altruism and voluntary giving, *Journal of Public Economics,* **58**(1), pp.107-126.

Staub, E. (1978), *Positive Social Behavior and Morality vol. 1.* 1st ed. New York: Academic Press.

Stephens, N.M., Markus, H.R. and Townsend, S.S. (2007), Choice as an act of meaning: the case of social class. *Journal of Personality and Social Psychology*, **93**(5), p.814.

Thaler, R.H. and Sunstein, C.R. (2009), *Nudge: improving decisions about health, wealth, and happiness*.New York: Penguin Books.

Tiehen, L.(2001), Tax policy and charitable contributions of money, *National Tax Journal*, **54**(4), pp.707-723.

Vázquez, J.J., (2011), Attitudes toward nongovernmental organizations in Central America, *Nonprofit and Voluntary Sector Quarterly,* **40**(1), pp.166-184.

Wansink, B. (2007), *Mindless Eating: Why We Eat More Than We Think.* New York: Bantam Books.

Wiepking, P. (2007), The philanthropic poor: In search of explanations for the relative generosity of lower income households, *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*. **18**(4), p.339.

Wiepking, P. and Maas, I. (2009), Resources that make you generous: Effects of social and human resources on charitable giving. *Social Forces*, **87**(4), pp.1973-1995.