Social Position and Distributive Justice: Experimental Evidence

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Abstract

In a simple double-blind dictator experiment, systematically removing subjects' levels of power and entitlement increases their choice of an income distribution generally consistent with Rawls (1971) concept of distributive justice, although choices are less unanimous and risk-averse than hypothesized.

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Introduction

In *A Theory of Justice* (1971) John Rawls states that men are born into various social positions that "cannot possibly be justified by an appeal to the notions of merit or desert" but which yield "different expectations of life" (p. 8). Rawls hypothesizes that if men could choose behind a "veil of ignorance" with regard to social position, they would unanimously agree to social institutions that allocate social benefits to maximize the income of the lowest income group.

It is not possible to directly test the Rawlsian hypothesis in the field. However, the hypothesis has been tested in laboratory economics and political science experiments (e.g. Herne and Suojanen 2004; Oleson 2001; de la Cruz-Dona and Martina 2000; Jackson and Hill 1995; Frohlich and Oppenheimer 1992; Bond and Park 1991; Lissowski, Tyska, and Okrasa 1991; Frohlich and Oppenheimer 1990; Frohlich, Oppenheimer, and Eavey 1987). The conclusion to be drawn from these studies is that subjects' choices do not conform strictly to the Rawlsian principle of distributive justice but rather to a mixture of Rawlsian and utilitarian principles.

While related to previous studies in that we test if subjects' choices under a laboratory veil of ignorance are consistent with the Rawlsian hypothesis, our experiments extend the analysis by determining the extent to which subjects' views on appropriate distributive shares are influenced by their relative social position. We measure social position by the initial distributive shares (entitlement) and the subjects' ability to determine the final distributive shares (power). Our hypothesis is that increasing a subject's power and entitlement will result in an income distribution choice to that subject's greater favor.

Experiment

In a dictator experiment (Kahneman, et al (1986)), one subject determines how a fixed sum of money is to be divided between her and one or more other players. We conducted a simple, double-blind, one-shot, two-person $20 dictator experiment using 150 student volunteers at the U.S. Naval Academy. There was no show-up fee. We implemented five protocols in which we systematically changed the decision-maker's social position in the experiment.

Protocol GD (Giving Dictator) is a standard dictator experiment. Player 1 is given $20 and the option of sending any portion of the endowment to a second person with whom she has been randomly matched. In Protocol PD (Probabilistic Dictator) both players indicate how they would divide $20 between themselves and the other player. One player's choice is chosen randomly and implemented, similar to Harrison and McCabe (1996). In Protocol TD (Taking Dictator), Player 2 receives the $20. Player 1 is instructed to indicate how much of the money she wants to "take". In Protocol VD (Veiled Dictator), one player is instructed to determine how the money will be divided between Player 1 and Player 2. The subject is then randomly assigned to be Player 1 or Player 2 with probability 50% for each outcome. Protocol HD (Hypothetical Dictator) refers to the hypothetical choice of the recipient (that is, Player 2) in Protocol GD when asked, "What allocation would you choose if you were Player 1?"

In the GD protocol, the decision-maker is in the greatest position of entitlement and power of any of the protocols. She is given the initial sum of money, full authority to implement the distribution of her choice, and there is no uncertainty that her choice will be implemented. She realizes that she is determining not only her own payoff, but also the payoff of a powerless person with whom she is matched.

The PD protocol levels the playing field between matched participants. There is no clear perception of entitlement because neither player is initially allocated the sum of money being divided. Furthermore, both participants have an equal probability of being assigned to the position of power. However, participants know that their choice will determine their payoff if they are chosen to be player 1 (the decision-maker).

While the TD protocol grants full power to the decision-maker, she is in a weaker position with regards to entitlement. In this protocol, the decision-maker is required to "take" money from the other player to increase her own payoff. Inaction, in a sense, will leave the entire payoff to the other player.

The VD protocol most closely reproduces Rawls' veil of ignorance in the laboratory. The decision-maker chooses the income distribution, but does not know on which end of the income distribution she will ultimately fall.

The player's choice in the HD protocol is a purely hypothetical one made after the player has been revealed to be in a weak position of power and entitlement in the actual experiment.

A standard game-theoretic prediction based on strict self-interest is that decision-makers in all protocols will seek to maximize their own monetary payoff. This implies that decision-makers in protocols GD, HD, TD, and PD will all choose a payoff of $20 to themselves, leaving $0 to the other player. In protocol VD, any distribution choice yields the same expected payoff. Risk-averse subjects should choose equal splits, while risk-seeking subjects should choose unequal splits. Models of pure altruism (as in Levine (1998)) would predict no difference in the distribution choice in protocols GD, HD, TD, and PD, though the choice may involve a positive payoff to the other player.

Our hypothesis is that protocols HD, TD, PD and VD should result in lower Player 1 payoffs (that is, more egalitarian payoffs) than protocol GD because decision-makers are in a lower social position in terms of power and entitlement. This hypothesis is based on how the simple Rawlsian notion of "different expectations of life" resulting from social position should manifest itself in the laboratory dictator game.

Results

Table 1 presents the experimental results in descending order of Player 1's average payoff. We compare subjects' choices using one-tailed Mann-Whitney tests.

Table 1. Results

	Mean (Player 1 payoff)	Std. Dev. (Player 1 payoff)	Frequency of Equal ($10) Splits	Frequency of $20/$0 Splits	N =
Protocol GD: Giving Dictator	$16.17	$4.32	24%	41%	29
Protocol PD: Prob. Dictator	$15.30	$4.80	29%	45%	31
Protocol TD: Taking Dictator	$14.03*	$4.00	39%	16%	31
Protocol HD[a]: Hypoth. Dictator	$11.93* ($15.38)	$4.88 ($4.88)	52% (10%)	7% (34%)	29
Protocol VD: Veiled Dictator	$9.80*	$5.90	43%	23%	30

[a] Number in parentheses indicates player 2's belief about what player 1 will choose.
* Significantly lower than GD player 1 payoff at $\alpha < 0.05$.

The results are generally consistent with the hypothesis that subjects' perceptions of distributive justice are influenced by social position. Decision-makers (Player 1) in the GD protocol were in the strongest position of power and entitlement. These subjects chose an income distribution that yielded the greatest monetary benefit (mean = $16.17) to themselves, with the lowest rate of equal splits (24%). Many (41%) made offers of $0.

Decisions in the PD protocol (mean = $15.30 with 29% equal splits and 45% offers of $0) were statistically no different than in the GD protocol. We conclude that players made decisions as if they were already in the position of full power and entitlement.

However, shifting entitlement from Player 1 to Player 2 (giving the initial $20 to Player 2) caused a statistically significant decrease (sig. one-tailed = 0.02) in Player 1's payoff in the TD protocol ($14.03) compared to the GD protocol ($16.17). Subjects also chose equal splits more frequently (39% compared to 24%). Cherry (2001) finds that only 24% of dictators made positive offers from "earned" endowments, whereas 74% made positive offers from "unearned" endowments. When Player 2 received the "unearned" endowment in our design, 86% of dictators effectively made positive "offers". It would be interesting to know if this effect is even stronger if the Player 2 endowment had been "earned".

The decision-makers in the HD protocol are in an even weaker power and entitlement position. They indicated (hypothetically) that they would have chosen an income distribution that was even more equitable (an average payoff to themselves of $11.93 with equal splits 52% of the time). Only 7% of subjects indicated they would have taken the entire $20. Compared to the GD and TD protocols, the Player 1 (hypothetical) payoff decrease in the HD protocol is statistically significant (sig. one-tailed = 0.00 and 0.04, respectively). Interestingly, the difference between what these subjects predicted the GD decision-makers would do ($15.38) and what the GD Player 1's actually chose ($16.17) is not statistically significantly, although they underestimated the propensity to choose equal splits (10% predicted versus 24% actual). Karni, et al (2001) present recipients in a three-player dictator game with a similar question. In contrast to our results, they find the hypothetical choices of recipients to be more selfish.

Lastly, although the Player 1 average payoff in the VD protocol was significantly lower than in the GD protocol ($9.80 versus $16.17, sig. one-tailed = 0.00), decisions were less risk-averse than hypothesized by Rawls. Subjects chose equal splits only 43% of the time, and the standard deviation of Player 1 payoffs was the greatest of all the protocols. Remarkably, nearly 1 out 4 subjects chose a $20/$0, despite the lack of a show-up fee. Subjects were willing to gamble on being the one to get the higher payoff.

Conclusions

We have demonstrated through a simple double-blind dictator experiment that a subject's social position, as measured by power and entitlement, affects the choice of income distribution generally consistent with Rawls (1971) concept of distributive justice. Individuals act more selfishly in a position with greater power and entitlement. However, in a "veiled" decision-making position, choices are less unanimous and risk-averse than hypothesized. These results are important if people also bring expectations arising from social position to the bargaining table in the field.

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