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Is increasing inequality harmful? Experimental evidence ☆

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ABSTRACT

Increasing inequality is commonly associated with social unrest and conflict between social classes. This paper reports the results of a laboratory experiment to study the implications of greater inequality on the tendency to burn others' income. The experiment considers an environment where higher earnings in a real-effort task are typically associated with higher effort and varies how fair and transparent this relationship is. The findings indicate that greater inequality does not lead to more money burning itself. Rather, it depends on whether the increase in inequality can be unequivocally attributed to exerted effort, i.e., the fairness of the income-generating process. Only if greater inequality can be the result of morally questionable activities, subjects engage in substantially more money burning. While most income burning aims at reducing inequality, the fairness of inequality only plays a role in the extent of money burning but not so much for the qualitative burning patterns.

1. Introduction

There has been a substantial increase in economic inequality in recent years, which has again brought inequality into the focus of public and economic debates (e.g., Piketty, 2014). A major concern is that too much inequality may trigger social unrest and conflicts between social classes.[1] While inequality is to some extent inevitable, it is not only the degree of inequality that raises concerns. Many people contest the fairness of current income and wealth distributions and express a preference for a more equal society (Norton and Ariely, 2011). Indeed, individuals' views about the fairness of the composition of inequality affects how they respond to inequality (e.g., Konow, 2000; Cappelen et al., 2007, 2013). In this paper I study the implications of greater inequality on the tendency to engage in behavior that is harmful to others and how such behavior interacts with the fairness of inequality.

Harmful (or antisocial) behavior is a frequently observed phenomenon. People become victims of random violence or sometimes people simply find pleasure in destroying or damaging the property of others (e.g., Abbink and Herrmann, 2011; Abbink and Sadrieh, 2009). There are many accounts, mostly from former socialist countries, that document property crimes,

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[1] In the public debate, the recent Occupy movements have, for example, addressed the economic problems of the working poor and the middle class and emphasized the link to economic inequality. The academic discourse of inequality and social class conflicts dates at least back to Durkheim (1893). Recently, empirical studies have, for instance, used data on incidences of air rage to illustrate a relationship between inequality and class conflicts by showing that the presence of first class cabins in airplanes – a form of physical inequality – is associated with more antisocial behavior in air travel (DeCelles and Norton, 2016). On a more general level, inequality is often tied to various social problems such as violence, distrust, imprisonment or drug abuse (see e.g., Wilkinson and Pickett (2009) for an overview).

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hostility and attacks toward more successful people. Such behavior is frequently attributed to an effort to restore equality among peers (see, e.g., Mui, 1995, for an excellent discussion) and seems closely tied to the perception that individual success is often based on illegal activities (e.g., Smith, 1990).[2] While there are many possible motives for engaging in antisocial behavior, it seems appealing to assume a relationship between increasing inequality and behavior that harms others without apparent material benefits for the transgressor. Yet causal empirical evidence is scarce, as it is difficult to isolate the different motives for antisocial behavior and to study changes in the degree and composition of inequality.[3]

To study the relationship of greater inequality and antisocial behavior, I turn to evidence from a laboratory experiment. This allows me to focus the analysis on harmful behavior that aims at reducing inequality and to investigate how such behavior depends on the composition of inequality, i.e., the fairness and transparency of the income-generating process. The experiment consists of a production phase and a "money burning" phase.[4] In the production phase participants are matched into groups of four and they each complete a real-effort task for which they receive a piece-rate wage and in some treatments a bonus, as explained below. In the money-burning phase, participants receive information on the performance and earnings of all other group members. They can then burn some of the income of each other group member, which involves no material gain for the burner. Burning decisions take place simultaneously and taking revenge for expected income reductions is not possible as only the decision of one randomly chosen group member is actually implemented.

The baseline condition considers an environment with moderate inequality where external factors, such as luck, play little role and thus higher earnings can be typically associated with higher effort. To vary inequality, in two additional treatments the best-performing participant in a group receives, in addition to the piece rate, a bonus payment. That is, the bonus payment stretches out the income distribution by increasing the income gap between the top performer and the other participants in a group. While many fairness ideals prevail in theory and society, prominent normative theories of justice assume that inequalities arising from factors under individuals control should not be eliminated (e.g., Roemer, 1998; Konow, 2003). In fact, these theories received ample support from laboratory experiments, suggesting that a majority of people do not eliminate inequalities that are due to merit or for which people can be held responsible for (Konow, 2000; Cappelen et al., 2007, 2013; Mollerstrom et al., 2015).

This fairness view, however, critically hinges on the transparency of the income-generating process. It is often hard or impossible to judge whether greater rewards are deserved or not. This is particularly the case when people can engage in morally questionable activities that have clear private benefits, i.e., unethical behavior such as corruption, doping, cheating, or tax evasion.[5] To investigate this possibility, I consider a treatment variation with a bonus payment where all subjects have the possibility to artificially inflate their performance. This performance manipulation is costly and unobservable to other group members. As such, this treatment explicitly distorts the fairness of the income distribution by allowing subjects to unobservedly tweak the income-generating process in their favor.

The main finding of this study is that the level of antisocial behavior crucially depends on the fairness of inequality. While antisocial behavior is present even in situations with moderate inequality, a mere increase in inequality has little effect on antisocial behavior. As long as higher inequality can be unambiguously attributed to exerted effort, money burning is only marginally higher than it is with low inequality. However, this is not the case when the link between earnings and exerted effort is non-transparent. If inequality is high and observed effort may result from a performance manipulation, i.e., inequality is possibly unjust, the share of money burning is substantially higher than in the two treatments where the performance is not manipulable and the resulting income distribution is likely seen as just. More specifically, the share of money burning is more than twice as high as in a situation where inequality is low and just, and 1.5 times higher than in a situation with similarly high, but unjust, inequality.

The results further suggest that subjects who received a bonus payment are more vulnerable to money burning and face harsher income reductions than any other subjects, indicating that most income reductions aim at a lowering of inequality. In fact, money burning of lower-ranked subjects results in a reduction of inequality by approximately 7 Gini points when inequality is high and unjust. Interestingly though, this harming pattern arises irrespective of whether it is easy or hard to judge the merit of the greater rewards. This indicates that the fairness of inequality only plays a role in the extent of money burning, but not so much for the qualitative burning patterns when inequality is high.

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[2] Recent evidence from off-shore leaks, such as the "Panama Papers", substantiate this perception. For example, Alstadsaeter et al. (2017) document that tax evasion is increasing in wealth in Scandinavian countries (with estimates suggesting that the top 0.01% of the wealth distribution evade about 25 percent of their taxes).

[3] Inequality has traditionally been associated with the occurrence of aggression and violent conflicts in academic research (e.g., Gurr, 1970; Sen, 1973) and in numerous media reports and anecdotal evidence. However, the empirical literature is not conclusive and there is, for example, an ongoing debate about the determinants of violent conflict (see e.g., Blattman and Miguel, 2010).

[4] In the game-theoretic literature the term "money burning" usually refers to burning one's own money as a signaling device (e.g., Van Damme, 1989; Ben-Porath and Dekel, 1992), whereas in the present context it refers to destroying the income of some other party. The latter use of this term originated in the seminal paper of Zizzo and Oswald (2001) and the subsequent literature on antisocial behavior (e.g., Abbink and Sadrieh, 2009; Abbink et al., 2011; Kebede and Zizzo, 2015). In the following I will use "money burning" interchangeably with income reduction and antisocial behavior.

[5] Such self-serving activities are arguably often available. For example, in professional work environments it is typically not perfectly observable how much effort others put into a project and whether someone makes use of unfair labor practices to inflate their performance in order to advance in the hierarchy. Charness et al. (2013) discuss the prevalence of illegal or unethical work practices in competitive (work) environments and show that unethical behavior, in the form of either reducing others' performance (sabotage) or inflating own performance even prevails in an experimental setting with flat wages and only symbolic rewards for performance.