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Not fair but acceptable… for us! Group membership influences the tradeoff between equality and utility in a Third Party Ultimatum Game

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ABSTRACT

A substantial body of literature on economic games (e.g., the Ultimatum Game) has consistently demonstrated that individuals strongly reject unfairness even at the price of personal utility. In four experiments we investigated the influence of social categorization and membership on economic decision-making and inequality aversion. Specifically, we used a modified version of the Third Party Ultimatum Game, in which participants played the role of responder and were instructed to make decisions for themselves or another individual (i.e. the receiver of the economic offer) who was an ingroup or outgroup member. Experiments 1–2 (N = 173) showed that the participants were more likely to accept unequal-advantageous offers when the receivers were ingroup rather than outgroup members. Experiment 3 (N = 121) supported previous findings and suggested the intervening role played by perceived intergroup competition. Experiment 4 (N = 61) explored the effect boundary conditions. Findings revealed that, even when responder's utility is linked to the receiver's utility, the receiver's membership exerted its influence when the responders were highly identified with the ingroup. A final small-scale meta-analysis confirmed the robustness of our findings. Taken together, these results integrate research on economic decision-making and intergroup bias and suggest that the utility target's membership can resolve the conflict between inequality aversion and utility maximization.

Social and economic disparities represent key challenges of our time (e.g., the World Economic Forum). According to current economic analyses, the richest 1% of the world owns more than half of the globe's total wealth; moreover, in developed and developing countries, the poorest part of the population controls < 10% of its wealth (Oxfam, 2015). One point in this public debate is whether and to what extent these disparities are exclusively a result of the system structure rather than individuals' misbehavior, including the tendency to favor one's own group, the promotion of lobbying campaigns to protect and enhance one's own interests and the disregard of social inequality. The dispute between self-interest motive and fair conduct in economic decision-making and behavior has long been investigated by disciplines such as economics, psychology, sociology and social science in general. Specifically, a substantial body of psychological literature on economic games has explored whether and under what conditions individuals are likely to reject rather than accept unfairness, particularly when a rejection entails costs in terms of personal utility (Güth, Schmittberger, & Schwarze, 1982). The present work aimed to extend prior research on the conflict between equality and utility preferences in decision-making. As most decisions (and economic decisions in particular) involve social groups, this research investigated the influence of group membership and social categorization on individual economic reasoning. Moreover, the experimental paradigm devised for the present studies (i.e., Third Party Ultimatum Game, TPUG) enabled an analysis of the reactions to inequality, disentangling its effect from the influence of personal utility deviation.

1. Inequality and decision-making

Fairness and social equality are pillars of interpersonal interactions and human sociality. They appear early in humans (Fehr, Bernhard, & Rockenbach, 2008; Warneken & Tomasello, 2006), and they are shared with other primates (Brosnan & de Waal, 2003; Brosnan, Schiff, & de Waal, 2005). Moreover, they are applied spontaneously: as the evolutionary perspective suggests, fairness is one of the natural moral instincts with which human beings are endowed (Alexander, 1987; Boehm, 1999; Darwin, 1871) as it maximizes individual survival by providing benefits for the group.

Given their centrality in an individual's psychological life, fairness and equality are likely to tailor cognitive processes, judgments and choices, thus leading human decision-making (Civai, 2013; Fehr & Schmidt, 1999; Messick & Schell, 1992). A considerable number of

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studies have investigated the reactions to unfairness and inequality, as well as positive (vs negative) utility (e.g., Cialdini & Goldstein, 2004; Falk & Fischbacher, 2006; Friedman, 1953; Messick & Thorngate, 1967; Rabin, 1993). For example, previous research has highlighted that individuals may generally show inequality aversion (Bolton, 1991; Bolton & Ockenfels, 2000; Fehr & Schmidt, 1999) to the point of sacrificing personal resources and payoff to move in the direction of a fair outcome (Fehr & Schmidt, 1999). Moreover, psychological literature on the use of heuristics in economics reasoning has indicated that decision-makers are likely to use criteria of equality (Messick & Schell, 1992), procedural justice (Schroeder, Steel, Woodel, & Bembenek, 2003), and social norms (Civai, Rumiati, & Rustichini, 2013) to solve problems of resource allocation. In this vein, Messick and Schell (1992) reported that individuals heuristically use equality as a main principle during their reasoning, particularly when no other criterion appears to be applicable.

A clear example of a situation in which statements of classic theories on gain maximization are violated is the Ultimatum Game (UG; Güth et al., 1982). The UG is an experimental game in which two participants split resources in a strategic manner. The first participant, referred to as the *proposer*, is endowed with the resources and decides how to split them; the second participant, referred to as the *receiver* or the *responder*, decides to accept or refuse the splitting proposal. If the responder accepts, the resources are divided as proposed; if s/he refuses, both participants gain nothing. Standard economic theory states that the proposer should act egoistically by splitting resources (e.g., $10) as unequally as possible in his/her favor (e.g., proposer: $9, receiver: $1) and the receiver should accept every possible proposal because a rejection indicates that his/her utility goes to 0 and is no longer maximized ($1 is more than $0). However, although equal splits and rejection to unequal offers are considered a contradiction of the standard economic theory, there have been many empirical demonstrations of these violations (Güth et al., 1982).

In addition to self-interest and personal gain maximization, (un) fairness appears to play an important role in economic behavior. Unfairness related to unequal splits in the UG may induce negative emotions (Civai, Corradi DellAcqua, Gamer, & Rumiati, 2010) and negative reciprocity (Rabin, 1993), which, in turn, drive rejection behavior to restore relative gain equality (a null gain for both participants). Neuroscience and physiological evidence have supported this perspective (Sanfey, Rilling, Aronson, Nystrom, & Cohen, 2003). The idea that rejections may be caused by a negative affective state is sustained by the correlation between the rejection rate and increased emotional arousal, as indexed by skin conductance (van't Wout, Kahn, Sanfey, & Aleman, 2006). Moreover, unequal offer rejections are related to greater activation of the anterior insula, a brain region previously associated with negative emotions such as anger and disgust (Sanfey et al., 2003).

However, as noted by Civai et al. (2013), the classic UG paradigm is unlikely to disentangle a genuine reaction toward inequality and a mere safeguard of self-interests because of the overlap between the role of the decision-maker and the role of the utility receiver (Güth, Schmidt, & Sutter, 2007). As the responder plays both roles at the same time, it is difficult to distinguish which motivation is responsible for the final behavior. This severe limitation may be overcome using a Third Party Ultimatum Game (Civai et al., 2010; Civai, Crescentini, Rustichini, & Rumiati, 2012). In this variation of the original paradigm, the roles of the decision-maker and utility receiver do not overlap because they are played by different agents. In general, the first is the experimental subject who makes decisions and evaluates proposals, and the second is a third party who only receives utility generated by the former's decisions. Thus, as the decision maker does not receive the utility produced by his/her decisions, this modification enable an unambiguous analysis of the influence of inequality aversion, thus ruling out potential self-interest explanations.

2. Economic decision, inequality aversion and ingroup bias

Most of the previously described research on unfairness rejection assumed only an individual or an interpersonal perspective, and limited studies have included the presence of a third party to manipulate self-involvement (Civai et al., 2010; Civai et al., 2013). Thus, the social connotations of the agents have been largely disregarded. However, within this framework, an interesting line of research started to explore the influence of the intergroup bias on the economic decision-making.

Intergroup bias is a general tendency to favor an ingroup member and/or derogate an outgroup member (for a review, refer to Brown, 2000; Hewstone, Rubin, & Willis, 2002; Tajfel, Billig, Bundy, & Flament, 1971; Tajfel & Turner, 1979; Turner & Reynolds, 2001). This phenomenon lies at the core of social psychology and shapes attitudes and behaviors in every domain. Previous research related to the trade-off between utility maximization and inequality aversion has suggested the role of group membership and group affiliation in economic behavior (refer also to, Abbink, Brandts, Herrmann, & Orzen, 2012; De Dreu et al., 2004; Yamagishi & Mifune, 2015). As remarkable examples, studies on parochial altruism and third party punishment (Bernhard, Fischbacher, & Fehr, 2006; Henrich et al., 2006) have suggested that individuals tend to favor the same ethnic, racial, language or broad social group members to promote social group positioning; moreover, they are willing to administer costly punishment to unequal behavior as a function of violators' group membership.

According to this perspective, Kubota, Li, Bar-David, Banaji, and Phelps (2013) obtained striking findings of intergroup discrimination in the UG. In their work, White participants holding a negative implicit attitude toward Black Americans accepted more offers and lower offer amounts from White proposers than from Black proposers. Moreover, they showed that the same offer was considered less equitable when it originated from a Black individual rather than a White individual. In the same vein, Mendoza, Lane, and Amodio (2014) determined that receivers were more likely to reject unfair proposals when they were offered by ingroup rather than outgroup proposers. This counter-intuitive phenomenon was explained in terms of greater severity toward ingroup members who violate the group-based norms of reciprocity and fairness.

In summary, this line of research has consistently noted that economic behavior and individuals' reactions to inequality were influenced and moderated by social factors, such as group membership. In the present work, we investigated social variables (i.e. social membership) likely to influence inequality rejection in economic decision-making when the decision-maker and the utility receiver did not coincide.

3. The present research

Prior studies on the UG explored the role of membership; however, it left several important questions unanswered. Previous research has typically analyzed the acceptance of equal offers as an application of the fairness norm (Messick & Schell, 1992) and the rejections of unequal-disadvantageous offers as the result of negative emotions (Sanfey et al., 2003) or cognitive heuristics (Civai et al., 2013). However, the literature has largely neglected a systematic investigation of the behavioral responses in cases of unequal-advantageous offers (offers that are unequal but advantageous for the receiver; e.g., proposer: $1, receiver: $9,) as well as the role of social factors in this process (e.g., Civai et al., 2013; Smith & Henry, 1996).

To fill this gap, the present research aimed to explore the reaction to equal, unequal-disadvantageous and unequal-advantageous offers when the receiver is an ingroup rather than an outgroup member. For this purpose, we adopted the TPUG paradigm to avoid confounding between inequality aversion and personal gain maximization (Civai et al., 2013).

Specifically, based on the assumption that individuals tend to favor their own ingroup with regards to the outgroup (Tajfel & Turner, 1979;