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Group identity and leading-by-example

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ABSTRACT

We study the interplay between leading-by-example and group identity in a three-person sequential voluntary contributions game experiment. A common identity between the leader and her two followers is beneficial for cooperation: average contributions are more than 30% higher than in a benchmark treatment where no identity was induced. In two further treatments we study the effects of heterogeneous identities. We find no effect on cooperation when only one of the followers shares the leader's identity, or when followers share a common identity that differs from that of the leader. We conclude that group identity is an effective but fragile instrument to promote cooperation.

1. Introduction

Leadership is a central topic in the behavioral and social sciences, which has attracted the interest of many researchers in recent years. A fundamental question is how a leader can successfully induce followers to engage in behaviors that may run counter their private interest, but are beneficial to the group. One way leaders can achieve this is by *leading-by-example*, i.e. by committing to behaviors that serve as an example and inspiration to others. Leading-by-example is ubiquitous in naturally-occurring social groups, from families to organizations to complex societies and nations.[1] A recent literature in experimental economics has examined the success of leading-by-example in settings where individual and collective interests are in conflict. Results from this literature, which we review below, suggest that leaders' commitment is not always sufficient to induce followers to sacrifice private interest for the common good (e.g., Haigner & Wakolbinger, 2010; Potters, Sefton, & Vesterlund, 2007; Rivas & Sutter, 2011). Thus, an important issue is which strategies should be adopted to increase the success

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[1] A recent, large-scale instance of leading-by-example comes from Greece's President, **Karolos Papoulias**, who on February 15th, 2012 announced he would forgo his €300k salary "as a symbolic gesture when the Greek people are being called to make such sacrifices" (*source*: http://www.guardian.co.uk/business/2012/feb/15/eurozone-debt-crisis-greece-eurozone-gdp). A similar announcement had been made in December 2011 by Italy's Prime Minister Mario Monti when his government adopted a package of emergency austerity measures (*source*: http://www.bbc.co.uk/news/world-europe-16024316).

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of leadership. In this paper we examine one such strategy: creating a common sense of identity between the leader and her followers in order to increase the latter's willingness to emulate the former.

Research in social psychology has shown that interpersonal similarity can increase attraction and liking, which can in turn increase compliance (Byrne, 1971; Cialdini, 2001). Moreover, social identity theory (Tajfel & Turner, 1979, 1986) suggests that membership and identification with social groups may affect individual behavior, as individuals adapt their choices to conform with the perceived group norms. In particular, a large number of studies documents that individuals act more favorably towards their own social group (''in-group'') than towards ''out-groups'' (e.g., Tajfel, Billig, Bundy, & Flament, 1971). Similar findings are also reported in economics studies of in-group/out-group affiliation (e.g., Chen & Li, 2009; Götte, Huffman, & Meier, 2006). These considerations suggest that manipulating group identities to increase the commonality of values and motives between leaders and followers may be a profitable strategy to encourage compliance and spur followers to eschew their narrow interests for the greater good of the group.

In this study, we examine the extent to which group identity enhances the effectiveness of leading-by-example in a voluntary contribution setting. In particular, we are interested in studying how successful leaders are in fostering cooperation among followers when (i) all followers identify with the leader, or (ii) followers are not fully identified with the leader. In the latter case, we distinguish between situations where some or none of the followers share a common identity with the leader.

We address these research questions by conducting a laboratory experiment with four treatments. In all treatments we use a sequential three-person voluntary contributions game which is repeated for ten rounds in fixed groups. In each round one player (the ''leader'') makes her contributions before the other two players (the ''followers''). Followers then observe the leader's choice and make their contributions. The game is parameterized such that not contributing maximizes individual earnings, whereas joint earnings are maximized when members contribute fully. We induce group identities in the experiment following Chen and Li (2009). In particular, in our three ''identity'' treatments, the voluntary contributions game is preceded by a group identity-building task: subjects are first randomly assigned to ''teams'', and can then communicate with other team members via a computer chat program to work on a problem-solving task. The three ''identity'' treatments differ in how groups in the voluntary contributions game are formed. In one treatment, groups are formed such that all the members belonged to the same team in the problem-solving task. Thus, leader and followers share a common group identity in this treatment. In the other two treatments groups in the voluntary contributions game have two players sharing the same identity, and one ''outsider''. These treatments vary in whether the outsider is one of the two followers (implying that the leader and one follower share a common group identity), or the leader (in which case no follower share the same identity as the leader). We compare these ''identity'' treatments with a baseline treatment where we do not induce group identities. Thus, our baseline treatment reproduces the standard leading-by-example environment previously studied in the literature, where leaders can only use their own actions to influence followers' behavior.

We find that, relative to the baseline environment, total contributions are 30% higher in the treatment where all players have a common group identity, and the effect is statistically significant. However, our analysis also shows that this effect is mainly driven by higher contributions made by leaders: there are no significant treatment differences in followers' contributions once we control for leaders' contributions. Thus, it appears that, rather than motivating followers to follow more closely the example set by the leader, a shared group identity encourages leaders to set better examples. Moreover, we also find that the positive effect of group identity vanishes when we introduce heterogeneous identities. In these treatments we observe higher total contributions than in the baseline treatment, but the effect is not statistically significant. Overall, these findings suggest that group identity can be an effective but fragile instrument available to leaders to foster cooperation in groups.

The remainder of the paper is organized as follows. In Section 2 we review the related literatures. Section 3 outlines the experimental design and procedures. Section 4 presents our main findings. Section 5 concludes.

2. Related literatures

The set-up most commonly used in the experimental economics literature on leading-by-example is based on a sequential version of the voluntary contributions game. In the game players decide how much to contribute to a group project. The project yields positive returns to all group members irrespective of the amount contributed. Contributions are made sequentially: one group member (the ''leader'') makes her contribution before the other group members (the ''followers''). The parameterization of the game implies that each individual has a private incentive to contribute less than what would be socially desirable.

As typical in voluntary contributions game experiments, subjects' contributions in such leader–follower games are found to be lower than the joint earnings-maximizing level, but exceed the zero level predicted under the assumption that all individuals are self-interested monetary payoff maximizers. Moreover, followers' contributions are strongly influenced by the contributions made by the leader: followers contribute little when the leader sets a bad example and makes small contributions to the group project, whereas they contribute substantial amounts when the leader is a high contributor (Figuières, Masclet, & Willinger, 2012; Gächter, Nosenzo, Renner, & Sefton, 2012; Güth, Levati, Sutter, & van der Heijden, 2007; Haigner & Wakolbinger, 2010; Levati, Sutter, & van der Heijden, 2007; Moxnes & van der Heijden, 2003; Potters et al., 2007). On the other hand, leaders typically contribute more than followers, implying that the latter tend to undercut the example set by the former (Figuières et al., 2012; Güth et al., 2007; Levati et al., 2007; Rivas & Sutter, 2011). This generally hampers leaders'