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THE SUBTLE EFFECTS OF INCENTIVES AND COMPETITION ON GROUP PERFORMANCE

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Abstract

We show that, under some circumstances, identification and differentiation in the form of competition and individual rewards may undermine, rather than improve, group performance. The key factor for successful group performance seems to be whether or not group members share common goals and whether or not they have aligned incentives.

Text

The thesis of Baumeister et al.'s target article is that many group processes and their outcomes can be understood in terms of the individual members' identification with the group and their role differentiation. We draw on our work comparing groups and markets

with financial incentives and competition, to identify some limitations in the ability of these two variables – identification and differentiation – to fully explain group performance.

A central premise of the target article is that differentiation induced by competition and individual rewards improves group performance in tasks involving information use (section 1.2). In our work on intellectual tasks, which have a unique and demonstrably correct solution, we showed that introducing financial incentives in a competitive fashion had detrimental effects on group performance (Maciejovsky & Budescu, 2013).

We compared the ability of 4-person groups to solve the Wason (1968) selection task. In the non-competitive groups, participants discussed the problem for 10 minutes and, then, each participant solved the task individually. Participants who solved the task correctly were paid € 1.50, regardless of how many other members of the group solved it. Thus, an ideal group could earn € 6.00. In the competitive incentivized groups, individual payments were a function of the performance of the other group members. Correct solutions were rewarded by € 6.00/number of correct solutions in the group (e.g., if two members solved the problem, each received € 3.00).

Individual and group performance decreased significantly in the competitive condition. The introduction of financial incentives in a competitive fashion “differentiated the self” (to compete and seek the individual rewards), yet the overall effect was negative in terms of information sharing among, and learning from other group members. In essence, these incentives created a social dilemma where people recognized that sharing knowledge benefits the collective, but reduces their private financial reward. In this case, the group identity broke down and selfish personal interests took over!

A second, and related, premise of the target article is the notion of the “differentiated self” that suggests that groups perform better (or worse) than the number of their members as a result of the “distinctiveness” of their members (or lack thereof).

In our studies such differentiation did not necessarily improve group performance. The key factor seems to be whether or not the group shared a common goal and whether or

not group members had aligned incentives (Maciejovsky & Budescu, 2007). For instance, providing all group members with a common goal led to better group performance than differentiating the members by means of side-payments (higher individual payments and, therefore, incentivized *differentiation*). Group performance was substantially worse in these cases (Maciejovsky & Budescu, 2013).

Groups of 3 members were instructed to identify the best of 3 candidates, labeled A, B and C, in a hidden profile paradigm (Stasser & Titus, 1985). Candidate B was the best, and voting for B would have resulted in payments of £4 for each of the members. In our studies, one member per group was promised side payments of £5 to convince the other two members to vote for candidate A (rather than B or C). One could claim that this member served as an advocate for candidate A. Thus, our payoff structure had all the features of a social dilemma (i.e., higher individual payoff (£5) at the detriment of the social optimum (3 times £4)). However, this differentiation had a detrimental effect on the group's ability to identify the best candidate, contrary to the prediction of Baumeister et al.'s framework.

Interestingly, we found that anonymous competitive markets (Budescu & Maciejovsky, 2005), which do not allow for individual identification and eliminate accountability (every man trades for him/her-self) actually outperformed groups (Maciejovsky & Budescu, 2007). Traders on these markets benefited in the long run, as they learned more successfully and transferred their newly acquired knowledge and skills more effectively to new problems than participants who were part of "regular" interactive groups (Maciejovsky & Budescu, 2013). It appears that the rules that govern simple markets made it extremely difficult for traders to hide their goals. The market "forces" traders who strive to achieve their private goals to act on their full information and, therefore, to "share" it with the others. This process can benefit those traders who have less (or inferior quality) information, and the group as a whole.

Other results in this market context support the authors' prediction regarding the benefits of cooperation within groups. For instance, people who traded in competitive markets as

part of dyads systematically outperformed individuals on the same markets, even when accounting for the excess information and skills (Maciejovsky et al., 2013). Protocols of the dyadic discussions suggest that accountability and the necessity to justify trading solutions to fellow group members had a positive impact on trading success.

In sum, our work suggests that individual identification and differentiation may not always improve group performance. If the combined effects of financial incentives and competition are strong enough, differentiation actually reduces group performance, particularly if the incentives and competitive forces lead individuals to abandon the notion of shared group goals and focus, instead, on their individual benefits. Future work should further explore this contrast between the positive and negative effects of identification and differentiation. A refined theoretical framework would allow accounting for these boundary conditions and would, as a result, make more accurate predictions about the broad spectrum of group performance.

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