Pro-social behaviour in groups: Evidence from the field

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Extended abstract

Pro-social behaviour is important in organizations and societies alike. Social norms regarding pro-social behaviour often play a key role in their success. However, lack of field evidence on pro-social behaviour in groups hinders our understanding how such norms develop. This is the gap which this paper addresses.

In our non-experimental field study, we have the data on over 15,000 individuals who, every week, are invited to take the same pro-social action at a cost to themselves. The individuals belong to around 3,000 groups, where, among other things, the actions are observable to the others. We analyze individual and group behaviour over the period of 30 weeks, to answer the following questions: Does the fact that an individual belongs to a group influence their choice to engage in pro-social behaviour? If so, what can we say about the direction and magnitude of these influences? What do the patterns in the data suggest about formation of group norms over pro-social behaviour?

Our context is the University of Cambridge's large scale Covid testing program which, from October 2020 to December 2021, asked each student to take a PCR Covid test every week, whether they had symptoms or not. The participation in this program was strictly voluntary and the information on who took part was kept confidential from the students' teachers and others in charge of them. The test was administered by swabbing the nose and mouth, and if positive, the student, as well as their house mates, would have to self-isolate for several days. To a large approximation, taking the test was a public good, with the main benefit of reduced infection accruing to Cambridge community, whilst the costs being borne by the student[1]. Nevertheless, at its high, about 60% of Cambridge's students participated in the program.

For the purposes of Covid management, most Cambridge students were put into well defined groups – households – with their neighbours in student accommodation. We analyze the students' decisions to sign up to the testing program and then to take the weekly test, over the course of roughly 30 weeks. Our results are three fold. First, we show that groups play an important role in influencing individual behaviour: students that live in groups are 13% more likely to sign up to the program and (by most conservative estimates) 8% more likely to take the test in any given week, than those who live alone. Second, we find significant peer effects in pro-social behaviour: when the number of other students who take the test in my household increases, my probability of testing rises, whilst it falls if the number of students who do not test in my household increases. Third, non-parametric analysis of household testing behaviour shows that the instances when (1) all students test in a household and (2) no students test in a household, are both significantly more likely than what would be expected if students decided to test independently. Thus, the observed behaviour in groups,

[1] For example, when speaking about the possibility of a large scale asymptomatic testing for Covid, an economist Steve Levitt said "Asymptomatic testing is a must. But why would anyone test? To have this thing stuck up your nose, when you have no reason to believe you are ill. (In response to proposal of doing asymptomatic tests at Walgreens) You do this to me once, and I will never shop at Walgreens again." ("People I Mostly Admire" podcast, 10 October 2020)

implies that pro-social actions are strategic complements rather than substitutes. It is consistent with models of social influences that generate multiple equilibria, good and bad ones.

Although the study is non-experimental, the richness of the dataset and institutional arrangements allows for robust empirical identification. For example, to help solve selection problems we use several sources of exogenous variation, including that first year students are allocated to households in a random way and that some students ended up alone because their housemates did not return to University during Covid. We also have a rich set of controls at both student and household level. Finally, the fact that we have panel data allow us to use fixed effects models where appropriate.

This paper is work in progress and we are currently exploring the question of why some groups arrive at better (more 'pro-social' equilibria) than others.