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Effect of social status on information transmission

Introduction

We investigate the effect of asymmetric social status on the transmission of information. We expect that decisions of higher-status individuals affect decisions of lower-status individuals more than vice versa.

People constantly interact with each other and observe each others’ actions. These choices affect actions of other individuals. This phenomenon can be referred to as social influence, peer effect, social contagion, diffusion, conformity. Influence on beliefs, consumption habits, financial behavior (Duflo, Saez (2002)), health outcomes ((Christakis, Fowler (2007)), innovations ((Sacerdote (2001)), voting ((Fafchamps, 2015)) and etc. was investigated empirically and experimentally.

Research in sociology and psychology shows that people have a desire to increase their social status and regard individuals with a higher social status as more competent and knowledgeable and their choices and information provided by them as more trustworthy. Directors transfer good practices top-down to employees. Prominent individuals, media stars or experts in their fields are opinion leaders who distribute information through their social network. People holding high public positions can be a role model for other individuals and can foster or inhibit different models of behavior (trickle-down effect).

Method

We use a series of computer-based laboratory experiments to investigate whether choices of high-status individuals affect choices of low-status individuals. Abundant research in sociology, social psychology and economics deals with effect of status on market behavior, altruistic behavior, emotions. However, there was no formal analysis of difference in status on the transmission of beliefs, habits. etc.

Status is a complex social construct. We refer to status as a relative rank of the individual in the social hierarchy. There are three approaches to induce status during an experiment. First, status can be ascribed to participants on a competitive basis, such as ranging subjects on their performance in a tournament of various kinds (Ball, Eckel (1996)). Second, status measures can be based on real information such as financial standing, occupation, education, etc. ((Liebe, Tutic (2010) Third, asymmetrical status can be induced exogenously, on a random basis. Still, all status measures are subjective to some extent and their perception depends on the subjects’ preferences. Therefore we use a combination of two approaches: we induce status exogenously and control for objective characteristics that are associated with a higher social status such as material standing of one’s family, leadership experience and social skills.

In a preliminary laboratory experiment subjects play experimental games in pairs and fill in separate surveys after each game and at the end of the experiment. Our expectations to create asymmetrical status perceptions are based on the psychological theory of status construction (Ridgeway et al (1998)). We randomly engage participants in social interaction. They do not know each other but after taking certain action they develop perceptions of their own status and status of their fellow player. We use such experimental games as a dictator game, trust game and labor market game. Pairs change after each game. Our goal is to find out which two-player game is better at inducing asymmetric social status. We associate a higher social status with the control over resources and the situation (Thye (2000)). The dictator game is the most asymmetrical of three games in this context. One player, the dictator, is the sole decision maker, with the budget to allocate between herself and the other player. The other player, the recipient, is passive and his payoff depends on the decision of the dictator.

To access information transmission in the main laboratory experiment we use the framework of the social learning in networks (Banerjee (1992), Bikhchandani et al (1992)). We consider a one link of the hypothetical social network: two individuals who observe each other’s actions. In the social learning model subjects update their beliefs according to the Bayes rule. Each of them receives a private noisy signal and should guess the real state of the world. After the first attempt they observe the choice of their partner and have the second attempt to guess the state of the world. Individuals learn from observing the actions of the partner. We use a standard design where signals and the state of the world are numbers generated by the computer. The payoff is higher when the guess is more precise so each participant has a motive to earn a higher payoff if she is rational.

Agents can follow their private signal and pay no attention to the action of their partner; follow their partner and ignore their own signal or use the combination of those two when it is optimal to do so. We compute optimal strategies for the subjects for the range of possible signals and the range of possible choices of the second player in the first period.

We incorporate an element of somewhat irrational behavior into this framework. One player in the pair is induced with a higher social status through the five rounds of the dictator game and the other – with lower social status. Then subjects play the learning game in the same pairs for ten rounds and finally, fill in the survey. Throughout the dictator game and then the guessing game subjects are constantly reminded of their roles by the means of the caption on the screen. We believe that the lower-status player will follow the choice of the higher-status player even if it is not optimal. The possible reason is that the higher-status player appears to be more trustworthy and competent.

Preliminary results

In the preliminary experiment we construct two indices that measure the difference between subjective status of the player and subjective status of the partner as perceived by the player. The first index is based on the semantic differential scale of qualities associated with the social dominance which the subject uses to evaluate herself and her partner. The second index is based on the own subjective social status estimate (McArthur’s SES ladder) where the subject places herself on one of ten steps of the society ladder. The dictator game is best at inducing asymmetric social status because both indices are significantly higher for the dictator than for other two games.

In the main experiment we find a weak effect of playing the dictator’s role on information transmission. Still the subjective status of dictator is higher than the status of the recipient and this effect does not decay despite playing the guessing game. The effect of the first-stage decisions of high-status players on the second-stage decisions of low status players is mediated by subjects’ leadership experience. Leadership abilities were measured by the survey at the end of the experiment and included specific questions on the leadership real-life experience such as contradicting the collective opinion, taking leadership in a situation, holding the chair at the event and etc. The subjective social status is also correlated with the leadership abilities.