

Effect of social status on transmission of information

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Introduction

People constantly interact with each other and observe each others' choices. It may happen when they make consumption decisions, vote, adopt innovations, etc. This phenomenon can be referred to as social influence, peer effect, social contagion, diffusion, conformity. Some individuals are more influential than others. They usually have a higher social status, e.g. a higher relative position in a group hierarchy. The change in their behavior can have a substantial effect on the behavior of their subordinates and thus trigger off rapid change in the society.

Research in sociology and psychology shows that people strive to increase their social status and regard individuals with a higher social status as more competent and knowledgeable. Information provided by influential individuals can be regarded as more trustworthy, even if it falls beyond their expertise domain [16]. Directors transfer good practices to employees. Prominent individuals, media stars or experts in their fields are opinion leaders who distribute information through their social network. People at high public positions can be a source of inspiration for other individuals and can foster or inhibit different models of behavior (trickle-down effect).

We investigate whether information transmitted by higher-status individuals affects behavior of lower-status individuals and makes them change their opinion. Abundant research in sociology, social psychology and economics deals with effect of social status on market behavior, altruism, emotions, etc. However, there formal numerical analysis of difference in status on the transmission of beliefs, habits, etc. has not been conducted yet. We are the first to analyze this effect in a social learning setting and the first to use a separate experimental game to induce asymmetrical status.

Related literature

Our research is related to two strands of literature - theoretical and experimental research in social learning and experimental research of social status on individual behavior. In a social learning model an individual makes a decision under incomplete and asymmetric information. She receives her own information signal, observes the actions of her predecessors, compares her information with the others' (updates her information) and makes her choice. At a certain moment agents can start imitating others while ignoring their own information [5, 6]. Irrational behavior in social learning models is also studied in laboratory experiments [2, 10, 7, 8].

Another strand of literature studies influence of individuals entitled with higher earned or exogenously received status on people they interact with. Higher-status agents transmit pro-social behavior [9]. They face more optimal conditions during an experimental market game [3]. Individuals with higher social capital (a proxy for status) exert more trust [12]. The follower imitates the leader and increases his level of effort compared to the case when he does not meet a leader [13, 15].

Methodology

We use a computer-based [11] laboratory experiment to investigate whether choices of high-status individuals affect choices of low-status individuals. In a separate series of experiments

[1] we showed that subjects who played dictators in the Dictator game have a higher subjective social status than subjects who played recipients and that this is not true for other experimental games - Trust game and Labor contract game. One player, the dictator, is the sole decision maker. He is given 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.

In our design subjects play five rounds of Dictator game. After that subjects play ten rounds of the social learning game in the same pairs [5, 6]. Throughout the dictator game and the social learning game subjects are constantly reminded of their roles by the caption on the screen (You are Dictator/You are Receiver).

We consider one link of the hypothetical social network: two individuals who observe each other's actions. Subjects update their beliefs according to the Bayes rule. They should guess X , the state of the world. X is a number generated by the computer and ranges from -7 to 7. Each participant receives a private noisy signal, $X+Y$. After the first attempt they observe the choice of their partner and have a second attempt to guess the state of the world. The closer the guess to the state of the world, the higher the payoff. Then subjects learn X , their payoff and move to the next round with a different state of the world and private signals.

To find out which personal characteristics mediate subjects' behavior we carry out a risk lottery [14] and a survey after the social learning game. The survey contains information about the family structure and family income; subject's adherence to social norms: subjective social-economic status scale [18] emotions measurement [17]; confident behavior; trust and level social capital.

We test the following hypotheses.

- Peer effect is present between the subjects. In terms of the model, subject's second attempt is affected by her partner's first attempt.
- Peer effect is multiplied by the higher status of the partner (when the subject is the recipient and her partner is the dictator)
- Subject changes her second decision to a smaller extent if her status is higher than her partner's.
- Subject is less likely to deviate from her first attempt if she has a higher status
- Higher confident behavior index and higher social capital are associated with smaller deviation from first-stage decision and lower likelihood to deviate.

Results

We conducted 6 sessions with 58 participants at the Moscow campus of Higebr School of Economics. We found that agents who played Dictators in the Dictator game - agents with higher subjective social status - show less conformity than agents with lower status who played Recipients. Both types of agents are subject to peer effect, that is, they take into account each other's actions independent of difference in status. However, peer effect is not multiplied or weakened by the difference in status. For separate groups of agents (male, firstborn child, etc.) the second attempt significantly tends to be higher than for lower-status agents. Higher-status agents change their second attempt to a smaller extent than lower-status agents and are less likely to change it. We found that subjects with higher confident behavior index and social capital do not show significant difference in deviation; other personal characteristics are also insignificant.

Our results suggest that a prominent individual can really affect decisions of people he interacts with directly or indirectly and is less prone to the influence of others. Opinion leaders are not easily moved by the herd and continue following their own strategy. This also opens new

possibilities for implementation of socially optimal policy and shows importance of choosing the leader who can affect formation and development of new institutions by promoting certain practices.

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