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# The effects of status mobility and group identity on trust \*

Rémi Suchon<sup>†</sup> - Marie Claire Villeval<sup>‡</sup>

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## Abstract

In a laboratory experiment we test the interaction effects of group identity and status on interpersonal trust. Natural group identity is generated by school affiliation. Status (expert or agent) is awarded based on relative performance in a math quiz that is *ex ante* less favorable to the subjects from one group. We find that "promoted" trustors (individuals from the disadvantaged group that nevertheless achieve the status of expert) trust less both in-group and out-group trustees, compared to the other members of their group. Status promotion singles-out individuals and seems to weaken group identification. In contrast, trustworthiness is not affected by status and there is no evidence that interacting with promoted individuals impacts trust or trustworthiness.

**Keywords:** Trust, status, group identity, social mobility, experiment.

**JEL Codes:** C92, D91, J62.

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# 1 Introduction

Social mobility, defined as the movement from a given social level to a higher level, is a cornerstone of modern democracies because it is a fundamental component of justice (Sen, 1980). Within organizations, upward mobility through internal promotions is also a major source of motivation (Prendergast, 1999; Lazear and Gibbs, 2014; Kuhn, 2017). However, social mobility may also have side effects, in particular when promoted individuals come from a disadvantaged group. For example, females who achieve top positions in male dominated organizations often face difficulties integrating the informal networks of leaders because these networks are usually composed of males (on the “Old Boy Networks”, see Oakley, 2000; Goldin, 2014); and when they succeed, they are not always willing to help other females to reach the same positions (on the “Queen-Bee effect”, see Ellemers et al., 2012). Promoted individuals from a disadvantaged group are also sometimes disregarded by those who share the same group identity but did not achieved the same mobility (on the “Acting White” phenomenon, see Fryer and Torelli, 2010). They may no longer be considered as in-groups by the members of their group of origin, while not being treated by higher status individuals as one of them yet.

Our research objective is to study how interpersonal trust is affected by the interactions between group identity and status mobility. We focus on trust because of its importance in promoting efficient economic interactions (Arrow, 1972), especially within organizations where interpersonal trust is a substitute to costly monitoring and a potential response to incomplete contracting (Fukuyama, 1995; LaPorta et al., 1997). We aim at understanding whether the effects of group identity on behavior (*e.g.*, Tajfel and Turner, 1979; Akerlof and Kranton, 2000; Chen and Li, 2009) are affected by status mobility, in contexts where group affiliation is strongly predictive of status. To that purpose, we designed a laboratory experiment based on a standard trust game (Berg et al., 1995) that uses natural group identities based on the affiliation of the subjects to two elite schools. The status of expert or agent is assigned to the subjects depending on their relative performance in a math quiz that is *ex ante* more favorable to the students of one school.

This design allows us to study whether achieving a higher status than what one’s

group affiliation predicted affects trust and trustworthiness toward in-groups and out-groups. Indeed, the previous literature has shown that individuals discriminate by trusting members from other groups less than people from their own group (Fershtman and Gneezy, 2001; Heap and Zizzo, 2009; Falk and Zehnder, 2013; Morita and Servátka, 2013). When the achieved status does not fit the group identity, we suspect that this may mitigate the effects of group identity on behavior. Indeed, promoted individuals may feel closer to those who share the same status and who are more likely to belong to the other group, while they may feel less close to those who share the same group identity but not the same status. For the same reason, mobility in terms of status may also mitigate the effects of group identity on trust toward the individuals who are promoted in terms of status. Indeed, on the one hand, the majority of their in-groups do not share the same status and, on the other hand, their out-groups do not share the same group identity but they have the same status in common.

In our experiment, natural group identity was conferred by belonging to either a local business school or a local engineering school. These two extremely selective schools (*"Grandes Ecoles"*) have a specific cultural identity and students from each school have a very strong feeling of belonging. In the first part of the experiment, we reinforced the natural identities of the two groups of subjects. In the second part, we used dictator games in which the receiver was either an in-group from the same school or an out-group to test the existence of in-group favoritism in social interactions. In the third part, we induced status by asking subjects to perform a math quiz individually after forming groups of five subjects. Relative performance in the quiz was used to assign the status of "expert" to the three subjects who gave the higher number of correct answers; the status of "agent" was assigned to the two other subjects. These labels determined the task people had to do in the last part of the experiment (agents had to answer to additional math questions while experts had to choose which questions would be used to determine payoffs in the session). A critical feature of our design is that school affiliation predicts the relative performance in the math quiz and thus, the status achieved, but imperfectly. Subjects from the engineering school are more likely to be experts than those from the business school who are disadvantaged in this task. However, for these subjects we introduced the possibility of a promotion in terms of status.

Each group of five was formed with two subjects from the engineering school and three from the business school. Therefore, the best performer among the subjects from the business school was assigned the status of expert. This is how we represent promotion in terms of status: these individuals achieved the status of expert although their school curricula made it less likely *ex ante*. Importantly, our design disconnects status from payoffs: experts and agents receive the same payoff in the last part in the session. This allows us to isolate the effect of status and group identity on trust and trustworthiness with no possible confound with wealth effects. This is an important methodological advantage of using laboratory experiments since in real settings, promotion is usually associated with increased payoffs.

Then, in the fourth part of the experiment subjects played a trust game under the strategy method. They made decisions both as trustor and as trustee, being informed of the school and the status of expert or agent of their counterpart in all possible combinations. Comparing the transfers of the experts from the business school (the promoted subjects) to the transfers of the agents from the business school is informative of the impact of status mobility on the propensity to trust in-groups and out-groups and to be trustworthy. Comparing the transfers directed at the experts from the business school to those directed at the agents from the business school informs us on the impact of status mobility on the propensity of others to trust and to be trustworthy to the promoted subjects.

Our results show that compared to the agents of their group, promoted subjects (those from the business school who achieved the status of expert) trust less their in-groups who have a lower status. Surprisingly, they also trust less their out-groups from the other school who share the same status of expert. This does not support our conjecture according to which status mobility would increase trust toward the out-groups. We reject explanations in terms of differences in social preferences, risk aversion or beliefs about trustee's trustworthiness. To better understand this finding, we have tested an additional condition for which we recruited subjects from the business school only. This allowed us to isolate the role of inter-group comparisons on the impact of status mobility on trust. We found that in this Single-School condition experts from the business school trust as much as agents. Therefore, our interpretation is that status promotion singles out individuals in

the presence of inter-group comparisons: these individuals get less close to their in-groups who have a lower status but they do not get closer to out-groups who share the same status. Having a comparison group for which the high status is a stereotypical characteristic makes salient the singularity of the promotion of an individual from the other group, but this does not mean an identification with this comparison group. This interpretation is consistent with the findings of Galeotti and Zizzo (2014) according to which singling-out an individual in a group can impact his behavior in subsequent trust games.

In contrast, we found no effect of promotion on trustworthiness, *i.e.*, when the individual is the last mover in the game. Overall, we suggest an interpretation of the lower trust of the promoted individuals toward both their in-groups and their out-groups in terms of increased betrayal aversion resulting from their singling-out. Finally, we show that subjects from either school transfer similar amounts, as trustor and as trustee, to promoted individuals as to agents. Thus, status mobility in itself does not attract a discriminatory behavior from others, possibly because in our design it does not result from self-selection on such traits as greed or competitiveness.

The remainder of the paper is organized as follows. Section 2 reviews briefly the related economic literature. Section 3 details the experimental design, the procedures and our behavioral conjectures. Section 4 presents our results and section 5 discusses these results and concludes.

## 2 Related literature

Our study contributes to advance two main strands of the literature. First, it relates to the literature on the impact of social mobility on social preferences. In particular, this literature has shown that the prospect or experience of upward mobility weakens the support for redistribution (Piketty, 1995; Alesina and Ferrara, 2005; Alesina et al., 2017; Acemoglu et al., 2018). Our approach is different. This previous literature focuses mostly on inter-generational income mobility whereas we consider status and hold income equal across statuses. Moreover, it considers individual support for redistribution, while we study interpersonal trust. More di-

rectly connected to our research are the studies of Austen-Smith and Fryer (2005) and Fryer and Torelli (2010) that analyze the relationships between social mobility and social preferences in the context of the racial gap in educational achievements. Students who achieve more than what was expected, given their race, tend to be rejected by those who are lagging behind. Heap and Zizzo (2009) and Tsutsui and Zizzo (2013) report on experiments in which subjects are split into groups, play trust games between and within groups and can periodically trade group membership on a market place. In Tsutsui and Zizzo (2013), groups have different statuses and subjects can pay to quit a low-status group and join a high-status group, which reveals a demand for upward mobility. In these studies, the mechanism behind mobility is self-selection: in equilibrium, mobility concerns those who identify less ex-ante to their background group. Our design is different since subjects cannot choose to join the high-status group. We contribute to this literature by measuring how interpersonal trust is affected by status mobility independently from self-selection issues.

Second, our study contributes to the large literature on the impact of group identity on economic behavior, as pioneered in economics by Akerlof and Kranton (2000). Group identity leads to in-group favoritism (*e.g.*, Charness et al., 2007; Chen and Li, 2009) and parochial exclusion (*e.g.*, Bowles and Gintis, 2004); it influences norm enforcement (*e.g.*, Bernhard et al., 2006), cooperation (*e.g.*, Montmarquette et al., 2004; Goette et al., 2006) and coordination (*e.g.*, Chen and Chen, 2011); it mitigates the hold-up problem (Morita and Servatka, 2013). In this literature group identity is usually uni-dimensional: individuals are affiliated to a single group. In contrast, our experiment involves two dimensions that overlap: a natural group identity conferred by school affiliation and a lab-induced status conferred by performance in a math quiz.

Very few papers have considered multi-dimensional group identities. Klor and Shayo (2010) induce status on top of natural group affiliations to test the impact of group identity on redistribution. Kranton et al. (2016) compare within-subjects the impact of natural identity (political affiliation) and arbitrary minimal group identity on allocation choices. They identify a heterogeneity of preferences between subjects who do not care about group identity and others who change their

preferences according to the affiliation of their counterpart. In Chen et al. (2014) subjects from the same school play coordination and cooperation games with different ethnic identities. Priming school fosters cooperation and coordination, while priming ethnic identities is harmful. We differ in several respects from these papers. In our experiment, status and material payoffs are uncorrelated; subjects are identified by both group identity and status when they interact and natural identity is predictive of status. Hong et al. (2016) generate a hierarchy between groups by introducing both horizontal group identities, determined randomly or by preferences, and vertical group identities, determined by performance or luck. In contrast, we use natural identities, we keep income constant across groups, and we do not study redistributive allocations but interpersonal trust. We contribute to this literature by studying whether status mobility changes attitudes toward in-groups and out-groups.

### **3 Design, Procedures and Conjectures**

In this section we first detail the experimental design before presenting the procedures and finally, our conceptual framework and behavioral conjectures.

#### **3.1 Experimental Design**

Before subjects played several trust games, we reinforced natural group identities, then we measured in-group bias in social preferences, and we induced status. Appendix 1 summarizes the timeline of the experiment.

##### **Natural Group Identities**

Our experiment uses natural group identities conferred by school membership. We recruited subjects from a local engineering school (Ecole Centrale de Lyon) and a local business school (Ecole de Management de Lyon). In the French higher education system, these schools are defined as “Grandes Ecoles”, independent from Universities and considered as providing education for elites. Grandes Ecoles are small in size (generally less than 4000 students, compared to more than 20 000 for universities) and they have very high educational requirements. The selection of



students at entry is based on very competitive exams prepared intensively during two years after high school. Each Grande Ecole has its own culture and traditions. Belonging to such schools generates a strong group identity. The two schools have different curricula, but they are equally selective.<sup>1</sup>

In the experimental instructions, it was made clear that the session was exclusively composed of students from these two schools. We reinforced natural group identities by several means. Upon arrival, each student was assigned to a computer terminal that displayed the logo of his school. Then, the first part of the experiment consisted of a quiz about one's school. Subjects had four minutes to answer to six questions relative to their own school, including for example its year of creation, the expected wage after graduation, or famous alumni (see Appendix 2). Before submitting their individual answers, subjects could communicate with their schoolmates in the session via a chatbox and discuss anonymously about the quiz. This procedure aims at reinforcing group identity (as in Chen and Li, 2009). The quiz was incentivized both at the individual and at the school level. Each correct answer yielded 1 Experimental Currency Unit (ECU, with 1 ECU = €0.2) to the subject. Moreover, each subject from the school that performed the best at the quiz earned an extra 5 ECU. This collective bonus aimed at activating both cooperation between schoolmates and competition between schools. No feedback about absolute or relative performance was provided to the subjects before the end of the session to avoid creating wealth effects.

## Social Preferences

In the second part, we elicited the subjects' social preferences toward in-groups from the same school and toward out-groups from the other school, using a dictator game. Subjects received a 10 ECU endowment and they had to decide how much

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<sup>1</sup>This is attested by the average grades of the students of these schools at the high school exit exam. According to the website "l'Étudiant" (hosting a database used by students in their educational choices), the average grade of students from these schools at the Baccalaureat is around 17/20. These are high grades since every year only 13% of the new holders of a Baccalaureat have grades higher than 16/20 (see <https://www.letudiant.fr/palmares/palmares-des-grandes-ecoles-de-commerce/em-lyon.html>, <https://www.letudiant.fr/palmares/palmares-des-ecoles-d-ingenieurs/centrale-lyon.html> and <http://www.education.gouv.fr/cid55597/resultats-definitifs-de-la-session-2017-du-baccalaureat-79-d-une-generation-est-titulaire-du-baccalaureat.html> respectively.

to transfer to another subject, conditional on whether this subject was from the business school or from the engineering school. Subjects were informed that they would be randomly matched at the end of the session with two subjects within the session. For one match (randomly drawn), their decision as dictator would be implemented, and for the other match they would receive the transfer decided by the other subject. While we did not elicit directly the subjects' feeling of belonging to their natural group at any stage of the experiment, behavior in the dictator games is used to check whether school identity generates in-group favoritism. Moreover, social preferences are used as a control variable when analyzing trust and trustworthiness.

### **Status: Agents and Experts**

**Math Quiz** In the third part we introduced status by means of two roles, Agent and Expert, that were assigned to the subjects based on their relative performance at a mathematical quiz.<sup>2</sup> At the beginning of the third part, the program randomly formed anonymous groups of five subjects, with three subjects from the business school and two from the engineering school; this was made common knowledge. Subjects had 15 minutes to solve 17 problems. The same problems were displayed in the same order on the subjects' screens. For each problem, four solutions were proposed and subjects had to pick one (see Appendix 3). The difficulty of the problems rose gradually to increase the variance of performance. Before performing this task, subjects were informed that their performance would impact their role in the remaining of the experiment, but with no more detail at this stage. The objective was to avoid self-selection into roles on traits such as preference for status, power or competitiveness. Once the 15 minutes had elapsed, subjects were informed that their performance would be used to award the role of expert to the three subjects who performed the best in the quiz among the five players, while the role of agent was assigned to the two remaining subjects. We chose to award

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<sup>2</sup>In the experimental literature, status is usually conferred by performance feedback, ranking, and/or public recognition (see, *e.g.*, Ball and Eckel, 1998; Ball et al., 2001; Kumru and Vesterlund, 2010; Bhattacharya and Dugar, 2013; Charness et al., 2014; d'Adda, 2017), although sometimes it is generated by apparent wealth (see, *e.g.*, Chen et al., 2017; Ebeling et al., 2017) or even by using a minimal status group manipulation, such as labeling some subjects as outsiders to the group (Tsutsui and Zizzo, 2013) or high-status subjects (Butler, 2014).

status within each sub-sample of five subjects rather than at the session level for two reasons. First, because in each group of five there are two subjects from the engineering school for three positions of experts; this ensures that at least one subject from the business school will have the status of expert. Second, it provides some randomness in the attribution of status. Indeed, if we had awarded status at the session level, the subjects who performed the most at the session level would always have achieved the high status and it would have been impossible to disentangle the effect of the achieved status from that of ability on behavior in the trust game.

The math quiz was incentivized. At the end of the session, the program selected randomly one subject in each group of five, and for each correct answer of the selected subject, each of the five subjects earned 1 ECU in addition to a fixed payoff of 5 ECU. This payment scheme ensures that each subject's expected payoff is equal within the group of five and that payment is kept independent from the status of expert or agent. To avoid that the procedure induces reciprocity within the group, players did not learn before the end of the session which player's performance was selected to determine the payoff of the five group members.<sup>3</sup>

Using a math quiz to assign roles and introducing the labels of expert and agent aimed at generating a hierarchy in status associated with these roles. First, subjects from both schools are likely to acknowledge that math induces status because, in their studies, being good at math allowed them to enter elite schools.<sup>4</sup> Second,

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<sup>3</sup>We acknowledge that the provision of effort by a subject entails positive externalities on the four others, which may reinforce the feeling of belonging to the group of five regardless of school affiliation and status. We chose this procedure for two reasons. First, incentives are needed to encourage subjects to provide some effort, otherwise a low performance - and thus the assignment of the role of agent - could result from either laziness or low ability with no possibility to distinguish between the two. With our procedure, it is in the best interest of each subject to provide some effort. Such extrinsic motivation has been shown to mitigate reciprocity (see *e.g.* Stanca et al., 2009). Second, it is important to not induce income inequality within groups before the trust game. Here, payoff inequality cannot be a source of confound in the trust game since all the players in the group earn the same amount. In contrast, using individual incentives would have introduced payoff inequality between players and it would have been impossible to disentangle the effect of payoff inequality from the effect of status in the trust game.

<sup>4</sup>Studying the selection technology of "Grandes Ecoles" Menger and Marchika (2014) show that schools that are ranked higher in their specialty put a greater coefficient on math at the entrance exam. Math grades account for slightly more than one third of the total grades at the

it is widely known that curricula at the engineering school are more math oriented, then subjects from this school are likely to perform better on average than those from the business school, and then achieve the position of expert more often.<sup>5</sup> This is meant to capture the inequality observed in many real-life situations where the members of a disadvantaged group are less likely to achieve certain positions compared to the members of another group. Finally, the labels of expert and agent used in the instructions reinforce the feeling of a hierarchy in status independent from income. This might in turn reinforce the salience of promotion when subjects from the business school achieve the status of expert that is more typical of subjects from the other school.<sup>6,7</sup>

At the end of the quiz, subjects received the instructions for the rest of the experiment, namely an expertise task and the trust game. The expertise task was performed after the trust games to avoid contamination effects, but subjects learned their status at the beginning of this part.

**Expertise Task** This task was designed to reinforce the status of expert or agent when the task was explained to the subjects. In the final part agents had to answer to three more multiple choice math questions of similar level of difficulty. Then, being informed of the distribution of the agents' answers at the session level, experts had to vote to select the question that would be used to determine payoffs. The question that received the most votes determined a payoff for all the subjects in the session, regardless of their school or status. This payoff was 10 times the

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entrance exam in top engineering schools, and for around one fourth in top business schools.

<sup>5</sup>Students accepted at EM business school and Ecole Centrale for engineers have on average the same grade at the Baccalaureat (respectively 17.1 and 17.08). But our data confirm that subjects from the engineering school perform much better in the math quiz than those from the business school. On average, the former gave 7.15 correct answers and the latter 4.95 (Mann-Whitney test,  $p < 0.001$ ).

<sup>6</sup>Note that the effect of status and social mobility would have possibly been larger if we had invited students in arts or humanities from local universities to participate in this experiment together with students from the engineering school; however, in France there is usually no group identity attached to belonging to a University in contrast with Grandes Ecoles; this would have introduced a major difference between the two groups of subjects.

<sup>7</sup>Note that it could have been interesting to test whether and to which extent the subjective feeling of belonging to one's school has been affected by answering to the math quiz and by the award of status. An option would have been to add a new set of dictator games after subjects learned their status.

mean rate of correct answers given by the agents in response to this question (*e.g.*, if the rate was 0.8, each subject in the session earned 8 ECU). The role of expert is expected to be associated with higher status since experts have to evaluate the work of the agents who execute the task, and take responsibility for a choice that determines the payoff of everyone.

We may worry that informing subjects before they play the trust games about the nature of the expertise task and the benevolent role of the experts might potentially introduce reciprocity or reinforce solidarity between agents and experts in the trust game, regardless of school affiliation and status. In order to assess these potential effects, we ran three sessions (with 45 subjects) of a control condition in which subjects received only minimal information about the expertise task before playing the trust games: they were only informed that there would be a task after the trust games in which experts and agents would have different roles but similar payoffs, but we did not inform them of the precise content of the task or how payoffs would be determined. The results from this new condition, while not significant due to a limited sample size, go in the same direction and are statistically indistinguishable from those of the main condition (See Appendix 5). In consequence, we pool the data from the main and the control conditions in the analysis.

## **Trust and Trustworthiness**

We are chiefly interested in behavior in the trust games played in the fourth part, conditional on school identity and status. In these games, both the first and the second movers receive a 10 ECU endowment. The first mover (the trustor, hereafter) has to choose an integer amount  $M$  between 0 and 10 ECU, inclusive, that will be sent to the second mover (the trustee, hereafter) and deducted from his payoff. This amount is multiplied by three. The trustee receives  $3M$  and has to choose an integer amount  $R \leq 3M$  to send back to the trustor. The amount sent by the trustor is a standard measure of trust, while the amount returned by the trustee is a measure of trustworthiness.

In each group of five, each subject first made four decisions as a trustor, interacting successively with each of the other four players in the role of trustees. Subjects

had also to guess the percentage of the amount received each trustee would send back to them; they were rewarded for accuracy, as explained below. Finally, each subject had to make four decisions as a trustee, interacting successively with each of the four other players in the role of trustors. We used the strategy method: trustees had to decide how much to return to the trustor for each of the ten possible transfers. Using the strategy method allows us to collect more data for each subject and to define a more accurate profile of preferences. For each decision as trustor and as trustee, subjects were informed about the school and the status of their counterpart (expert or agent). At this moment, they could observe whether one or more players from the business school achieved the status of expert.

At the end of the experiment, the program randomly selected one decision in the role of trustor and one in the role of trustee for each subject and the sum of payoffs in these two decisions determined the payoff for the trust games.<sup>8</sup> The program also randomly selected one guess made by the individual in the role of a trustor. If this guess was equal to the actual percentage returned by the trustee more or less 5 percent, the subject earned an extra 5 ECU.

Finally, at the end of the session subjects had to answer to several questions about socio-demographic characteristics, risk attitudes (using the procedure of Dohmen et al., 2011), and perceptions about the experiment. In particular, they had to report their opinion about the statement *“It is very important to have good math skills”* on a five point likert-scale. No subject strongly disagreed with the statement and 128 subjects out of 145 agreed to some extent.<sup>9</sup> They also had to report which school they believe have the best students in math. Answers strongly support that math induces a hierarchy between schools, since all the subjects from the engineering school and 9 out of 10 subjects from the business school reported

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<sup>8</sup>The program generated two random numbers for each subject. This generated two rankings of subjects within each group of five. The first ranking was used to determine which decision was used to compute payoffs as trustor and the second ranking was used to determine which decision was used to compute payoffs as trustee. In both cases, the decision used for payment was the one in which the counterpart was next in the corresponding ranking.

<sup>9</sup>Subjects acknowledge the importance of math skills irrespective of their school or status. The distribution of opinions between “Strongly disagree”, “Disagree”, “Somewhat agree”, “Agree”, “Strongly Agree” differs neither across schools ( $\chi^2(3) = 0.548$ ,  $p = 0.908$ ), nor across statuses ( $\chi^2(3) = 2.212$ ,  $p = 0.529$ ).

that the students from the engineering school were the best at math.

The total payoff in the experiment was the sum of the payoffs made in the quiz about schools, in the dictator game, in the math quiz, in the trust games and in the expertise task.

## 3.2 Procedures

The experiment was developed using z-Tree (Fischbacher, 2007). All sessions were conducted at GATE-LAB, Lyon, France. We ran nine sessions (six in the main condition, three in the control condition) with 10 to 20 subjects each that were recruited using Hroot (Bock et al., 2014). In total, 145 subjects took part in these sessions: 87 from the Business school (Ecole de Management de Lyon) and 58 from the Engineering school (Ecole Centrale de Lyon). 41% of the subjects are females (36% of the subjects from the engineering school and 44% of those from the business school; Fisher’s exact test,  $p = 0.39$ ). The average age is 21.23 years (21.58 for the subjects from the engineering school and 21 for those from the business school; Mann-Whitney test, M-W hereafter,  $p = 0.038$ ).

Upon arrival, subjects drew a tag from one of two opaque bags (one for each school) assigning them to a cubicle. The instructions for each part were distributed and read aloud by the same experimenter after completion of the previous part, except the instructions for the trust games and the expertise task that were distributed together in the main condition (see Appendix 4). Since the design involves many parts, reading the instructions for a part only after subjects completed the previous one aimed at facilitating understanding and at limiting carry-over effects across parts. Before playing the trust games, subjects had to fill out a comprehension questionnaire and questions were answered in private.

The average duration of sessions was 80 minutes. The average payoff was €14.49 (Min: €9.10, Max: €21.60, standard deviation, S.D. hereafter = 2.30). Payments were made in cash, in a separate room and in private.

### 3.3 Conceptual Framework and Conjectures

In the trust game, without social preferences there is a unique subgame perfect Nash equilibrium. The trustee has no incentive to return any amount to the trustor and the trustor anticipates this. Hence, both the trustor and the trustee send nothing. Empirically, however, behavior usually deviates from the SPNE, as trustors and trustees typically send non trivial amounts.<sup>10</sup> Moreover, various studies have shown that trust and trustworthiness are generally higher with in-groups than with out-groups. This is true for both artificial groups (*e.g.*, Buchan et al., 2006) and natural groups (*e.g.*, Etang et al., 2011).<sup>11</sup> A higher perceived distance between individuals and groups (Kazdin, 2000; Dufwenberg and Muren, 2006) reduces trust between individuals.

In our experiment, each subject is characterized both by the natural group identity conferred by his school and by the status conferred by the role of agent or expert depending on his relative performance at the math quiz.<sup>12</sup> The interactions between these two dimensions allow us to define four categories of subjects. For the first two categories, status matches the natural group identity. The “Steady-low” subjects are the subjects from the business school that achieved the status of agent (since on average, due to their education, they were less likely to overperform engineers in the math quiz), and the “Steady-high” subjects are the subjects from the engineering school that achieved the status of expert. The two other categories capture two opposite forms of mobility. We identify as “Promoted” the subjects from the business school that achieved the status of expert although they were *ex ante* more likely to become agents. We assume that assigning them the status of expert captures the idea of a symbolic promotion to a higher status. Finally,

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<sup>10</sup>In a meta-analysis, Johnson and Mislin (2011) found that trustors send almost half of their endowment and trustee return about 35% of the amount they received.

<sup>11</sup>Behavior in the trust game depends on social preferences and on the expectations about the counterpart’s social preferences. For instance, Chen and Li (2009) showed that people are kinder to in-groups, and Goette et al. (2006) found that people expect more kindness from in-groups than from out-groups.

<sup>12</sup>We use the notions of group identity and status instead of the respective notions of “background identity” and “acquired identity” because the latter suggest that group identity and status are substitutes in the definition of identity. By contrast, as explained below, we believe that identification with a group is endogenous and depends on the status typically attached to that group.



“Demoted” subjects are the subjects from the engineering school who have unexpectedly achieved the status of agent.<sup>13</sup> These denominations were not mentioned in the instructions. Table 1 characterizes the four categories obtained by the combination of natural group identity and status.

Table 1: The four categories of subjects in the experiment

| Natural group \ Status | Status | Agent                 | Expert               |
|------------------------|--------|-----------------------|----------------------|
|                        |        |                       |                      |
| Engineering school     |        | Demoted (status-down) | Steady-High          |
| Business school        |        | Steady-Low            | Promoted (status-up) |

Our experiment basically revolves around assessing the interaction effects between individual status and group identity. *A priori*, a natural group identity should be resistant to status manipulation because it is more permanent (subjects will remain defined by their school identity after the completion of the experiment, not by their status in the experiment). However, status has been shown to have a strong behavioral impact even without any monetary consequence or value beyond the time frame of an experiment (*e.g.*, Charness et al., 2014), because people use status to positively distinguish themselves from others and enhance their self-esteem (Tajfel and Turner, 1979). Thus, we expect to identify interactions effects between the achieved status and group identity.

Importantly, individual identification to social groups has been shown to depend both on cognitive factors such as the similarity with the stereotypical group member, and on affective factors, such as the self enhancement provided by identifying with the group (Shayo, 2009; Klor and Shayo, 2010; Hett et al., 2017). For example, in Klor and Shayo (2010) identification with a group requires that the individual cares also about the status of that group. In our experiment, the subjects from the business school achieve the status of expert less often than those from the engineering school. Clearly, this might affect the cognitive component of identification to the group for the promoted subjects because their status of expert does not fit the stereotype of their group anymore. Furthermore, our design

<sup>13</sup>Our experiment being designed to study promotion, there are only 14 demoted subjects. Thus, we leave the study of the impact of demotion on trust for further research.

introduces an implicit hierarchy between the two schools because the access to the high status is less frequent for the subjects from the business school. This may weaken the affective identification of the promoted ones to their group of origin, since distantiating themselves from this group may improve their self-image.

Thus, in a context where identification is endogenous we anticipate that status concerns might weaken the original group identification and, as a consequence, affect trusting decisions and trustworthiness, conditional on the status and group identity of the counterpart. In particular, our lab-induced individual status may mitigate the effects of natural identities when individuals achieve the status of expert. If promoted subjects derive utility from being labelled as expert, they may value more their status than their group identity, compared to steady-low subjects; this may reduce their group identity feelings toward their in-groups and increase their feeling of closeness or similarity toward the other experts who belong to the other group. We summarize our behavioral conjectures regarding the interaction effects of status and group identity on trust and trustworthiness as follows:

**Conjecture 1:** Compared to steady-low subjects, promoted subjects send less to steady-low subjects in the trust games, both as trustors and as trustees.

**Conjecture 2:** Compared to steady-low subjects, promoted subjects send more to steady-high subjects, both as trustors and as trustees.

**Conjecture 3:** Compared to steady-low subjects, promoted subjects receive lower amounts from steady-low subjects, both as trustors and as trustees.

**Conjecture 4:** Compared to steady-low subjects, promoted subjects receive higher amounts from steady-high subjects, both as trustors and as trustees.

## 4 Results

We first present summary statistics about status, social preferences, trust and trustworthiness. Then, we examine the behavior of promoted subjects and then,

the behavior towards promoted subjects. Finally, we isolate the role of inter-group comparisons by means of an additional condition.

## 4.1 Summary Statistics

**Status** Status was assigned via the math quiz. The average number of correct answers in the math quiz is 5.83 (Min = 1, Max = 13, S.D. = 2.48). As expected, this number is significantly higher for the subjects from the engineering school (7.15) than for those from the business school (4.95) (M-W:  $p < 0.001$ ).<sup>14</sup> The lowest performance for an expert from the engineering school (the business school, respectively) is 3 (4, resp.), and the best performance is 13 (9, resp.). On average, the number of correct answers is 7.19 for the experts and 3.79 for the agents (M-W:  $p < 0.001$ ).

By design, 87 subjects achieved the status of experts. The probability to reach this status is 0.76 for a subject from the engineering school and 0.49 for a subject from the business school (Fisher’s exact test:  $p = 0.002$ ). Among the 58 subjects from the engineering school, 44 became experts (“steady-high”) and 14 failed to do so (“demoted”). Among the 87 subjects from the business school, 43 became experts (“promoted”) and 44 did not (“steady-low”). In 13 groups out of 29, there is more than one promoted subject (one with three promoted subjects and twelve with two promoted subjects). Note that the distributions of performance of experts and agents from the business school overlap, as depicted by Figure A1 in Appendix 6. This is due to the fact that status was awarded within the subsamples of five subjects and not at the session level. As mentioned earlier, this allows us to identify the effect of status independently from the effect of ability, since for a given ability level some subjects are promoted to the high status and others not, depending on the relative performance of the four other members.

**Social preferences** We elicited social preferences by letting subjects play dictator games with a receiver either from the same school or from the other school. On average, dictators transfer 2.58 to a receiver from the same school and 1.56

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<sup>14</sup>All the non-parametric tests reported in the results section are two-sided and take each individual as one single independent observation. When a subject makes several decisions, we compute the average of his decisions, which gives one independent observation per subject.

to a receiver from the other school ( $n = 145$ , Wilcoxon signed-rank test, W hereafter:  $p < 0.001$ ). In-group favoritism is observed in both schools. These numbers are respectively 2.63 and 1.55 for the dictators from the business school ( $n = 87$ , W:  $p < 0.001$ ), and 2.51 and 1.58 for the dictators from the engineering school ( $n = 58$ , W:  $p < 0.001$ ). The transfers to a receiver from the same school do not differ across schools (M-W :  $p = 0.933$ ). Transfers do not differ either when the receiver is from the other school (M-W:  $p = 0.836$ ). Finally, we checked that promoted and steady-low subjects do not differ in terms of social preferences before status is awarded. Indeed, their transfers do not differ, regardless of whether the receiver is from the same school (M-W:  $p = 0.623$ ) or from the other school ( $p = 0.951$ ).

**Trust and Trustworthiness** Table 2 displays summary statistics about trust, trustworthiness and beliefs, for the whole sample of subjects, by school and by status. The average transfer by trustors is 3.37 ECU (S.D. = 2.8). Transfers do not differ across schools (3.15 for the engineering school and 3.51 for the business school. M-W:  $p = 0.491$ ).<sup>15</sup> Regarding beliefs, trustors expect that trustees will return on average 24.69% of what they received. Beliefs do not differ across schools (24.1% for the engineering school and 25% for the business school. M-W:  $p = 0.762$ ). Trustees return on average 19.7% of what they received (S.D. = 19.23). Trustworthiness does not differ across schools either (19.87% for the engineering school and 19.64% for the business school. M-W:  $p = 0.918$ ). Table 2 also indicates that there is no significant difference in trust, beliefs and trustworthiness between agents and experts from either school.

Let us now consider in-group favoritism. Pooling both schools, the average amount sent to a trustee from the same school is 3.62 ECU and the average amount sent to a trustee from the other school is 3.24 ECU (W:  $p = 0.012$ ), showing evidence of in-group favoritism. Considering each school separately shows evidence of an asymmetric in-group bias in trust: trustors from the engineering school send more to trustees from the engineering school than to out-groups (3.63 ECU *vs.* 3, W:  $p = 0.006$ ); trustors from the business school send also more to in-group than to

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<sup>15</sup>Again, for these non-parametric tests we average for each individual all his decisions as a trustor, so that each subject gives one independent observation.

Table 2: Summary statistics on trust, trustworthiness and beliefs, by school and status

|  | All subjects<br>(1) | Agents<br>(2) | Experts<br>(3) | $p - value$<br>(2)-(3) |
|--|---------------------|---------------|----------------|------------------------|
| Trust (mean amount sent)   |                     |               |                |                        |
| Business school  | 3.51 (2.85)         | 3.92 (2.75)   | 3.08 (2.91)    | 0.102                  |
| N  | 87                  | 44            | 43             | -                      |
| Engineering school   | 3.15 (2.89)         | 2.85 (2.55)   | 3.25 (2.84)    | 0.847                  |
| N  | 58                  | 14            | 44             | -                      |
| $p - value$  | 0.491               | 0.236         | 0.685          | -                      |
| Trustworthiness (mean % of the tripled amount received that is returned) |                     |               |                |                        |
| Business school  | 19.64 (19.21)       | 20.21 (17.41) | 19.07 (21.09)  | 0.528                  |
| N  | 87                  | 44            | 43             | -                      |
| Engineering school   | 19.87 (19.43)       | 13.98 (14.5)  | 21.74 (20.55)  | 0.243                  |
| N  | 58                  | 14            | 44             | -                      |
| $p - value$  | 0.918               | 0.269         | 0.455          | -                      |
| Beliefs (mean % of the tripled amount expected in return)                |                     |               |                |                        |
| Business school  | 25.08 (21.75)       | 24.94 (22.54) | 25.23 (21.17)  | 0.854                  |
| N  | 87                  | 44            | 43             | -                      |
| Engineering school   | 24.10 (21.1)        | 22.60 (23.21) | 24.57 (20.65)  | 0.576                  |
| N  | 58                  | 14            | 44             | -                      |
| $p - value$  | 0.762               | 0.553         | 0.911          | -                      |

Notes: Standard deviations are in parentheses. The  $p - values$  in the last column are from Mann-Whitney tests comparing agents and experts. The  $p - values$  in rows are from Mann-Whitney tests comparing subjects from the two schools. The average of the decisions of each subject gives one independent observation.

out-group trustees (3.61 *vs.* 3.40), but there is more variance across individuals and the difference is not significant (W:  $p = 0.344$ ). The same asymmetry is found in beliefs. Trustors from the engineering school expect a higher return from their in-group trustees than from their out-group trustees (28.15 ECU *vs.* 22.75, W:  $p = 0.014$ ), whereas trustors from the business school expect similar returns from both types of trustees (24.54 ECU *vs.* 25.63, W:  $p = 0.966$ ). Since a strong in-group favoritism was found in the dictator games for the subjects from the two schools, the absence of a significant in-group bias in the trust games for the subjects from the business school may result from the status mobility of some of its members. <sup>16</sup>

<sup>16</sup>Note that engineers may also have a stronger feeling of identity than the subjects from the

In contrast to trust, in-group favoritism in trustworthiness is symmetric: trustees from both schools return more to trustors from the same school than to trustors from the other school (21.7 ECU *vs.* 18.3, W:  $p < 0.001$ ).

## 4.2 Behavior of Promoted Individuals

This section focuses on the behavior in the trust games of the subjects from the business school who achieved the status of expert. We introduce our first result:

**Result 1: Compared to the steady-low trustors, promoted subjects trust less both steady-low and steady-high trustees.**

Result 1 supports Conjecture 1, but not Conjecture 2.

*Support for Result 1:* Figure 1 plots the average amount sent by the trustors from the business school, depending on whether they are promoted or not. The left panel focuses on the matches with trustees from the business school and the right panel on the matches with trustees from the engineering school. On average, the steady-low trustors send 4.02 ECU ( $n = 44$ ; S.D. = 2.82) to trustees from the business school, while the promoted trustors send 3.19 ECU ( $n = 43$ ; S.D. = 3.25; M-W:  $p = 0.085$ ). On average, the steady-low trustors send 3.82 ECU to trustees from the engineering school ( $n = 44$ ; S.D. = 3.09), and the promoted trustors send 2.97 ECU ( $n = 43$ ; S.D. = 3.07; M-W:  $p = 0.132$ ).

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business school because they constitute a minority in each group (2 out of 5 members) and because high status is granted according to ability in a math quiz.

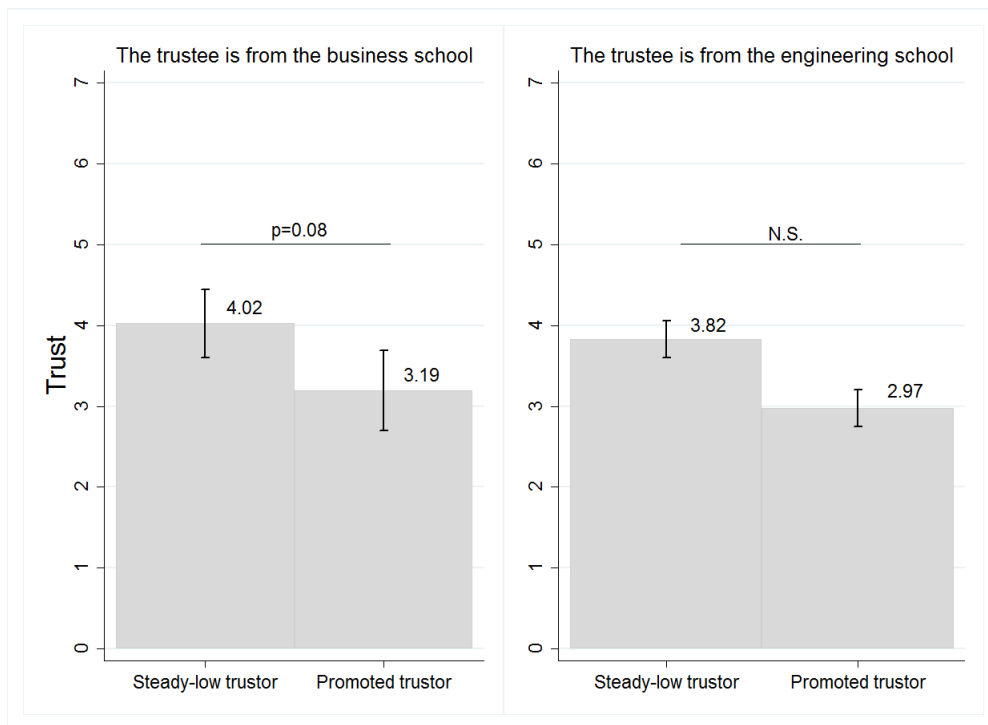


Figure 1: Average amount sent by trustors from the business school, by trustor's status and trustee's school

Note: Vertical lines represent standard errors.

Table 3: Determinants of the amount sent by the trustors from the business school to the trustees (Tobit models)

|                                       | (1)                  | (2)                 | (3)                 |
|---------------------------------------|----------------------|---------------------|---------------------|
| Beliefs                               | 0.054***<br>(0.014)  | 0.052***<br>(0.017) | 0.056***<br>(0.015) |
| Prom. trustor and Prom. trustee       | -1.239<br>(1.121)    | -1.239<br>(1.114)   | -<br>-              |
| Prom. trustor and St. low trustee     | -2.013**<br>(0.922)  | -2.002**<br>(0.941) | -<br>-              |
| Prom. trustor and St. high trustee    | -2.477***<br>(0.870) | -<br>-              | -2.000**<br>(0.907) |
| Prom. trustor and Dem. trustee        | -1.811*<br>(1.087)   | -<br>-              | -1.315<br>(1.170)   |
| St. low trustor and Prom. trustee     | -0.476<br>(0.531)    | -0.510<br>(0.502)   | -<br>-              |
| St. low trustor and St. high. trustee | -0.461<br>(0.502)    | -<br>-              | -<br>-              |
| St. low trustor and Dem. trustee      | -1.689*<br>(0.894)   | -<br>-              | -1.159<br>(0.808)   |
| Transfer in DG, same school           | 0.287<br>(0.183)     | 0.356*<br>(0.191)   | 0.223<br>(0.190)    |
| Transfer in DG, other school          | 0.368<br>(0.225)     | 0.239<br>(0.228)    | 0.491**<br>(0.233)  |
| Female                                | -0.377<br>(0.718)    | -0.665<br>(0.747)   | -0.0713<br>(0.774)  |
| Risk attitude <sup>a</sup>            | -0.057<br>(0.145)    | 0.080<br>(0.158)    | -0.206<br>(0.163)   |
| Math quiz performance                 | 0.039<br>(0.246)     | 0.007<br>(0.259)    | 0.068<br>(0.282)    |
| Perception math <sup>b</sup>          | -0.056<br>(0.843)    | -0.227<br>(0.863)   | 0.097<br>(0.874)    |
| Session fixed effects                 | Yes                  | Yes                 | Yes                 |
| $N$                                   | 348                  | 174                 | 174                 |
| Nb left censored observations         | 88                   | 38                  | 50                  |
| Nb clusters                           | 87                   | 87                  | 87                  |
| Pseudo R <sup>2</sup>                 | 0.105                | 0.114               | 0.108               |
| Log pseudo-likelihood                 | -734.264             | -368.997            | -359.224            |
| $F$                                   | 4.22                 | 4.38                | 4.41                |
| $p > F$                               | < 0.001              | < 0.001             | < 0.001             |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . (1) Trustees from the business school and from the engineering school pooled, (2) trustees from the business school only, (3) trustees from the engineering school only.

The reference category in models (1) and (2) corresponds to steady-low trustors matched with a steady-low trustee; in model (3), it is a steady-low trustor matched with an steady-high trustee. Prom. for promoted subject (from the business school), St.-low for steady-low subject (from the business school), St.-high for steady-high subject (from the engineering school), and Dem. for demoted subject (from the engineering school). (a) For risk attitudes, a higher number indicates less risk aversion. (b) Dummy indicating that the subject "strongly disagrees" or "disagrees" with the statement "*It is important to have good mathematical skills*".



These comparisons do not control for beliefs and individual characteristics. Table 3 reports the marginal effects from Tobit regressions explaining the trusting decisions of the subjects from the business school. We use Tobit models since data are censored, and robust standard errors are clustered at the individual level since each trustor makes several decisions. In model (1), the independent variables include dummy variables for each type of match, taking the steady-low trustors matched with a steady-low trustee as the reference category.<sup>17</sup> They include the amount the trustor expects to receive in return, social preferences toward in-groups and out-groups, risk attitudes, and gender. We include performance in the math quiz as an identification variable to test whether the effect of status on trust is not driven in fact by ability in the quiz, and also because previous studies have suggested that smarter people trust more on average (*e.g.*, Burks et al., 2009; Corgnet et al., 2016; Falk et al., 2018). We add a dummy variable indicating that the trustor somewhat or strongly disagrees with the statement about the importance of math skills, as it could capture a negative perception of the legitimacy of the selection of experts. Finally, session fixed effects are included. In model (2), we restrict the observations to the cases in which the trustor is matched with a trustee from the business school. In model (3), we restrict the observations to the cases in which the trustor is matched with a trustee from the engineering school. In this model, the reference category is the steady-low trustors matched with a steady-high trustee.

Overall, these regressions show that promotion reduces trust toward both steady-low and steady-high trustees.<sup>18</sup> Indeed, compared to steady-low trustors, promoted trustors trust significantly less (at the 5% level) steady-low trustees (see models (1) and (2)). Model (3) indicates that they also trust less steady-high trustees from the engineering school than the steady-low trustors do. We also observe that trustors

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<sup>17</sup>The different types of matches are: promoted trustor matched with a promoted trustee, or with a steady-low trustee, or with a steady-high trustee, or with a demoted trustee; steady-low trustor matched with a promoted trustee, or a steady-high trustee, or a demoted trustee.

<sup>18</sup>Additional Tobit regressions, reported in Table A2 in Appendix 7, in which the dependent variable is the trustors' belief about the percentage returned by the trustee indicate that the effect of promotion on trust is not driven by differences in beliefs. Indeed, the beliefs of the promoted trustors do not differ significantly from those of the steady-low trustors. Differences in risk attitudes cannot explain either differences in trust. The mean measure of risk attitudes is 5.11 ( $n = 44$ ; S.D. = 2.29) for the steady-low and 5.30 for the promoted trustors ( $n = 43$ ; S.D. = 2.14); the difference is not significant (MW:  $p = 0.66$ ).

send more when they expect a higher return, which replicates previous findings in the literature ( *e.g.* Bohnet and Croson, 2004; Bohnet, 2008; Sapienza et al., 2013; Costa-Gomes et al., 2014). Most of the other variables are not significant, except that more generous subjects with an in-group (out-group, resp.) in the dictator game trust also more an in-group (out-group, resp.). The fact that performance in the math quiz is not significant allows us to reject an alternative interpretation of Result 1 according to which higher ability individuals belonging to a natural group whose access to the status of expert is less likely tend to trust less those with lower ability in the same group, regardless of their achieved status.<sup>19</sup>

**Result 2: Promotion does not impact trustworthiness, regardless of the trustor’s group identity.**

This result rejects Conjectures 1 and 2.

*Support for Result 2:* Compared to the steady-low trustees, the promoted trustees do not return less to the steady-low trustors and more to the steady-high trustors. Consider first the matches between trustors and trustees when both are from the business school. On average, the promoted trustees return 20.99% ( $n = 43$ ; S.D. = 22.26) of the amount received to trustors and the steady-low trustees return 21.89% ( $n = 44$ ; S.D. = 18.13; M-W:  $p = 0.741$ ). Consider next the matches between trustors from the engineering school and trustees from the business school. On average, the promoted trustees return 17.15% ( $n = 43$ ; S.D. = 20.79) of the amount received and the steady-low trustees return 18.52% ( $n = 44$ ; S.D. = 17.87; M-W:  $p = 0.475$ ). None of these differences is significant. The pattern is similar if we only consider the returns to the steady-high trustors: on average, the promoted trustees return 17.19% ( $n = 40$ ; S.D. = 21.02) to them and the steady-low trustees return 18.48% ( $n = 44$ ; S.D. = 21.02; MW:  $p = 0.467$ ).

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<sup>19</sup>In addition, Table A3 in Appendix 7 reports the same regression analysis as Table 3 but restricted to the sub-sample of subjects whose performance in the math quiz was equal to or higher than 4, *i.e.*, subjects whose performance was high enough to achieve the status of expert in some groups. This table shows that the effect of status remains significant, although less so than in Table 3 probably due to the lower number of observations. This confirms that the lower trust expressed by business school subjects who achieve the status of expert is driven by promotion more than by relative ability.

In Appendix 7, Table A4 presents the results of regressions that estimate Tobit models in which the dependent variable is the percentage of the amount received that is returned by trustees from the business school. For each interaction, we average the percentages returned for all the possible amounts received. The independent variables are the same as in the regressions on trust, except that beliefs about returns are replaced with the amount actually transferred by the subject when acting as a trustor with the same counterpart. These regressions confirm that the trustee’s promotion does not impact trustworthiness significantly.

### 4.3 Attitudes Toward Promoted Individuals

This section compares the behavior of subjects when they are matched with promoted *vs.* steady-low subjects from the business school. Result 3 is the following:

**Result 3: Neither trustors nor trustees from either school condition their decisions on whether their counterpart was promoted.**

Conjectures 3 and 4 predicted that promoted individuals would receive less trust and trustworthiness from steady-low subjects and more trust and trustworthiness from steady-high subjects. These conjectures are rejected.

*Support for Result 3:* On average, the non promoted trustors send 3.54 (S.D. = 3.10) to promoted trustees and 3.27 to steady-low trustees ( $n = 88$ ; S.D. = 2.98; W:  $p = 0.177$ ). Consider first the matches between trustees and trustors when both are from the business school. On average, the steady-low trustors send 4.06 (S.D. = 3.04) to promoted trustees and 3.96 ( $n = 32$ ; S.D. = 3.29; W:  $p = 0.712$ ) to steady-low trustees. Consider next the matches between trustees from the business school and trustors from the engineering school. On average, steady-high trustors send 3.19 (S.D. = 3.22) to promoted trustees and 2.96 ( $n = 44$ ; S.D. = 2.98) to steady-low trustees (W:  $p = 0.340$ ). None of these differences is significant.

The same conclusion holds for trustworthiness. On average, non promoted trustees return 20.54% (S.D. = 19.02) of the triple amount they received to promoted trustors and 19.77% ( $n = 88$ ; S.D. = 18.64; W:  $p = 0.553$ ) of this amount to

steady-low trustors. Consider first the matches between trustees and trustors when both are from the business school. On average, the steady-low trustees return 21.92% (S.D. = 18.15) of the tripled amount received to promoted trustors and 20.93 ( $n = 32$ ; S.D. = 18.07; W:  $p = 0.206$ ) to steady-low trustors. Consider next the matches between trustees from the engineering school and trustors from the business school. On average, trustees from the engineering school return 19.50% (S.D. = 19.74) of the tripled amount received to promoted trustors and 19.10 ( $n = 56$ ; S.D. = 19.09; W:  $p = 0.847$ ) to steady-low trustors. Again, none of the pairwise comparisons reach standard levels of significance and the conclusion remains the same if we consider only the steady-high trustees who, on average, return 21.54% (S.D. = 21.12) to the promoted trustors and 20.21% (S.D. = 19.73) to the steady-low trustors ( $n = 44$ ; W:  $p = 0.324$ ).

In Appendix 7, Table A5 presents the estimates of Tobit models in which the dependent variable is either the amount sent by the trustor or the percentage returned by the trustee. They show that, even when controlling for covariates, the attitudes toward promoted individuals, either in the role of trustor or in the role of trustee, do not differ from the attitudes toward steady-low individuals.

#### 4.4 The Role of Inter-Group Comparisons

The previous analysis shows that achieving the status of expert when one's group identity makes it less likely *ex ante* than for another group tends to reduce trust. However, our design does not allow us to identify whether this is due precisely to the fact that the access to the status of expert was less likely for students from the business school than for those from the engineering school (inter-group comparisons) or due to the simple assignment of the status of expert to the subjects from the business school. In order to explore the mechanism leading to Result 1, we ran three sessions of an additional condition, the Single-School condition, for which we recruited 55 subjects from the business school only. There are several differences between this new condition and the main condition. First, to guarantee that promoted subjects remain a minority like in the main condition, only two subjects in each group received the status of expert instead of three. Second, because there

Table 4: Determinants of the amount sent by the trustors from the business school to the trustees, by condition (Tobit models)

| Condition                               | Main<br>(1)      | Single-School<br>(2) |
|---|------------------|----------------------|
| Beliefs                                 | 0.054*** (0.018) | 0.140*** (0.029)     |
| Promoted trustor and promoted trustee   | -1.111 (1.126)   | 0.660 (1.910)        |
| Promoted trustor and steady-low trustee | -1.913** (0.936) | 0.437 (1.749)        |
| Steady-low trustor and promoted trustee | -0.473 (0.499)   | 0.137 (0.562)        |
| Individual characteristics              | Yes              | Yes                  |
| Session fixed effects                   | Yes              | Yes                  |
| $N$                                     | 174              | 220                  |
| Nb left censored observations           | 38               | 84                   |
| Nb clusters                             | 87               | 55                   |
| Pseudo $R^2$                            | 0.111            | 0.126                |
| Log pseudo-likelihood                   | -370.152         | -428.315             |
| $F$                                     | 4.88             | 5.11                 |
| $p > F$                                 | <0.001           | <0.001               |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. Individual characteristics include gender, risk attitude, performance in the math quiz, and perception about math. \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

were only subjects from the business school in this new condition, each subject in a session received 5 ECU with a 0.5 probability for the quiz on school identity (part 1). Finally, for the same reason we naturally removed the dictator game with subjects from the other school (part 2). Because of these differences, one must remain cautious about the comparison between conditions.

Table 4 reports the marginal effects from Tobit regressions in which the dependent variable is the amount sent by the trustors. The independent variables are similar to those included in the models reported in Table 3, except for the transfer to a receiver from the other school in the dictator game. Model (1) uses the data from the main condition and model (2) those from the Single-School condition. Result 1 does not replicate in the Single-School condition: as shown by model (2), in the absence of out-groups promotion does not reduce trust toward steady-low trustees. Keeping in mind the limitation mentioned above, this suggests that inter-group comparison is necessary for promotion to impact trust. In contrast, Results 2 and

3 replicate in the Single-School condition (see Table A6 in Appendix 7).

## 5 Discussion and Conclusion

In this study, our objective was to test the effect of status promotion on interpersonal trust in the presence of natural group identities. Our main research question was to determine whether achieving a high status although one's group identity makes it less likely *ex ante* (the way we define promotion) changes trust and trustworthiness toward in-groups who did not achieve the same status and toward out-groups who share the same high status but not the same group identity. We were also interested in identifying whether others' attitudes toward promoted individuals change as well, depending on whether people share or not the same group identity.

We found that the individuals who are promoted in terms of status are as trustworthy and are not treated differently, in terms of trust or trustworthiness, than the other members of their natural group. By contrast, they trust less both their in-groups and their out-groups. These results do not support our initial conjectures according to which promotion would reduce trust toward in-groups of lower status (as we observe) but increase trust toward out-groups of high status, and trustworthiness would be impacted by promotion to the same extent as trust.

How can one explain that promotion reduces trust both toward in-group trustees of lower status and toward out-groups of similar status? In line with studies showing that individuals who are singled-out tend to behave differently (Galeotti and Zizzo, 2014), a possible interpretation is that promotion singles out individuals when differences in status are strongly correlated with group identity. This interpretation receives some support from the Single-School condition which reveals that promotion does not affect trusting decisions when inter-group comparison is not possible. In this condition becoming an expert does not single-out the promoted individuals, as there is no discrepancy between the high status of expert and school identity. It is the inter-group comparison that renders promotion more salient and that singles out the promoted individuals because the high status given

by a higher performance in maths is typically a characteristic associated with the engineering school. In other words, having a comparison group for whom the high status is a stereotypical characteristic emphasizes the singularity of the promotion of a subject from the other group that is not associated with this stereotypical status. Thus, individuals who achieve the status of expert although they belong to a group with a lower probability to succeed may feel they are special. As a result, they may feel more distant from their in-groups because of the status difference, without feeling closer to the other high status individuals because the latter belong to another group for whom the high status is a stereotypical characteristic.

How can one explain that promotion affects trust but not trustworthiness? An explanation could be related to beliefs since beliefs may affect trustors but not trustees' since they are the last movers in the game; however, our analysis rejects this explanation, as we have shown that the impact of promotion on trust is not driven by beliefs. An alternative explanation is that betrayal aversion mediates the effect of promotion on trust. Betrayal aversion is the "disutility from the experience, anticipation or observation of non-reciprocated trust" (Aimone et al., 2015). Our results are found controlling for beliefs, risk aversion and social preferences, but not for this specific preference. This interpretation is all the most plausible as trustors who hold a higher status relative to the trustee have been shown to be more betrayal averse (see, *e.g.*, Bohnet and Zeckhauser (2004); Aimone and Houser (2012) on betrayal aversion and Hong and Bohnet (2007) for evidence linking status and betrayal aversion). This makes the interpretation in terms of betrayal aversion attractive.

An implication of our results is that it may be important to accompany social mobility by interventions to increase trusting behavior. Of course, we must remain cautious before extrapolating our findings. In our design the assignment of status is fair and transparent, whereas in real settings promotion processes are sometimes fuzzy or discretionary. This may influence the relationships between promoted individuals and others, as procedural fairness impacts social preferences (*e.g.*, Bolton et al., 2005). Moreover, when subjects were performing the math quiz, they could not anticipate that their relative performance would be used to assign status; the purpose was to limit selection on traits such as greed or pref-

erence for status, and to identify the causal effect of status promotion on trust. In contrast, in real settings the access to a higher status is also affected by competitiveness and a taste for power and rank. These preferences might affect the way promoted individuals trust and are trusted by others, as for example, Bartling et al. (2009) have shown that more competitive people are less egalitarian. Finally, our experiment abstracts from income inequality but in real settings differences in status often come with income inequality, which may also impact behavior toward promoted individuals (*e.g.*, Lei and Vesely, 2010). The anecdotal evidence showing that socially mobile individuals face sometimes the risk of being rejected by their in-groups could result from these other considerations.

From a methodological point of view, we can discuss about the procedures used to induce status. Our subjects had both a natural affiliation and a lab-induced status. While the group identity conferred by the school affiliation is strong (as shown by in-group favoritism of subjects from both schools in the dictator games), the induced status may appear comparatively weak, and thus, have a limited impact on behavior. We doubt it because we confirmed the importance of math for a vast majority of the subjects. However, we cannot exclude that our design may have induced status asymmetrically: promoted individuals may have perceived it as special, but others did not.

Several interesting research directions could be explored. It would be important to study also the impact of demotion on trusting behavior. Indeed, social demotion is a rising concern in modern democracies, and sometimes one's promotion leads to someone else's demotion. It would be also interesting to allow subjects to opt-in or opt-out of the promotion process to measure how selection into promotion affects trust toward promoted individuals.



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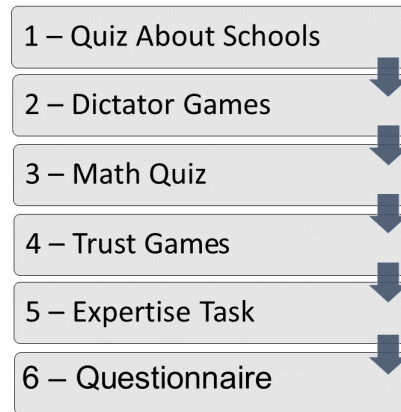
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## Appendix 1    Timeline of the experiment





## Appendix 2 Quiz on schools - Part 1 (*Translated from French*)

### Business school

4. Julien Courbet

**Question 1** How many students are there at EM Lyon?

1. Around 1000
2. Around 2000
3. Around 3000
4. Around 4000

**Question 4** When was EM Lyon founded?

1. 1753
2. 1872
3. 1917
4. 1932

**Question 2** According to the ranking by "L'etudiant",<sup>20</sup>, what is the rank of EM Lyon among the French business schools?

1. Third rank
2. Fifth rank
3. Tenth rank
4. Beyond tenth rank

**Question 5** What is the average grade at Baccalaureat<sup>21</sup> of the students at EM Lyon?

1. 15
2. 15.5
3. 16.5
4. 17.5

**Question 3** Among the following famous people, which one is an alumni from EM Lyon?

1. Nagui
2. Stéphane Bern
3. Christophe Dechavanne

**Question 6** What is the average yearly salary of the students from EM Lyon in their first job after graduation?

1. Less than €30 000
2. Between €30 and €35 000
3. Between €35 and €40 000
4. More than €40 000

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<sup>20</sup>L'Etudiant is a magazine on higher education that is widely read by students.

<sup>21</sup>In France, Baccalaureat is the exam passed at the end of the high school.

## Engineering school

4. Nicolas Hulot

**Question 1** How many students are there at ECL?

1. Less than 1000
2. About 1500
3. About 2000
4. About 2500

**Question 2** According to the ranking by "L'étudiant", what is the rank of ECL among the French engineering schools?

1. Less than tenth
2. Between tenth and fifteenth
3. Between fifteenth and twentieth
4. Beyond twentieth

**Question 3** Among the following famous people, which one is an alumni from ECL?

1. Jean Mermoz
2. Paul-Emile Victor
3. Jacques-Yves Cousteau

**Question 4** When was ECL founded?

1. 1753
2. 1857
3. 1912
4. 1934

**Question 5** What is the average grade at Baccalaureat of the students at ECL?

1. 15
2. 16
3. 17
4. 18

**Question 6** What is the average yearly salary of the students from ECL in their first job after graduation?

1. Less than 27 000€
2. Between 27 and 30 000€
3. Between 30 and 33 000€
4. More than 33 000€

## Appendix 3    Math quiz - Part 3 (*Translated from French*)

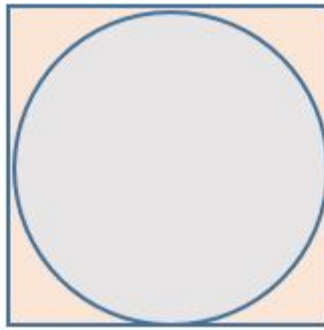
1.  $a$  and  $b$  are two even integers. Which of the following is also an even integer?
  - (a)  $ab + 2$
  - (b)  $a(b - 1)$
  - (c)  $a(a + 5)$
  - (d)  $3a + 4b$
  - (e)  $(a + 3)(b - 1)$
2.  $(x + 2)^2 = -4 + 10x$ . What can be a value of  $x$ ?
  - (a) 2
  - (b) 1
  - (c) 0
  - (d) -1
  - (e) -2
3. Approximately, what percentage of the forest across the world is in Finland, knowing that Finland has 53.42 millions hectares of forest for a total of 8.076 billions hectares of forest worldwide?
  - (a) 0.0066%
  - (b) 0.066%
  - (c) 0.66%
  - (d) 6.6%
  - (e) 66%
4. The Figure below is a square. This square has sides that are 4 units long. What is the best approximation of the area of the circle?
  - (a)  $\pi$
- (b) 4
- (c) 8
- (d) 13
- (e) 16
5. An individual invests his money in stocks in the financial market. During the first year, the value of his stocks increases by 50%. During the second year, the value of his stocks decreases by 30%. What is the total variation of the value of his stocks in the period?
  - (a) -5%
  - (b) 5%
  - (c) 15%
  - (d) 20%
  - (e) 80%
6. Assume that  $A$ ,  $B$ ,  $C$  are three statements such that  $C$  is true if exactly one of  $A$  or  $B$  is true. If  $C$  is false, then which of the following statement is necessarily true?
  - (a) If  $A$  is true, then  $B$  is false
  - (b) If  $A$  is false, then  $B$  is false
  - (c) If  $A$  is false, then  $B$  is true
  - (d)  $A$  and  $B$  are both true
  - (e)  $A$  and  $B$  are both false
7.  $(1 + i)^{10} = ?$ 
  - (a) 1
  - (b)  $i$
  - (c) 32
  - (d)  $32i$

- (e)  $32(i+1)$
8.  $f$  is a real value function continuously differentiable, defined on the open interval  $(-1, 4)$  such that  $f(3) = 5$  and  $f'(x) \leq -1$  for all  $x$ . What is the greatest possible value of  $f(0)$ ?
- (a) 3  
(b) 4  
(c) 5  
(d) 8  
(e) 11
9. A drawer contains 2 pairs of blue socks, 4 pairs of red socks, 2 pairs of yellow socks. If we draw randomly two pairs of socks from this drawer, what is the probability that those two pairs are of the same color?
- (a)  $\frac{2}{7}$   
(b)  $\frac{2}{5}$   
(c)  $\frac{3}{7}$   
(d)  $\frac{1}{2}$   
(e)  $\frac{3}{5}$
10. If  $F(x) = \int_e^x \ln(t)dt$  for all  $x$ , then  $F'(x) = ?$
- (a)  $x$   
(b)  $\frac{1}{x}$   
(c)  $\ln(x)$   
(d)  $x\ln(x)$   
(e)  $x\ln(x) - 1$
11.  $F(1)$  and  $F(n) = F(n-1) + \frac{1}{2}$  for all integer  $n > 1$ , then  $F(101) = ?$
- (a) 49  
(b) 50  
(c) 51  
(d) 52  
(e) 53
12.  $\lim_{x \rightarrow 0} \frac{\cos(3x)-1}{x^2} = ?$
- (a)  $\frac{9}{2}$   
(b)  $\frac{3}{2}$   
(c)  $-\frac{2}{3}$   
(d)  $-\frac{3}{2}$   
(e)  $-\frac{9}{2}$
13. Assume that  $f$  is differentiable, with  $\lim_{x \rightarrow \infty} f(x)$  and  $\lim_{x \rightarrow \infty} f'(x)$  both existing and finite. Which of the following statement MUST be true?
- (a)  $\lim_{x \rightarrow \infty} f'(x) = 0$   
(b)  $\lim_{x \rightarrow \infty} f''(x) = 0$   
(c)  $\lim_{x \rightarrow \infty} f(x) = \lim_{x \rightarrow \infty} f'(x)$   
(d)  $f$  is constant  
(e)  $f'$  is constant
14. What is the 19th derivative of  $\frac{x-1}{e^x}$ ?
- (a)  $(18-x)e^{-x}$   
(b)  $(19-x)e^{-x}$   
(c)  $(20-x)e^{-x}$   
(d)  $(x-19)e^{-x}$   
(e)  $(x-20)e^{-x}$
15. How many positive numbers satisfy  $\cos(97x) = x$ ?
- (a) 1  
(b) 15  
(c) 31  
(d) 49  
(e) 96
16.  $\sum_{k=1}^{\infty} \frac{k^2}{k!} = ?$

- (a)  $e$
- (b)  $2e$
- (c)  $(e+1)(e-1)$
- (d)  $e^2$
- (e)  $\infty$

17. The first derivative of  $\phi(t) = f(t^2, 2t)$  is:

- (a)  $(2+2t)\frac{\partial f}{\partial x}(t^2, t2)+(2+2t)\frac{\partial f}{\partial y}(t^2, 2t)$
- (b)  $\frac{\partial f}{\partial x}(t^2, 2t) + \frac{\partial f}{\partial y}(t^2, 2t)$
- (c)  $2t\frac{\partial f}{\partial x}(t^2, 2t) + 2\frac{\partial f}{\partial y}(t^2, 2t)$
- (d)  $2\frac{\partial f}{\partial x}(t^2, 2t) + 2t\frac{\partial f}{\partial y}(t^2, 2t)$
- (e) None of the previous is correct



Square and circle

## Appendix 4 Instructions (*Translated from French*)

### 4.1 Instructions of the main condition

We thank you for participating in this experiment on decision-making. Please switch off your cellphone and put it away. You are not allowed to communicate with the other participants, unless otherwise instructed by an experimenter.

During the session, if you have any question you can press the red button on the side of your cubicle. An experimenter will come and answer to your questions in private. During the session, you will have to make several decisions anonymously. These decisions can earn you money. Your earnings will be expressed in Experimental Currency Units (ECU) and converted into Euros at the following rate:

$$5 \text{ ECU} = \text{€}1$$

You will be paid in private, in a separate room and in cash. Other participants will not be informed of your earnings.

The session consists of several parts. At the end of each part, you will receive the instructions for the next part. In this experiment, participants are students from the Ecole Centrale de Lyon and from the Ecole de Management de Lyon. We call participants from the Ecole Centrale “Centraliens” and participants from the Ecole de Management “Emiens”. Please make sure that the logo displayed on your computer screen corresponds to your school.

#### 4.1.1 Part 1

In the first part, you have to answer individually to a quiz about your school. 6 multiple choice questions will be displayed on your screen. For each question, you have to choose an answer and validate by pressing the OK button. Once you have pressed the OK button, your answer is recorded and you proceed to the next question. You have 4 minutes to answer to the 6 questions.

In order to get help to answer to the questions, you can use a chatbox, displayed on the right part of the screen. You can communicate only with the participants from the same school as you and exclusively through the chatbox. Communication is anonymous. You can send any message, provided that these messages do not identify you and are not offensive.

In this part, you will earn a fixed payoff of 5 ECU and a variable payoff that depends on your answers. Each correct answer pays you 2.5 ECU. In addition, each participant from the school whose participants in the session gave the highest number of correct answers earns an extra 5 ECU.

You will be informed of your number of correct answers, of the school which participants gave the highest number of correct answers and of your payoff in this part at the end of the session.

***\*\* Please read these instructions again. If you have any question, press the call button on the side of your cubicle \*\****

#### **4.1.2 Part 2**

This part involves person A and person B.

Person A receives an endowment of 10 ECU. He has to decide which amount, between 0 and 10 ECU inclusive, he is willing to transfer to person B. He keeps for himself the amount he did not transfer.

Person B does not receive any endowment. He earns the amount that person A transfers to him. He has no decision to make.

Each participant makes two decisions successively as a person A : in one decision, person B is a student from Ecole Centrale de Lyon; in the other decision, person B is a student from Ecole de Management de Lyon.

At the end of the session, the computer program will randomly match you to two other participants. For one of these matches, you will be paid for your decision as person A; for the other match, you will be paid in the role of person B. The program selects randomly the match for which your decision as person A determines your payoff.

1. As a person A, it is your decision that determines your payoff and the payoff of the person B.
2. As a person B, it is the decision of the person A you are matched with that determines your payoff and his payoff.

You will be informed of your payoff in this part at the end of the session.

***\*\* Please read these instructions again. If you have any question, press the call button. \*\****

#### **4.1.3 Part 3**

In this part, the computer program forms randomly groups of five participants. In each group, two participants are from Ecole Centrale de Lyon and three participants are from Ecole de Management de Lyon.

You have to answer individually to multiple choice mathematical questions. You have to select an answer and validate it by pressing the OK button. Validation is definitive. You can use the

paper sheets and pen that have been provided to you. You are not allowed to use your cellphone to help you solve the questions, otherwise you expose yourself to exclusion from the session and from the payoffs. Every participants in the session receive the same questions in the same order.

You have 15 minutes to answer to the questions.

For your participation in this part, you earn a fixed payoff of 5 ECU and a variable payoff. The computer program will randomly select one participant in each group of five participants. The number of correct answers of this participant will determine the variable payoff of each member of his group. Each correct answer of this participant increases the payoff of every member of his group, including himself, by 1 ECU.

You will be informed of your number of correct answers and of your payoff in this part at the end of the session. In addition, your relative performance in this part will condition your role in the next part.

***\*\* Please read these instructions again. If you have any question, press the call button. \*\****

#### **4.1.4 Part 4**

The previous part was used by the computer program to identify two types of participants who will have different roles in what follows.

1. Experts are participants who gave the highest number of correct answers in the third part within their group of five participants. In each group of five, there are three experts.
2. Agents are the participants who are not experts. In each group of five persons, there are two agents.

You are informed whether you are an agent or an expert at the beginning of the fourth part. This part consists in two stages.

**Stage 1** In this stage, the composition of the groups of five is the same as in the third part. This stage consists in eight successive games. In each game, you are paired with a different member of your group. You are informed of the school and role (expert or agent) of the other member of the pair.

In each pair, a participant is a participant A and the other one is a participant B. The sequence in each game is the following :

1. Participant A makes a decision.
2. When making his decision, participant B does not know the decision made by participant A. Participant B has to make a decision for each potential decision made by participant A.



In the first four games, you have the role of person A and you interact with the four other members of the group in the role of person B.

In the last four games, you have the role of person B and you interact with the four other members of the group who will have the role of person A.

At the end of the session, the computer program will randomly select one of your decisions in the role of person A and one of your decision in the role of person B. Your payoff in each of these two games will be added-up to determine your payoff in this part.

### **Description of each game:**

1. Participant A and participant B receive an endowment of 10 ECU each.
2. Participant A chooses the amount he is willing to send to participant B. Participant A can send from 0 to 10 ECU, inclusive.
3. Each ECU sent to participant B is multiplied by 3 by the computer program. For example, if participant A sends 2 ECU, participant B receives  $2 \times 3 = 6$  ECU ; if he sends 4 ECU, participant B receives  $4 \times 3 = 12$  ECU.
4. Then, participant B chooses the amount he is willing to return to participant A. This amount is between 0 and three times the amount sent by participant A, inclusive.

When choosing the amount to return to participant A, participant B does not know the amount sent by participant A. Participant B has to choose the amount he is willing to send back to participant A for each amount participant A potentially sent to him. For each amount potentially sent by participant A, participant B can return any amount between 0 and 3 times this amount (because he received this amount multiplied by 3). For example, if participant A sent 2 ECU, participant B can send back any amount, between 0 and 6 ECU, inclusive. If participant A sent 5 ECU, he can send back any amount, between 0 and 15 ECU, inclusive.

When choosing which amount to send to participant B, participant A has to indicate which proportion of the amount received by participant B he expects to receive in return. A guess equal to the actual amount more or less 5 percents pays an extra 5 ECU.

**Determination of payoffs** For each game selected for payment, the computer program takes into account the decision of Participant A. Then, the program selects among participant B's return decisions the one that corresponds to the amount actually sent by participant A.

For each game selected for payment in this stage, participant A's payoff is computed as follows:  
Payoff of participant A = 10 - amount sent to participant B + amount sent back by participant B

Participant B's payoff is computed as follows:

Payoff of participant B =  $10 + 3 \times \text{amount sent by A} - \text{amount sent back to A}$

The following figure represents the screenshot for the decision of a participant A. On this screen, you have to indicate the amount you are willing to send to participant B and the percentage of the amount received you guess you will receive in return.

Screenshot of participant A's decision.

Which amount out of your endowment of 10 ECU would you like to transfer? 0

- Your identifier is: EM\_2(expert)  
- You take your decision as person A  
- You interact with ECL\_1(Expert)

Which percentage of the amount received by your counterpart do you expect to receive back? 0

OK

The following figure represents the screenshot for the decisions of a participant B. The first column indicates each amount potentially sent by A. The second column displays each corresponding tripled amount you can potentially receive. In the third column you have to enter on each line the amount you decide to send back to participant A, between 0 and the tripled amount indicated in the second column.

Screenshot of participant B's decisions.

Temps restant 12

- You are **EM\_3(expert)**  
 - You take your decision as person B  
 - You interact with **EM\_1(agent)**

| If EM_1(agent) transfers : | You receive (3 times the amount transferred by EM_1(agent)) : | You send back:                            |
|----------------------------|---|---|
| 1                          | 3   | <input style="width: 100%;" type="text"/> |
| 2                          | 6   | <input style="width: 100%;" type="text"/> |
| 3                          | 9   | <input style="width: 100%;" type="text"/> |
| 4                          | 12  | <input style="width: 100%;" type="text"/> |
| 5                          | 15  | <input style="width: 100%;" type="text"/> |
| 6                          | 18  | <input style="width: 100%;" type="text"/> |
| 7                          | 21  | <input style="width: 100%;" type="text"/> |
| 8                          | 24  | <input style="width: 100%;" type="text"/> |
| 9                          | 27  | <input style="width: 100%;" type="text"/> |
| 10                         | 30  | <input style="width: 100%;" type="text"/> |

**Stage 2** In the second stage, decisions are no longer made within the five person group, but at the session level.

Agents and experts have different roles. Agents have to answer to three multiple choice maths questions. Each agent receives the three same questions. Experts are informed of the distribution of the agents' answers; then, they have to decide which question will be used to determine everybody's payoff in this part.

The following screenshot represents the agents' decision screen.

### Screenshot of the Agents' decisions

The screenshot displays a user interface for agents to answer three questions. Each question is presented in a separate panel with a large black area for the question text and a section for answer options. The questions are labeled 'Question 1:', 'Question 2:', and 'Question 3:'. Below each question, the text 'Your answer is :' is followed by three radio button options: 'a)', 'b)', and 'c)'. At the bottom left of the interface, there is a prompt 'Please answer the following questions'. At the bottom right, there is an 'OK' button.

Once all the agents have submitted their answers, the experts can see the questions and the distribution of the answers for each question. Experts have to chose which question will be used to determine the payoff of each participant in the session for this stage, regardless of their role of agent or expert. To do so, they vote for one of the questions. The number of correct answers to the question that has received the highest number of votes from the experts in the session determines each participant's payoff in this stage.

The following screenshot represents the experts' decision screen.

## Screenshot of the Experts' decision

The screenshot displays a software interface for experts to make a decision. It features three panels, each for a different question. Each panel contains a large black square representing a question and a table showing the distribution of answers. Below each table is a 'Vote' button. An 'OK' button is located at the bottom right of the interface.

| Question 1 : |                        |
|--------------|------------------------|
| Answer       | Distribution of Answer |
| a)           | 25 %                   |
| b)           | 25 %                   |
| c)           | 50 %                   |

Vote question 1 : ☐

| Question 2 : |                        |
|--------------|------------------------|
| Answer       | Distribution of Answer |
| a)           | 0%                     |
| b)           | 50 %                   |
| c)           | 50 %                   |

Vote question 2 : ☐

| Question 3 : |                        |
|--------------|------------------------|
| Answer       | Distribution of Answer |
| a)           | 100%                   |
| b)           | 0%                     |
| c)           | 0%                     |

Vote question 3 : ☐

The payoff in ECU of each participant in this stage is equal to the percentage of correct answers to the selected question, multiplied by 10. For instance, if the experts choose question 1 and that 50% of the agents gave the correct answer to this question, each participant in the session earns 5 ECU ( $50\% \times 10 = 5$ ).

\*\*\*

At the beginning of this part, you will be informed on whether you are an expert or an agent. You will receive a unique identifier in your group of five persons in the form: School.i(expert) or School.i(agent). Then, you will have to fill out a check questionnaire that will be displayed on your screen, then stage 1 will start.

\*\*\*

At the end of this part, you will be informed of your performance and of your payoffs in the different parts of the experiment. At the end of the session, several questionnaires will be displayed on your screen. We remind you that your answers are anonymous. Once you have filled these questionnaires, please remain seated and silent. When you are called to the payment room, bring with you only your computer tag and your payment receipt. Please, leave the instructions, pen and papers on your desk.

***\*\* Please read these instructions again and if you have questions, press the call button. \*\****

## 4.2 Instructions of the Control condition

*(We only reproduce here the paragraphs of the instructions that differ from the main treatment, starting at the end of part 4).*

**Stage 2** In the second stage, decisions are no longer made within the five persons group, but at the session level.

Agents and experts have different roles. However, each participants in the session receive the same payoffs for this stage. The payoffs for this stage do not depend on roles. The instructions for stage 2 will be distributed after the end of stage 1.

\*\*\*

At the beginning of this part, you will be informed on whether you are an expert or an agent. You will receive a unique identifier in your group of five persons in the form: School.i(expert) or School.i(agent). Then, you will have to fill out a check questionnaire that will be displayed on your screen, then stage 1 will start.

\*\*\*

### 4.2.1 Stage 2

In stage 2, agents and experts have different roles. Agents perform a set of tasks and experts decide which task determines payoffs.

The tasks consist in choosing an answer to 3 multiple choice math questions. Each agent receives the three same questions. The following screenshot represents the agents' decision screen.

### Screenshot of the Agents' decisions

The screenshot displays a user interface for agents to answer three questions. Each question is presented in a separate panel with a large black area for the question text and a response area at the bottom. The response area includes the text 'Your answer is :' followed by three radio button options: 'a)', 'b)', and 'c)'. Below the question panels, there is a prompt 'Please answer the following questions' and an 'OK' button.

**Question 1 :**

Your answer is : ☐ a)  
☐ b)  
☐ c)

**Question 2 :**

Your answer is : ☐ a)  
☐ b)  
☐ c)

**Question 3 :**

Your answer is : ☐ a)  
☐ b)  
☐ c)

Please answer the following questions

OK

Once all the agents have submitted their answers, the experts can see the questions and the distribution of the answers for each question. Experts have to chose which question will be used to determine the payoff of each participant in the session for this stage, regardless of their role of agent or expert. To do so, they vote for one of the questions. The number of correct answers to the question that has received the highest number of votes from the experts in the session determines each participant's payoff in this stage.

The following screenshot represents the experts' decision screen.

## Screenshot of the Experts' decision

The screenshot displays a software interface for experts to make decisions on three questions. Each question is presented in a separate panel. Each panel contains a large black square representing a question and a table showing the distribution of answers. Below each table is a 'Vote question' button. An 'OK' button is located at the bottom right of the interface.

**Question 1 :**

| Answer | Distribution of Answer |
|--------|------------------------|
| a)     | 25 %                   |
| b)     | 25 %                   |
| c)     | 50 %                   |

Vote question 1 : ☐

**Question 2 :**

| Answer | Distribution of Answer |
|--------|------------------------|
| a)     | 0%                     |
| b)     | 50 %                   |
| c)     | 50 %                   |

Vote question 2 : ☐

**Question 3 :**

| Answer | Distribution of Answer |
|--------|------------------------|
| a)     | 100%                   |
| b)     | 0%                     |
| c)     | 0%                     |

Vote question 3 : ☐

OK

The payoff in ECU of each participant in this stage is equal to the percentage of correct answers to the selected question, multiplied by 10. For instance, if the experts choose question 1 and that 50% of the agents gave the correct answer to this question, each participant in the session earns 5 ECU ( $50\% \times 10 = 5$ ).

At the end of this part, you will be informed of your performance and of your payoffs in the different parts of the experiment. At the end of the session, several questionnaires will be displayed on your screen. We remind you that your answers are anonymous. Once you have filled these questionnaires, please remain seated and silent. When you are called to the payment room, bring with you only your computer tag and your payment receipt. Please, leave the instructions, pen and papers on your desk.

***\*\* Please read these instructions again and if you have questions, press the call button. \*\****



## 4.3 Instructions of the Single-School condition

We thank you for participating in this experiment on decision-making. Please switch off your cellphone and put it away. You are not allowed to communicate with the other participants, unless otherwise instructed by an experimenter.

During the session, if you have any question you can press the red button on the side of your cubicle. An experimenter will come and answer to your questions in private. During the session, you will have to make several decisions anonymously. These decisions can earn you money. Your earnings will be expressed in Experimental Currency Units (ECU) and converted into Euros at the following rate:

$$5 \text{ ECU} = \text{€}1$$

You will be paid in private, in a separate room and in cash. Other participants will not be informed of your earnings.

The session consists of several parts. At the end of each part, you will receive the instructions for the next part. In this experiment, participants are students from the Ecole de Management de Lyon exclusively. We call them “Emiens”.

### 4.3.1 Part 1

In the first part, you have to answer individually to a quiz about your school. 6 multiple choice questions will be displayed on your screen. For each question, you have to choose an answer and validate by pressing the OK button. Once you have pressed the OK button, your answer is recorded and you proceed to the next question. You have 4 minutes to answer to the 6 questions.

In order to get help to answer to the questions, you can use a chatbox, displayed on the right part of the screen. You can communicate with other participants from the session exclusively through the chatbox. Communication is anonymous. You can send any message, provided that these messages do not identify you and are not offensive.

In this part, you will earn a fixed payoff of 5 ECU and a variable payoff that depends on your answers. Each correct answer pays you 2.5 ECU. In addition, there is one chance out of 2 that each participant in the session earns an extra 5 ECU.

You will be informed of your number of correct answers and of your payoff in this part at the end of the session.

***\*\* Please read these instructions again. If you have any question, press the call button on the side of your cubicle \*\****

### 4.3.2 Part 2

This part involves person A and person B.

Person A receives an endowment of 10 ECU. He has to decide which amount, between 0 and 10 ECU inclusive, he is willing to transfer to person B. He keeps for himself the amount he did not transfer.

Person B does not receive any endowment. He earns the amount that person A transfers to him. He has no decision to make.

At the end of the session, the computer program will randomly match you to two other participants. For one of these matches, you will be paid for your decision as person A; for the other match, you will be paid in the role of person B. The program selects randomly the match for which your decision as person A determines your payoff.

1. As a person A, it is your decision that determines your payoff and the payoff of the person B.
2. As a person B, it is the decision of the person A you are matched with that determines your payoff and his payoff.

You will be informed of your payoff in this part at the end of the session.

***\*\* Please read these instructions again. If you have any question, press the call button. \*\****

### 4.3.3 Part 3

In this part, the computer program forms randomly groups of five participants.

You have to answer individually to multiple choice mathematical questions. You have to select an answer and validate it by pressing the OK button. Validation is definitive. You can use the paper sheets and pen that have been provided to you. You are not allowed to use your cellphone to help you solve the questions, otherwise you expose yourself to exclusion from the session and from the payoffs. Every participants in the session receive the same questions in the same order.

You have 15 minutes to answer to the questions.

For your participation in this part, you earn a fixed payoff of 5 ECU and a variable payoff. The computer program will randomly select one participant in each group of five participants. The number of correct answers of this participant will determine the variable payoff of each member of his group. Each correct answer of this participant increases the payoff of every member of his group, including himself, by 1 ECU.

You will be informed of your number of correct answers and of your payoff in this part at the end of the session. In addition, your relative performance in this part will condition your role in the next part.

***\*\* Please read these instructions again. If you have any question, press the call button. \*\****

#### **4.3.4 Part 4**

The previous part was used by the computer program to identify two types of participants who will have different roles in what follows.

1. Experts are participants who gave the highest number of correct answers in the third part within their group of five participants. In each group of five, there are two experts.
2. Agents are the participants who are not experts. In each group of five persons, there are three agents.

You are informed whether you are an agent or an expert at the beginning of the fourth part. This part consists in two stages.

**Stage 1** In this stage, the composition of the groups of five is the same as in the third part. This stage consists in eight successive games. In each game, you are paired with a different member of your group. You are informed of the role (expert or agent) of the other member of the pair.

In each pair, a participant is a participant A and the other one is a participant B. The sequence in each game is the following :

1. Participant A makes a decision.
2. When making his decision, participant B does not know the decision made by participant A. Participant B has to make a decision for each potential decision made by participant A.

In the first four games, you have the role of person A and you interact with the four other members of the group in the role of person B.

In the last four games, you have the role of person B and you interact with the four other members of the group who will have the role of person A.

At the end of the session, the computer program will randomly select one of your decisions in the role of person A and one of your decision in the role of person B. Your payoff in each of these two games will be added-up to determine your payoff in this part.

### Description of each game:

1. Participant A and participant B receive an endowment of 10 ECU each.
2. Participant A chooses the amount he is willing to send to participant B. Participant A can send from 0 to 10 ECU, inclusive.
3. Each ECU sent to participant B is multiplied by 3 by the computer program. For example, if participant A sends 2 ECU, participant B receives  $2 \times 3 = 6$  ECU ; if he sends 4 ECU, participant B receives  $4 \times 3 = 12$  ECU.
4. Then, participant B chooses the amount he is willing to return to participant A. This amount is between 0 and three times the amount sent by participant A, inclusive.

When choosing the amount to return to participant A, participant B does not know the amount sent by participant A. Participant B has to choose the amount he is willing to send back to participant A for each amount participant A potentially sent to him. For each amount potentially sent by participant A, participant B can return any amount between 0 and 3 times this amount (because he received this amount multiplied by 3). For example, if participant A sent 2 ECU, participant B can send back any amount, between 0 and 6 ECU, inclusive. If participant A sent 5 ECU, he can send back any amount, between 0 and 15 ECU, inclusive.

When choosing which amount to send to participant B, participant A has to indicate which proportion of the amount received by participant B he expects to receive in return. A guess equal to the actual amount more or less 5 percents pays an extra 5 ECU.

**Determination of payoffs** For each game selected for payment, the computer program takes into account the decision of Participant A. Then, the program selects among participant B's return decisions the one that corresponds to the amount actually sent by participant A.

For each game selected for payment in this stage, participant A's payoff is computed as follows:  
Payoff of participant A =  $10 - \text{amount sent to participant B} + \text{amount sent back by participant B}$

Participant B's payoff is computed as follows:

Payoff of participant B =  $10 + 3 \times \text{amount sent by A} - \text{amount sent back to A}$

The following figure represents the screenshot for the decision of a participant A. On this screen, you have to indicate the amount you are willing to send to participant B and the percentage of the amount received you guess you will receive in return.

Screenshot of participant A's decision.

Which amount out of your endowment of 10 ECU would you like to transfer ?

Which percentage of the amount received by your counterpart do you expect to receive back ?

- Your identifier is : **EM\_2(expert)**  
 - You take your decision as **person A**  
 - You interact with **EM\_1 (Expert)**

OK

The following figure represents the screenshot for the decisions of a participant B. The first column indicates each amount potentially sent by A. The second column displays each corresponding tripled amount you can potentially receive. In the third column you have to enter on each line the amount you decide to send back to participant A, between 0 and the tripled amount indicated in the second column.

Screenshot of participant B's decisions.

| Si EM_1(agent) transfère : | Vous recevez (transfert de EM_1(agent) multiplié par 3) : | Vous retournez :     |
|----------------------------|---|----------------------|
| 1                          | 3   | <input type="text"/> |
| 2                          | 6   | <input type="text"/> |
| 3                          | 9   | <input type="text"/> |
| 4                          | 12  | <input type="text"/> |
| 5                          | 15  | <input type="text"/> |
| 6                          | 18  | <input type="text"/> |
| 7                          | 21  | <input type="text"/> |
| 8                          | 24  | <input type="text"/> |
| 9                          | 27  | <input type="text"/> |
| 10                         | 30  | <input type="text"/> |

- Vous êtes **EM\_3(expert)**  
 - Vous prenez une décision en tant que personne B  
 - Vous interagissez avec **EM\_1(agent)**

OK

**Stage 2** In the second stage, decisions are no longer made within the five person group, but at the session level.

Agents and experts have different roles. Agents have to answer to three multiple choice maths questions. Each agent receives the three same questions. Experts are informed of the distribution of the agents' answers; then, they have to decide which question will be used to determine everybody's payoff in this part.

The following screenshot represents the agents' decision screen.

Screenshot of the Agents' decisions

The screenshot displays a user interface for agents to answer three multiple-choice questions. The interface is divided into three columns, each containing a question box. Each question box has a title (Question 1, Question 2, Question 3), a large black rectangular area for the question text, and a response area at the bottom. The response area includes the text 'Your answer is :', three radio buttons labeled 'a)', 'b)', and 'c)', and a small 'OK' button at the bottom right of the entire screen. At the bottom left of the screen, there is a prompt: 'Please answer the following questions'.

Once all the agents have submitted their answers, the experts can see the questions and the distribution of the answers for each question. Experts have to chose which question will be used to determine the payoff of each participant in the session for this stage, regardless of their role of agent or expert. To do so, they vote for one of the questions. The number of correct answers to the question that has received the highest number of votes from the experts in the session determines each participant's payoff in this stage.

The following screenshot represents the experts' decision screen.

## Screenshot of the Experts' decision

The screenshot displays a software interface for experts to make decisions on three questions. Each question is presented in a separate panel. Below each question is a table showing the distribution of answers (a, b, c) and their respective percentages. At the bottom of each panel is a 'Vote question' button. An 'OK' button is located at the bottom right of the entire interface.

| Question 1 : |                        |
|--------------|------------------------|
| Answer       | Distribution of Answer |
| a)           | 25 %                   |
| b)           | 25 %                   |
| c)           | 50 %                   |

Vote question 1 : ☐

| Question 2 : |                        |
|--------------|------------------------|
| Answer       | Distribution of Answer |
| a)           | 0%                     |
| b)           | 50 %                   |
| c)           | 50 %                   |

Vote question 2 : ☐

| Question 3 : |                        |
|--------------|------------------------|
| Answer       | Distribution of Answer |
| a)           | 100%                   |
| b)           | 0%                     |
| c)           | 0%                     |

Vote question 3 : ☐ OK

The payoff in ECU of each participant in this stage is equal to the percentage of correct answers to the selected question, multiplied by 10. For instance, if the experts choose question 1 and that 50% of the agents gave the correct answer to this question, each participant in the session earns 5 ECU ( $50\% \times 10 = 5$ ).

\*\*\*

At the beginning of this part, you will be informed on whether you are an expert or an agent. You will receive a unique identifier in your group of five persons in the form: Em\_i(expert) or Em\_i(agent). Then, you will have to fill out a check questionnaire that will be displayed on your screen, then stage 1 will start.

\*\*\*

At the end of this part, you will be informed of your performance and of your payoffs in the different parts of the experiment. At the end of the session, several questionnaires will be displayed on your screen. We remind you that your answers are anonymous. Once you have filled these questionnaires, please remain seated and silent. When you are called to the payment room, bring with you only your computer tag and your payment receipt. Please, leave the instructions, pen and papers on your desk.

***\*\* Please read these instructions again and if you have questions, press the call button. \*\****

## Appendix 5 Analysis of the Control condition

One may worry that informing subjects about the content of the expertise task before the trust games may confound the results if this information introduces in the trust games a feeling of solidarity and concern for reciprocity between the agents and the experts who have to act as representatives in the final part. Thus, we ran three sessions of a control condition, involving 45 subjects, in which we gave to the subjects minimal information about the expertise task before they played the trust games. In this condition we only informed subjects that after the trust games there will be a task in which experts and agents will have different roles and that payoffs will be independent from status. We did not inform them of the precise content of the task or how payoffs will be determined.

Table A1 reports the estimates of models similar to models (2) and (3) in Table 3 with clustering at the individual level, except that we interact the variables of interest capturing the status of the matched individuals in the trust games (Prom. trustee and St.-low trustor, Prom. trustee and St.-high trustee, etc.) with a dummy variable for the control condition. Models (1) and (2) estimate the determinants of the trust decisions of subjects from the business school, and models (3) and (4) estimate the determinants of their trustworthiness. In models (1) and (3), both the trustor and the trustee are from the business school. In models (2) and (4), the trustee is from the engineering school. The table also reports the  $p$ -value of Chow tests comparing the parameters of interest across conditions.

This table shows that the values of the parameters do not differ significantly across conditions. Indeed, the coefficients of the interacted terms point in the same direction as the main corresponding variables but they never reach significance. Informing the subjects about the content of the expertise task before they play the trust games does not drive our results. Therefore, we pool the data from this control condition together with the data of the main condition.



Table A1: Trust and trustworthiness of subjects from the business school - Main condition and Control condition (Tobit models)

| Dep. variable                                      | Trust<br>(1)        | Trust<br>(2)        | Trustworthiness<br>(3) | Trustworthiness<br>(4) |
|--|---------------------|---------------------|------------------------|------------------------|
| Beliefs  | 0.052***<br>(0.017) | 0.057***<br>(0.015) |                        |                        |
| Prom. sender and St.-low receiver <sup>a</sup>     | -2.383**<br>(1.126) |                     | 3.827<br>(9.461)       |                        |
| Prom. sender and St.-low receiver (Control cond.)  | -1.062<br>(1.372)   |                     | 6.636<br>(15.98)       |                        |
| Prom. sender and St.-high receiver                 |                     | -2.079*<br>(1.068)  |                        | 9.763<br>(7.890)       |
| Prom. sender and St.-high receiver (Control cond.) |                     | -2.092<br>(1.476)   |                        | 3.279<br>(14.63)       |
| $p - value$ diff.                                  | 0.474               | 0.994               | 0.879                  | 0.695                  |
| Individual characteristics                         | Yes                 | Yes                 | Yes                    | Yes                    |
| Session fixed effects                              | Yes                 | Yes                 | Yes                    | Yes                    |
| $N$  | 174                 | 174                 | 174                    | 174                    |
| Nb clusters  | 87                  | 87                  | 87                     | 87                     |
| Nb censored observations                           | 38                  | 50                  | 62                     | 68                     |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ . (1) Trustee from the business school, (2) Trustee from the engineering school, (3) Trustor from the business school, (4) Trustor from the engineering school. Trust is the amount sent by the trustor to the trustee, trustworthiness is the mean percentage of the amount received that is returned to the trustor by the trustee. Prom. for promoted subject (from the business school), St.-low for steady-low subject (from the business school), St.-high for steady-high subject (from the engineering school). Individual characteristics include gender, risk attitude, performance in the math quiz and perception about the value of math. (a) Sender refers to the trustor when the explained decision is trust, and to the trustee when the explained decision is trustworthiness.  $p - value$  diff. corresponds to the  $p - value$  of Chow tests comparing parameters on two successive lines.

## Appendix 6 Additional Figure

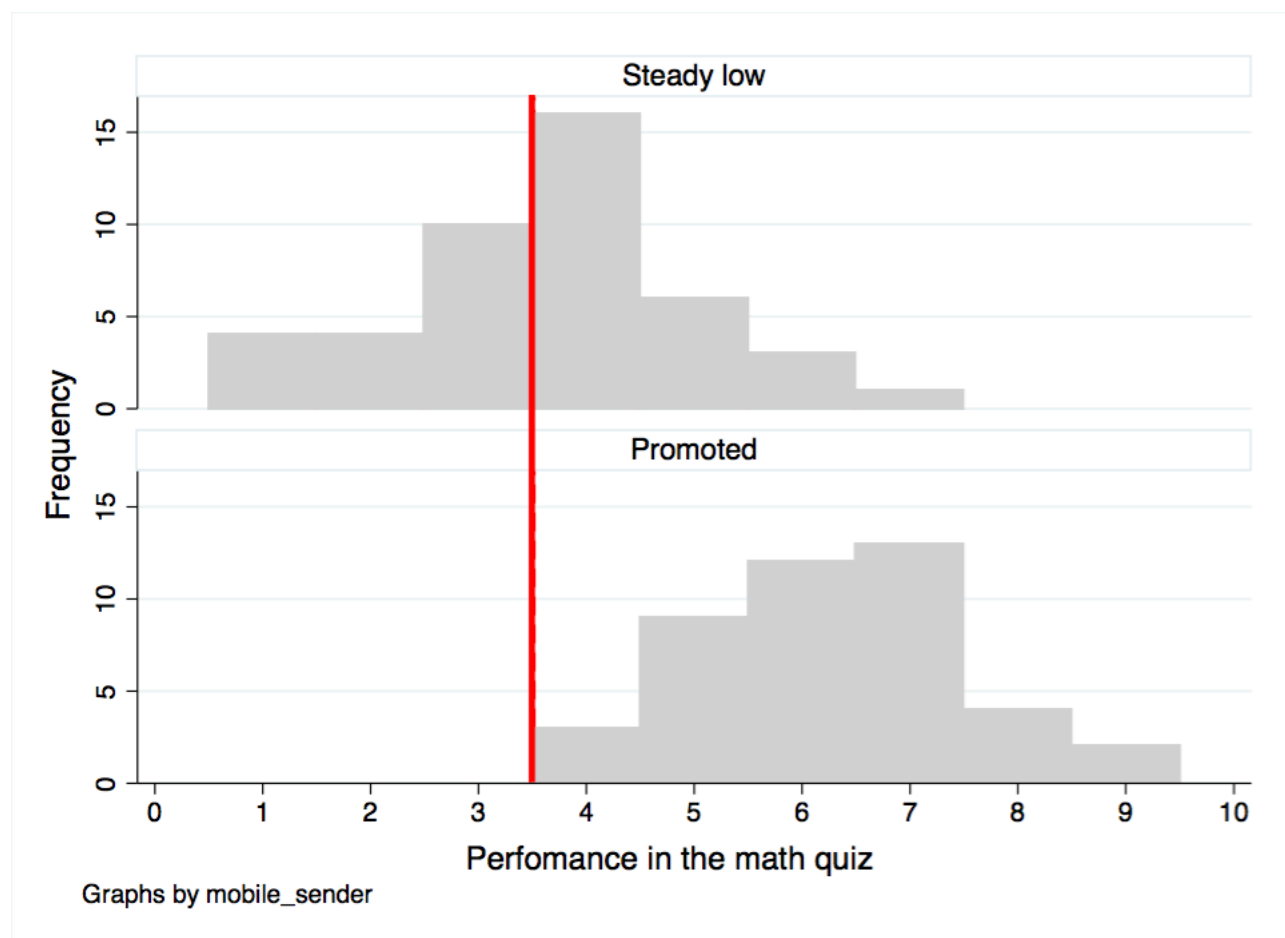


Figure A1: Distribution of performances in the math quiz of the subjects from the business school, by status

## Appendix 7 Additional Tables

Table A2: Beliefs of trustors from the business school about the percentage returned by the trustee (Tobit models)

| Dep. variable                         | Beliefs<br>(1)     | Beliefs<br>(2)     | Beliefs<br>(3)     |
|---------------------------------------|--------------------|--------------------|--------------------|
| Prom. trustor and Prom. trustee       | -4.234<br>(10.12)  | -4.151<br>(10.48)  | -                  |
| Prom. trustor and St.-low trustee     | -3.917<br>(10.24)  | -1.526<br>(9.744)  | -                  |
| Prom. trustor and St.-high trustee    | 5.180<br>(10.85)   | -                  | 3.007<br>(11.02)   |
| Prom. trustor and Dem. trustee        | -6.231<br>(10.12)  | -                  | -5.900<br>(11.13)  |
| St.-low trustor and Prom. trustee     | 4.649<br>(4.151)   | 3.473<br>(3.843)   | -                  |
| St.-low trustor and St.-high. trustee | -0.0750<br>(4.477) | -                  | -                  |
| St.-low trustor and Dem. trustee      | 8.937<br>(10.92)   | -                  | 11.26<br>(9.214)   |
| Transfer in DG, same school           | 1.982<br>(1.340)   | 2.282<br>(1.411)   | 1.687<br>(1.541)   |
| Transfer in DG, other school          | 4.246**<br>(1.661) | 4.566**<br>(1.790) | 3.852**<br>(1.789) |
| Female                                | -13.17*<br>(7.285) | -12.10<br>(7.656)  | -14.19*<br>(8.332) |
| Risk attitude <sup>a</sup>            | 1.237<br>(1.394)   | 1.815<br>(1.444)   | 0.541<br>(1.739)   |
| Math quiz performance                 | -1.074<br>(3.099)  | -2.102<br>(3.505)  | -0.139<br>(3.304)  |
| Perception math <sup>b</sup>          | -6.139<br>(11.55)  | -4.476<br>(10.57)  | -7.725<br>(13.64)  |
| Session fixed effects                 | Yes                | Yes                | Yes                |
| $N$                                   | 348                | 174                | 174                |
| Nb clusters                           | 87                 | 87                 | 87                 |
| Nb censored observations              | 108                | 55                 | 53                 |
| Pseudo R <sup>2</sup>                 | 0.0359             | 0.048              | 0.033              |
| Log pseudo-likelihood                 | -1245.716          | -607.442           | -631.964           |
| $F$                                   | 3.48               | 3.59               | 2.47               |
| $p > F$                               | < 0.001            | < 0.001            | 0.001              |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ . (1) Trustees from the business school and from the engineering school pooled, (2) trustees from the business school only, (3) trustees from the engineering school only. The reference category in models (1) and (2) corresponds to steady-low trustors matched with a steady-low trustee; in model (3), it is a steady-low trustor matched with an steady-high trustee. Prom. for promoted subject (from the business school), St.-low for steady-low subject (from the business school), St.-high for steady-high subject (from the engineering school), and Dem. for demoted subject (from the engineering school). (a) For risk attitudes, a higher number indicates less risk aversion. (b) Dummy indicating that the trustor "strongly disagrees" or "disagrees" with the statement "*It is important to have good mathematical skills*".

Table A3: Trust by subjects from the business school who scored 4 or more in the math quiz (Tobit models)

| Dep. variable                         | Trust<br>(1)          | Trust<br>(2)          | Trust<br>(3)          |
|---------------------------------------|-----------------------|-----------------------|-----------------------|
| Beliefs                               | 0.0686***<br>(0.0171) | 0.0814***<br>(0.0197) | 0.0617***<br>(0.0195) |
| Prom. trustor and Prom. trustee       | -0.671<br>(0.948)     | -0.514<br>(0.859)     | -<br>-                |
| Prom. trustor and St.-low trustee     | -1.431*<br>(0.769)    | -1.320*<br>(0.731)    | -<br>-                |
| Prom. trustor and St.-high trustee    | -1.956**<br>(0.834)   | -<br>-                | -1.531<br>(1.382)     |
| Prom. trustor and Dem. trustee        | -1.193<br>(0.934)     | -<br>-                | -0.850<br>(1.558)     |
| St.-low trustor and Prom. trustee     | 0.0262<br>(0.721)     | 0.0911<br>(0.656)     | -<br>-                |
| St.-low trustor and St.-high. trustee | -0.547<br>(0.744)     | -<br>-                | -0.166<br>(1.071)     |
| St.-low trustor and Dem. trustee      | -0.414<br>(1.108)     | -<br>-                | -<br>-                |
| Transfer in DG, same school           | 0.166<br>(0.171)      | 0.189<br>(0.156)      | 0.114<br>(0.197)      |
| Transfer in DG, other school          | 0.445**<br>(0.225)    | 0.305<br>(0.231)      | 0.564**<br>(0.232)    |
| Female                                | -0.205<br>(0.693)     | -0.288<br>(0.702)     | -0.126<br>(0.782)     |
| Risk attitude <sup>a</sup>            | 0.0559<br>(0.143)     | 0.234<br>(0.158)      | -0.142<br>(0.181)     |
| Perception math <sup>b</sup>          | -1.076<br>(0.666)     | -1.306*<br>(0.692)    | -0.922<br>(0.703)     |
| Session fixed effects                 | Yes                   | Yes                   | Yes                   |
| $N$                                   | 276                   | 138                   | 138                   |
| Nb clusters                           | 69                    | 69                    | 69                    |
| Nb censored observations              | 72                    | 32                    | 40                    |
| Pseudo $R^2$                          | 0.125                 | 0.160                 | 0.116                 |
| Log pseudo-likelihood                 | -559.387              | -273.381              | -276.487              |
| $F$                                   | 6.04                  | 7.84                  | 4.98                  |
| $p > F$                               | < 0.001               | < 0.001               | < 0.001               |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . (1) Trustees from the business school and from the engineering school pooled, (2) trustees from the business school only, (3) trustees from the engineering school only. The reference category in models (1) and (2) corresponds to steady-low trustors matched with a steady-low trustee; in model (3), it is a steady-low trustor matched with a steady-high trustee. Trust is the amount sent by the trustor to the trustee. Prom. for promoted subject (from the business school), St.-low for steady-low subject (from the business school), St.-high for steady-high subject (from the engineering school), and Dem. for demoted subject (from the engineering school). (a) For risk attitudes, a higher number indicates less risk aversion. (b) Dummy indicating that the trustor "strongly disagrees" or "disagrees" with the statement "*It is important to have good mathematical skills*".

Table A4: Trustworthiness of trustees from the business school (Tobit models)

| Dep. variable                         | Trustworthiness<br>(1) | Trustworthiness<br>(2) | Trustworthiness<br>(3) |
|---------------------------------------|------------------------|------------------------|------------------------|
| Trust                                 | 3.110***<br>(0.733)    | 3.106***<br>(0.900)    | 3.331***<br>(0.767)    |
| Prom. trustor and Prom. trustee       | -3.833<br>(8.347)      | -3.984<br>(8.663)      |                        |
| Prom. trustor and St.-low trustee     | 0.574<br>(7.990)       | -0.514<br>(8.490)      |                        |
| Prom. trustor and St.-high trustee    | -2.484<br>(7.940)      |                        | 3.975<br>(7.311)       |
| Prom. trustor and Dem. trustee        | -9.998<br>(9.124)      |                        | -4.502<br>(8.893)      |
| St.-low trustor and Prom. trustee     | -1.753<br>(3.495)      | -1.755<br>(3.436)      |                        |
| St.-low trustor and St.-high. trustee | -4.910<br>(3.127)      |                        |                        |
| St.-low trustor and Dem. trustee      | -5.567<br>(7.091)      |                        |                        |
| Transfer in DG, same school           | 1.760*<br>(0.974)      | 1.590<br>(1.092)       | -0.314<br>(5.631)      |
| Transfer in DG, other school          | 3.510***<br>(1.456)    | 3.676***<br>(1.654)    | 1.871**<br>(0.946)     |
| Female                                | -5.855<br>(5.032)      | -5.480<br>(5.424)      | 3.278**<br>(1.410)     |
| Risk attitude <sup>a</sup>            | 0.361<br>(1.256)       | -0.0383<br>(1.403)     | -6.255<br>(5.141)      |
| Math quiz performance                 | -0.606<br>(1.782)      | -0.111<br>(1.993)      | 0.885<br>(1.223)       |
| Perception math <sup>b</sup>          | 1.146<br>(7.563)       | 2.626<br>(8.403)       | -1.156<br>(1.816)      |
| Session fixed effects                 | Yes                    | Yes                    | Yes                    |
| $N$                                   | 348                    | 174                    | 174                    |
| Nb clusters                           | 87                     | 87                     | 87                     |
| Nb censored observations              | 130                    | 62                     | 68                     |
| Pseudo R <sup>2</sup>                 | 0.069                  | 0.064                  | 0.073                  |
| Log pseudo-likelihood                 | -1076.697              | -552.113               | -522.120               |
| $F$                                   | 4.28                   | 3.74                   | 4.61                   |
| $p > F$                               | 0.000                  | 0.000                  | 0.000                  |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . (1) Trustors from the business school and from the engineering school pooled, (2) trustors from the business school only, (3) trustors from the engineering school only. The reference category in models (1) and (2) corresponds to a steady-low trustee matched with a steady-low trustor; in model (3), it is a steady-low trustee matched with an steady-high trustor. Trustworthiness is the mean percentage of the amount received that is returned to the trustor by the trustee. Prom. for promoted subject (from the business school), St.-low for steady-low subject (from the business school), St.-high for steady-high subject (from the engineering school), and Dem. for demoted subject (from the engineering school). (a) For risk attitudes, a higher number indicates less risk aversion. (b) Dummy indicating that the trustee "strongly disagrees" or "disagrees" with the statement "*It is important to have good mathematical skills*".

Table A5: Trust and trustworthiness toward promoted counterparts (Tobit models)

| Dep. variable                                | Trust<br>(1)       | Trust<br>(2)       | Trustworthiness<br>(3) | Trustworthiness<br>(4) |
|--|--------------------|--------------------|------------------------|------------------------|
| Trust  | -                  | -                  | 3.106*** (0.900)       | 2.523*** (0.966)       |
| Beliefs                                      | 0.0521*** (0.0175) | 0.0773*** (0.0158) |                        |                        |
| Prom. sender and Prom. receiver <sup>a</sup> | -1.239 (1.114)     |                    | -3.984 (8.663)         |                        |
| Prom. sender and St.-low receiver            | -2.002** (0.941)   |                    | -0.514 (8.490)         |                        |
| St.-low sender and Prom. receiver            | -0.510 (0.502)     |                    | -1.755 (3.436)         |                        |
| St.-high sender and Prom. receiver           |                    | 0.0612 (0.258)     |                        | 0.636 (1.583)          |
| Dem. sender and Prom. receiver               |                    | -0.403 (1.037)     |                        | -11.56 (7.438)         |
| Dem. sender and St.-low receiver             |                    | -0.552 (1.070)     |                        | -9.255 (7.484)         |
| Transfer in DG, same school                  | 0.356* (0.191)     | -0.203 (0.236)     | 1.590 (1.092)          | 0.733 (1.914)          |
| Transfer in DG, other school                 | 0.239 (0.228)      | 0.583* (0.315)     | 3.676** (1.654)        | 6.338*** (2.316)       |
| Female                                       | -0.665 (0.747)     | 1.965** (0.770)    | -5.480 (5.424)         | 12.60** (6.392)        |
| Math quiz performance                        | 0.00781 (0.259)    | 0.288 (0.175)      | -0.111 (1.993)         | -0.902 (1.292)         |
| Risk attitude <sup>b</sup>                   | 0.0804 (0.158)     | -0.197 (0.198)     | -0.0383 (1.403)        | -1.470 (1.292)         |
| Perception math <sup>a</sup>                 | -0.227 (0.863)     | 2.198* (1.132)     | 2.626 (8.403)          | -9.159 (7.672)         |
| Session fixed effects                        | Yes                | Yes                | Yes                    | Yes                    |
| $N$  | 174                | 174                | 174                    | 174                    |
| Nb clusters                                  | 87                 | 87                 | 87                     | 87                     |
| Nb censored observations                     | 38                 | 59                 | 62                     | 68                     |
| Pseudo R <sup>2</sup>                        | 0.114              | 0.227              | 0.068                  | 0.137                  |
| Log pseudo-likelihood                        | -368.997           | -293.796           | -552.113               | -487.819               |
| $F$  | 4.38               | 6.64               | 3.74                   | 6.28                   |
| $p > F$                                      | 0.000              | 0.000              | 0.000                  | 0.000                  |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Model (1) restricts observations to matches in which both the trustor and the trustee are from the business school. The reference category corresponds to steady-low trustors matched with a steady-low trustee. Model (2) restricts observations to matches in which the trustor is from the engineering school and the trustee is from the business school. The reference category corresponds to steady-high trustors matched with a steady-low trustee. Model (3) restricts observations to matches in which both the trustor and trustee are from the business school. The reference category corresponds to steady-low trustees matched with a steady-low trustor. Model (4) restricts observations to matches in which the trustee is from the engineering school and the trustor is from the business school. The reference category corresponds to steady-high trustees matched with a steady-low trustor. Trust is the amount sent by the trustor to the trustee, trustworthiness is the mean percentage of the amount received that is returned to the trustor by the trustee. Prom. for promoted subject (from the business school), St.-low for steady-low subject (from the business school), St.-high for steady-high subject (from the engineering school), and Dem. for demoted subject (from the engineering school). (a) "Sender" refers to the trustor for the trust decision and to the trustee for the return decision. "Receiver" refers to the trustee for trust decision and the trustor for trustworthiness decision. (b) For risk attitudes, a greater number indicates less risk aversion. (c) Dummy indicating that the subject "strongly disagrees" or "disagrees" with the statement "*It is important to have good mathematical skills*".

Table A6: Trust and trustworthiness toward promoted counterparts in the Single-School condition (Tobit models)

| Dep. variable                     | Trust    |         | Trustworthiness |         |
|-----------------------------------|----------|---------|-----------------|---------|
|                                   | (1)      |         | (2)             |         |
| Beliefs                           | 0.140*** | (0.029) | -               | -       |
| Prom. sender and Prom. receiver   | 0.660    | (1.910) | -3.485          | (9.399) |
| Prom. sender and St.-low receiver | 0.437    | (1.749) | 0.979           | (8.946) |
| St.-low sender and Prom. receiver | 0.137    | (0.562) | -0.900          | (1.997) |
| Transfer in DG, same school       | 0.391*   | (0.210) | 2.411           | (1.485) |
| Female                            | -0.193   | (1.069) | 2.909           | (8.909) |
| Math quiz performance             | -0.165   | (0.492) | 0.941           | (2.723) |
| Risk attitude                     | 0.308    | (0.231) | 0.870           | (1.925) |
| Perception math                   | 1.506    | (2.789) | -3.642          | (7.847) |
| Session fixed effects             | Yes      |         | Yes             |         |
| $N$                               | 220      |         | 220             |         |
| Nb clusters                       | 55       |         | 55              |         |
| Nb censored observations          | 84       |         | 72              |         |
| Pseudo $R^2$                      | 0.126    |         | 0.034           |         |
| Log pseudo-likelihood             | -428.315 |         | -736.335        |         |
| $F$                               | 5.11     |         | 2.43            |         |
| $p > F$                           | 0.000    |         | 0.007           |         |

Notes: Marginal effects are reported. Robust standard errors clustered at the individual level are in parentheses. \*  $p < 0.10$ , \*\*\*  $p < 0.01$ . In model (1), "sender" refers to the trustor and "receiver" refers to the trustee. In model (2) "sender" refers to the trustee and "receiver" to the trustor. The reference category corresponds to a steady-low subject matched with a steady-low subject. Trust is the amount sent by the trustor to the trustee, trustworthiness is the mean percentage of the amount received that is returned to the trustor by the trustee. Prom. for promoted subject (from the business school), St.-low for steady-low subject (from the business school). (a) For risk attitudes, a higher number indicates less risk aversion. (b) Dummy indicating that the subject "strongly disagrees" or "disagrees" with the statement "*It is important to have good mathematical skills*".