Ingratiation and Favoritism

Stéphane ROBIN ([a]), Agnieszka RUSINOWSKA ([b]) and Marie Claire VILLEVAL ([c])

[a] University of Lyon, F-69007, Lyon, France; CNRS, GATE Lyon St Etienne, 93, Chemin des Mouilles, 69130 Ecully, France. Email: robin@gate.cnrs.fr

[b] CES (Centre d'Economie de la Sorbonne), CNRS – Paris School of Economics, 106-112 Bd de l'Hôpital, 75647 Paris, France. Email: agnieszka.rusinowska@univ-paris1.fr

[c] University of Lyon, F-69007, Lyon, France; CNRS, GATE Lyon St Etienne, 93, Chemin des Mouilles, 69130 Ecully, France. Email: villeval@gate.cnrs.fr

Abstract: We investigate workers' ingratiatory behavior and managers' discrimination in favor of workers who share similar opinions. In our laboratory experiment, managers can observe workers' performance and opinions before assigning payoffs. In some treatments, workers can change their opinion after learning that held by the manager. We find evidence of high ingratiation indices although managers reward less opinion conformity when opinions can be manipulated. Ingratiation and favoritism can be reduced by introducing managerial performance pay and by making the manipulation of opinions more costly to the workers. Reducing the role of luck in the measure of performance has little effect.

Keywords: Ingratiation, opinion conformity, favoritism, discrimination, social distance, experiment.

JEL Classification: C7, C92, D03, D86, M51

1. INTRODUCTION

This paper explores how interpersonal influence activities affect the assignment of rewards within a hierarchy. We study employees' ingratiatory behavior directed at superiors who have discretion in the assignment of a promotion. Ingratiation consists of various strategies including opinion conformity, self-presentation and other-enhancement.[1] This paper considers the first strategy. In a work environment, ingratiation occurs when an employee aims to impress superiors by increasing his/her attractiveness.[2] For example, using survey data from Forbes 500 companies, Westphal and Stern (2006) provide evidence that managers use interpersonal influence activity as a substitute for elite credentials to obtain boardroom appointments. Ingratiation may result from a willingness to reduce social distance with managers and it does not necessarily originate in informational asymmetries, in contrast to the influence activities modeled by Milgrom (1988) and Milgrom and Roberts (1988).[3]

Ingratiation has certainly been encouraged by the development of subjective appraisals of employees. Managers frequently reward dimensions other than the strict job performance of workers.[4] Prendergast and Topel (1996) have modeled favoritism as resulting from the unavailability of objective measures of performance. Subjectivity may lead evaluators to reward preferred subordinates arbitrarily. Bandiera *et al*. (2009) have shown the importance of social connections as managers who are paid a fixed wage tend to favor the workers to whom they are socially connected, regardless of their ability. Bramoullé and Goyal (2011) explain that favoritism may exist even without introducing managers' social preferences, as it allows a social group in which favors are traded to retain more surplus within the group. Favoritism may harm the firm's performance because it pervades the information on which job assignments are made. Levine *et al.* (2010) have shown that employers who favor specific workers may end up hiring inefficient workers. In addition, by distorting incentives, it may discourage the effort of workers who do not benefit from favors.[5]

To the best of our knowledge, no study has so far investigated both employees' ingratiatory behavior and managers' favoritism simultaneously. A novelty of our paper is that we tie these two

---

[1] In psychology, ingratiation is defined as "a strategic attempt to get someone to like you in order to obtain compliance with a request" (Vaughan and Hogg, 2008) or as "strategic behaviors employed by a person to make himself more attractive to another" (Wortman and Linsenmeier, 1977). Opinion conformity consists of expressing preferences supporting the opinion held by a target person; self-presentation is a means of self-promotion; other-enhancement includes flattering (Jones, 1964).

[2] Ingratiation is also thought to be widespread among politicians for the support of voters, citizens for reaching priority access to certain facilities, sellers for encouraging customers to buy, individuals for facilitating mating.

[3] It also differs from collusion within organizations (Tirole, 1986) as it does not involve bribing the superior. In contrast to the "Yes Men" theory of Prendergast (1993), which provides a rationale for subordinates to conform to their superiors' opinions by reporting what the superiors want to hear about employees' efforts, ingratiation by opinion conformity is not restricted to information that directly influences a firms' profit.

[4] A survey, conducted in U.S. companies with over 1,000 employees, indicates that 84% of the 302 senior business executives interviewed online report that favoritism exists in their company, and 23% admit they have practiced it themselves (Gardner, 2011). Favoritism is defined in the study as: "Preferential treatment of an employee for assignments, credit, opinion, influence, or advancement on the basis of factors that do not directly relate to a person's ability to perform his or her job function, such as background, ideology or gut instincts."

[5] Efferson *et al.* (2008) have shown, however, that in-group favoritism may also help populations of heterogeneous people to solve coordination problems.

dimensions together to understand better their joint dynamics. Another novelty is that we provide empirical evidence on employees' strategic opinion conformity and managers' favoritism, based on opinion proximity. We have found no empirical study in economics on ingratiation or on favoritism based on opinion conformity.[6,7] As managers may interpret opinion conformity as a signal of reduced social distance, our study also sheds light on discriminatory processes based on social distance.

Since reliable survey data on ingratiation and favoritism are hardly available, we have designed a laboratory experiment in which three workers have to perform a task while the manager has discretion on how to assign unequal payoffs to them. This can be considered as a tournament or it is equivalent to considering that a manager's effort is complementary to a worker's effort and that the manager spends more time working with a specific worker. In the Baseline, the manager can obtain information on the workers' performance and on their opinions about a certain topic, before assigning unequal payoffs. Indeed, at the beginning of each session, the players have to report their opinion on four various topics. Comparing the opinions of the manager and those of each worker gives a metric of their proximity. We are therefore able to measure the respective weight of relative performance and opinion proximity in the assignment of payoffs.

In the Baseline, workers cannot change their opinion after learning that of the manager. In contrast, in the Ingratiation treatment workers have the option of changing their opinion before the manager knows about it. We exploit this change to identify whether workers expect managers to reward opinion proximity and whether less-able workers use it to compensate for low performance. By comparing the managers' decisions in these two treatments, we study whether managers behave differently when knowing that proximity may result from ingratiation.

Opinion conformity is, however, not always strategic.[8] To disentangle ingratiation and a taste for conformity or social learning, a Random treatment has been designed. The assignment of payoffs is now random and the manager passive, but workers are still allowed to change their opinions. The comparison with the Ingratiation treatments measures the importance of strategic conformity.

We have designed three additional treatments to test the sensitiveness of ingratiation and favoritism to three policy interventions. First, we test whether ingratiation resists the introduction of a

---

[6] In contrast, social psychologists have investigated ingratiatory behaviors extensively. For meta-analyses, see notably Gordon (1996) and Higgins *et al*. (2003) and Appelbaum and Hughes (1998) for a survey.

[7] Empirical tests of favoritism focus on demographic characteristics (Goldin and Rouse, 2000; Knowles *et al.*, 2001; Fershtman and Gneezy, 2001) or on home bias in sports (Kocher and Sutter, 2004; Garicano *et al*., 2005) and editing (Laband and Piette, 1994). In addition to Bandiera *et al*. (2009), recent experimental studies have investigated in-group/out-group discrimination based on personal relations or social distance in trust games (Falk and Zehnder, 2007; Hargreaves Heap and Zizzo, 2009; Brandts and Sola, 2010), bargaining games (Zizzo, 2011), or competition games (Filippin and Guala, 2011; Dutcher, 2011). On social distance, see Akerlof (1997).

[8] In psychology, conformity is motivated by the search for social approval (Asch, 1951; Cialdini and Goldstein, 2004). Neuroscientists have shown that the brain analyzes a deviation from the group opinion as a punishment (Berns, 2008; Klucharev *et al*., 2009). Economists give three explanations for conformity. Herding behavior (Banerjee, 1992; Scharfstein and Stein, 1990) and informational cascades (Bikhchandani *et al.,* 1992) result from informational deficits. Conformity results from the impairment of status in case of departure from a social norm (Akerlof, 1980; Jones, 1984; Bernheim, 1994). It creates mutual positive externalities (Katz and Shapiro, 1986).

financial cost linked to changing one's opinion. In workplace environments, increasing the cost of ingratiation may be obtained by increasing the awareness of managers, thus requiring more subtle strategies from ingratiators. Second, we test the sensitiveness of ingratiation and favoritism to a reduction of the importance of luck in the measure of workers' relative performance. In a real setting, this could be achieved via a stronger standardization of the content of tasks. Third, we change managerial incentives from fixed pay to performance pay. By tying the manager's compensation to the workers' outputs, we expect managers to reward more performance and workers to reduce their ingratiatory behavior.

Our results show that a majority of workers change their opinion after learning the manager's opinion. While a pure taste for conformity or social learning cannot be rejected, most of this behavior is strategic. Ingratiation and performance are negatively correlated. The fear of not being a frontrunner leads some workers to express opinions that could make them more likeable in the eyes of the manager. Ingratiation decreases in its moral costs depending on the topic and the strength of opinion. It is larger when opinions are related to highly debated policy issues, which suggests that it is not only acquisitive (driven by the desire to access resources) but also protective (motivated by the willingness to prevent sanctions in case of disagreement) (Jones, 1964). Ingratiation does not disappear over time because a significant proportion of managers reward opinion conformity. If a majority of them behave in accordance with a meritocratic principle and promote the most able individuals, a shorter social distance is also rewarded. Managers discriminate against those who express more distant opinions. However, knowing that workers can conform strategically reduces the influence of social distance.

Moreover, imposing a financial cost for changing one's opinion discourages ingratiation. The introduction of managers' performance pay is the policy intervention that increases the most the role of relative performance in the assignment of a promotion, relative to opinion proximity. This result is consistent with Bandiera *et al*. (2009) who find that managerial performance pay increases the productivity of high ability workers, especially those who have no connection with the manager. Performance pay does not, however, eliminate discrimination in favor of similarly-oriented workers and it does not affect ingratiatory behavior. Finally, reducing the noise in the measure of workers' ability does not increase the chance of the best performer to get the highest payoff.

2. EXPERIMENTAL DESIGN AND PREDICTIONS

We designed a game with a manager and workers, which allows us to analyze managers' favoritism and workers' ingratiation at the same time. The manager's task is to assign unequal earnings to the workers. The workers have to perform a task. The managers can get access to two sets of information before assigning the payoffs: the performance and the opinions of the workers on various topics.

2.1. Elicitation of opinions

In the first part of each session, we elicited the players' opinions on four topics displayed in random order. Two topics are related to tastes and two others related to highly debated policy issues. After looking at a naïve art painting and listening to a piece of reggae music, the players had to rate their taste for the painting and the music on a rating scale ranging from 1 ("I hate it") to 100 ("I adore it"). They also had to rate their opinion on two statements: "One should introduce a carbon tax to change the course of global warming" and "One should regularize illegal immigrants", between 1 ("extremely unfavorable") and 100 ("extremely favorable").

They were informed that their responses were anonymous but would be used in the next parts of the session with no further information. Since we expect that ingratiation is negatively correlated with the strength of one's opinion (as a measure of the moral cost of ingratiation), participants had to indicate the importance of each response on a Likert-type scale between 1 ("I could have answered completely differently") and 10 ("my answer represents a lot to me"). Answers were not incentivized because of the policy-related questions.

2.2. Main treatments

Our experiment included three treatments called Baseline, Ingratiation, and Random.

The Baseline treatment consists arbitrarily of 12 periods. Each period includes three stages. In the first stage, groups of four were formed randomly, including one manager ("participant A") and three workers ("participants B"). Roles were kept constant throughout the session. Workers were informed about their manager's opinion on one randomly selected topic, but not on the other workers' opinions.

In the second stage, the workers had to perform a task consisting of answering two questions of a trivia quiz on general knowledge. It was common information that the random draw of questions was independently and identically distributed for each worker, which is equivalent to introducing an idiosyncratic random term in the payoff function. Each worker was only informed of his "score", that is his own number of correct answers.

In the third stage, the manager had to assign payoffs to the workers, namely one payoff of 10 points for one promoted worker (with 18 points = €1) and two payoffs of 5 points. She could press two buttons for free before assigning payoffs. One button was for asking information about the three workers' scores and the other one for asking the three workers' opinions on the issue selected in the first stage. Each button was randomly disposed on the left or the right of the screen in order not to force the manager's attention on any information. The manager was paid a fixed wage of 12 points. A fixed wage allows us to observe the natural inclination for meritocracy related to the workers' performance at the task or for opinion proximity; it is relaxed in a further treatment.

At the end of each period, workers were only informed about their payoff; they received no feedback on the relative opinion or the relative score of the worker who got the highest payoff. Groups were rematched in the next period. Using a stranger matching protocol eliminates that managers build

reciprocal relationships based on favoritism and favor rendering. This treatment allowed us to determine the respective influence of relative opinion and performance on assigning payoffs.

There is only one difference between the Ingratiation treatment and the Baseline: workers were allowed to change their initial opinion before it was made available to the manager and after receiving a feedback on their score. The manager knew that workers could modify their opinion but she only observed the reported opinions without knowing whether they had been changed or not. As before, workers did not receive any information about other workers' opinions or scores. This treatment allowed us to determine *i*) the importance of ingratiation and *ii*) its relationship with performance, opinion topic, and the strength of opinions. Comparing the Baseline and the Ingratiation treatments indicates whether the respective weights of relative scores and opinions differ when managers know that opinions can be manipulated strategically.

Workers may change their opinion strategically but also because they like conforming to the opinion of a high status person or because they are uncertain about their opinion. To disentangle between these strategic and non-strategic reasons, in the Random treatment workers can still change their opinion but managers are now passive: workers' payoffs are assigned randomly. In this context, we assume that a change in opinion is driven by a taste for conformity or by social learning, but it is not strategic. Comparing Ingratiation and Random treatments indicates to what extent opinion conformity is strategic.

Each participant played in two treatments: the Ingratiation treatment and either the Baseline or the Random treatment. The order of treatments was counterbalanced across sessions.

2.3. Policy interventions

We tested in new treatments the sensitiveness of ingratiation and favoritism to three policy interventions: a reduction of the noise in the measurement of relative performance; the introduction of a financial cost for changing opinion; and the introduction of managerial performance pay.

In the Baseline-No Noise and Ingratiation-No Noise treatments, we increased the precision of relative performance measures. The three workers then received the same four questions instead of two, which reduced the role of idiosyncratic luck in scores. A comparison with the original treatments indicates whether, when scores are more informative of ability, *i*) the influence of scores is reinforced and *ii)* the expected negative correlation coefficient between ingratiation and score increases.

The Ingratiation-Cost and Random-Cost treatments introduce a fixed cost of 1 point for changing one's opinion regardless of the size of the change (it corresponds to 20% of the low payoff and 10% of the high payoff). Comparing these treatments with the original ones indicates whether *i*) ingratiation is cost-sensitive, and *ii*) managers pay more attention to opinions when ingratiation is costly.

In the Baseline-Incentives and Ingratiation-Incentives treatments, we introduced performance pay by tying the manager's payoff to the sum of the three workers' scores. Under performance pay, the manager's payoff function becomes:

$$w_m = w_0 + \gamma \sum_k y_k = 10 + 0.5 \sum_{k=1}^{3} y_k$$

where w_m denotes the manager's payoff. The parameter $\gamma \geq 0$ captures the strength of managerial incentives and y_k indicates the score of worker k. It has been chosen so that on average the managers earn 12 points, as in the main treatments.[9] We tested whether managerial incentives *i*) lead managers to reward more scores and less opinion proximity than under a fixed compensation; and *ii*) as a consequence, lead to a reduction in ingratiatory behaviors.

2.4. Behavioral conjectures

Extending the framework of favoritism studied in Prendergast and Topel (1996) in which the manager observes only performance, we write the manager's utility as follows:

$$u_m = w_m + \alpha w_{dist} + \beta w_{perf}$$

where w_{dist} denotes the payoff of the worker with the lowest distance between his opinion and the opinion of the manager, and w_{perf} denotes the payoff of the worker with the best performance. $\alpha \geq 0$ and $\beta \geq 0$ measure the intensity of the manager's preference for one of the two types of workers, respectively. $\alpha > \beta$ characterizes a manager who favors more workers who share more similar opinions, with a particular case of the *opinion-oriented manager* when $\beta = 0$. Similarly, $\beta > \alpha$ describes a manager who favors the best performance more than opinion similarity. This manager is called a *meritocratic manager* when $\alpha = 0$. The case when $\alpha = \beta$ means that the manager has equal preference for both kinds of workers. An *indifferent manager* does not pay attention to either performance or opinion and is characterized by $\alpha = \beta = 0$.

The degree of the worker's ingratiation by opinion conformity is measured by the so-called ingratiation index, which is defined similarly to the influence index in the framework of influence in a social network (Grabisch and Rusinowska, 2009, 2010). Let d_{ini}^k denote the distance between the initial opinion of the worker k and the opinion of the manager, and d_{fin}^k be the distance between the final (reported) opinion of the worker and the opinion of the manager. For all $d_{ini}^k \neq 0$ and $d_{ini}^k \geq d_{fin}^k$ we define the ingratiation index by:

$$I_k = \frac{d_{ini}^k - d_{fin}^k}{d_{ini}^k} \in [0,1].$$

The higher I_k is, the stronger is the worker's ingratiation behavior. I_k=0 reports no ingratiation behavior and I_k=1 corresponds to perfect ingratiation. The cost function of ingratiation is given by $C_k(I_k) = (c_k + c_k^{mo}(s))I_k$ where c_k is a financial cost (equal to 0 in all treatments but one). $c_k^{mo}(s)$

[9] An alternative would be to link the manager's payoff to the score of the worker who receives the high payoff. This would allow us to measure how much money managers are willing to forego to favor opinion conformity instead of performance. This could be tested in an extension of this paper. Our less direct payoff function enabled us to test whether making the reference to performance more salient suffices to reduce favoritism.

denotes the moral cost of ingratiation which we assume to be a function of the strength s of the worker's opinion, i.e. the more important his personal opinion on a given topic is to the worker, the higher is his moral cost of ingratiation.[10] The worker *k's* utility is defined as follows:

$$u_k(f_{I_k}^k(\alpha,\beta)) = \begin{cases} 10 - C_k(I_k) - c(e_k) & \text{if the manager gives the highest payoff to worker } k \\ 5 - C_k(I_k) - c(e_k) & \text{if the manager gives the lowest payoff to worker } k \end{cases}$$

with the act denoted by $f_{I_k}^k$ and the cost of effort exerted by the worker denoted by $c(e_k)$.

If the worker k faces a manager who favors opinion proximity, $\alpha \neq 0$, then the probability to get the highest payoff increases with a higher I_k. Since the worker has to choose his ingratiation index without knowing the type of his manager (his α and β), he faces a problem of decision under uncertainty. Given his score, the worker k chooses the ingratiation index I_k that maximizes his expected utility:

$$\arg\max_{I_k} E_{\alpha,\beta}(u_k(f_{I_k}^k(\alpha,\beta))), \text{ where } E_{\alpha,\beta}(u_k(f_{I_k}^k(\alpha,\beta))) = \iint u_k(f_{I_k}^k(\alpha,\beta))p(\alpha,\beta)\,d\alpha d\beta$$

with the probability distribution of (α,β) denoted by p(α,β).

We express the following conjectures on the workers' behavior:

Conjecture 1: Provided the costs of ingratiation are sufficiently low, the worker should report opinions that reduce the distance in opinion with the manager for strategic reasons. The ingratiation index should be higher in the Ingratiation treatment than in the Random treatment.

Conjecture 2: A worker is more likely to choose a higher ingratiation index if his performance is low.

Conjecture 3: Increasing the financial or the moral costs of ingratiation decreases the ingratiation index. This index should be lower for the players who report stronger opinions and it should be lower in the Ingratiation-Cost treatment than in the initial Ingratiation treatment.

On the manager's side, we are interested in observing if both opinion-oriented and meritocratic managers exist, i.e., if both $\alpha > 0$ and $\beta > 0$ are identified in the experiment, and in which proportion. Moreover, we expect that the intensity of the manager's preference for opinion proximity should be lower when the manager knows that workers can change their opinion because these opinions are probably less sincere. We therefore expect that the weight of relative performance will be higher in the Ingratiation treatment than in the Baseline.

Managers are also expected to react to the various policy interventions. In the Baseline-No Noise and the Ingratiation-No Noise treatments, the difference in performance between workers now depends only on ability. This reduction of the noise in the measure of relative performance should increase the weight put on relative performance in the assignment of payoffs compared with the initial treatments. The introduction of managerial performance pay in the Baseline-Incentive and the Ingratiation-Incentive treatments should also increase the weight of relative performance compared

[10] The moral cost of ingratiation could be higher if ingratiation was made visible to the other workers because it could generate social disapproval. Here, we assume that expressing a different opinion from that initially reported entails a moral cost that increases in the strength of the initial opinion because of self-image concerns. We acknowledge that individuals with no self-image may have no moral cost of ingratiation.

with the initial treatments, because managers should focus more their attention on the workers' performance and less on opinions. In contrast, introducing a cost for changing one's opinion in the Ingratiation-Cost treatment may have the opposite effect and reduce the initial difference between the Baseline and the Ingratiation treatments since opinions are less likely to be changed.

We summarize our conjectures on the managers' behavior as follows:

Conjecture 4: There is a coexistence of meritocratic, opinion-oriented and indifferent managers.

Conjecture 5: Introducing the possibility of changing opinions in the Ingratiation treatment decreases the weight of opinion proximity in the assignment of payoffs compared with the Baseline treatment.

Conjecture 6: Reducing the role of luck in the determination of relative performance and introducing managerial performance pay both increase the weight of relative performance in the assignment of payoffs compared with the initial treatments. Introducing a cost for changing opinion in the ingratiation treatment has the opposite effect.

2.5. Procedures

The experiment was computerized, using the REGATE-NG software. 29 sessions were conducted at the laboratory of the *Groupe d'Analyse et de Théorie Economique (GATE),* Lyon, France, involving 500 undergraduate students from the local Engineering and Business schools invited via the ORSEE software (Greiner, 2004). Table A1 in Appendix 2 indicates the number of participants and the treatments played in each session.

Upon arrival, the participants were randomly assigned to a terminal by drawing a tag from a bag. Instructions for the elicitation of opinions were distributed and read aloud (see Appendix 1). After all of them expressed their opinions on the four issues, instructions were distributed for the next part. After checking individually the understanding of the instructions by means of a questionnaire, roles were assigned and participants played the 12 periods of a given treatment with a random re-matching of groups after each period. Then, the instructions for a second treatment were distributed.

At the end of the session, the payoffs of all the periods were added up and converted into Euro for payment in cash and in private. Sessions lasted on average 75 minutes and participants earned €14.78 on average, including a show-up fee of €4.

3. RESULTS

In this section, we first analyze the workers' ingratiatory behavior. Then we study whether and by how much opinion conformity matters relative to performance in the assignment of payoffs. In a final sub-section we report the results of the policy interventions.

3.1. Ingratiatory behavior

To measure opinion conformity and ingratiation, we compare the initial distance between the manager's and the worker's opinions expressed preliminarily and the final distance between opinions after workers can change opinion. Table 1 reports summary statistics for each treatment indicating, for the cases in which initial opinions differ, the number of changes in opinions in each direction, the

number of observations with perfect or almost perfect ingratiation, and the mean ingratiation index. Perfect ingratiation indicates a change in opinion designed to match exactly the opinion of the manager; almost perfect ingratiation corresponds to the cases in which the initial distance is higher than 2 and the final distance does not exceed 2. The index is calculated as the difference between the initial distance and the final distance, divided by the initial distance. It excludes the cases in which the final distance exceeds the initial distance, which by definition does not correspond to ingratiation.

Table 1. Summary statistics

Treatments	Baseline	Ingratiation	Random
Same initial opinion as the manager's	65 (4.75%)	130 (4.63%)^{ns}	74 (5.14%)^{ns}
Different initial opinion	1303 (95.25%)	2678 (95.37%)^{ns}	1366 (94.86%)^{ns}
Total number of observations	*1368 (100%)*	*2808 (100%)*	*1440 (100%)*
Sub-sample of observations with a different initial opinion			
Change between final and initial distance			
- Increased distance	-	167 (6.24%)	116 (8.49%) **
- Same distance	1303 (100%)	995 (37.15%)	819 (59.96%)*
- Decreased distance	-	1516 (56.61%)	431 (31.55%)***
Total	*1303 (100%)*	*2678 (100%)*	*1366 (100%)*
Perfect ingratiation (same final opinion)	-	301 (11.24%)	63 (4.61%)^{ns}
Almost perfect ingratiation (same +/- 2)	-	477 (18.57%)	103 (7.72%)*
Mean ingratiation index	-	0.42 (0.26)	0.19 (0.19)***

Note: The Table reports the significance of two-tailed two-sample tests of proportion comparing, in the upper part of the Table, each of the Ingratiation and Random treatments with the Baseline, and in the other cases, the Random treatment with the Ingratiation treatment. The comparison of ingratiation indices in the last row of the Table is based on a two-tailed Mann-Whitney test (M-W, hereafter). All the tests reported in the paper are conducted only on the first period when all observations are still independent. ^{ns} indicates no significance and *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

Table 1 shows that in the Ingratiation treatment, slightly more than one third of the workers kept the same opinion after learning that it differs from that of the manager, while 56.61% of the workers conformed with the manager's opinion and 11.24% even matched the manager's opinion perfectly. Most of this behavior is strategic, as in the Random treatment less than one third of the workers reduced the distance in opinions and perfect conformism represents only 4.61% of the observations. As a complement, Figure 1 represents the initial difference between the manager's and the worker's opinions on the *x*-axis, and the final difference between opinions on the *y*-axis, for each period of the game and for the Ingratiation and the Random treatments.

Figure 1 identifies four situations. The first situation corresponds to the cases in which workers do not change opinion. This is represented by the diagonal including the point (0,0) where the worker and the manager share the same initial opinion. A second situation is represented by the few dots located below (above) the diagonal, when the initial difference is negative (positive): workers increase distance with the manager, which can be seen as anti-conformism (this is outside the scope of this study). Third, the dots on the horizontal line corresponding to a final difference of zero indicate that the worker and the manager share the same opinion at the end. When the initial difference is not equal to zero, this reveals perfect ingratiation or perfect conformism. Fourth, almost all the other cases

correspond to incomplete ingratiation or conformism. Many workers change opinion in the Ingratiation treatment, while many observations lie on the diagonal in the Random treatment.

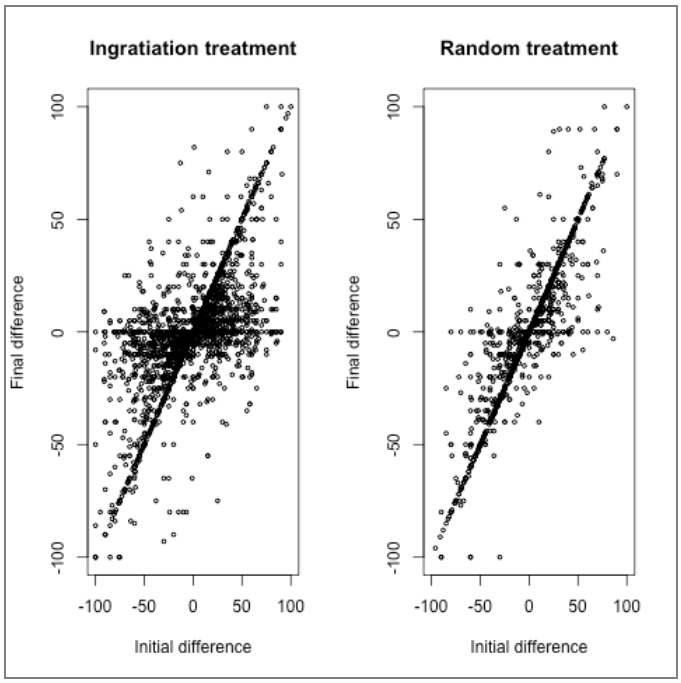

Fig. 1. Distribution of initial and final differences between the manager's and worker's opinions

Next, we analyze the determinants of the probability for a worker to increase, keep constant or decrease the distance in opinion with the manager. We estimate multinomial Logit models with robust standard errors clustered at the worker level since each participant is observed 24 times. The reference category is when the worker does not modify his initial opinion. In Model (1), we pool the data from the Ingratiation and Random treatments and include a dummy variable for the Ingratiation treatment in the independent variables. Model (2) is for the Ingratiation treatment and Model (3) for the Random treatment. The independent variables include the score, as we expect that ingratiation is more likely when workers perform poorly.[11] Regarding opinions, we include the distance between the manager's and the worker's initial opinion and its squared value to allow for non-linearity, and the strength of the opinion reported in the preliminary part. We allow ingratiation to differ according to the opinion topic, by including a dummy variable for each topic (with music as the reference category). To measure whether the ordinal position of the worker's opinion relative to that of the manager matters, we include "negative initial difference" variables for the immigration and carbon tax statements indicating whether the worker's opinion was less conservative than the manager's one. We finally control for the order between treatments (with a dummy variable equal to 1 when the Ingratiation treatment was played first), the period in the treatment and the worker's gender. Table 2 reports the marginal effects.

[11] We checked preliminarily that scores do not depend on the initial distance in opinion with the manager, by means of an OLS model with robust standard errors clustered at the worker's level, in which the dependent variables include dummy variables for each treatment, the distance in opinions interacted with each topic, the workers' gender and age, the period and the order of treatments. The same model was estimated on each treatment separately. The opinion variables were significant in no regression.

Table 2. Determinants of the probability of varying the distance in opinion with the manager - Multinomial Logit models with robust standard errors clustered at the worker level

Ref. = no change in distance	Ingratiation and Random treatments (1)		Ingratiation treatment (2)		Random treatment (3)	
	Increased distance	Decreased distance	Increased distance	Decreased distance	Increased distance	Decreased distance
Ingratiation treatment	-0.023*	0.280***	-	-	-	-
	(0.013)	(0.028)	-	-	-	-
Score	-0.017***	0.007	-0.023***	0.004	0.003	0.002
	(0.005)	(0.013)	(0.005)	(0.015)	(0.010)	(0.019)
Initial distance	-0.004***	0.022***	-0.004***	0.025***	-0.003**	0.012***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.003)
Squared initial distance	0.00004***	-0.0002***	0.0004***	-0.0002***	0.0004**	-0.0001***
	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)
Strength of the initial opinion	-0.003*	-0.027***	-0.003	-0.025***	-0.004	-0.026***
	(0.002)	(0.006)	(0.002)	(0.006)	(0.004)	(0.007)
Topic: painting	-0.020**	0.028	-0.011	0.006	-0.036**	0.059*
	(0.010)	(0.024)	(0.010)	(0.028)	(0.018)	(0.035)
Topic: migration	-0.022*	0.123***	-0.023**	0.111***	-0.018	0.113**
	(0.012)	(0.033)	(0.012)	(0.035)	(0.027)	(0.049)
Negative initial diff.*migration	0.004	-0.116***	-0.006	-0.086*	0.023	-0.131**
	(0.020)	(0.041)	(0.018)	(0.050)	(0.042)	(0.053)
Topic: carbon tax	-0.016	0.047	-0.027**	0.072**	0.009	-0.001
	(0.012)	(0.035)	(0.012)	(0.036)	(0.023)	(0.051)
Negative initial diff.*carbon tax	0.005	-0.063	0.040	-0.116**	-0.051**	0.016
	(0.018)	(0.044)	(0.027)	(0.049)	(0.023)	(0.069)
Order	-0.026**	0.020	-0.027**	0.007	-0.013	0.030
	(0.011)	(0.028)	(0.013)	(0.041)	(0.024)	(0.053)
Period	0.002	0.001	0.002*	-0.0003	0.001	0.004
	(0.001)	(0.002)	(0.001)	(0.003)	(0.002)	(0.003)
Female	-0.026*	0.049	-0.026**	0.037	-0.019	0.062
	(0.014)	(0.040)	(0.013)	(0.042)	(0.025)	(0.053)
N (by category)	4044 (283-1814-1947)		2678 (167-995-1516)		1366 (116-819-431)	
Nb of clusters	234		234		120	
Log Pseudolik.	-3236.6217		-2053.618		-1149.299	
Wald Chi2	337.89		303.82		60.37	
Prob> Chi2	0.0000		0.0000		0.0001	
Pseudo-R^2	0.108		0.111		0.044	

Note: Marginal effects are reported with robust standard errors in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively. N by category refers to the number of cases in which workers increase the distance, keep the distance stable and decrease the distance, respectively.

Model (1) shows that the Ingratiation treatment increases the likelihood of shifting one's opinion towards the manager by 28%, compared to the Random treatment. The score has no effect on this likelihood. In contrast, the probability of reducing the distance increases with the initial distance, at a decreasing rate. As predicted, it is lower when the participant reported a stronger belief in his opinion. Some topics are more likely to lead to ingratiation. The statement about the regularization of illegal immigrants increases by 12.27% the likelihood of reducing the distance in opinion. This effect is asymmetric: it vanishes when the worker holds opinions that are more liberal than that of the manager.

Ingratiation/conformism is more likely when the worker is more conservative than the manager.[12] In Models (2) and (3), the impact of the initial distance is 2.52% for each difference point in the Ingratiation treatment and 1.20% in the Random treatment. Table 2 also indicates that the probability of increasing the distance with the manager's opinion is marginally lower in the Ingratiation treatment. It is also reduced when the score is lower (only in the Ingratiation treatment), when the initial distance is higher (but non-linearly), when workers hold stronger initial opinions and when opinions are related to policy issues in the Ingratiation treatment.

Next, we study the determinants of the ingratiation index. We estimate Tobit models with robust standard errors clustered at the worker level, since the index is censored both at 0 (no change in opinion) and at 1 (perfect ingratiation).[13] By definition, we exclude anti-conformist workers and individuals who have the same initial opinion as the manager since they do not ingratiate themselves. The independent variables are the same as in Table 2 (except the distance in opinions since it is used to calculate the dependent variable). Model (1) pools the data from the Ingratiation and Random treatments; Models (2) and (3) analyze each treatment separately. Table 3 reports the estimates.

Table 3. Determinants of the ingratiation index - Tobit models

Dependent variable: Ingratiation index	Ingratiation and Random treatments (1)	Ingratiation treatment (2)	Random treatment (3)
Ingratiation treatment	0.530*** (0.058)	-	-
Score	-0.031 (0.022)	-0.040* (0.024)	-0.006 (0.043)
Strength of the initial opinion	-0.041*** (0.009)	-0.035*** (0.009)	-0.058*** (0.017)
Topic: painting	0.049 (0.036)	0.043 (0.040)	-0.055 (0.068)
Topic: migration	0.240*** (0.052)	0.236*** (0.057)	0.235** (0.097)
Negative initial diff.*migration	-0.240*** (0.072)	-0.196** (0.077)	-0.337** (0.147)
Topic: carbon tax	0.049 (0.055)	0.060 (0.058)	0.025 (0.111)
Negative initial diff.*carbon tax	-0.042 (0.073)	-0.054 (0.082)	-0.043 (0.145)
Order	0.010 (0.050)	-0.034 (0.069)	0.106 (0.117)
Period	0.007** (0.004)	0.006 (0.004)	0.012 (0.008)
Female	0.078 (0.067)	0.037 (0.070)	0.180 (0.116)
Constant	-0.095 (0.107)	0.457*** (0.103)	-0.150 (0.179)
N/ Left-/ right-censored obs.	3761/ 1814 / 364	2511 / 995 / 301	1250 / 819 / 63
Nb of clusters	234	234	120
Log-pseudolikelihood	-3458.483	-2491.620	-957.350
F / Prob>F	11.10 / 0.0000	3.78 / 0.0000	2.49 / 0.006
Pseudo R^2	0.052	0.011	0.025

Note: Robust standard errors clustered at the worker level are in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

[12] This effect is not due to a specific distribution of the differences in initial opinions in this topic relative to the other topics (see Figure 1A in Appendix that displays the distribution of differences in opinions for each topic separately). Nor is this due to a difference in the strength of opinion across topics. Two-tailed Wilcoxon tests with the subject as one independent unit of observation show that the strength of the opinion is not different between music (reference), migration policy (p=0.780) and carbon tax policy (p=0.437); opinions are less certain about painting (p<0.001).

[13] We also estimated a two-step model to deal with a potential selection bias, with a Probit model with clustered robust standard errors in the first step, and an OLS model including the Inverse of Mill's Ratio in the second step. Since IMR was not significant, we report here the estimates of Tobit models accounting for censored data.

The significantly higher index in the Ingratiation than in the Random treatment (model (1)) confirms the presence of strategic conformism. The index decreases consistently with the score, but only in the Ingratiation treatment and the coefficient is small (model (2)). The strength of the initial opinion reduces the size of the index in both treatments but the coefficient is larger in the Random treatment (models (2) and (3)). In both treatments, the index increases when opinions are relative to the immigration statement, at least for the workers who hold a more conservative opinion than the principal, probably due to a social desirability bias. In the Random treatment, the index is decreased for the workers who hold a more liberal opinion on migration policy, which is not the case in the Ingratiation treatment.[14] To sum up, our analysis supports these results:

Result 1. Many workers change their initial opinion strategically after learning the manager's opinion. We also observe non-strategic changes of opinions, due to a pure taste for conformity, social desirability or social learning. This supports conjecture 1.

Result 2. The ingratiation index is negatively correlated with a higher moral cost of conformity (a stronger initial opinion) and with performance in the Ingratiation treatment. More conservative opinions on debated issues increase ingratiation and conformity. This supports conjectures 2 and 3.

We turn now to the managers to analyze the determinants of the payoff assignment.

3.2. Performance and opinion proximity in payoff assignment

We first consider the rate of success of a worker depending on his ranking in the triad, based on his score and opinion distance. The "score rank" 1 (3) is assigned to the worker who gets the highest (lowest, respectively) score; the "opinion rank" 1 (3) is assigned to the worker whose reported opinion is the closest (most distant) to the manager's opinion. Ranks 2 are assigned to intermediate scores or opinions. In the Baseline, the share of best performers who receive the high payoff is 42.49% (56.68% after exclusion of ties among the best performers); in the Ingratiation treatment, these percentages are 46.55 (proportion test comparing Ingratiation and Baseline in period 1, p=0.993) and 67.57 (p=0.365). Figure 2 displays the relative frequency of workers who get the high payoff by ranks and treatment.

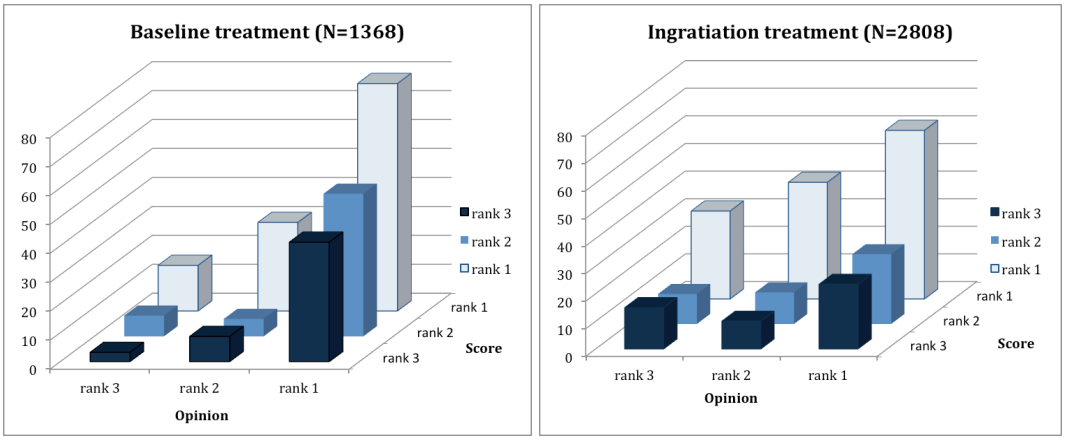

Fig. 2. Percentage of workers receiving the high payoff by ranks and treatment

[14] We estimated the same models on the restricted sample of workers who strictly reduced the distance in opinion with the manager. The main differences are an increased level of significance of the score in the Ingratiation treatment (at the 5% level) and a loss of significance of the topic variables in both treatments, except for the negative impact of having more liberal opinions on illegal immigration in the Ingratiation treatment.

For each opinion rank, Figure 2 indicates that having the first score rank always increases the likelihood of receiving the high payoff in the Baseline. But it also shows that for any score rank, having the first opinion rank increases dramatically the probability of receiving the high payoff. Only the first opinion rank allows a worker to earn more than a random assignment of payoff regardless of the score rank, whereas having the first score rank makes the worker better off than a random assignment only if he also holds the first opinion rank. The Ingratiation treatment rebalances the influence of scores and opinions: the first opinion rank is rewarded much less than in the Baseline. Now, only the first score rank allows a worker to earn more than a random assignment, except when he holds the third opinion rank. Managers put less weight on opinions when they expect brownnosing.

89.25% of the managers asked information on both the workers' scores and opinions in the Baseline; the corresponding values were 95.51% and 82.08% in the Ingratiation and the Random treatments, respectively.[15] A Probit model with robust standard errors clustered at the manager level (available upon request) shows that the probability to look at both scores and opinions is significantly higher in the Ingratiation treatment than in the Baseline (p=0.020); it is not different in the Random treatment and the Baseline (p=0.443); it is lower for males (p=0.026) and older managers (p<0.001).

To study the determinants of which worker receives the high payoff we estimate conditional Logit models with fixed effects and robust standard errors clustered at the manager level. Indeed, the manager selects one worker conditional to the attributes of the choice alternatives, i.e. the characteristics of the other triad members.[16] The independent variables include score and opinion ranks (Rank 2 is omitted) and dummy variables for a tie in the score Rank 1 or in the opinion Rank 1. A variable interacts the first ranks in both opinion and score in case of a tie in the score rank to test whether the opinion rank is used to split the tie. A similar variable is built for a tie in the opinion rank. The independent variables also include the distance in opinion and a dummy variable indicating whether the worker reports exactly the same opinion as the manager. We also interact the distance in opinion and each topic, and dummy variables indicating a negative difference in opinion for the immigration and carbon tax statements (i.e. a less conservative opinion of the worker compared to the manager). Topic variables are not directly included because there is no within-group variation. We only include the cases in which managers looked at both scores and opinions. Table 4 displays the marginal effects of these variables in the Baseline (Model (1)) and the Ingratiation treatment (Model

[15] The percentage of managers who ask only information on scores is 5.26% in the Baseline, 1.39% in the Ingratiation treatment and 0.21% in the Random treatment. The percentages of those who ask only information on opinions are 4.82%, 2.78% and 5.62%, respectively. 0.66%, 0.32% and 12.08% of managers, resp., do not ask information at all.

[16] To control for a possible selection bias, it could be appropriate to use a two-step procedure of estimation, with a selection equation estimated by a Probit model of the manager's choice to look at both scores and opinions. However, it is not possible to estimate a conditional Logit in the second step because the Inverse of the Mill's Ratio (IMR) given by the selection equation does not vary within the group of three workers. Estimating simple Logit models in the second step indicates that the IMR is not significant, showing no evidence of a selection bias in the managers who choose to look at both scores and opinions.

(2)). We also report regressions excluding ties among the best performers. Excluding ties leaves aside the data from the whole triad.

Table 4. Determinants of which worker receives the high payoff – Conditional fixed effects Logit models with robust standard errors clustered at the manager level

Dependent variable: Probability of receiving the high payoff	Baseline treatment (1)		Ingratiation treatment (2)	
	All obs.	Excluding ties in score rank 1	All obs.	Excluding ties in score rank 1
Score rank 1	0.318***	0.338***	0.347***	0.310***
	(0.079)	(0.078)	(0.033)	(0.029)
Tie in score rank 1	-0.233***	-	-0.217***	-
	(0.086)		(0.076)	
Score rank 3	-0.123 [a]	-0.171*	-0.056	-0.053
	(0.079)	(0.090)	(0.077)	(0.079)
Score rank 1 with a tie in opinion rank 1	0.043	0.022	0.022	0.141
	(0.146)	(0.215)	(0.079)	(0.089)
Opinion rank 1	0.225***	0.256***	0.097***	0.094**
	(0.058)	(0.072)	(0.031)	(0.043)
Tie in opinion rank 1	-0.191*	-0.068	-0.162*	-0.151
	(0.103)	(0.162)	(0.090)	(0.136)
Opinion rank 3	-0.017	0.079	-0.021	-0.035
	(0.070)	(0.082)	(0.039)	(0.048)
Opinion rank 1 with a tie in score rank 1	0.049	-	0.039	-
	(0.089)		(0.044)	
Reported distance in opinion	-0.006***	-0.008*	-0.001	0.002
	(0.002)	(0.004)	(0.001)	(0.002)
Same opinion as the manager	-0.071	-0.123	0.030	0.046
	(0.093)	(0.103)	(0.039)	(0.063)
Final distance * painting	-0.004	-0.004	-0.002	-0.004
	(0.004)	(0.007)	(0.002)	(0.003)
Final distance * migration	-0.006*	-0.0004	-0.002	-0.007[b]
	(0.003)	(0.004)	(0.002)	(0.004)
Final distance * carbon tax	-0.005*	-0.005	-0.004**	-0.005*
	(0.003)	(0.005)	(0.002)	(0.003)
Negative final difference* migration	0.199*	0.097	-0.016	-0.097
	(0.105)	(0.129)	(0.058)	(0.088)
Negative final difference* carbon tax	-0.017	-0.031	0.085[a]	0.118
	(0.156)	(0.223)	(0.053)	(0.073)
N / Nb of clusters	1221 / 37	552 / 35	2682 / 77	1259 / 76
Log Pseudolikelihood	-277.559	-130.114	-803.193	-333.401
Wald Chi2	230.32	100.68	150.74	113.30
Prob> Chi2	0.0000	0.0000	0.0000	0.0000
Pseudo-R^2	0.379	0.356	0.182	0.277

Note: Marginal effects are displayed with standard errors of the marginal effects in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively. [a]: significant at the 12% level. [b]: significant at the 10.5% level.

Table 4 shows that having the best score in the triad increases the probability of receiving the high payoff by 31.82% in the Baseline and by 34.70% in the Ingratiation treatment. These effects decrease in the case of ties. Being the worst performer in the triad is sanctioned but only in the Baseline and this is borderline significant. Having the smallest opinion distance increases the chance of receiving the

high payoff by 22.47% in the Baseline and by 9.67% in the Ingratiation treatment (the effects remain when we exclude ties in score rank 1). A higher opinion distance in absolute value is punished in the Baseline treatment (the "reported distance in opinion" variable), with an additional effect when opinions are about policy topics ("final distance*migration" and "final distance*carbon tax" variables). A worker's more liberal opinion on migration policy than the manager's ("negative final distance*migration" variable) is rewarded more than a more conservative opinion in the Baseline. In the Ingratiation treatment, a higher distance in opinion is sanctioned only when the statement is about the carbon tax. In this treatment, managers pay little attention to the absolute value of the difference in opinion since they probably anticipate that the workers may have changed their opinion. Finally, there is no additional effect of having the first rank in case of a tie in the other dimension.

Next, we build a tentative typology of payoff assignment functions. For each manager, we estimate the α and β parameters of our model by means of a conditional Logit model of the decision to assign the high payoff to a specific worker with robust standard errors. We include all the periods in which the manager looked at both scores and opinions.[17] To retain the maximum number of observations, we pool the data from the Baseline and Ingratiation treatments.[18] The value of α is given by the marginal effect of opinion rank 1 and the value of β by the marginal effect of score rank 1. In Figure 3, a dot on the vertical (horizontal) axis means that the manager is influenced by the best rank in score (opinion) while the marginal effect of the best rank in opinion (score) is not different from 0.

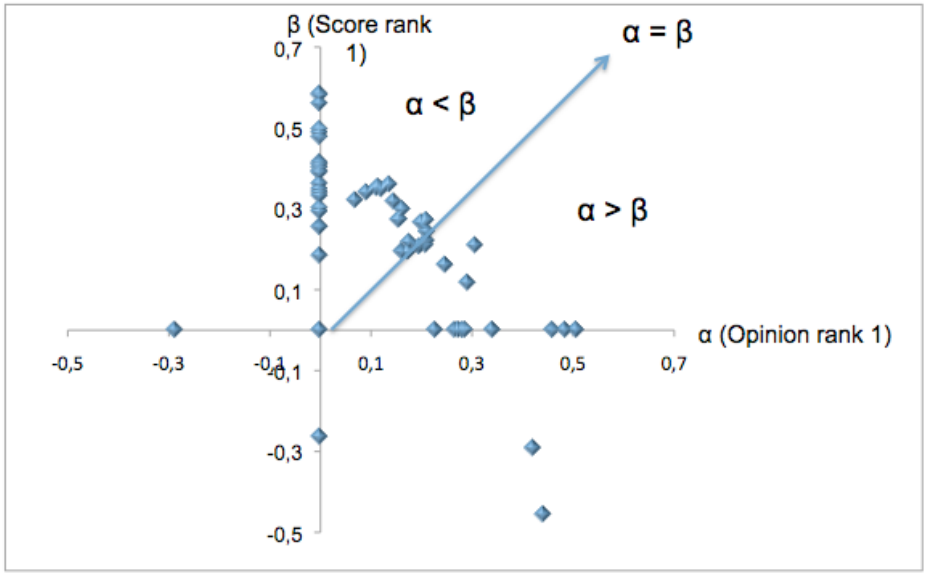

Fig. 3. Distribution of managers' α and β (marginal effects of a conditional Logit model)

We identify four types with the 71 managers for whom we reach convergence (out of 78). A first type includes 21 managers (29.58%) who are influenced by the best score rank but not by opinion rank; 20 of them are *meritocratic managers* ($\alpha=0$, $\beta>0$). A second type includes 24 managers

[17] This excludes only one manager who looked exclusively at the opinions of the workers throughout the game.
[18] The minimum number of observations is 33 and the maximum 72 by subject. We acknowledge that pooling treatments may bias coefficients, since opinion rank matters less in the Ingratiation treatment.

(33.80%) who are influenced by both the score and the opinion ranks ($\alpha>0, \beta>0$). 22 of these are *weakly meritocratic* ($\beta>\alpha$). The third type includes 11 managers (15.49%) who are only influenced by the best opinion rank. 10 of them are *opinion-oriented managers* ($\alpha>0, \beta=0$). A final type includes 15 *indifferent managers* (21.13%) who reward no specific dimension ($\alpha=\beta=0$).

With an OLS model in which the score is the dependent variable, we consider whether workers reduce their effort over time. The time trend is significant in no treatment, which could have been the case if workers revised downward their beliefs on the expected return of a high performance (regressions not reported but available upon request).[19] This does not, however, constitute a definitive answer. Indeed, in our experiment the workers are randomly re-matched with a manager in each period; provided there exists a sufficient share of meritocratic managers in the population, maintaining effort is rational. In addition, they do not know whether they have been outperformed by another worker. We summarize our results as follows:

Result 3. A majority of managers are meritocratic but a large minority of managers favor similarly-oriented workers. This supports Conjecture 4.

Result 4. Managers reward opinion conformity especially when workers cannot conform strategically. This supports Conjecture 5. When ingratiation is impossible, managers sanction a higher distance more when workers' opinions on highly debated policy topics are more conservative.

3.3. Policy interventions

Three interventions introduce respectively a variation in the task that facilitates the comparison of workers' performance and reduces the role of luck, a financial cost for changing one's opinion, and managerial performance pay. We first test whether these changes modify the workers' ingratiatory behavior. Figure 4 represents the relative frequency of changes in opinion, by treatment.

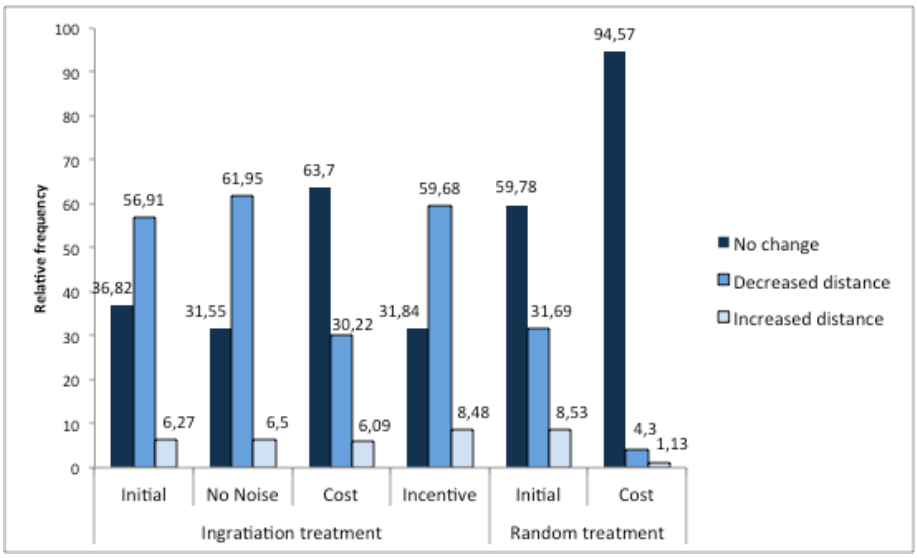

Fig. 4. Relative frequency of changes in opinion, by treatment

[19] We tried several specifications, with the data of the three treatments pooled together or not. The independent variables included the time trend alone, or the time trend interacted with each treatment, dummies for each treatment, the distance in opinion, and opinion topics. No variable was ever significant, although in the Baseline the time trend was negative and significant at a threshold of 11% or 12%, according to the models.

Figure 4 shows a major change after introducing a financial cost for changing opinion. The share of workers who do not change opinion increases from 36.82% in the initial Ingratiation treatment to 63.70% in the Ingratiation-Cost treatment (proportion test, p=0.411), and from 59.78% in the Random treatment to 94.57% in the Random-Cost treatment (p=0.004). Such a cost eliminates non-strategic conformism and reduces ingratiation. The other policy interventions do not affect ingratiatory behaviors significantly (p>0.10).

This is confirmed by multinomial Logit regressions in which the dependent variable is the probability of a worker increasing, keeping constant or decreasing the distance in opinion with the manager.[20] Compared with the initial Ingratiation treatment, the introduction of a cost diminishes the probability of shortening the distance in opinion by 30.23%; the other manipulations exert no significant impact. Compared with the initial Random treatment, the introduction of a cost reduces the probability of conformity by 25.03%. With the initial Random treatment as the reference, the probability of ingratiation is increased by 28.29% in the initial Ingratiation treatment, 30.36% in the Ingratiation-No Noise treatment, 31.83% in the Ingratiation-Incentives treatment; there is no significant difference with the Ingratiation-Cost treatment. The reduction of the distance remains driven by the initial distance, a lower strength of initial opinions, and a highly-debated topic related to immigration. These results are also supported by Tobit estimates of the ingratiation index (see Table A3 in Appendix). Introducing a cost or managerial performance pay exerts no impact on the workers' scores (M-W tests on the first period data, p>0.50).

Finally, we study whether managers' behavior is affected by the new treatments by re-estimating the determinants of which worker is assigned the high payoff. Table 5 reports the marginal effects of conditional fixed effects Logit models pooling the data from the initial and the new treatments (model (1) for the Baseline treatments and model (2) for the Ingratiation treatments), with separate regressions excluding ties in score rank.[21]

[20] Dummy variables for the new treatments are added to the independent variables included in the models reported in Table 2, as well as a variable interacting the score with the No Noise treatment since scores are measured on a larger scale in this treatment. See Table A2 in Appendix.

[21] In the Baseline treatments, the share of the best performers who receive the high payoff is 42.49% in the initial treatment, 45.99% in No Noise (p=0.933) and 51.56% in Incentives (p=0.004); excluding ties, these values are 56.68%, 61.54% (p=0.264), and 77.88% (p=0.018), respectively. In the Ingratiation treatments, these proportions are 46.55% in the initial treatment, 50.18% in No Noise (p=0.919), 49.45% in Cost and 53.83% in Incentives (p<0.001 for both); excluding ties, these percentages are 67.57%, 69.52% (p=0.846), 75.0% (p=0.005), and 83.62% (p=0.014), respectively. These tests are to-tailed proportion tests on the first period data.

Table 5. Determinants of which worker receives the high payoff in the initial and the policy treatments – Conditional Logit models with robust standard errors clustered at the manager level

Dependent variable:	Baseline treatments (1)		Ingratiation treatments (2)	
Probability of receiving the high payoff	All obs.	Excluding ties in score rank 1	All obs.	Excluding ties in score rank 1
Score rank 1	0.328***	0.320***	0.319***	0.339***
	(0.066)	(0.080)	(0.027)	(0.028)
Score rank 1*No Noise treatment	0.154	0.074	0.012	0.013
	(0.137)	(0.133)	(0.073)	(0.084)
Score rank 1*Cost treatment	-	-	0.109**	0.162**
			(0.046)	(0.082)
Score rank 1*Incentive treatment	0.245**	0.474***	0.180***	0.251***
	(0.099)	(0.112)	(0.060)	(0.072)
Score rank 3	0.012	-0.145*	0.043	-0.097
	(0.054)	(0.079)	(0.034)	(0.079)
Score rank 3*No Noise treatment	0.073	0.149	0.096	0.207**
	(0.141)	(0.223)	(0.060)	(0.095)
Score rank 3*Cost treatment	-	-	-0.061	0.123
			(0.104)	(0.134)
Score rank 3*Incentive treatment	-0.185	-0.438***	-0.068	-0.198
	(0.120)	(0.095)	(0.182)	(0.299)
Opinion rank 1	0.216***	0.231***	0.099***	0.099***
	(0.031)	(0.078)	(0.018)	(0.036)
Opinion rank 1*No Noise treatment	0.033	-0.078	0.010	0.083
	(0.102)	(0.141)	(0.040)	(0.065)
Opinion rank 1*Cost treatment	-	-	-0.042	0.040
			(0.069)	(0.098)
Opinion rank 1*Incentive treatment	-0.008	-0.078	0.113	0.012
	(0.077)	(0.173)	(0.054)	(0.109)
Opinion rank 3	0.001	0.064	0.002	-0.029
	(0.074)	(0.089)	(0.027)	(0.043)
Opinion rank 3*No Noise treatment	-0.033	-0.042	0.071	-0.013
	(0.106)	(0.105)	(0.051)	(0.095)
Opinion rank 3*Cost treatment	-	-	0.016	0.098
			(0.058)	(0.079)
Opinion rank 3*Incentive treatment	-0.032	-0.173	0.015	-0.130
	(0.111)	(0.132)	(0.072)	(0.155)
Distance in opinion	-0.010***	-0.008***	-0.003***	-0.003*
	(0.003)	(0.003)	(0.001)	(0.002)
Distance *No Noise treatment	0.003	0.002	-0.004	0.001
	(0.004)	(0.005)	(0.003)	(0.003)
Distance *Cost treatment	-	-	-0.004	-0.007**
			(0.003)	(0.003)
Distance *Incentive treatment	0.003	-0.007	-0.001	-0.003
	(0.005)	(0.009)	(0.003)	(0.003)
N / Nb of clusters	2235 / 70	1050 / 66	4797 / 124	2273 / 122
Log Pseudolikelihood	-531.908	-230.145	-1331.495	-542.573
Wald Chi2	269.22	1282.63	328.97	298.23
Prob> Chi2	0.0000	0.0000	0.0000	0.0000
Pseudo-R^2	0.371	0.402	0.242	0.348

Note: Marginal effects are displayed with standard errors in parentheses. Clustering at the manager level. *, **, and *** indicate significance at the 10%, 5% and 1% levels respectively

Table 5 attests to the reinforced importance of holding the best score rank for getting the high payoff in the cost and incentives conditions compared to the initial conditions. The weight of the relative performance is increased especially under managerial incentives. Managerial incentives benefit the workers with the highest score also because managers ask more frequently for information on scores exclusively (7.46% in the Baseline-Incentives treatment vs. 5.26% in the Baseline, proportion test, p=0.039; 11.84% in the Ingratiation-Incentives treatment vs. 1.39% in the Ingratiation treatment, p<0.001). In contrast, a reduction in the role of luck in the measure of performance does not change the managers' behavior significantly, except in a surprising direction for the worst performers in the Ingratiation treatment (model (2), last column). Moreover, Table 5 confirms that the various policy interventions do not affect significantly the importance of the best opinion rank in the assignment of payoffs compared with the initial treatments. A larger distance in opinion is still sanctioned in all treatments and it is even more sanctioned than initially when changing one's opinion is costly (model (2), last column).

These findings are summarized as follows:

Result 5. Introducing a monetary cost to change opinion reduces ingratiation and conformity. This supports Conjecture 3.

Result 6. While reducing the role of luck in the measure of performance has little effect, introducing managerial performance pay or a cost for changing opinion increases the weight of relative performance in the assignment of payoffs. This is not sufficient, however, to eliminate favoritism of opinion proximity. This supports only partially Conjecture 6.

4. DISCUSSION AND CONCLUSION

Many workers in our experiment conform strategically to the opinion of managers and managers reward workers' proximity in opinion in addition to relative performance. Social distance is a vector of both ingratiation and favoritism. This confirms in an economically-controlled setting the evidence obtained in social psychology of the effect of ingratiation on career success, higher salary increases, or boardroom appointments (Gordon, 1996; Higgins *et al*., 2003; Westphal and Stern, 2006) and of the different attitudes people have *vis-à-vis* in-groups and out-groups (Tajfel *et al*., 1971). This confirms the importance of social distance that has been found in social preferences (Chen and Li, 2009), in cooperation induced by social connections (Bandiera *et al*., 2005; 2009) and team identity (Eckel and Grossman, 2005), and in competition (Dutcher, 2011). While in these studies, identity is given exogenously, our experiment focuses on how individuals manipulate their opinion. The ingratiation index is smaller when an individual values more his opinion, and is larger when opinions are related to highly debated policy issues, which suggests that ingratiation is not only acquisitive but also protective as suggested by Jones (1964). We also found that proximity is rewarded less when managers suspect brownnosing. Favoritism behavior reacts to a change in managerial incentives, as performance pay motivates managers to put more weight on workers' relative performance in the assignment of earnings. Ingratiation can also be reduced by increasing its costs to the workers.

Our experiment helps to identify some reasons for managers to reward smaller social distance. Rewarding opinion proximity offers a solution when several workers achieve a similar performance (on discrimination as a tie-breaking rule, see Filippin and Guala, 2011, and de Haan *et al*., 2011). It is an alternative to random selection among the best performers. We predict that favoritism is more widespread when the pool of competitors for a prize is more homogenous and when the idiosyncratic random uncertainty is large. A second reason is related to a taste for similarity or homophily. Managers value workers more who express similar opinions, especially when these opinions relate to socially debated topics. Social psychologists have shown how similarity in values increases liking and interpersonal attraction (Byrne *et al*., 1966; Liden and Mitchell, 1988). In contrast, we do not find evidence that favoritism results from the imprecision in the measure of workers' ability.

Naturally, some aspects of our design can be discussed and this suggests several extensions of this study. First, we forced managers to assign unequal prizes like in a tournament setting. It could be interesting to increase the flexibility of the payoff assignment by letting managers decide freely on how to share the total payoff between the workers. This would allow us to test whether ingratiation and favoritism are a specific property of tournament settings. We did not opt for this flexible compensation scheme in the current design because inequality aversion in managers could have the same effect as favoritism: indeed, sharing payoffs equally may result both from a norm of equality or from the willingness to favor a specific worker who differs from other workers in terms of ability or opinion. Imposing inequality exogenously is more restrictive but it avoids such confound.

Second, in our design the number of correct answers in a multiple choice general knowledge questionnaire is used as a measure of performance. While this gives a measure of ability, it could be argued that it does not provide a measure of effort. A possible extension of our study would be to consider a task in which performance depends mainly on effort. This would allow us to measure the degree of substitutability between effort and ingratiation – which was not the main aim of this study.

Third, our current design is based on one-shot interactions between managers and workers. To observe the long-term effect of favoritism and ingratiation on employees' performance, another natural extension would be to introduce repeated interactions and feedback on who is rewarded. The dynamics of ingratiation and favoritism over time could have a negative impact on the effort of able workers who are passed over in favor of less able employees if they become aware that their manager rewards more opinions than productivity. But it could also exert a positive effect on favored agents if they want to self-justify their better treatment and a smaller social distance may facilitate communication and coordination in repeated interactions if work is organized in teams (see Efferson *et al*., 2008). The current study shows that ingratiation is possible even in a static framework and it constitutes a benchmark to compare with a dynamic setting.

Finally, in our current design we chose to limit the visibility of conformity because usually people keep secret their differences between private and public opinions. Another extension would consist of manipulate the visibility of changes in opinions in order to vary the moral cost of

ingratiation. Indeed, making the change of opinion visible to the other workers would probably reduce the frequency of ingratiatory behavior because of a fear of shame and social disapproval. However, this would also introduce peer pressure and raise non-trivial identification problems because of a reflection problem (Manski, 1993). Making ingratiation visible to the manager might influence her subsequent decisions, especially if they imply a trusting relationship with the worker. Introducing a risk of detection of ingratiatory behavior has an *a priori* indeterminate effect on workers as some managers may reward conformity while others may perceive it as a lack of trustworthiness.

Both our findings and the perspectives open by these possible extensions show that studying workers' ingratiation and employers' favoritism in the same framework may shed light on a widespread phenomenon in companies as suggested by interviews in companies (Westphal and Stern, 2006; Gardner, 2011).

REFERENCE LIST

Akerlof, G.A. (1980). A Theory of Social Custom, of Which Unemployment May Be One Consequence. *The Quarterly Journal of Economics*, 94, 749-775.

Akerlof, G.A. (1997). Social Distance and Social Decisions. *Econometrica*, 65, 1005-1027.

Appelbaum, S.H., Hughes, B. (1998). Ingratiation as a Political Tactic: Effects within the Organization. *Management Decision*, 36(2), 85-95.

Asch, S. (1951). Effects of Group Pressure upon the Modification and Distortion of Judgments. In Guetzkow, H. (Ed.), *Groups, Leadership and Men Research in Human Relations*. Pittsburgh: Carnegie Press, 177-190.

Bandiera, O., Barankai, I., Rasul, I. (2005). Social Preferences and the Response to Incentives: Evidence from Personnel Data. *Quarterly Journal of Economics*, 120, 917-962.

Bandiera, O., Barankai, I., Rasul, I. (2009). Social Connections and Incentives in the Workplace: Evidence from Personnel Data. *Econometrica*, 77(4), 1047-1094.

Banerjee, A.V. (1992). A Simple Model of Herd Behavior. *Quarterly Journal of Economics*, 107, 797-819.

Bernheim, B.D. (1994). A Theory of Conformity. *Journal of Political Economy*, 102(5), 841-877.

Berns, G. (2008). *Iconoclast: A Neuroscientist Reveals How to Think Differently*. Harvard: Harvard Business Press.

Bikhchandani, S., Hirshleifer, D., Welch, I. (1992). A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades. *Journal of Political Economy*, 100, 992-1026.

Bramoullé, Y., Goyal, S. (2011). Favoritism. Mimeo, Université Laval and University of Cambridge.

Brandts, J., Sola, C. (2010). Personal Relations and their Effect on Behavior in an Organizational Setting: An experimental study. *Journal of Economic Behavior and Organization*, 73, 246-253.

Byrne, D., Clore, G., Worchel, P. (1966). The Effect of Economic Similarity-dissimilarity on Interpersonal Attraction. *Journal of Personality and Social Psychology*, 4, 220-224.

Chen, Y., Li, S.X. (2009). Group Identity and Social Preferences. *American Economic Review*, 99(1), 431-457.

Cialdini, R.B., Goldstein, N.J. (2004). Social Influence: Compliance and Conformity. *Annual Review of Psychology*, 55, 591-621.

Dutcher, E.G. (2011). How Does the Social Distance Between an Employee and a Manager Affect Employee Competition for a Reward? University of Innsbrück, mimeo.

Eckel, C., Grossman, P. (2005). Managing Diversity by Creating Team Identity. *Journal of Economic Behavior and Organization*, 58(3), 371-392.

Efferson, C., Lalive, R., Fehr, E. (2008). The Coevolution of Cultural Groups and Ingroup Favoritism. *Science*, 321, 26 September.

Falk, A., Zehnder, C. (2007). Discrimination and In-group Favoritism in a Citywide Trust Experiment. IZA Discussion Paper, 2765, Bonn.

Fershtman, C., Gneezy, U. (2001). Discrimination in a Segmented Society: An Experimental Approach. *Quarterly Journal of Economics*, 116(1), 351-377.

Filippin, A., Guala, F. (2011). Costless Discrimination and Unequal Achievements in a Labour Market Experiment. IZA Discussion Paper, 6187, Bonn.

Gardner, J. (2011). Executive Masters in Leadership - Capstone Project. Georgetown University, McDonough School of Business.

Garicano, L., Palacios, I., Prendergast, C. (2005). Favoritism Under Social Pressure. *Review of Economics and Statistics*, 87, 208-216.

Goldin, C., Rouse, C. (2000). Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians. *American Economic Review*, 94(4), 715-741.

Gordon, R.A. (1996). Impact of Ingratiation on Judgments and Evaluation: A Meta-analytic Investigation. *Journal of Personality and Social Psychology*, 71, 54-68.

Grabisch, M., Rusinowska, A. (2009). Measuring Influence in Command Games. *Social Choice and Welfare*, 33, 177-209.

Grabisch, M., Rusinowska, A. (2010). A Model of Influence in a Social Network. *Theory and Decision*, 69(1), 69-96.

Greiner, B. (2004). An Online Recruitment System for Economic Experiments. In Forschung und wissenschaftliches Rechnen GWDG Bericht 63, Ed. K. Kremer, and V. Macho. Göttingen: Gesellschaft für Wissenschaftliche Datenverarbeitung.

de Haan, T., Offerman, T., Sloof, R. (2011). Discrimination in the Labor Market: The Curse of Competition between Workers. Timbergen Institute Discussion Paper 2011-174/1.

Hargreaves Heap, S., Zizzo, D.J. (2009). The Value of Groups. *American Economic Review*, 99, 295-323.

Higgins, C.A., Judge, T.A., Ferris, G.R. (2003). Influence Tactics and Work Outcomes: A Meta-analysis. *Journal of Organizational Behavior*, 24, 89-106.

Jones, E.E. (1964). *Ingratiation*. New-York: Appleton-Century-Crofts.

Jones, S.R.G. (1984). *The Economics of Conformism*. Oxford: Blackwell.

Katz, M.L., Shapiro, C. (1986). Technology Adoption in the Presence of Network Externalities. *Journal of Political Economy*, 94, 822-841.

Knowles, J., Persico, N., Todd, P. (2001). Racial Bias in Motor Vehicle Searches: Theory and Evidence. *Journal of Political Economy*, 109(1), 203-229.

Kocher, M., Sutter, M. (2004). Favoritism of Agents – The Case of Referees' Home Bias. *Journal of Economic Psychology*, 25, 461-469.

Klucharev, V., Hytönen, K., Rijpkema, M., Smids, A., Fernandez, G. (2009). Reinforcement Learning Signal Predicts Social Conformity. *Neuron*, 61, 140-151.

Laband, D.N., Piette, M.J. (1994). Favoritism versus Search for Good Papers: Empirical Evidence Regarding the Behavior of Journal Editors. *Journal of Political Economy*, 102(1), 194-203.

Levine, D.K., Weinschelbaum, F., Zurita, F. (2010). The Brother in Law Effect. *International Economic Review*, 51(2), 497-507.

Liden, R.C., Mitchell, T.R. (1988). Ingratiatory Behaviors in Organizational Settings. *Academy of Management Review*, 13, 572-587.

Manski, C.F. (1993). Identification of Endogenous Social Effects: The Reflection Problem. *Review of Economic Studies,* 60(3), 531-542.

Milgrom, P.R. (1988). Employment Contracts, Influence Activities, and Efficient Organization Design. *Journal of Political Economy*, 96, 42-60.

Milgrom, P.R., Roberts, D.J. (1988). An Economic Approach to Influence Activities in Organizations. *American Journal of Sociology*, 94, S154-S179.

Prendergast, C. (1993). A Theory of "Yes Men". *American Economic Review*, 83(4), 757-770.

Prendergast, C., Topel, R.H. (1996). Favoritism in Organizations. *Journal of Political Economy*, 104(5), 958-978.

Scharfstein, D., Stein, J. (1990). Herd Behavior and Investment. *American Economic Review*, 80, 465-479.

Tajfel, H., Billig, M., Bundy, R., Flament, C.L. (1971). Social Categorization and Inter-Group Behavior. *European Journal of Social Psychology*, 1(2), 149-178.

Tirole, J. (1986). Hierarchies and Bureaucraties: On the Role of Collusion in Organizations. *Journal of Law, Economics, and Organizations*, 2, 181-214.

Vaughan, G.M., Hogg, H.A. (2008). *Introduction to Social Psychology* (5th ed.). French Forest NSW, Australia: Pearson Education.

Westphal, J.D., Stern, I. (2006). The Other Pathway to the Boardroom: Interpersonal Influence Behavior as a Substitute for Elite Credentials and Majority Status in Obtaining Board Appointments. *Administrative Science Quarterly*, 51, 169-204.

Wortman, C.B., Linsenmeier, J.A.W. (1977). Interpersonal Attraction and Techniques of Ingratiation in Organizational Settings. In Staw, B.W., and Salancik, G.R. (Eds.), *New Directions in Organizational Behavior*. St Clair, Chicago, 133-178.

Zizzo, D.J. (2011). You Are not in My Boat: Common Fate and Discrimination Against Outgroup Members. *International Review of Economics*, 58, 91-103.

APPENDIX 1 – Instructions for the Ingratiation - Random treatments (*Translated from original in French. The instructions for the other treatments and sessions are available upon request to the authors*)

We thank you for participating in this experiment on economic decision-making. During this experiment you can earn a certain amount of money. All the transactions and payoffs are expressed in points. Your gains in points in all the periods of all parts will be added up and converted into Euros according to the following rate:

18 points = €1 or 1 point = €0.0556

In addition to the earnings you will make during the experiment, you will receive a €4 show-up fee. Your payoffs will be paid to you in cash and in private at the end of the session. All your decisions during the session will remain anonymous. You will never have to enter your name in the computer.

The experiment consists of three parts. These instructions are related to the first part of the experiment. The instructions relative to the other parts will be distributed after the first part will have been completed.

Part 1

During this part, you will have to answer four questions. Your answers to these questions will be called your "preferences". These four questions will be displayed in a random order.

Question on painting
A painting will be displayed on your computer screen during a minimum of 20 seconds and a maximum of two minutes. After watching this painting, you will have to indicate how you liked it on a graduated scale from 1 (« I hate it») to 100 (« I adore it »).

Question on music
You will listen to a piece of music during a minimum of 20 seconds and a maximum of two minutes. After listening, you will have to indicate how you liked it on a graduated scale from 1 (« I hate it») to 100 (« I adore it »).

Questions on policy issues
You will have to express your opinion on two policy issues. You express your opinion on a graduated scale from 1 (« extremely unfavorable») to 100 (« extremely favorable »).

We ask you to answer these questions with sincerity. Your answers will be used in the second part of the experiment. We remind you that all your answers in this experiment will remain anonymous. When you have answered these questions on your preferences, you will have to answer to a series of complementary questions. Your answers to these questions will not be used in the remaining of the experiment.

It is strictly forbidden to communicate with the other participants throughout the experiment. Any attempt to communicate may lead to the exclusion from the session without any compensation.If you have any question related to the first part of the experiment, please raise your hand. We will answer your questions in private.

Part 2 *(distributed after part 1 was completed)*

This part consists of 12 periods and involves two roles. During this part, you are either a participant A, or a participant B. This role is assigned randomly. It is displayed on your computer screen. You keep the same role throughout this part.

In each period, we form groups of four participants. Each group consists of one participant A and three participants B. The composition of groups is rematched randomly at the beginning of each period. In each group, the role of participants B is to perform a task. Then, the role of participant A is to decide on the assignment of two possible payoffs to participants B.

- **Description of each period**

One period consists of four stages.

In the first stage, the preference of the participant A expressed in response to one of the four questions in the first part (the preference regarding either the painting, the piece of music, or one of the two social issues) is displayed on the computer screen of his group members.

In the second stage, each participant B has to perform a task. This task consists of answering two questions randomly drawn from a general knowledge quiz including a hundred items. The questions may differ across participants. A few examples are displayed in the Table below.

What is the oldest auction house in the world? Christie's / Sotheby's / Bonhams
Which tennis tournament does not belong to the grand slam? The US Open / the Monte Carlo Masters Series / the Wimbledon tournament
What is the capital of Italy? Paris / Londres / Rome

The number of correct answers (0, 1 or 2) determines the participant B's « *score* » for the current period. Each participant B is informed of his own score.

In the third stage, each participant B is reminded on his computer screen of the preference he has expressed in part 1 in response to the question selected in the first stage. He can change this preference before it is communicated to the participant A.

In the fourth stage, the participant A must decide which of the three participants B will receive a payoff of 10 points for the period. The two other participants will receive a payoff of 5 points. If he wishes, before making his decision, the participant A can be informed on the scores of the three participants B (their number of correct answers in the quiz) and/or on the preferences they have expressed in stage 3 regarding the question selected in stage 1 of this period.

- **How are payoffs calculated in each period?**

In each group:

- The participant A earns 12 points.
- The participant B selected by the participant A earns 10 points.
- The two other participants B earn 5 points each.

- **What does change from one period to the next?**

At the beginning of each period, the groups of four participants are rematched randomly. There are always one participant A and three participants B in each group. Each participant keeps the same role (participant A or participant B) in all the periods in this part.The reference question (relative to the painting, the piece of music or the two social issues) may change in each period.

Please read again these instructions. If you have any question, please raise your hand. We will answer your questions in private.

Part 3 *(distributed after part 2 was completed)*

The instructions for the third part of the experiment are similar to the instructions for part 2, except regarding the fourth stage. Now, the participant B who receives the payoff of 10 points is selected randomly.

To summarize:

- The third part consists of 12 periods.
- You keep the same role as in the second part.
- The groups are rematched randomly in each period.
- In each period, one of the four questions of the first part, relative to the painting, the piece of music or one of the social issues, is selected.
- The participant A's preference regarding the selected question is displayed on the computer screen of all the group members.
- The participants B perform a task. It consists of answering to two questions extracted from a general knowledge quiz and that differ across participants B. The numbers of their correct answers constitute the scores of participants B.
- The participants B can change the preference they have expressed in part 1 relative to the question selected in stage 1 of the current period.
- A random draw determines which of the three participants B will receive the payoff of 10 points in the current period. The two other participants B will receive the payoff of 5 points. If he wishes, before the random draw, the participant A can be informed on the scores of the three participants B (their number of correct answers in the quiz) and/or on the preferences they have expressed in stage 3 regarding the question selected in stage 1 of this period.

Please read again these instructions. If you have any question, please raise your hand. We will answer your questions in private. After the 12 periods have been completed, we will ask you to answer a few demographic questions. Please remain seated until we invite you to leave the laboratory.

APPENDIX 2. TABLES

Table A1. Characteristics of the experimental sessions

Session number	*Number of participants*	*Treatments/order*
1	20	Ingratiation-Baseline
2	20	Ingratiation-Baseline
3	20	Ingratiation-Baseline
4	20	Baseline-Ingratiation
5	20	Baseline-Ingratiation
6	16	Baseline-Ingratiation
7	16	Ingratiation-Baseline
8	20	Baseline-Ingratiation
9	20	Ingratiation-Random
10	20	Random-Ingratiation
11	16	Random-Ingratiation
12	12	Ingratiation-Random
13	20	Ingratiation-Random
14	16	Ingratiation-Random
15	20	Ingratiation-Random
16	16	Random-Ingratiation
17	20	Random-Ingratiation
18	12	Ingratiation-Baseline - No Noise
19	16	Ingratiation-Baseline - No Noise
20	20	Baseline-Ingratiation - No Noise
21	12	Baseline-Ingratiation - No Noise
22	16	Ingratiation-Random - Cost
23	16	Ingratiation-Random - Cost
24	20	Ingratiation-Random - Cost
25	12	Ingratiation-Baseline - Incentives
26	20	Ingratiation-Baseline - Incentives
27	16	Ingratiation-Baseline - Incentives
28	12	Baseline-Ingratiation - Incentives
29	16	Baseline-Ingratiation - Incentives
TOTAL	500	

Table A2. Determinants of the probability to change opinion distance in Policy treatments - Multinomial Logit models with robust standard errors clustered at the worker level

Ref. = no change in distance	Ingratiation and Random treatments (1)		Ingratiation treatment (2)		Random treatment (3)	
	Increased distance	Decreased distance	Increased distance	Decreased distance	Increased distance	Decreased distance
Ingratiation treatment	-0.022**	0.283***	-	-	-	-
	(0.010)	(0.030)	-	-	-	-
Ingratiation No Noise	-0.003	0.304***	0.030	0.027	-	-
	(0.023)	(0.058)	(0.030)	(0.066)	-	-
Ingratiation Cost	0.001	-0.029	0.020	-0.302***	-	-
	(0.021)	(0.058)	(0.024)	(0.046)	-	-
Ingratiation Incentives	-0.007	0.318***	0.018	0.056	-	-
	(0.013)	(0.047)	(0.015)	(0.053)	-	-
Random Cost	-0.053***	-0.408***	-	-	-0.072***	-0.250***
	(0.008)	(0.031)	-	-	(0.015)	(0.031)
Score	-0.015***	0.002	-0.016***	-0.002	-0.002	0.001
	(0.004)	(0.011)	(0.005)	(0.014)	(0.006)	(0.013)
Score in Ingrat. No Noise	-0.009	0.014	-0.008	0.018	-	-
	(0.014)	(0.027)	(0.012)	(0.029)	-	-
Initial distance	-0.005***	0.022***	-0.007***	0.028***	-0.003***	0.010***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Squared initial distance	0.0001***	-0.0002***	0.0001***	-0.0003***	0.0001***	-0.0001***
	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)
Strength of the initial opinion	-0.003**	-0.022***	-0.003*	-0.020***	-0.004*	-0.017***
	(0.002)	(0.005)	(0.002)	(0.005)	(0.002)	(0.005)
Topic: painting	-0.015**	0.011	-0.012	-0.005	-0.027**	0.038
	(0.008)	(0.019)	(0.008)	(0.022)	(0.011)	(0.025)
Topic: migration	-0.011	0.107***	-0.011	0.084***	-0.018	0.071**
	(0.009)	(0.028)	(0.009)	(0.029)	(0.016)	(0.035)
Negative initial diff.*migration	-0.011	-0.078**	-0.027***	-0.037	0.021	-0.064**
	(0.012)	(0.035)	(0.010)	(0.041)	(0.029)	(0.037)
Topic: carbon tax	-0.015*	0.029	-0.021**	0.037	0.002	-0.003
	(0.009)	(0.027)	(0.009)	(0.029)	(0.014)	(0.036)
Negative initial diff.*carbon tax	0.013	-0.050	0.029	-0.068*	-0.036**	0.012
	(0.016)	(0.036)	(0.020)	(0.040)	(0.015)	(0.049)
Order	-0.023***	0.007	-0.022**	-0.006	-0.012	0.023
	(0.009)	(0.026)	(0.010)	(0.035)	(0.015)	(0.040)
Period	0.001	0.0004	0.001	-0.001	0.001	0.003
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Female	-0.023**	0.044	-0.031***	0.039	-0.010	0.036
	(0.010)	(0.032)	(0.010)	(0.034)	(0.016)	(0.037)
N (by category)	6094 (403-2889-2802)		4438 (340-1746-2352)		1882 (135-1297-450)	
Nb of clusters	375		375		159	
Log Pseudolik.	-4588.350		-3427.722		-1302.634	
Wald Chi2	553.86		555.06		122.73	
Prob> Chi2	0.0000		0.0000		0.0000	
Pseudo-R^2	0.155		0.142		0.121	

Note: The table reports the marginal effects, with robust standard errors in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively. N by category refers to the number of cases in which workers increase the distance, keep the distance stable and decrease the distance, respectively.

Table A3. Determinants of the ingratiation index - Tobit models with robust standard errors clustered at the worker level, with Policy treatments

Dependent variable: Ingratiation index	Ingratiation and random treatments (1)	Ingratiation treatment (2)	Random treatment (3)
Ingratiation treatment (initial)	0.536*** (0.058)	-	-
Ingratiation - No Noise	0.489***(0.105)	-0.099 (0.093)	-
Ingratiation - Cost	0.128 (0.119)	-0.433*** (0.107)	-
Ingratiation - Incentives	0.616*** (0.093)	0.096 (0.083)	-
Random - Cost	-0.941*** (0.149)	-	-1.279*** (0.198)
Score	-0.025 (0.020)	-0.004 (0.022)	0.019 (0.049)
Score in Ingratiation - No Noise	0.066 (0.045)	0.071 (0.047)	-
Strength of the initial opinion	-0.030*** (0.008)	-0.021*** (0.008)	-0.050*** (0.018)
Topic: painting	0.045 (0.030)	0.061 (0.037)[a]	0.027 (0.092)
Topic: migration	0.228*** (0.046)	0.288*** (0.053)	0.405*** (0.122)
Negative initial diff.*migration	-0.183*** (0.061)	-0.220*** (0.066)	-0.569*** (0.170)
Topic: carbon tax	0.040 (0.044)	0.129*** (0.050)	-0.022 (0.125)
Negative initial diff.*carbon tax	-0.039 (0.060)	-0.147** (0.068)	-0.162 (0.168)
Order	-0.020 (0.046)	-0.008 (0.058)	0.095 (0.125)
Period	0.005 (0.003)	0.003 (0.004)	0.001 (0.009)
Female	0.046 (0.056)	0.055 (0.057)	0.245** (0.119)
Constant	-0.140 (0.097)	0.254*** (0.089)	-0.297 (0.194)
N	5699	4333	1865
Left-censored obs.	2897	1887	1355
Right censored obs.	535	558	131
Nb of clusters	375	375	159
Log-pseudolikelihood	-5035.628	-4325.819	-1265.701
F	13.92	4.86	6.15
Prob>F	0.0000	0.0000	0.0000
Pseudo R^2	0.085	0.019	0.084

Note: The data exclude the observations in which the worker has the same initial opinion as the manager and those in which the worker increased his distance with the manager. Robust standard errors are in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively. [a] : significant at the 10.2% level.

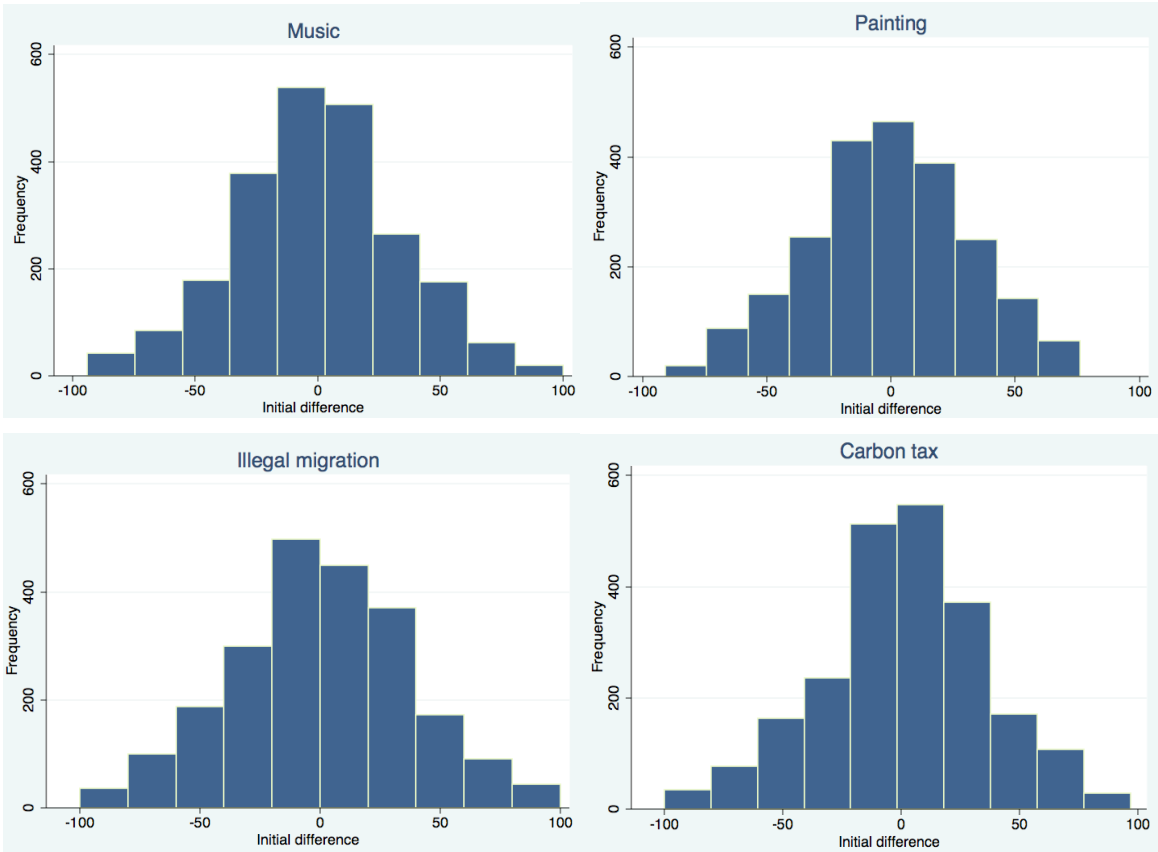

Figure 1A. Distribution of the frequency of differences in initial opinions between the managers and the workers, by topic, all treatments included