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Don't Ask Me If You Will Not Listen: The Dilemma of Consultative Participation

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We study the effect of *consultative participation* in an experimental principal–agent game, where the principal can consult the agent's preferred option regarding the cost function of the transfer to be implemented in the final stage of the game. We show that consulting the agent was beneficial to principals as long as they followed the agent's choice. Ignoring the agent's choice was detrimental to the principal because it engendered negative emotions and low levels of transfers. Nevertheless, the majority of principals were reluctant to change their mind and adopt the agent's proposal. Our results suggest that the ability to change one's own mind is an important dimension of managerial success.

Data, as supplemental material, are available at http://dx.doi.org/10.1287/mnsc.2013.1786.

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1. Introduction

Employees' participation in the decision-making process is a widely used managerial tool that has been studied at length in the last 50 years in the management literature (Allport 1945, Cotton et al. 1988, Lam et al. 2002) and described in detail in numerous case studies and reports.[1] Yet, evidence on the positive impact of *participative decision making* (PDM) on employees' performance has been controversial despite its intuitive appeal.[2] As shown by Cotton et al. (1988) and Miller and Monge (1986), different forms of PDM can produce markedly different outcomes. For example, Cotton et al. (1988) find that informal participation and employee ownership are effective in terms of both productivity and satisfaction, but short-term participation is ineffective on both criteria. In other cases, such as participation in work decisions or consultative participation, results are mixed or inconclusive. The intuitive appeal of PDM is linked to the belief that involving people in decision making can increase job satisfaction and raise motivation (Wagner et al. 1997). People are expected to react positively to PDM because they tend to value the fact that their opinions are being heard and considered (Korsgaard and Roberson 1995, Wiley 1997, Freeman and Rogers 1999). However, implementing PDM appears to be challenging because it tends to create expectations for increased employees' empowerment. High expectations may well be followed by disenchantment.

One issue faced by empirical researchers is the difficulty to observe the degree of employees' participation and isolate this effect from potential confounding factors such as corporate culture, firm size, organizational structure, or industry competitiveness. Another issue is the wide variety of approaches that have been described under the label of PDM (see, e.g., Cotton et al. 1988).

In this paper, we focus on *consultative participation*, defined as a low-cost form of participation under which employees are asked to give opinions about job-related issues without having the power to make final decisions (Cotton et al. 1988). We propose a simple experimental approach to shed light on the current debate regarding the effect of PDM tools on employees' performance.

[1] See, for example, Marrow et al. (1967), Lowin (1968), Mitchell (1973), Locke and Schweiger (1979), Frey (1993b), Miller and Monge (1986), McCaffrey et al. (1995), and also the writings by Lawler and others (Lawler 1988, 1990, 1993; Lawler et al. 1992, 1998; Ledford 1993).

[2] See, for example, Locke and Schweiger (1979), Locke et al. (1986), Schweiger and Leana (1986), Wagner and Gooding (1987a, b), Cotton et al. (1988, 1990), Leana et al. (1990), and McCaffrey et al. (1995).

2. An Experimental Approach to Participation in the Workplace

The use of experiments is motivated by the difficulty of gathering field data about crucial aspects of organizations such as participation in decision making or internal communications among workers and managers (Falk and Fehr 2003). A growing number of related experimental works building on principal-agent games have been conducted to study organizational features such as incentives contracts (Fehr et al. 1993, 1997; Fehr et al. 2007a, b) or monitoring (Frey 1993a, Fehr and Gächter 2000, Falk and Kosfeld 2006, Dickinson and Villeval 2008).

The experimental methodology enables us to control for well-known confounding factors that may have prevented researchers from providing clear evidence on the positive relationship between employees' involvement in decision making and performance. We build on the principal–agent game described in Falk and Kosfeld (2006; FK henceforth) in which agents decide upon a level of transfer which is costly to them but beneficial for the principal. The authors show that imposing a minimum level of transfer can backfire and reduce agents' motivation. Interestingly, Charness et al. (2012) modify the FK gift-exchange design by allowing the principal to delegate the decision to set wages. The authors show that delegating the wage decision to the agent increases transfers.

We extend the FK design by allowing the principal to consult the agent regarding the choice of the cost function of the transfer to be implemented. We introduce an initial stage during which both principals and agents select their preferred cost function among five possible choices. In Stage 2, principals decide whether or not to pay a fee to consult the cost function previously selected by the agent. In Stage 3, if the principal decided to consult the agent, he or she can decide whether to follow the agent's preferred option or implement his or her own preferred cost function. In the last stage and after learning the cost function selected by the principal in Stage 3, agents decide on the value of the transfer. Our approach differs from that of FK because we study the effect of *consultative participation* rather than control and monitoring. It is interesting to notice that consulting can be implemented at low costs and thereby constitutes an appealing managerial tool. Clearly, these costs may be high if the consulting process is time consuming. Nevertheless, we consider *consultative participation* as a low-cost mechanism compared with other forms of PDM.

Our analysis is also related to a recent paper by Fehr et al. (2013; FHW henceforth) in which the authors analyze delegation of authority in a modified version of the principal–agent game. The authors show that principals are reluctant to delegate authority because they value authority per se. Interestingly, the allocation of authority affects effort provision and, in particular, controlling parties tend to overprovide effort, whereas subordinates underprovide effort. The previous paper is closely connected to our design as it analyzes the issue of empowerment that can be seen as a strong form of *participative management*. However, empowerment and *consultative decision making* are different managerial tools. The former tool consists of giving power to the agent, whereas the latter simply consists of asking employees about job-related issues without affecting the allocation of authority in the organization. The empowerment approach is likely to be more costly and more difficult to implement than the consulting approach.

3. The Dilemma of Consultative Participation

In this study, we are able to validate the intuitive appeal of *consultative participation* by establishing that workers' participation in the decision-making process can increase transfers from agents to principals. This occurred when the principal decided to consult and follow the agent's proposal. However, this profitable strategy was followed by a minority (31%) of principals. The rest of the principals decided either not to consult the agent (47%) or to consult the agent without following his or her proposal (22%). These strategies led to levels of transfers that were respectively 23% and 45% lower than in the case in which the principal consulted and followed the agent's preferred option. Also, the principals who consulted the agent but did not follow his or her preferred option significantly underperformed principals who decided not to consult the agent. As a result, consulting the agent was not a profitable strategy for principals who were unwilling to follow the agent's proposal. However, a large proportion of principals (53%) decided to consult the agent's choice, incurring a monetary consultation fee imposed by the experimenter. In a Nash equilibrium with purely selfish individuals, principals would not consult agents because they would expect selfish agents not to transfer anything in the last stage of the game regardless of the cost function finally implemented by the principal. However, as we show in our theoretical analysis, consulting the agent at a cost may be an optimal strategy for the principal in the presence of social preferences. This is the case because the principal may collect high transfers in the last stage of the game by selecting a cost function that matches the agent's distributive concerns. In addition, the principal can foster positive reciprocity and increase the agent's transfer by consulting and following the latter.

Indeed, a noticeable proportion (60%) of the principals believed that following the agent's choice would increase agents' transfers in the last stage of the game with respect to the case in which they do not consult. Only 14% of the principals anticipated that following the agent's choice would affect transfers negatively. Interestingly, most principals (78%) acknowledged that following the agent would induce either positive emotions or larger transfers, whereas only 19% claimed that the agent would be indifferent.

Then, one may wonder why a large proportion of principals (41%) decided to ignore the agent's choice. Principals decided not to follow the agent's choice because they were not willing to change their minds and preferred to implement the game they themselves selected in the first stage of the experiment. Principals believed that the agent's choice conflicted with their own interpretation of how the game should be played. This behavior is closely related to the well-documented self-serving biases by which people conflate what is fair with what benefits them (Babcock et al. 1995, Babcock and Loewenstein 1997). In our design, self-serving individuals were likely to disregard the opinion of the other party concerning the choice to be implemented. Evidence of self-serving biases has also been found in a simulated labor relationship closely related to the current experiment (Charness and Haruvy 2000).

Interestingly, only two principals (out of 222) reported that they did not follow the agent's preferred option to keep control of the situation. This confirms that the mechanism by which principals ignored the agent differed from the one highlighted by FHW, wherein principals decided to retain authority because they valued power. In our design, the principals did not decide whether to delegate authority to the agents, instead, they decided whether to listen to the agent's choice or not. Agents understood this difference and, as one of them summarized in the debriefing questionnaire, "Being consulted gives me a voice in their decision."

Our analysis also relates to the introduction of communication in principal–agent games. Charness and Dufwenberg (2006) found that promises were effective in increasing cooperation because people were likely to keep their promises to avoid guilt from disappointing others' expectations. In a related paper, Brandts and Cooper (2007) found that coordination on high levels of transfers could be facilitated by communication between managers and workers. In our setting, we show that consulting can lead to very different outcomes than the ones found in previous communication experiments. Indeed, even though principals were willing to consult the agent, they were unwilling to implement their preferred option, generating dissatisfaction and reducing cooperation, as a result. This occurred even in the experimental setting in which agents and principals were able to chat during the consultation process.

Finally, our findings relate to previous experimental works showing that individuals are not purely selfish, but express reciprocal concerns as well as social preferences. In particular, our analysis is in line with a series of works that showed that managers can strengthen the effect of monetary incentives by fostering positive reciprocity either by increasing fixed wages (Fehr et al. 1993, 1997) or by giving bonuses (Fehr et al. 2007a, b). Consistent with previous research on the psychology of incentives (for an overview of the literature, see, e.g., Fehr and Falk 2002, Camerer and Malmendier 2007, Charness and Kuhn 2011), our results suggest that reciprocal behaviors may play an important role in understanding employees' motivation in the workplace. In our design, consulting agents and implementing their preferred option had a positive effect on their level of transfers because it fostered positive reactions. Conversely, ignoring the agent, and to a lesser extent not consulting the agent, nurtured negative reactions. As a result, consulting employees was likely to backfire when the principal decided to ignore the agent's choice. This undesirable outcome may account for the scarce evidence of the positive effect of PDM on workers' performance.

The process of involving workers in decision making is challenging because, on one hand, managers are willing to ask their subordinates about their opinions, but, on the other hand, they are reluctant to change their minds and follow the employees' proposals. This behavior captures the essence of the *consultative participation dilemma* and is illustrated by the following quotations:

> *Of course, I like to hear everyone, but then I go off alone and decide. The decisions that are important must be made alone.*
>
> —Richard M. Nixon (Schecter 1972, pp. 18–19)

> *Wanted to stand by my own decision to see where that led.*
>
> —Anonymous subject who played the role of principal and who did not follow the agent's proposal after consultation

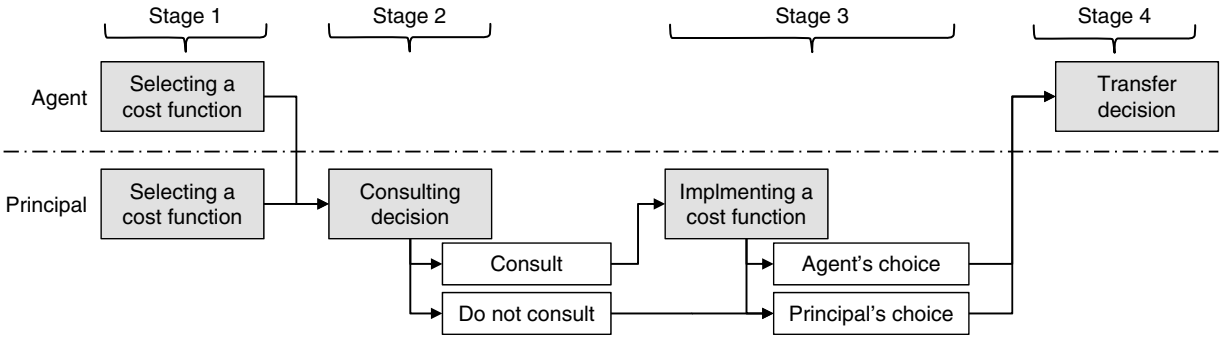
Our findings stress that, beyond incentive contracts, the manager's capacity to listen and follow their subordinates can be a powerful source of motivation. This result is particularly striking given that it relies on an almost costless managerial tool.

4. Experimental Design

4.1. The Consultation Game

Our experiment was designed to study the effect of involving employees in the decision-making process

Figure 1 Timing of the Consultation Game



on workers' performance. We used a modified version of the principal–agent game described in FK. In this game, the agent selects a transfer x, which is costly for the agent but beneficial to the principal. In particular, each transfer of x points increases principals' earnings by $2x$. In our design, principals were endowed with 2 points, whereas agents had an initial endowment of 12 points. Notice that in FK, principals received no initial endowment. We introduced this positive endowment in our design to allow principals to pay for the consultation fee in Stage 2 without incurring losses in case they received no transfer from the agent. Each point was converted to cash at the end of the experiment at the following exchange rate: 1 point = \$1.50 (see Appendix A.3 for the full set of instructions).

The timing of the consultation game was as follows (see Figure 1).

In Stage 1, both types of players, agents and principals, had eight minutes to select the cost function of the transfer that they wanted to be considered in the final selection of the cost function in Stage 3.

In Stage 2, principals decided whether to consult the cost function previously selected by the agent. Principals incurred a cost $c > 0$ to consult the agent's choice. The parameter c varied across treatments. At this stage, the agent was informed of the principal's decision to consult them or not. In the chat treatment, consulting the agent's choice was also followed by a three-minute chat session between the agent and the principal. The agent knew before the chat took place that the principal had previously consulted his or her transfer rule.

In Stage 3, principals who consulted the agent's decision learned the agent's choice in Stage 1 and chose whether to follow the agent's choice when deciding upon the implementation of a cost function. Depending on the treatment, the principal could also decide to implement a cost function that had not been selected by either the agent or the principal in Stage 1. Notice that consulting the agent's choice in Stage 2 did not imply transferring the authority to make the final decision in Stage 3 to the agent. In our design, and in contrast to FHW, the final decision was always made by the principal.

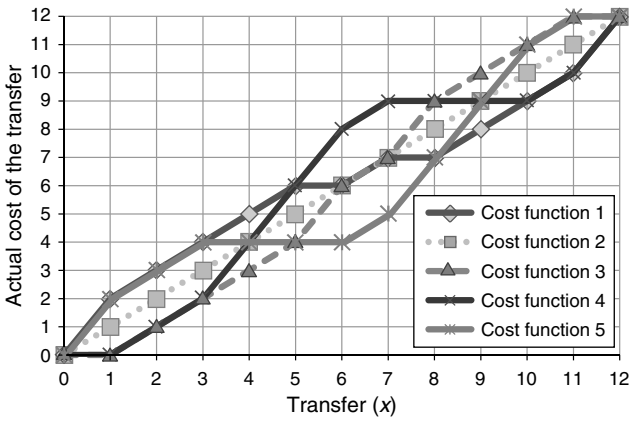
In the final stage and after learning the cost function implemented by the principal in Stage 3, agents decided on the value of the transfer x in $\{0, 1, \ldots, 12\}$. Agents who were consulted and followed did not learn the cost function selected by the principal in Stage 1.

The game was played only once.

In Stage 1, we introduced a crucial feature of our experiment. Previous to the decisions of the agents regarding transfers, principals and agents decided which of five different cost functions they wanted to see implemented in the third stage of the game (see Appendix A.3 for more details on cost functions). Each cost function was nondecreasing in transfers, and the marginal cost of the transfer was always lower than or equal to the marginal product of the transfer. Figure 2 shows all the cost functions.

Cost function 2 corresponds to the linear cost function used in FK. The other four cost functions are symmetrical with respect to the linear cost function. All cost functions are such that zero transfers are costless, whereas the cost of the maximum transfer (12 points) is always equal to 12. Nonlinear cost functions differ for intermediate transfer values and were

Figure 2 Cost Functions of the Transfer



designed such that there exists a range of transfer values for which a given cost function entails lower transfer costs than the others. Cost functions 3 and 4 are associated with the lowest transfer costs for low transfers (between zero and three points for cost function 4, and between zero and five points for cost function 3). For higher transfers (between five and eight), cost function 5 entails the lowest transfer costs. Finally, cost function 1 is the least costly of the cost functions for very high transfers (from 8 to 12). Interestingly, the choice of cost functions by the agents in Stage 1 helped us identify distributive preferences. For example, an agent who chose cost function 5 would tend to prefer an equal sharing of the agent's endowment, whereas an agent who chose cost functions 3 or 4 would reveal his or her willingness to transfer less than half of the initial endowment to the principal. The choice of the cost function as a predictor of agents' distributive concerns is valid as long as agents truthfully revealed their preferred cost functions in Stage 1. If this was the case, first-stage decisions could help us identify initial social preferences and control for them in our analysis of the effect of consulting on agents' transfers. Similarly, we could study principals' expectations regarding agents' transfers according to the cost function they selected in Stage 1. For example, principals selecting cost functions 1 or 5 were likely to expect agents to make large transfers. In line with the literature on self-serving biases, agents and principals were likely to differ in their choice of the cost function because they would tend to form different expectations about transfers.

Our design aims to represent a situation in which a manager (principal) has to decide about the procedure (cost function of the transfer) that a worker (agent) should follow to complete a productive task. Each procedure requires effort (transfer), and all procedures are such that output increases in the level of effort. However, procedures differ in the relationship between effort and output. We will illustrate this by focusing on transfer values between one and six, which correspond to the very large majority of the actual transfers (98%). For example, one may think of the agent undertaking a programming task for the principal for which the parties have to decide on the programming language to be used. One type of programming language is standard and does not require additional learning for the agent but will be particularly inefficient when reaching an advanced stage in the project. The sophisticated language requires initial learning, which will make programming more costly than with the standard language in early stages of the project. However, if the project reaches an advanced stage, the sophisticated language will be more efficient than the standard language.

The choice of the sophisticated language could be illustrated by cost functions 1 and 5 for which it is very costly to increase effort for low levels of effort, whereas it is less costly to do so for higher levels of effort. Cost functions 3 and 4 exhibit the opposite pattern, which could illustrate the choice of the standard programming language. These cost functions are consistent with the standard assumption of convexity for the cost of effort according to which increasing effort becomes more difficult as effort increases.

In the first stage, both the manager and the employee spend some time reflecting upon the procedure to be implemented, after which the manager decides whether to consult the employee's opinion or not. We are envisioning a situation in which not only the manager but also the employee knows the set of procedures that can be undertaken.[3]

4.2. Treatments

We considered a total of six treatments varying the availability, the cost, and the mode of consultation as well as introducing the possibility for principals to set agents' wages before the consultation game started (see Table 1). In the no consultation (NC) treatment principals were not able to consult agents' choices. This treatment consisted of two stages. In the first stage, which was the same as Stage 1 in Figure 1, both the agent and the principal chose a cost function, but only the principal's choice was implemented. In the second, stage which was the same as Stage 4 in Figure 1, agents learned the cost function implemented by the principal and then selected the amount to be transferred to the principal. The simple consultation (SC) treatment was identical to the game presented in Figure 1. Principals decided whether to consult the agent's choice in Stage 2. In the case where they consulted the agents, principals had to choose whether to implement their own choice or the agent's choice in Stage 3. Had principals not consulted the agent, they would have to implement their own cost function. We considered two simple consultation treatments that only differed in the cost of consulting. The first treatment is referred to as SC1, in which case the cost of consulting the agent's choice was equal to 1 point ($1.5) for the principal. In the second treatment, referred to as SC0, the cost of consulting was equal to 0.2 point (30¢). In treatment SC0, the cost was

[3] An alternative design may consider that only the manager is able to think about the procedures in the first stage of the game. This would be the case if the employee was not informed about the type of work he or she can be asked to undertake. Besides the fact that our experiment is designed to represent a real-world labor environment, it is also the case that having the agent select a cost function in Stage 1 allows us to assess his or her social preferences and control for those in our subsequent analysis.

Table 1 Experimental Design

Treatment[a]	Description	Number of subjects
NC	Consultation was not available	120 subjects (four sessions)
SC1	Cost of consulting was \$1.5	106 subjects (four sessions)
SC0	Cost of consulting was 30¢	118 subjects (five sessions)
FL	Same as SC0, but principals who consulted could implement any cost function	110 subjects (three sessions)
CH	Same as SC0, but principals who consulted could chat with the agent	110 subjects (six sessions)
GX	Same as SC0, but principal first determined the agent's endowment	112 subjects (three sessions)

Notes. We did not include two observations from treatment FL and one observation from treatment CH because agents decided to transfer all of their endowment in the last stage of the game. In treatment CH, the agent and the principal attempted to arrange side payments. The agent asked the principal "What are you wearing?," "What color shirt and shorts?," and "Have you seen the berlin wall piece?" (a specific place on campus, next to the laboratory where the experiment was completed). We identified this as an attempt to arrange side payments outside of the laboratory.

[a]We would like to thank the associated editor and the referees for suggesting treatments NC, FL, CH, and GX.

set to the lowest possible value (in points) that translates into a positive monetary cost (in dollars) for the principal.[4]

We analyzed two additional treatments in which we altered the mode of consultation. Our aim was to assess the robustness of our results to more sophisticated consultation mechanisms. In particular, we implemented a consultation treatment that gave the opportunity to the principal to find a compromise solution in Stage 3 and choose a cost function that was neither the principal's nor the agent's, but that could appeal to both (flexible consultation; treatment FL). We also extended our simple consultation environment by introducing free-form communication in the process of consultation (treatment CH). In particular, principals who consulted the agent's choice could chat with the latter in a free text format for three minutes after consulting and observing the agent's choice. Not only is communication a crucial feature of the natural environments we aim at representing, but it also offers a unique opportunity for the principal and the agent to find an agreement on the cost function to implement in Stage 3. In both treatments the cost of consulting was kept equal to 0.2 point.

Finally, we extended the simple consultation treatment to the case in which the principal could set the agent's endowment at the beginning of the experiment similarly to a standard gift exchange game (GX) (Fehr et al. 1993). Our aim was to strengthen the managerial interpretation of our experimental results. We will explain the remaining details of this treatment in §6.3.

4.3. Procedures

Our subject pool consisted of students from Chapman University and University of California, Irvine. The experiments took place in October and November 2010 and in May and June 2012. In total, 676 subjects participated in these experiments, divided into 25 sessions (see Table 1). Students were assigned randomly to one of the two roles, agent or principal, and were randomly matched with a partner. The experiment was completed using papers and pencils, except for the three-minute chat room session used in treatment CH in which agents and principals interacted via computer terminals.

When all students were seated, the experimenter read the instructions aloud for approximately 20 minutes. Agents and principals made their decisions using answer sheets provided by two monitors.[5] Subjects put their answer sheets into envelopes that were collected by the monitors and delivered to their respective partners in the principal–agent game.

At the end of the experiment, but before principals knew the agent's transfer, we elicited principals' beliefs. Agents' beliefs were elicited after the final stage of the game. We elicited beliefs for 21 out of 25 sessions with a total of 534 subjects.[6] At the end of the experiment, all answer sheets were collected, and a short questionnaire was distributed to the subjects (see Appendix A.4 for the details of the questions). Subjects responded to the questionnaire while payoffs were being computed. Experimental sessions lasted one hour on average. Agents and principals earned, on average, \$22.18 and \$16.96, respectively, including a \$7.00 show-up fee.

4.4. Theoretical Model and Predictions

We develop our theoretical conjectures for the simple consultation game by building on previous works that incorporated social preferences into the utility

[4] The standard procedure at the two laboratories we used to run the experiments is to round all of the payoffs up to the nearest quarter, and, given the exchange rate used in the experiment, any cost lower than or equal to 0.2 would not cut down on the participants' final earnings in dollars.

[5] Monitors were graduate students. The experimenter did not serve as a monitor.

[6] The elicitation of beliefs was not incentivized. This choice was motivated by the possible effects incentivized belief elicitation may have on subjects' behaviors as was shown in the context of public goods games by Gächter and Renner (2010).

function of decision makers (Fehr and Schmidt 1999, Bolton and Ockenfels 2000, Charness and Rabin 2002). In particular, we consider the social preferences model presented in Charness and Rabin (2002, pp. 822–823), which includes both distributive preferences as well as reciprocal behaviors. Social preferences are captured by the weight ($0 \leq w \leq \frac{1}{2}$) that each individual assigns to the other person's monetary payoffs in his or her utility function. We consider two types of individuals who only differ in the magnitude of their other-regarding preferences. More specifically, individuals of type L assign a lower weight to the other player's monetary payoffs in their utility function than individuals of type H.

We denote π_A and π_P as the agent's and the principal's monetary payoffs, respectively. In our case, $\pi_P = 2 + 2x - c$ and $\pi_A = 12 - C_r(x)$, where $x \geq 0$ stands for the transfer of an agent, $c \geq 0$ denotes the cost of consultation ($c = 0$ if consultation does not occur), and $C_r(x)$ denotes the cost of transferring an amount x to the principal when cost function $r \in \{r_L, r_H\}$ applies. We assume that $C_r(x)$ is increasing in transfer. An individual's type is private information, whereas the distribution of types, which is captured by the proportion ($p \in (0, 1)$) of individuals of type L in the population, is publicly known. We specify the utility function for agents (A) of type $i \in \{L, H\}$ and principals (P) of type $j \in \{L, H\}$ as $U_{A,i} := w_i^A \pi_P + (1 - w_i^A)\pi_A$ and $U_{P,j} := w_j^P \pi_A + (1 - w_j^P)\pi_P$, respectively.

We denote by r_i the cost function that provides the highest level of utility to an agent of type $i \in \{L, H\}$; that is,

$$\max_{x_i} U_{A,i}(x_i, r_i) \geq \max_{x_i} U_{A,i}(x_i, r_s) \quad \forall\, i \neq s,\ (i, s) \in \{L, H\}^2. \quad (1)$$

Also, we consider that $\arg\max_{x_i} U_{A,i}(x_i, r_i) \geq \arg\max_{x_i} U_{A,i}(x_i, r_s)$ so that the principal obtains the highest transfers when implementing the agent's favorite cost function. This assumption allows us to rule out the trivial case in which the principal always sets $r = r_H$.

In Charness and Rabin (2002), the weight that an individual assigns to the other person's monetary payoffs includes a reciprocity term q, which takes the value -1 if the other person has misbehaved and 0 otherwise. Similarly, we define $w_i^A := \rho_i^A + \theta q$, where $\rho_i^A > 0$ captures distributive preferences, and $\theta > 0$ assesses the magnitude of reciprocal behaviors of agents. These parameters are such that $0 \leq w_i^A \leq \frac{1}{2}$. Also, we set $w_j^P := \rho_j^P$, with $0 \leq \rho_j^P \leq \frac{1}{2}$, that is, we consider that $q = 0$ for the principals since, in the current game, they do not have any opportunities to reciprocate the agent's behavior. Our utility functions correspond to the case in which $\rho = \sigma$ in Charness and Rabin (2002). The objective of the current framework is to introduce heterogeneity in agents' and principals' distributive preferences in a setting in which distributive preferences are defined as parsimoniously as possible. Note that a similar analysis could be developed for different specifications of distributive preferences without affecting the qualitative aspects of our results.

In our setting, the agent is making the final decision regarding the transfer to the principal in Stage 4 and can thus reciprocate the principal's choice of the cost function in Stage 3. In particular, agents will interpret as unkind (kind) behavior the decision of the principals not to implement their own cost function. This is the case since, by assumption, cost function $i \in \{L, H\}$ maximizes the utility of an agent of type i. As a result, in our setting, we consider that $q = +1$ ($q = -1$) whenever the principal decides (not) to follow the cost function of the agent, and $q = 0$ if the principal does not consult the agent's choice. We allow for both positive reciprocity ($q = +1$) and negative reciprocity ($q = -1$), in line with the literature in management that contemplates the positive role of consultation on employees' motivation. We use our theoretical setting to establish the following conjectures.

First, let us consider that all agents are purely self-interested so that $w_i^A = 0$. In that context, the choice of the cost function should be irrelevant given that self-interested agents would never transfer any amount to the principal, since zero transfers are costless for any of the cost functions. In a subgame perfect Nash equilibrium with purely self-interested individuals, principals would anticipate the selfish behavior of the agent in Stage 4 and would decide not to pay the monetary cost for consulting the agent. As a result, any choice of cost functions in Stage 1 would be consistent with Nash equilibrium. This result is summarized in Proposition 1.

Proposition 1. *In the absence of social preferences ($w_i^A = 0$ and $w_j^P = 0$), the agent transfers nothing to the principal, and the principal decides not to consult. Both the agent and the principal choose indifferently between cost functions.*

However, we know from previous studies that, in principal–agent games, individuals typically express both distributive and reciprocal concerns.[7] In particular, we may expect that consulting agents and implementing their cost functions will have a positive effect on transfers because it may foster positive reciprocity, whereas ignoring the agents may nurture negative reciprocity and reduce transfers. In that case,

[7] Fehr et al. (1993, 1997), FK, Fehr et al. (2007a, b), Charness et al. (2012), FHW.

agents and principals may not be indifferent regarding the choice of the cost function in the first stage of the game.

In the next proposition we contemplate the case in which individuals exhibit social preferences ($w_i^A > 0$ and $w_j^P > 0$). In our model, principals may be willing to consult agents to collect information regarding the agent's social preferences. By doing so, principals will increase their chances of selecting cost functions that are consistent with the agent's type. This will translate into larger transfers to the principal in Stage 4. The principal will consult the agent if and only if the consultation fee is lower than the gains associated with the increase in transfers derived from consulting and following the agent's favorite cost function. It is interesting to note that a principal who decides to consult in Stage 2 will always decide to follow the agent's choice in Stage 3. This is the case because principals would not pay a consultation fee, as inexpensive as it may be, if they did not have the intention to raise transfers by implementing the agent's favorite cost function in Stage 3. Following the agent's choice will not only increase transfers by selecting a cost function that matches the agent's type (see Equation (1)) but it will also increase transfers by fostering positive reciprocity ($q = +1$). Our findings are summarized in Proposition 2 (see Appendix A.1 for proofs).

Proposition 2. *In the presence of social preferences ($w_i^A > 0$ and $w_j^P > 0$), we have the following*:

(i) *In Stage* 1, *agents of type i choose the cost function r_i, which is consistent with their social preferences. This may not be the case for principals. Indeed, principals who do not consult the agent will choose cost function $r = r_L$ whenever the proportion of individuals of type L in the population (p) is sufficiently high.*

(ii) *There exists a threshold for the cost of consulting ($c_j^+ > 0$) below which a principal of type $j \in \{L, H\}$ consults the agent. For $c = 0$, the principal always consults the agent. As the magnitude of the reciprocity factor (θ) increases, principals will be willing to consult the agent for a lower threshold of the cost of consulting.*

(iii) *Principals who consult the agent always decide to follow the cost function stated by the agent. As a result, principals who decide to consult the agent choose indifferently between cost functions in the first stage of the game.*

(iv) *Agents endowed with social preferences transfer a positive amount to principals. On average, agents' transfers are larger if agents have been consulted than if they have not been consulted. Also, the difference in average transfers between these two cases increases in the reciprocity factor.*

5. Results

In this section, we present the results for all our experimental treatments (NC, SC0, SC1, FL, and CH) but not treatment GX, which is analyzed in §6.3.

Table 2 Choice of Cost Functions

	Agent choice (%)					Principal choice (%)				
Treatment	1	2	3	4	5	1	2	3	4	5
NC	8	2	68	5	17	7	0	47	2	45
SC1	2	4	68	9	17	8	4	26	6	57
SC0	2	5	63	10	20	12	7	34	7	41
FL	5	0	56	11	27	18	5	36	5	35
CH	4	2	73	9	13	13	0	38	7	42
All	4	2	66	9	19	11	3	37	5	44

5.1. Cost Function Choice and Social Preferences

We start by presenting an analysis of the first stage of the game in which participants had to choose the cost function they wanted to be implemented later on. According to our theoretical model with social preferences, we expect agents to report truthfully the cost function they actually wanted to play in all treatments involving consultation (Proposition 2(i)). However, this may not always be the case for principals. In the no consultation treatment, agents had no incentives to either lie or tell the truth, whereas principals should have revealed their preferred cost function given that it was going to be implemented for sure. Interestingly, we observe that the distribution of cost functions selected by agents in Stage 1 did not differ significantly between the no consultation treatment and the four consultation treatments (see Table 2 and Table O1 in §A of the online appendix, available at https://sites.google.com/site/consultativeparticipation/). For the case of principal choices, we found slightly significant differences between the no consultation treatment and treatments SC0 and CH, whereas no significant differences were found for treatments SC1 and FL.

If agents were purely selfish, both agents and principals would be indifferent between the five cost functions since the transfer of the agent in Stage 4 would be equal to 0, regardless of the cost function actually selected (Proposition 1). However, we know from previous research that people exhibit social preferences in this setting. As a result, we should expect agents and, to a certain extent, principals to choose cost functions in response to their social preferences (Proposition 2(i)). The most popular cost functions for principals and agents across all treatments were cost functions 3 and 5, respectively. On aggregate, 82% (464/564) of the participants chose one of these two cost functions.[8] Cost function 3 is the function for which the transfer cost was the lowest for any transfer between zero and five, whereas cost function 5 is the function for which the transfer cost was the lowest

[8] We reject the hypothesis that the distribution of cost functions selected by either the principal or the agent follows a uniform distribution (Pearson's chi-square test, $p < 0.001$ for all treatments).

for any transfer between five and eight. Note that cost function 1 is characterized by the minimum transfer cost for any transfer above eight. This cost function was logically not as popular as cost functions 3 and 5 since the proportion of agents considering transferring more than eight points was extremely low in this game (only four subjects in the whole data set transferred more than eight points). The selection of a cost function in Stage 1 is relevant for the experimenter to identify agents' social preferences. For example, we would expect an agent who chose cost function 5 to be willing to transfer a larger amount than an agent who chose cost function 3. If agents truthfully revealed their type, then we could use their Stage 1 decision to control for social preferences in our statistical analysis. This would help us disentangle the effect of the consulting process from the existence of initial social preferences.

It is not surprising that most agents opted for cost function 3 (66%). Indeed, transfers below one half of the initial agent's endowment represented 92% of the choices in our five experimental conditions. A noticeable proportion of agents (19%) also opted for cost function 5. Analyzing the debriefing questionnaire, we report that most subjects (71% of the agents and 66% of the principals) considered the ratio between the intended transfer value and its cost, when asked which criteria they considered to select the cost function. About 25% of the agents and 30% of the principals mentioned that they selected their transfer so as to achieve a fair outcome. In contrast to agents, principals preferred cost function 5 (44%) to cost function 3 (37%). The proportion of principals who chose cost function 5 was significantly greater than the proportion of agents who chose cost function 5, whereas the opposite was true for cost function 3 (proportion test (PRt), $p < 0.001$ in both cases). Agents would choose cost function 5 if they intended to transfer any amount between five and eight. Consistently, the agents who selected cost function 5 in the first stage transferred more to principals than the agents who selected cost function 3. For example, if we consider only the cases in which the agent was not consulted by the principal, agents who selected cost function 5 transferred almost twice more ($4.50) than agents who selected cost function 3 ($2.33; Mann–Whitney–Wilcoxon test (MWWt), $p = 0.001$; see Table O2 in the online appendix for detailed analysis). These results are consistent with the heterogeneity in social preferences introduced in our theoretical model.

Participants' decisions in Stage 1 put forward that agents and principals held different views regarding the amount that the agent should transfer to the principal. Agents generally considered transfer values between zero and five whereas principals expected transfers between five and eight. As one of the subjects who played the role of the agent summarized in the debriefing questionnaire, "I felt like we both wanted very different outcomes."

This finding is in line with the study by Charness and Haruvy (2000) in which subjects who played the role of employers were likely to claim that they would have provided, for any given wage, more effort than subjects who played the role of employees actually provided. This behavior may also be related to the literature on self-serving biases (Konow 2000, 2003) in which people tend to adopt the concept of fairness that is most favorable to them. In our experiment, people who played the role of agents revealed a different vision of what fair transfers should be (between zero and five) compared with people who played the role of principals (between five and eight). Using our results on belief elicitation, we show that principals expected significantly larger transfers than the amounts agents were planning to transfer.[9] For example, in the baseline treatment without consultation, principals expected to receive transfers on average equal to $5.5, whereas average transfers were equal to $2.5 (MWWt, $p < 0.001$).

This conflict of views between agents and principals is crucial to understanding the behavior of principals and agents in the remaining stages of the game. In our theoretical setting, conflicts of views arise as a result of heterogeneous social preferences. The introduction of self-serving biases in our theoretical setting would strengthen the discrepancy of views between principals and agents. We summarized our findings regarding cost functions choices in Stage 1 as follows.

Result 1 (Choice of the Cost Function of the Transfer). (i) *Agents and principals were not indifferent between the five cost functions. This is consistent with the existence of social preferences.*

(ii) *Agents and principals held different views regarding the choice of the cost function.*

5.2. Consulting or Not Consulting?

In Stage 2, principals could consult the agent's previously selected cost function by paying a cost $c > 0$, where the cost was $1.5 in treatment SC1 and 30¢ in

[9] We elicited beliefs for all treatments except for the first four sessions of treatments SC1 and SC0, that is, a total of 312 subjects (156 agents and 156 principals) for the five experimental sessions studied in the current section. Using a two-sided MWWt, we reject the hypothesis that principals' beliefs regarding agents' transfers were equal to agents' beliefs about their own transfers in the cases in which the principal does not consult ($p = 0.048$), consults but does not follow ($p = 0.002$), and consults and follows ($p = 0.008$) (see Table A.1 in the appendix for more details). We obtained similar results if we considered agents' actual transfer levels instead of agents' beliefs.

Table 3 Regression Models for the Probability of Being Consulted (Left Panel) and for Agents' Transfers and Principals' Earnings (Right Panel)

Probit model ($n = 222$)		Censored Tobit model ($n = 222$, 57 left censored)		
Dependent variable	Consult	Dependent variable:	Agent's transfers	Principal's earnings
Constant	−0.36**	*Constant*	1.43***	7.01***
Treatment SC0	0.47**	*Treatment SC0*	0.14	0.81
Treatment FL	0.52**	*Treatment FL*	−0.67	−1.58
Treatment CH	0.71***	*Treatment CH*	−0.10	0.13
		Consult	0.41	0.72
		Agent chose cost function 1	−0.43	−1.18
		Agent chose cost function 2	1.14	3.55
		Agent chose cost function 3 (omitted)		
		Agent chose cost function 4	−0.30	−0.84
		Agent chose cost function 5	1.25***	3.74***
Log likelihood	−149.00	Log likelihood	−422.93	−598.74
Likelihood ratio χ^2	9.12**	Likelihood ratio χ^2	14.06*	13.60*

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

the rest of the treatments with consultation (SC0, FL, and CH). We chose low values of the consultation fee to collect a sufficient number of observations in which principals consult agents. This is motivated by the fact that the main objective of this paper is to study the reaction of agents to the consultation process. We observe that the proportions of principals who consulted were equal to 54%, 56%, and 64% in treatments SC0, FL, and CH, respectively. The proportion of principals who consulted was only 36% in treatment SC1, where the cost of consulting was higher. The difference in proportions between treatments SC0 and SC1 was significant (PRt, $p = 0.056$). The proportion of principals who consulted the agent in treatment SC1 was also significantly higher than in treatments FL and CH (PRt, $p = 0.037$ and $p = 0.004$, respectively). This confirms the sound premise that, in our environment, participants were responsive to relatively small monetary costs. These results were confirmed by conducting probit regressions where the dependent variable was a dummy variable (*Consult*) taking the value 1 in the case where the principal consulted the agent and 0 otherwise (see left panel of Table 3 for results) and where independent variables were treatment dummies. Note that we do not observe any significant differences in the proportion of principals consulting agents when comparing the treatments with a low consulting fee (SC0, FL, and CH; PRt, $p > 0.100$ in all three pairwise comparisons).

Average and median transfers as well as principals' earnings across treatments are displayed in Table 4. First, we observe that transfers and principals' earnings did not differ between the no consultation treatment and the four consultation treatments in the case in which principals did not consult the agent (see the second column of Table O3 in the online appendix for the tests). Pooling the data of the consulting treatments (SC, FL, and CH), we do not find differences in transfers or principals' earnings when comparing principals who consulted the agent with those who did not (last row in Table 4). Analyzing treatments separately, we report only significant differences for

Table 4 Agents' Transfers, Principal's Earnings, and Proportion of Principals Who Consulted Across Treatments

		Agents' transfers in U.S. dollars			Principal's earnings in U.S. dollars			
Treatment		Principal consulted ($n = 117$)	Principal did not consult ($n = 165$)	MWWt (p-value)	Principal consulted ($n = 117$)	Principal did not consult ($n = 165$)	MWWt (p-value)	Proportion of principals who consulted (%)
NC	Average	—	2.55	—	—	8.10	—	—
($n = 60$)	Median		1.50			6.00		
SC1	Average	3.31	3.23	0.784	7.97	9.62	0.478	36
($n = 53$)	Median	3.00	1.50		4.50	9.00		
SC0	Average	3.52	3.50	0.926	9.73	10.00	0.233	54
($n = 59$)	Median	2.25	3.00		7.20	9.00		
FL	Average	2.52	2.88	0.575	7.73	8.75	0.047	56
($n = 55$)	Median	1.50	2.25		5.70	7.50		
CH	Average	3.64	2.18	0.026	9.99	7.35	0.290	64
($n = 55$)	Median	4.50	1.50		11.70	6.00		
All but NC	Average	3.24	3.04	0.385	8.99	9.09	0.137	53
($n = 222$)	Median	3.00	3.00		8.70	9.00		

agents' transfers in treatment CH and for principals' earnings in treatment FL.

In addition, we assess the robustness of our results by conducting a regression analysis that allows us to control for agents' cost function choices in the first stage of the game. On the right panel of Table 3 we present the results of two censored Tobit models where the dependent variables are either agents' transfers (left column) or principals' earnings (right column; see Table O4 in the online appendix for further analyses). The independent variables include treatment dummies as well as dummy variables for agents' cost function choices in Stage 1. We confirm the absence of significant differences in agents' transfers and principal's earnings between the case in which the principals consulted the agent and the case in which the principal did not consult the agent. We also corroborate the absence of significant differences in transfers and principals' earnings across treatments by testing whether the coefficients associated with treatment dummies differ significantly (Fisher test, $p > 0.100$). Finally, we report that the agent's choice of the cost function in Stage 1 affected final transfers significantly. In particular, agents who chose cost function 5 transferred more than those who selected cost function 3 since the coefficient of the dummy variable *Agent chose cost function 5* in Table 3 is positive and highly significant. Agents who chose cost function 5 seemed to exhibit stronger distributive concerns, which led them to select higher transfers than the rest of the agents.

Principals' earnings, as well as transfer values, were similar whether the principal decided to consult the agent's choice or not. Nevertheless, a large proportion of principals (53%) decided to consult the agent's choice even though it was costly to do so. This result is in line with Proposition 2(ii), according to which consulting may be valuable to principals to obtain information about agents' social preferences or foster positive reciprocity. However, this result is not consistent with the Nash equilibrium with purely selfish individuals, according to which principals should not consult agents at a cost. In our design, even though consulting could help principals to collect information regarding agents' social preferences, it could not provide any valuable information about the cost functions. This is the case because the specification of the different cost functions was public knowledge. This is an important difference between our analysis and the paper by FHW, in which principals could be better off delegating the decision-making process to more informed agents. In our setting, there exists no asymmetric information regarding cost functions, and the effect, if any, of consulting on final transfers should be accounted for by behavioral considerations.

We summarize the results regarding the consulting stage of our experiment as follows.

Table 5 Agents' Emotional Responses to Being Consulted or Not

	After being consulted (%)			After not being consulted (%)		
Treatment	Positive	Neutral	Negative	Positive	Neutral	Negative
SC1	79	16	5	13	29	58
SC0	77	17	6	15	26	59
FL	72	19	9	12	45	43
CH	77	23	0	2	40	58
All	76	19	5	10	34	55

Result 2 (Consulting or Not Consulting). (i) *The majority of principals decided to consult the agent* (53%) *even though it was costly to do so.*

(ii) *Principals who consulted the agent did not outperform those who did not, because agents' transfers were not significantly different in these two cases.*

Using the debriefing questionnaire, we shed light on the motives of principals to consult or not consult the agent's choice.[10] A large proportion of principals (37%) mentioned that they would consult agents to know their intended transfer in the last stage of the game. This may be interpreted as principals' willingness to uncover the agent's social preferences. In line with Proposition 2(iv), a noticeable proportion (55%) of the principals believed that implementing the agent's choice would increase agents' transfers in the last stage of the game with respect to the case in which they do not consult the agent. Only 11% of the principals believed that implementing the agent's cost function may decrease transfers.

We also asked agents about their emotional reaction to consulting. We summarize agents' emotional responses to being consulted or not in Table 5. A large majority of agents (76%) who were consulted reported that it generated positive emotions. In particular, about one-third of these agents mentioned *being regarded and considered* as their dominant feeling when being consulted. One-third of the subjects explicitly mentioned that being consulted by the principal would lead them to increase their transfer value. These reported emotions are consistent with the intuitive appeal of *consultative participation* according to which consulting agents and considering their choice should enhance their satisfaction (see Miller and Monge 1986 for an extensive discussion on affective models of participation). Indeed, we know that people value the fact that their opinions are being heard and considered (Korsgaard

[10] The usual limitation regarding the use of debriefing questionnaires applies here. The answers to the questionnaire have to be interpreted with care, because people may attempt to rationalize their acts a posteriori. For example, principals who did not consult the agent's choice may claim that they did not expect the agents to react negatively when not being consulted so as to justify their decision.

and Roberson 1995, Wiley 1997, Freeman and Rogers 1999), and this is likely to translate into positive reactions from the agent. It is also interesting to notice that a majority of agents (55%) who were not consulted reported negative emotions for not being consulted. About one-third of those agents reported that they felt ignored by the principal. These results are consistent across treatments.

We also report principals' beliefs about agents' emotional responses after being consulted or not (see Table A.2 in the appendix). These beliefs were consistent with agents' emotional responses, and this stresses that principals were aware of agents' positive behavioral reaction to being consulted and the negative reaction that followed from not being consulted.

The positive reaction of agents to being consulted does not seem to be consistent with the fact that transfer values were not significantly higher when agents were consulted than when they were not (Result 2). To elucidate this apparent puzzle, we need to analyze the decision of the principal to follow or not follow the agent's preferred option. We examine this stage of the game in the next section. Note that in the rest of the results section, we present the data from treatments SC0 and SC1 together, which will be referred to as the simple consultation treatment (SC). This is motivated by the fact that only 19 principals consulted the agent in treatment SC1, rendering a separate analysis of this treatment unreliable (see §B of the online appendix for more details).

5.3. Listening, or Not Listening?

In Stage 3, the principals who consulted the agent had to decide whether to follow the agent's choice. This decision turns out to be crucial in understanding the consulting process and its effect on agents' transfers. Interestingly, almost half of the participants (44%) decided not to listen to the agent's choice even though it may have been beneficial for them to do so. The proportion of principals who followed the agent's choice was similar across treatments.[11] These findings are inconsistent with our theoretical conjecture (Proposition 2(iii)) according to which principals should always follow the choice of the agent after consulting. We summarize our results in Table 6.

The average earnings of the principals who followed the agent's preferred cost function ($10.44) were about 54% larger than the average earnings of principals who ignored the agent's choice ($6.79). This is the case because, in line with Proposition 2(iv), agents transferred significantly more on average to principals who followed their choice ($3.95) than to those who did not ($2.17). Additional evidence is shown in Figure A.1(a) in the appendix when comparing empirical cumulative distributions of transfers. These results hold regardless of the consulting treatment (see Table 6). We also compare transfers and principals' earnings in these two cases for each of the cost function choices of the agent (see Table O5 in the online appendix). Differences in transfers and principals' earnings continue to be significant for the case of cost function 3, which is the only case in which we have a reasonable number of observations. In Table 7, we present the results of two censored Tobit models where the dependent variables are agents' transfers and principals' earnings, and where we control for agents' choices of cost functions in Stage 1. We include the variable *Follow* as an independent variable, where *Follow* is a dummy variable that takes the value 1 if the principal followed the agent's preferred cost function and 0 otherwise. This variable is positive and highly significant in both cases, showing that following the agent's choice led to higher transfer values and principals' earnings than ignoring the agent's choice.

The behavior of the agents was driven by emotional responses to the principal's decision to follow their choice or not. We summarize agents' emotional responses to being followed or not by the principal in Table 8.

A large majority of agents (82%) whose cost function was followed by the principal reported that it generated positive emotions. In particular, about one-fourth of these agents explicitly mentioned *being regarded and considered* as their dominant feeling in that case. Positive emotions (82%) as well as negative emotions (70%) were apparently stronger than the ones reported by agents when asked about their reaction to being consulted or not (76% of positive emotions and 55% of negative emotions in that case).[12] This illustrates that agents may value the implementation of their cost function more than the mere fact of being consulted. This behavior is at the core of the *consultative participation dilemma*. Successful principals should not limit themselves to asking agents their opinions, but should also put those opinions into practice. Failing to do so may generate strong negative feelings from agents who expect their opinion to count once being consulted. Most principals who did not follow the agent's choice mentioned that they had already selected the best cost function in the first stage of the

[11] Pairwise comparison between treatments SC and CH, and between treatments FL and CH, did not lead to significant differences (PRt, $p = 0.410$ and $p = 0.315$, respectively). The difference between treatments SC and FL was slightly significant (PRt, $p = 0.067$).

[12] Notice that, similarly to §5.1, principals' beliefs about agent's emotional responses were consistent with agents' beliefs. That is, principals expected that following (not following) the agent's choice would generate positive (negative) emotions.

Table 6 Agents' Transfers for Principals Who Did and Did Not Follow the Agent

		Transfer value in U.S. dollars			Principals' earnings in U.S. dollars			
Treatment		Principal followed ($n = 68$)	Principal did not follow ($n = 47$)	MWWt (p-value)	Principal followed ($n = 68$)	Principal did not follow ($n = 47$)	MWWt (p-value)	Proportion of principals who followed (%)
SC	Average	4.38	2.40	0.002	11.05	7.02	0.002	51
($n = 51$)	Median	4.50	1.50		10.50	4.50		
FL	Average	3.00	0.75	0.019	8.70	4.20	0.019	72
($n = 29$)	Median	3.00	0.75		8.70	4.20		
CH	Average	4.36	2.57	0.054	11.41	7.84	0.054	60
($n = 35$)	Median	4.50	2.25		11.70	7.20		
ALL	Average	3.95	2.17	< 0.001	10.44	6.79	< 0.001	59
($n = 115$)	Median	4.50	1.50		11.70	5.70		

game. Subjects playing the role of principal typically claimed, "His [cost function] wasn't as good as mine."

Notice that a significant proportion of principals decided not to consult the agent even in cases in which consulting was almost free. This may be seen as evidence of principals anticipating the possible negative effects of consulting the agent without following his or her preferred option. Indeed, the average (median) earnings for principals who did not consult the agent were equal to \$9.09 (\$9.00) and were significantly larger (MWWt, $p < 0.001$) than the earnings of principals who consulted the agent but decided not to follow his or her choice, \$6.79 (\$5.70). This was the case because average (median) transfers were lower in the case in which the principal consulted the agent without following his or her preferred option, \$2.17 (\$1.50), than in the case in which the principal did not consult the agent, \$3.04 (\$3.00; MWWt, $p = 0.04$). In addition, consulting the agent entailed a monetary cost that lowered the earnings of the principals who consulted.

This result is consistent with the fact that the negative emotions generated by not following the agent's preferred option were particularly pronounced and may have offset the positive feelings that agents expressed when being consulted. It is also true that the positive reaction of the agents following the acceptance of their own cost function by the principal was sufficiently strong to offset the consultation fee paid by the principal. The average (median) earnings of the principals who consulted the agent and decided to follow his or her choice, \$10.44 (\$11.76), were higher than the earnings of the principal who did not consult, \$9.09 (\$9.00), even though the difference was not significant (MWWt, $p = 0.361$). Average (median) agents' transfers were significantly higher in the case in which the principal consulted and followed the agent's choice, \$3.95 (\$4.50), than in the case in which the principal did not consult the agent, \$3.04 (\$3.00; MWWt, $p = 0.007$).

Notice that the negative reaction of the agents who were not consulted could be overestimated in treatments where the option to consult was available (treatments SC, FL, and CH). In line with the analysis conducted by Charness et al. (2012), we control for this possible effect by comparing the transfers of the agents who were consulted in treatments SC, FL, and CH with agents' transfers in the no consulting treatment (treatment NC). We show that agents' transfers and principals' earnings are also higher in the case in which principals consulted and followed the agents' choice (in treatments SC, FL, and CH) than when consultation was not available (treatment NC; see Table O3 in the online appendix).

Table 7 Censored Tobit Regression for Agents' Transfers and Principals' Earnings for Those Principals Who Consulted the Agent

($n = 115$, 27 left censored)	Agents' transfers	Principals' earnings
Constant	0.87**	5.06***
Follow	1.76***	5.12***
Treatment FL	−2.26**	−3.07**
Treatment CH	0.14	0.83
Agent chose cost function 1	−0.90	−2.61
Agent chose cost function 2	0.47	1.82
Agent chose cost function 3 (omitted)		
Agent chose cost function 4	0.34	1.04
Agent chose cost function 5	1.15**	3.47**
Log likelihood	−212.42	−306.90
Likelihood ratio χ^2	27.01***	26.61***

**$p < 0.05$; ***$p < 0.01$.

Table 8 Agents' Emotional Responses After Being Followed or Not

	After being followed (%)			After not being followed (%)		
Treatment	Positive	Neutral	Negative	Positive	Neutral	Negative
SC	81	19	0	0	27	73
FL	82	18	0	0	37	63
CH	84	16	0	2	31	67
All	82	18	0	1	30	70

Table 9 Censored Tobit Regression of Agents' Transfers and Principals' Earnings

	Agents' transfers ($n = 219$, 57 left censored)	Principals' earnings ($n = 222$, 57 left censored)
Constant	1.54***	7.55***
Consult and not follow	−0.71*	−2.51**
Consult and follow	1.10***	2.81**
Treatment FL	−0.93**	−2.58**
Treatment CH	−0.23	−0.50
Agent chose cost function 1	−0.08	−0.14
Agent chose cost function 2	1.35	4.20
Agent chose cost function 3 (omitted)		
Agent chose cost function 4	−0.05	−0.11
Agent chose cost function 5	1.22***	3.67***
Log likelihood	−415.29	−591.40
Likelihood ratio χ^2	29.34***	28.29***

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

In Table 9, we extend our analysis by conducting a regression analysis that controls for agents' choices in Stage 1. We introduce as independent variables the dummy variable *Consult and follow* (*Consult and not follow*), which takes the value 1 if the principal consulted and followed (did not follow) the agent's choice and the value 0 otherwise. We report that consulting and following agents' choices increased transfers and principals' earnings with respect to the case in which agents were not consulted. This is the case because the coefficients for the variable *Consult and follow* is positive and significant in both regressions. Furthermore, agents' transfers and principals' earnings were significantly lower when agents were consulted but their choice was not followed by the principal than when they were not consulted. This is the case because the coefficient for the dummy variable *Consult and not follow* is negative and significant in both regressions.[13]

It is also interesting to note that only 10% of the agents decided to transfer nothing to the principal when the latter decided to follow the agent's choice, whereas the proportion of zero transfers rose to 43% in the case in which the principal did not follow the agent's choice (PRt, $p < 0.001$). We also find that the proportion of zero transfers was significantly higher when principals decided not to consult the agent (29%) than when they followed the agent's cost function (PRt, $p = 0.003$).[14] At the same time, the proportion of zero transfers was lower in the case in which principals did not consult than when they consulted the agent but did not follow their choice (PRt, $p = 0.091$).

In a nutshell, consulting the agent was not a neutral process even though the earnings of the principals who consulted the agent did not differ significantly from the earnings of those who did not. Indeed, there were potential gains from consulting as long as the principal was willing to accept the agent's view. We summarize our findings as follows.

Result 3 (Consultative Participation Dilemma). (i) *A large proportion of principals* (44%) *decided not to follow the agent's preferred option after consulting the latter.*

(ii) *However, principals who followed the agent's choice obtained significantly larger transfers than principals who did not.*

(iii) *Controlling for the cost function of the transfer chosen by the agents, principals' earnings were significantly higher when they consulted and followed the agent's preferred option than when they did not consult the agent, despite the cost of consulting.*

(iv) *Because of the cost of consulting and because of lower transfers, principals' earnings were significantly lower when they consulted but did not follow the agent's preferred option than when they did not consult the agent.*

(v) *The proportion of zero transfers was significantly lower when the principal followed the agent's choice than when the principal either did not follow the agent's preferred option or did not consult the agent.*

The fact that a large proportion of principals decided not to follow the agent's choice is not consistent with our theoretical prediction, according to which principals would only consult agents with the intention of following their choice (Proposition 2(iii)). Nevertheless, the fact that agents' transfers and principals' earnings are larger when the principal follows the agent's choice than when the principal does not (Result 3, (ii) and (iii)) is consistent with Proposition 2(iv). Also, Result 3(iv) is consistent with our theoretical model, according to which agents' transfers and principals' earnings are expected to be larger when principals do not consult the agent than when they consult the agent but ignore the choice of the latter.

From a theoretical standpoint, one way to account for the fact that principals may not follow the agent's choice in equilibrium is to introduce mind rigidity

[13] To control for a possible negative effect of no consultation, in Table O6 in the online appendix we report the results of two regressions similar to those in Table 9. In Table O6, we use the data for the no consultation treatment instead of the data for principals who did not consult the agents in treatments SC, FL, and CH. Similarly to the results in Table 9, we find that consulting and following the agents' choice increases agents' transfers and principals' earnings.

[14] Note that the proportion of zero transfers in the nonconsulting treatment NC was equal to 28%, which was not significantly different from the case of principals who did not consult the agent while having the option to do so in treatments SC, FL, and CH.

in the model presented in §4.4 (see Appendix A.1, Proposition 3). In that case, the utility function for the principal is such that implementing a cost function that is different from his or her preferred option entails a switching cost. In sum, principals hold a visceral belief regarding which cost function should apply and may be very reluctant to switch to another cost function even after evidencing the agent's preferred choice. Note that our assumption on mind rigidity can be motivated by strategic considerations. This follows from the fact that people may value consistent behaviors (Cialdini 1993, Chap. 3) because they signal personal strength (Falk and Zimmermann 2011). In the presence of mind rigidity, there exists an equilibrium in which principals may decide to consult agents with the intention of rejecting their offer whenever they differ from theirs (see Proposition 3 in Appendix A.1). This is the case because principals who systematically ignore the agent's choice can still benefit from the consulting process as long as they are matched with an agent who is endowed with the same social preferences.

5.4. Comparing Different Types of Consultation

In our previous analysis, we reported many similarities among consultation treatments. In particular, we stressed that the distribution of agents' and principals' choices in Stage 1 did not differ across treatments. We also showed that consultation modes did not differ regarding the proportion of principals who decided to consult the agent in Stage 2. In this section we compare the three modes of consultation (simple consultation (SC), flexible consultation (FL), and consultation with communication (CH)) in more detail.

In the consultation mode with communication (CH), principals who decided to consult the agent's choice could chat with the agent for a duration of three minutes after observing the choice of the latter in Stage 1. In this treatment, principals consulted agents slightly more often (64%) than in treatment SC0 (54%), although this difference was not statistically significant (PRt, $p = 0.308$). The proportion of principals who followed the agent's choice was also slightly larger in treatment CH than in treatment SC0, although this difference was not significant (60% in CH and 53% in SC; PRt, $p = 0.571$). In sum, simple consultation and consultation with communication led to similar outcomes as illustrated by the fact that the distribution of transfers did not differ between these two treatments, whether principals consulted and followed the agent's choice, consulted but did not follow the agent's choice, or did not consult the agent (Kolmogorov–Smirnov test, $p = 0.744$, $p = 0.682$, and $p = 0.622$, respectively). In that respect, our results differ from classical experiments on communication that attempt to reduce social distance between subjects to foster social motives (Roth 1995, Hoffman et al. 1996, Bohnet and Frey 1999). One explanation may be that agents perceived the consultation process with communication as a strategic move from the principal rather than as an attempt to fraternize and reduce social distance. Also, the fact that the chat confronted agents and principals with very different views about which cost function should apply (see Table 2) may have limited the effectiveness of the communication process (see §D of the online appendix for the details of chat conversions).

In the flexible consultation treatment, only two principals (out of 55) decided to make use of the option to choose a cost function that was neither the principal's nor the agent's. Interestingly, a significant proportion of principals (48%) and agents (34%) revealed in the debriefing questionnaire that not selecting either the agent's or the principal's cost function would generate confusion. However, flexible consultation differs from simple consultation, as principals appeared to be slightly more likely to follow the agent's choice (PRt, $p = 0.067$). This inclination to follow the agent's choice under flexible consultation in Stage 3 did not translate into differences in agents' transfers or principals' earnings in Stage 4 between treatments FL and SC (MWWt, $p = 0.257$ and $p = 0.216$, respectively). This partly follows from the fact that consulting and following the agent's choice was less beneficial to principals in treatment FL than under simple consultation as agents' transfers were slightly lower in the former treatment than in the latter (MWWt, $p = 0.084$).[15]

We summarize our findings as follows.

Result 4 (Modes of Consultation). (i) *The chat treatment did not significantly differ from the treatment with simple consultation.*

(ii) *The distribution of cost functions chosen by agents and principals and the percentage of consultation in the flexible consultation treatment were not significantly different from the simple consultation treatment. However, principals were slightly more likely to accept the agent's choice under flexible consultation compared to simple consultation. This difference did not translate into differences in agents' transfers or principals' earnings.*

6. Interpretation of the Results and Robustness Checks

6.1. Principal Behavior and Reluctance to Change One's Own Mind

In this section, we further study the motives underlying the principal's decision to accept or reject the

[15] We report no significant differences in agents' transfers between simple and flexible consultation when principals consulted and did not follow the agent's choice or did not consult the agent (MWWt, $p = 0.353$ and $p = 0.602$, respectively).

Table 10 Probit Regression Results

	Dependent variable: *Follow*				
	Regression 1	Regression 2	Regression 3	Regression 4	Regression 5
Intercept	−0.05	0.63**	1.14*	0.63**	1.54**
Same choice[a]	0.58**		−0.58		−1.01
Total sum		−0.08***	−0.14*		
Partial sum				−0.05***	−0.11**
Treatment FL	0.59**	0.59*	0.61*	0.58*	0.61*
Treatment CH	0.18	0.13	0.11	0.14	0.12
Agent chose cost function 1	−0.70	−0.67	−0.67	−0.57	−0.46
Agent chose cost function 2	−0.38	−0.60	−0.80	−0.55	−0.83
Agent chose cost function 3 (omitted)					
Agent chose cost function 4	−0.41	−0.36	−0.37	−0.24	−0.09
Agent chose cost function 5	0.15	0.10	0.08	0.14	0.15
Log likelihood	−71.47	−70.04	−69.68	−69.98	−69.19
Likelihood ratio χ^2	12.64*	15.49**	16.20**	15.61**	17.20**

[a]This is a dummy variable taking the value 1 if the agent and the principal chose the same cost function in Stage 1.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

cost function of the agent. First, we assess whether principals were more likely to accept the cost function of the agent when it was more similar to their own cost function. To that end, we measure the discrepancy between two cost functions by computing the distance between them. The two measures of distance (*Total sum* and *Partial sum*) we use are described in §C of the online appendix. It is interesting to note that both measures were significantly larger in the case in which the principal decided not to follow the cost function chosen by the agent than in the case in which the principal followed the agent's choice (MWWt, $p = 0.002$ for the case of the *partial sum* and $p = 0.001$ for the case of the *total sum*). Also, we run a series of probit regressions using each measure as an independent variable to confirm that principals were more likely to accept the choice of the agent when it was closer to their previously selected cost function. Our dependent variable (*Follow*) is a dummy variable that takes the value 1 if the principal followed the agent's preferred cost function and 0 otherwise. The results are summarized in Table 10.

The coefficient associated with our two measures of discrepancy between the agent's and the principal's cost functions is negative and significant, underlining that principals were less likely to accept the agent's choice when it was farther away from the principal's initial choice.

In line with the previous findings, the analysis of the questionnaire stresses that principals did not follow the agent's option because they believed that it conflicted with their own interpretation of how the game should be played. Principals were reluctant to change their mind and adopt the agent's cost function whenever it was significantly different from their initial choice.

To shed light on the reluctance of principals to change their mind, we report principals' beliefs and analyze whether they played accordingly. In Table 11 we display, for each available strategy, principals' earnings computed according to their beliefs regarding the agent's transfer. The principals' expected earnings that correspond to their actual decisions in the game are shown in the main diagonal. The remaining cells correspond to the expected earnings under strategies that were not played by the principal.

We observe that regardless of their actual strategy, principals recognized that, on average, consulting the agent and following his or her choice would lead to the highest expected earnings. Not surprisingly, principals who actually decided to consult and follow the agent's choice were the ones who expected this strategy to be most profitable. Principals who did not consult and follow the agent's choice decided to play their second most profitable strategy instead. These results suggest that principals have a preference for implementing their own cost function. In other words, people do not like to change their mind. As a result, some principals may have decided to settle for their second most profitablestrategy because the expected

Table 11 Principals' Expected Earnings According to Their Beliefs About Agents' Transfers

	Average (median) expected earnings in U.S. dollars if principals had:		
Principal's actual strategy	Not consulted	Consulted but not followed	Consulted and followed
Principal did not consult	9.65 (6.00)	8.37 (5.70)	11.12 (8.70)
Principal consulted but did not follow	10.71 (9.00)	11.88 (11.70)	12.03 (11.70)
Principal consulted and followed	10.24 (9.00)	9.01 (8.70)	13.78 (13.50)

gains derived from following the agent's choice could not have compensated for the cost of changing one's mind. Relatedly, FHW found that, in the context of a delegation game, principals were reluctant to delegate authority even though this strategy maximized their expected payoffs according to their beliefs about the agent's transfer. The authors put forward that people value authority. Notice that our interpretation of the results is different from the interpretation put forward by FHW, in which case principals were willing to retain authority for the mere pleasure of keeping control of the situation. In our case, only two principals out of 222 mentioned control as a reason for rejecting the agent's cost function.

Finally, one may think that the principals decided to stick to their own cost function to influence the agent's perception of what is a fair transfer. This argument relies on the fact that some individuals are conformists and may be tempted to follow the norm advanced by the principal (Sliwka 2007). However, we find no evidence of such mechanism in our experiment, as principals expected the effect of ignoring the agent's preferred option to be negative. Also, no principals mentioned influencing the agent's perception of fairness as a determinant aspect of their strategy to stick to their own cost function in treatments SC and FL.

We summarize our findings as follows.

Result 5 (Reluctance to Change One's Own Mind). (i) *Principals were reluctant to follow the agent's choice when it was farther away from the principal's initial choice.*

(ii) *Principals who consulted and followed the agent's choice expected this strategy to be the most profitable one. Principals who did not consult and follow the agent's choice also expected this strategy to be the most profitable one but decided to play their second most profitable strategy instead.*

6.2. Agent Behavior and Reciprocity

A large majority of agents (82%) whose choice was followed by the principal reported that it generated positive emotions, whereas a large majority (70%) expressed negative feelings when their choice was ignored by the principal. These reported emotions are consistent with the idea that agents reciprocated positively (negatively) when principals decided to follow (ignore) their cost function because they perceived such behavior positively (negatively). However, to support the reciprocity-based explanation further, we have to rule out alternative explanations of agents' behavior. For example, one may argue that agents transferred less to the principal when the latter did not follow their choice because transfers were more costly in that case. Indeed, the final cost function implemented by the principal in Stage 3 differed whether the principal followed the agent's choice or not. In particular, cost function 5 was implemented in 55% of the cases when the principal ignored the agent's choice, compared to 18% when the principal followed the agent's choice (PRt, $p < 0.001$). Conversely, cost function 3 was more commonly used in the latter case (69%) than in the former (26%) (PRt, $p < 0.001$). Importantly, cost function 5 entailed higher costs than cost function 3 for any transfer value between zero and four (81% of agents' transfers were in that range). To assess whether differences in cost functions can account for differences in transfers, we compute the average transfer cost in the case in which the principal followed the agent's choice and in the case in which the principal did not follow the agent's choice. Reporting transfer costs will inform us about the monetary amount that agents were willing to sacrifice to increase principals' earnings. We find that average (median) transfer costs were equal to \$1.76 (\$0.00) when the principal ignored the agent, compared to \$2.69 (\$3.00) when the principal followed the agent's choice (MWWt, $p = 0.022$).[16] Estimating a censored Tobit regression to control for agents' choices of cost functions and treatments, we find that the dummy variable *Follow* is positive and significant in explaining transfer costs incurred by the agents (see Table O7 in the online appendix). Also, the proportion of zero-cost transfers was significantly higher when principals ignored the agent's choice (60%) than in the case in which principals followed the agent's choice (29%; PRt, $p = 0.001$). Additional evidence is shown in Figure A.1(b) in the appendix, comparing the empirical cumulative distributions of transfer costs when principals followed the agent's choice and when they did not.

These results stress that the increase in agents' transfers when the principal followed their preferred cost function is not solely due to the fact that transfers were less costly in that case. Agents transferred more in that case because they were willing to incur higher transfer costs than in the case in which they were ignored by the principal. This interpretation is in line with the reciprocity-based account of agents' behaviors (see our theoretical model in §4.4).

[16] It is important to notice that this is a conservative test for the hypothesis that reciprocity does not account for agents' behavior. Indeed, reciprocity concerns could still explain agents' behaviors even if the average transfer costs were the same when principals ignored the agent and when they followed the agent's choice. For example, all agents who decided to incur no transfer cost in the case in which the principal followed their preferred option faced cost function 3 and decided to transfer one point to the principal. This behavior can be seen as evidence of positive reciprocity. To the contrary, the great majority of agents who were ignored by the principal and decided to incur no transfer cost did not transfer any points to the principal.

6.3. The Consultative Participation Dilemma in the Gift-Exchange Game

In treatments SC, FL, and CH, we studied different modes of consultation in a simple setting abstracting from relevant issues such as the setting of wages and incentives. Our aim was to assess the effect of consultation in the absence of possible confounding factors. Nevertheless, to strengthen the managerial interpretation of our experimental results, we consider an extension of our previous setting to the case in which the principal can set the wage of the agent at the beginning of the experiment, as is the case in standard gift-exchange games (Fehr et al. 1993, 1997). We refer to this setting as treatment GX. The study of this experimental design will allow us to analyze possible interaction effects between wage setting and the consultation process.

Treatment GX is an extension of the simple consultation treatment (SC) in which the principal was able to choose the agent's endowment in Stage 0 prior to the consultation game. Principals were endowed with 17 points. In Stage 0, principals had to select an endowment of 9, 12, or 15 points for the agent out of their (principals') initial endowment. Given that no subjects transferred more than nine points in treatments SC, FL, or CH, we believed that such endowment values would not distort the set of transfer choices for the agent. The payoffs of the principal were as follows: $\pi_P = 17 - E + 2x - c$, where E is the agent's endowment selected by the principal. Notice that for $E = 15$, the principals' earnings formula would be the same in treatment GX as in previous consultation treatments.

In Stage 0, we find that the majority of principals (66%, 37 out of 56) opted to set the lowest endowment level, whereas 29% of them (16 out of 56) selected an endowment of 12, and only 5% (3 out of 56) selected the highest possible endowment. Regarding the choice of cost functions in Stage 1, we report no differences with respect to our previous treatments, as most of the principals (55%) selected cost function 5, whereas most agents (66%) favored cost function 3 (PRt, $p > 0.999$ and $p = 0.131$, respectively). Also, cost functions 3 and 5 were the most popular for both principals and agents (87% and 81%, respectively) in line with previous treatments. In Stage 2, 52% of the principals consulted the agent, which is exactly the proportion of principals who consulted in the previously studied treatments (SC, FL, and CH). Among the principals who consulted the agent in treatment GX, a significant proportion of them decided not to follow the agent's choice (59%), in line with the *consultative participation dilemma* identified in Result 3, which was established in the absence of a gift-exchange structure. The proportion of principals who did not follow the agent's choice was not significantly different between treatment GX and the treatments considered previously (PRt, $p = 0.361$). Similarly to previous treatments, we find that consulting agents and following their choice led to larger transfers and principal earnings than not following the agent's choice (MWWt, $p = 0.054$). In sum, our main results regarding consultative participation extend to the case in which principals could set wages to the agents.

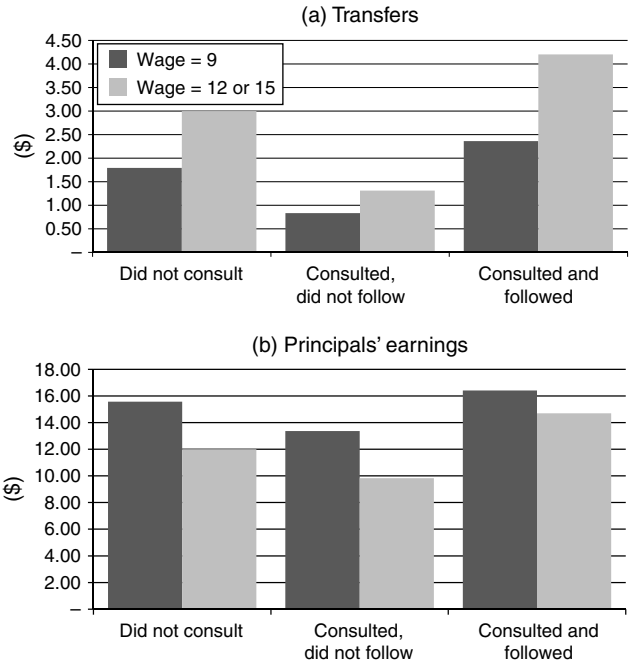
An important question is to assess whether the setting of wages and the consultation process were used as substitute mechanisms for enhancing the agent's motivation. If this was the case, principals who set high wages would not need to consult agents to increase their transfers. By the same token, principals may attempt to compensate the payment of low wages by consulting and listening to the agents. Interestingly, our results seem to support the opposite hypothesis, according to which the setting of wages and the consultation process are complementary mechanisms. Indeed, 70% of the principals who selected a wage of either 12 or 15 also decided to consult the agent's choice, whereas only 43% of the principals who selected a low wage decided to consult the agent's choice (PRt, $p = 0.051$). This result suggests that the relevance of consultation as a tool to increase workers' motivation is not undermined by the use of other motivation tools such as monetary incentives. To the contrary, principals who are more likely to rely on gift-exchange effects by setting high wages are the ones who are more likely to consult agents. (See Table O8 in the online appendix for additional analyses.)

Finally, we analyze the impact of wages on transfers. In Figure 3, we show average transfers and principals' earnings by wage levels and for each of the three possible strategies of the principal. We report that higher wages induced higher transfers (MWWt, $p = 0.011$), in line with standard gift-exchange games (Fehr et al. 1993, 1997). This was the case whether principals decided to consult agents or not and whether they decided to follow their choice or not (see Table O9 in the online appendix). Furthermore, principals who set higher wages and followed the agent's choice received, on average, significantly higher transfers (\$2.89) than those principals who did not consult and set a low wage (\$1.79; MWWt, $p = 0.024$). However, the positive effect on transfers of setting high wages and listening to the agent did not translate into higher earnings (MWWt, $p = 0.812$).

We summarize our findings as follows.

Result 6 (Consultation and Wage Setting). (i) *When principals were able to set wages, consulting agents and following their choices led to larger transfers and principal earnings than not following the agents' choices, in line with previous treatments.*

Figure 3 Gift-Exchange Treatment



(ii) *Principals who set higher wages were more likely to consult agents*.

(iii) *Principals who set higher wages received higher transfers independently of whether they consulted or followed the agents' choices*.

7. Concluding Remarks

In this paper, we analyzed the impact of *consultative decision making* in an experimental principal–agent game, where the principal could ask the agent's opinion about the cost function to be selected in the final stage of the game. We proposed a simple experimental approach to shed light on the current debate regarding the effect of PDM tools on employees' performance. The experimental approach enabled us to control for known moderating factors such as firm size, industry, job type or corporate culture. These confounding factors had prevented researchers from providing clear evidence on the positive relationship between employees' involvement in decision making and performance.

We were able to corroborate the intuitive appeal for *consultative participation* by showing that agents reacted positively when being consulted by the principal and were likely to increase their transfer when their opinion was considered and implemented. This result stressed that, beyond monetary incentives, managers could increase workers' effort by simply listening to their opinions and, most importantly, by putting their recommendations into practice. In particular, we found that principals obtained significantly higher earnings when they listened to the agents, once controlling for agents' cost function choices, than when they did not consult the agents.

Nevertheless, consulting employees was likely to backfire when the principal decided to ignore the agent's choice. This situation is what we referred to as the *consultative participation dilemma*. We showed that the principals who consulted but ignored the agent's preferred option significantly underperformed those who did not consult the agent. This was the case because agents were likely to reciprocate negatively when principals consulted their preferred option but ultimately ignored their choice. The behavior of principals can be understood in the light of previous research showing the prevalence of self-serving behaviors according to which people demonstrate limited capacity to envision another person's view of a problem and change their mind accordingly.

We also compared different modes of consultation, which varied according to their degree of sophistication. We found that the chat treatment did not differ significantly from the treatment with simple consultation while reporting some differences between simple and flexible consultation. In particular, under flexible consultation, principals were slightly more likely to accept the agent's choice than under simple consultation. However, this did not translate in differences in agents' transfers or principals' earnings between treatments. In a robustness check treatment, we were also able to confirm the prevalence of the *consultative participation dilemma* in a context in which the principal could set the wage of the agent, as is the case in standard gift-exchange games.

In practical terms, our results suggest that even weak forms of employee involvement such as *consultative decision making* can have strong effects on workers' effort as long as managers do not systematically ignore their employees' suggestions. To be an effective manager, one cannot simply ask employees their opinions, but also has to put them into practice. However intuitive this behavior may seem to be, a large proportion of our subjects decided to ignore their employees. The ability to change one's own mind may well be at the heart of managerial talent. This result may resonate with management scholars who have stressed the crucial role of emotional intelligence, empathy, and listening skills in successful leadership (Barker 1971; Goleman 1995, 1998).

The reluctance of people to change their minds in a context in which it is profitable to do so could be a relevant behavioral feature to introduce in models of persuasion (Milgrom and Roberts 1986, Dewatripont and Tirole 1999, Caillaud and Tirole 2007) and committees (Farrell and Gibbons 1989, Li 2001, Li et al. 2001).

Supplemental Material

Supplemental material to this paper is available at http://dx.doi.org/10.1287/mnsc.2013.1786.

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Appendix

Table A.1 Principals' Beliefs About Agents' Transfer Compared with Actual Agent'S Transfer (Treatments SC0, SC1, FL, and CH)

	Belief for each case: Average (median)		
	If principals had not consulted	If principals had consulted but not followed	If principals consulted and followed
Agents' actual transfer	2.2 (2.0)	1.7 (1.0)	3.0 (3.0)
Principals' beliefs regarding transfers:			
All principals	3.2 (3.0)	2.8 (2.0)	4.2 (4.0)
Principal does not consult	3.8 (4.5)	3.2 (2.5)	3.5 (3.5)
Principal consults and does not follow	3.1 (3.0)	3.5 (3.0)	4.0 (4.0)
Principal consults and follows	3.0 (3.0)	2.3 (2.0)	4.7 (4.0)

Table A.2 Principals' Beliefs About Agents' Emotional Responses

	After consulting the agent (%)			After not consulting the agent (%)		
Treatment	Positive	Neutral	Negative	Positive	Neutral	Negative
SC1	95	5	0	1	23	76
SC0	88	12	0	0	25	75
FL	69	24	8	10	25	65
CH	78	22	0	4	27	69
All	82	16	2	4	26	70

A.1. Proofs

Proof of Proposition 1. See §4.4 for a sketch of the proof. □

Proof of Proposition 2. We denote by $x_{i,s}(x^+_{i,s})[x^-_{i,s}]$ for any $(i,s)\in\{L,H\}^2$ the transfer of an agent of type i under cost function (r_s) in the absence of reciprocity (in the presence of positive reciprocity, $q=+1$; in the presence of negative reciprocity, $q=-1$). It follows from maximizing the agent's utility function that $x^-_{i,s}<x_{i,s}<x^+_{i,s}$.

In Stage 4, agents of type i will decide upon a transfer to the principal $(x_{i,s})$ after observing which cost function (r_s) applies and whether they have been consulted by the principal or not. Thus, agents face the following three cases in Stage 4:

Case 1. The principal of type j did not consult the agent in Stage 2, so cost function $r_s=r_j$ applies in Stage 3. In that case, the transfer for an agent of type i will be $x_{i,j}$, where by assumption (1) we have $x_{i,i}\geq x_{i,j}$.

Case 2. The principal of type j consulted the agent in Stage 2 and followed the agent's cost function in Stage 3 so that cost function $r_s=r_L$ $[r_s=r_H]$ applies if the principal consulted an agent of type L $[H]$. As a result, the transfer of the agent of type L $[H]$ will be equal to $x^+_{L,L}$ $[x^+_{H,H}]$.

Case 3. The principal of type j consulted the agent in Stage 2 but ignored the agent's cost function in Stage 3, so cost function $r_s=r_j$ applies regardless of the type of the agent. As a result, the agent will transfer $x^+_{i,s}$ if $i=j$, whereas the agent will transfer $x^-_{i,s}$ if $i\neq j$, where by assumption $x^+_{i,s}>x^-_{i,s}$.

In Stage 3, managers who consulted the agent's decision in Stage 2 decide whether to follow the agent's choice or not. At this point, it is clear that following the agent's choice is always optimal for the principal since it leads to larger transfers. Note that we have to impose the following assumption to ensure that an increase in transfers implies an increase in the principal's expected utility for any value of the transfer:

$$\frac{\partial U_{P,j}}{\partial x}>0 \iff w^P_j<\frac{2}{C'_r(x)+2}. \tag{2}$$

A sufficient condition for assumption (2) to hold is that $C'_r(x)<2$, that is, the marginal cost of the transfer is lower than the marginal product of the transfer. This assumption is consistent with the five different cost functions used in our experimental design.

In Stage 2, principals decided whether to consult the agent or not. From Stage 3 we know that the principal who consulted the agent in Stage 2 will decide to follow the agent's choice. As a result, it will be optimal for the principal to consult whenever the cost of consulting is lower than the gains obtained from implementing the agent's cost function with probability one in Stage 3. This condition is stated as follows for a principal of type L in case the principal who does not consult selects the cost function which corresponds to his or her type:

$$\begin{aligned} &w^P_L\big[12-(pC_r(x^+_{L,L})+(1-p)C_r(x^+_{H,H}))\big]\\ &\quad+(1-w^P_L)\big[2+2(px^+_{L,L}+(1-p)x^+_{H,H})-c\big]\\ &\geq w^P_L\big[12-(pC_r(x_{L,L})+(1-p)C_r(x_{H,L}))\big]\\ &\quad+(1-w^P_L)\big[2+2(px_{L,L}+(1-p)x_{H,L})\big]. \end{aligned}$$

By rearranging terms, we obtain

$$\begin{aligned} c\leq{}& 2p[x^+_{L,L}-x_{L,L}]+2(1-p)[x^+_{H,H}-x_{H,L}]+\frac{w^P_L}{1-w^P_L}\\ &\cdot\big(p[C_r(x_{L,L})-C_r(x^+_{L,L})]+(1-p)[C_r(x_{H,L})-C_r(x^+_{H,H})]\big). \end{aligned}$$

Similarly, for a principal of type H, we obtain

$$c \le 2p[x^+_{L,L} - x_{L,H}] + 2(1-p)[x^+_{H,H} - x_{H,H}] + \frac{w^P_H}{1-w^P_H} \cdot \big(p[C_r(x_{L,H}) - C_r(x^+_{L,L})] + (1-p)[C_r(x_{H,H}) - C_r(x^+_{H,H})]\big).$$

At this stage, we see that an increase in the reciprocity factor θ will increase the right-hand side of both conditions, which will increase the range of consultation costs for which consultation occurs (Proposition 2(ii)). This is the case since an increase in the reciprocity factor will increase transfers for following the agent's choice, and, under assumption (2), an increase in agents' transfers will increase the principal's utility function. From here, we also derive Proposition 2(iv) according to which agents' transfers are larger if agents have been consulted ($px^+_{L,L} + (1-p)x^+_{H,H}$) than if they have not been consulted ($px_{L,H} + (1-p)x_{H,H}$). Also, the difference in average transfers between these two cases increases in the reciprocity factor θ since both $x^+_{L,L}$ and $x^+_{H,H}$ increase in θ. The previous reasoning continues to hold if the principal who does not consult selects the cost function that does not correspond to his or her type.

In Stage 1, agents know that if they are consulted, they will be followed by the principal. As a result, stating the cost function that matches their type will maximize their expected utility.

Principals of type j who do not consult in Stage 2 will maximize their expected utility by selecting cost function r_L whenever

$$p \ge \left((x_{H,H} - x_{H,L}) + \frac{w^P_j}{2(1-w^P_j)}\big(C_r(x^+_{H,L}) - C_r(x^+_{H,H})\big)\right) \Big/ \left((x_{H,H} - x_{H,L}) + (x_{L,L} - x_{L,H}) + \frac{w^P_j}{2(1-w^P_j)}\Big(\big(C_r(x^+_{H,L}) - C_r(x^+_{H,H})\big) + \big(C_r(x^+_{L,H}) - C_r(x^+_{L,L})\big)\Big)\right),$$

and cost function r_H otherwise. As a result, even though agents reveal their type truthfully in Stage 1, principals may decide to implement a cost function that differs from their type if they believe that a significant proportion of the agents in the population have preferences that differ from theirs. Note that self-serving biases as evidenced in Babcock et al. (1995) and Babcock and Loewenstein (1997) may render this case unlikely.

Principals who consult the agent in Stage 2 will be indifferent between cost functions since they will always follow the agent's choice in Stage 3.

Mind Rigidity. In the case of mind rigidity, the utility function for the principal is modified as follows: We denote by $\pi_{P,j}$ the monetary payoffs for a principal of type j that is defined as $\pi_{P,j} = 2 + 2x_i - c - g$, where $g \ge 0$ represents the cost for a principal to select a cost function that differs from his or her type ($g > 0$ if and only if $r \ne r_j$, and $g = 0$ otherwise). Proposition 3 is stated and proved below. Note that we continue to consider that assumption (1) holds. □

Proposition 3. *In the presence of social preferences* ($w^A_i > 0$ *and* $w^P_i > 0$) *and mind rigidity* ($g > 0$),

(i) *there exists a threshold for the level of mind rigidity above which and a threshold for the cost of consulting below which principals consult the agent but decide not to follow the agent's choice*;

(ii) *outside this range of values for* g *and* c, *the equilibrium is characterized as in Proposition* 2 *so that principals either do not consult the agent or consult the agent and always follow the agent's choice*.

Proof of Proposition 3. The types of equilibrium described in Proposition 3 can be derived as follows:

(i) Principals of type H (a similar reasoning holds for principals of type L) consult the agent in Stage 2 while ignoring the agent's choice in Stage 3. This equilibrium holds if and only if principals are better off consulting and ignoring the agent's choice than either not consulting (condition (C1)) or consulting and following the agent's choice (condition (C2)). Conditions (C1) and (C2) are as follows:

$$c \le 2p(x^-_{L,H} - x_{L,H}) + 2(1-p)(x^+_{H,H} - x_{H,H}) + \frac{w^P_H}{1-w^P_H}\big(p\big(C_r(x_{L,H}) - C_r(x^-_{L,H})\big) + (1-p)\big(C_r(x_{H,H}) - C_r(x^+_{H,H})\big)\big); \quad \text{(C1)}$$

$$c \le g + 2p(x^-_{L,H} - x^+_{L,L}) + \frac{w^P_H}{1-w^P_H}\big(p(C_r(x^+_{L,L}) - C_r(x^-_{L,H}))\big). \quad \text{(C2)}$$

Conditions (C1) and (C2) are verified as long as condition (C12) below holds. This will be the case as long as mind rigidity (g) is large enough and consultation costs (c) are low enough:

$$c \le \min\Big\{2p(x^-_{L,H} - x_{L,H}) + 2(1-p)(x^+_{H,H} - x_{H,H}) + \frac{w^P_H}{1-w^P_H}\big(p\big(C_r(x_{L,H}) - C_r(x^-_{L,H})\big) + (1-p)\big(C_r(x_{H,H}) - C_r(x^+_{H,H})\big)\big)g + 2p(x^-_{L,H} - x^+_{L,L}) + \frac{w^P_H}{1-w^P_H}\big(p\big(C_r(x^+_{L,L}) - C_r(x^-_{L,H})\big)\big)\Big\}. \quad \text{(C12)}$$

Note that similarly to the proof of Proposition 2, we have considered the case in which the principal who does not consult selects the cost function that corresponds to his or her type. The previous reasoning continues to hold if the principal who does not consult selects the cost function that does not correspond to his or her type.

This equilibrium holds because the agent reciprocates positively the decision of the principal to adopt his or her cost function regardless of the fact that the principal had no intention to change his or her mind. It is interesting to note that even though principals do not use the information provided by the consulting process, they still benefit from the act of consulting in equilibrium.

(ii) The other two types of equilibrium encountered in Proposition 2 also exist. Principals will either consult agents and follow their cost functions (see conditions (C31) and (C32) for a principal of type H) or decide not to consult

the agents (see conditions (C41) and (C42) for a principal of type H):

$$c \le 2p(x^+_{L,L}-x_{L,H})+2(1-p)(x^+_{H,H}-x_{H,H}) + \frac{w^P_H}{1-w^P_H}\big(p\big(C_r(x_{L,H})-C_r(x^+_{L,L})\big) +(1-p)\big(C_r(x_{H,H})-C_r(x^+_{H,H})\big)\big), \quad \text{(C31)}$$

$$c \ge g+2p(x^-_{L,H}-x^+_{L,L}) + \frac{w^P_H}{1-w^P_H}\big(p\big(C_r(x^+_{L,L})-C_r(x^-_{L,H})\big)\big), \quad \text{(C32)}$$

$$c \ge 2p(x^-_{L,H}-x_{L,H})+2(1-p)(x^+_{H,H}-x_{H,H}) + \frac{w^P_H}{1-w^P_H}\big(p\big(C_r(x_{L,H})-C_r(x^-_{L,H})\big) +(1-p)\big(C_r(x_{H,H})-C_r(x^+_{H,H})\big)\big), \quad \text{(C41)}$$

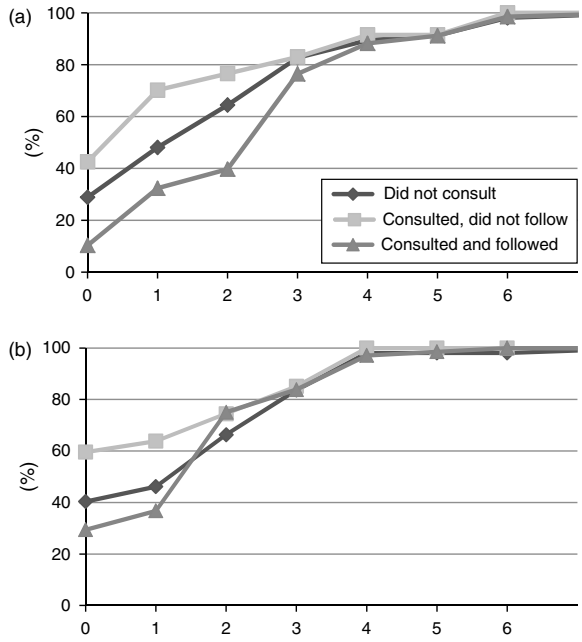
$$c+g \ge 2p(x^+_{L,L}-x_{L,H})+2(1-p)(x^+_{H,H}-x_{H,H}) + \frac{w^P_H}{1-w^P_H}\big(p\big(C_r(x_{L,H})-C_r(x^+_{L,L})\big) +(1-p)\big(C_r(x_{H,H})-C_r(x^+_{H,H})\big)\big). \quad \text{(C42)}$$

Similar conditions are obtained when considering a principal of type L or when considering the case in which the principal who does not consult selects the cost function that does not correspond to his or her type. □

A.2. Cumulative Distribution of Transfer Values and Transfer Costs (Treatments SC, FL, and CH)

We use a Kolmogorov–Smirnov test to confirm that the cumulative distribution function of transfers [transfer costs] for the case in which the principal did not follow the agent's choice is above the cumulative distribution function for the case in which the principal followed the agent's choice ($p = 0.007$) [$p = 0.001$] (see Figure A.1).

Figure A.1 Empirical Cumulative Distribution of (a) Transfer Values and (b) Transfer Costs by Consulting and Following



A.3. Full Set of Instructions

General Information

This is an experiment in decision making. You will be paid in cash for your participation at the end of the experiment. Different participants may earn different amounts. What you earn depends on your decisions and the decisions of others.

You will complete the experiment with a pencil and answer sheets provided to you by a monitor. If you have any questions during the instruction round, raise your hand and a monitor will come by to answer your question. If any difficulties arise after the experiment has begun, *raise your hand*, and someone will assist you.

During the experiment your earnings will be calculated in points. Each point will be converted in cash at the end of the session at the following exchange rate: 1 point = \$1.5. Payments will be made confidentially, so no one will receive information about the earnings of the other participants.

At your desk, you have instructions for the current experiment. Both the instructions and the answer sheet indicate your ID for this experiment (top left corner). This ID consists of a letter and a number. The letter is either A or B and indicates whether you are going to play the role of A or B in the current experiment.

Instructions

Introduction. In this experiment you will be involved in a decision problem that involves two subjects. All participants in this experiment are allocated in two groups: the group of participants A and the group of participants B.

Each participant A will be matched randomly with a participant B. The other participant will only get informed about your decisions. They will never learn your name, that is, your decisions will remain anonymous.

This is an experiment in which you will use only papers and pencils. Your decisions will be anonymously transferred to the participant you have been matched with. You will write your answers in the answer sheets provided to you during the experiment. You will then put your answer sheet in an envelope that will be collected by a monitor and then transferred to the participant you have been matched with.

Description of the experiment. Participant A receives an amount of 12 points at the beginning of this experiment. Participant B receives only 2 points. Each point is worth \$1.5.

Participant A will have the possibility to transfer part or the total of his initial amount of points to participant B.

There are five different types of transfer rules that can be used. The transfer rule specifies how costly will be the transfer from participant A to participant B.

The selection of the specific transfer rule and the amount to be transferred will be determined in the following four stages of the experiment.

Stage 1. Participants A and B study the different *transfer rules*. All participants have eight minutes to study the five different transfer rules and answer the following question:

(Q1) Which of the five transfer rules would you like to apply for this experiment?

Stage 2. Participant B decides whether to consult participant A's answer to question (Q1) regarding the choice of the transfer rule to be used. Consulting participant A's answer implies a fixed cost $c = 1$ for participant B, *which will be subtracted from B's initial amount of points*.

Stage 3. Participant B's second decision is as follows:

— If participant B *has* consulted participant A's answer to question (Q1) in Stage 2, then he or she will know A's answer to question (Q1) and then will have to choose whether to implement the transfer rule stated by participant A in Stage 1 or implement the transfer rule stated by himself or herself in Stage 1.

— If participant B *has not* consulted participant A's answer to question (Q1), then he or she will have to implement the transfer rule stated by himself or herself in Stage 1.

Stage 4. Participant A's decision is as follows: Knowing which rule has been chosen by participant B in Stage 3, participant A decides how many points he or she wants to *transfer* to participant B. The cost of *transfer* for participant A depends on the transfer rule selected previously.

The experimenter doubles each point that participant A transfers to participant B. Thus, each transfer point increases B's earnings by two points.

The formula for calculating earnings is as follows:

— Participant A's earnings: $12 - (\textit{transfer cost computed using the rule selected}$ in Stage 3).

— Participant B's earnings: $2 + 2 \times \textit{transfer} - c$ (if B consults A's answer to question (Q1)).

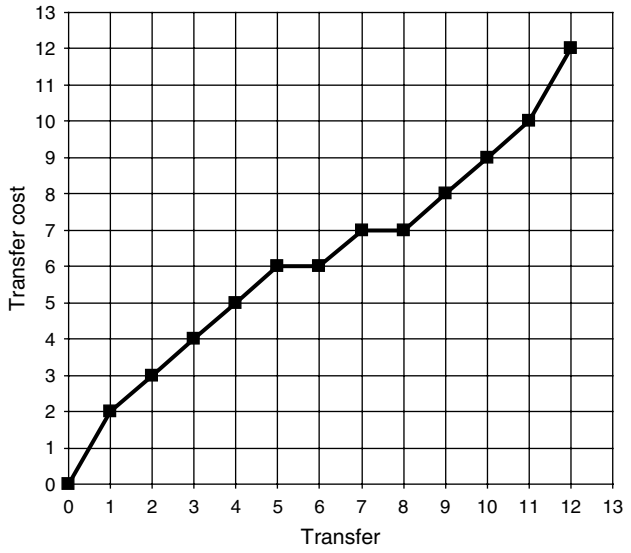
— Participant B's earnings: $2 + 2 \times \textit{transfer}$ (if B does not consult A's answer to question (Q1)).

We describe the five different transfer rules in the following tables and graphs. You will have enough time to study the different rules in Stage 1 of the experiment.

We describe the five different transfer rules as follows.

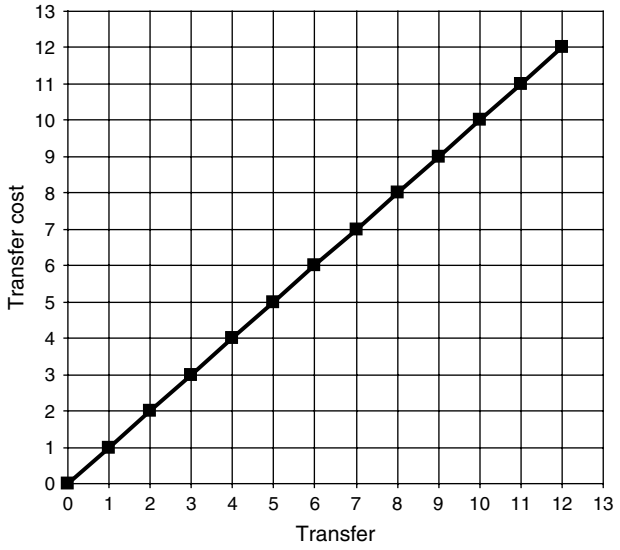
Transfer rule 1													
Transfer	0	1	2	3	4	5	6	7	8	9	10	11	12
Actual cost of the transfer	0	2	3	4	5	6	6	7	7	8	9	10	12

TRANSFER RULE 1



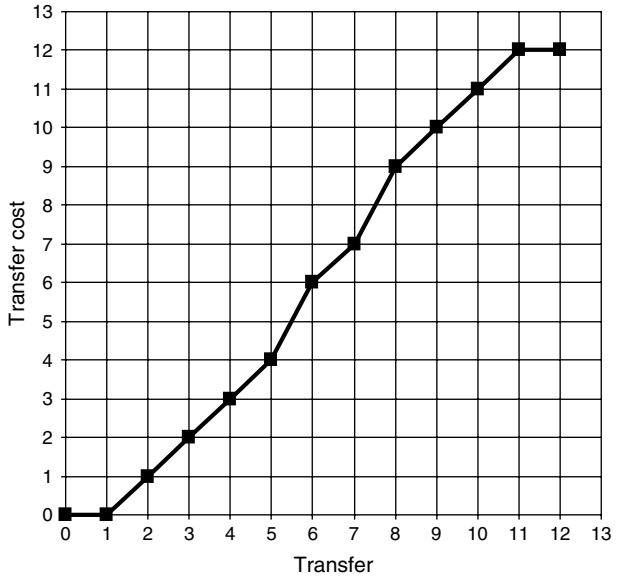
Transfer rule 2													
Transfer	0	1	2	3	4	5	6	7	8	9	10	11	12
Actual cost of the transfer	0	1	2	3	4	5	6	7	8	9	10	11	12

TRANSFER RULE 2

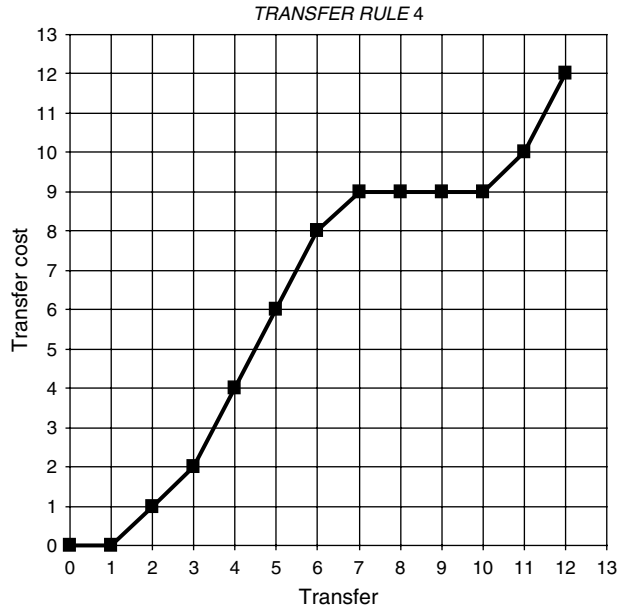


Transfer rule 3													
Transfer	0	1	2	3	4	5	6	7	8	9	10	11	12
Actual cost of the transfer	0	0	1	2	3	4	6	7	9	10	11	12	12

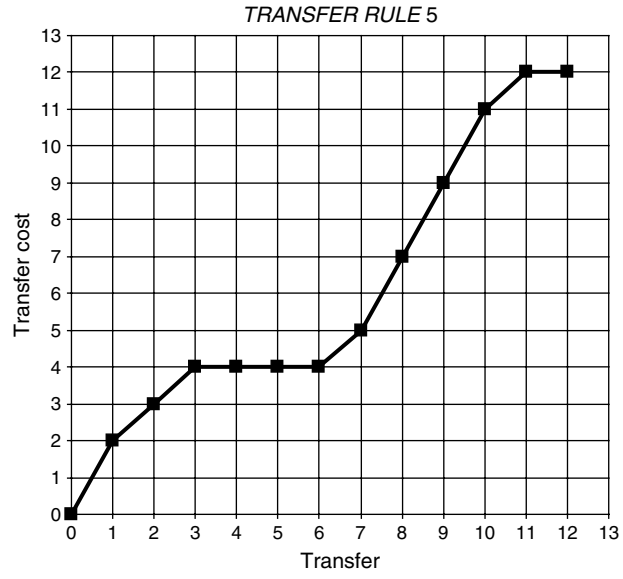
TRANSFER RULE 3



Transfer rule 4													
Transfer	0	1	2	3	4	5	6	7	8	9	10	11	12
Actual cost of the transfer	0	0	1	2	4	6	8	9	9	9	9	10	12



Transfer rule 5													
Transfer	0	1	2	3	4	5	6	7	8	9	10	11	12
Actual cost of the transfer	0	2	3	4	4	4	4	5	7	9	11	12	12



The following examples will clarify the earnings formula.

Example 1. Consider that transfer rule 3 is selected by participant B without consulting participant A's answer, and participant A transfers two points to B.

— As a result of selecting transfer rule 3, we know that the cost of transferring two points is equal to 1.

— The earnings are then 11 (12 − transfer cost) for participant A and 6 (2 + 2 times the transfer) for participant B.

Transfer rule 3													
Transfer	0	1	**2**	3	4	5	6	7	8	9	10	11	12
Actual cost of the transfer	0	0	**1**	2	3	4	6	7	9	10	11	12	12

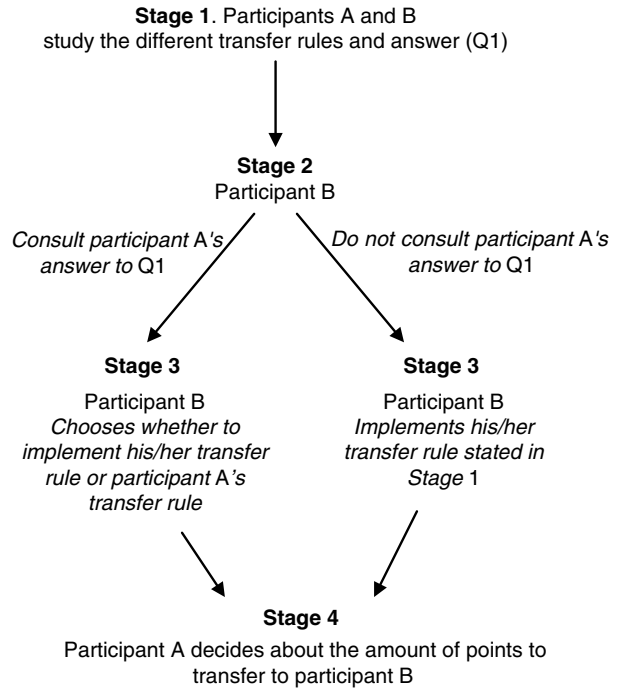
Example 2. Consider that transfer rule 5 is selected after participant B has consulted participant A's answer, and participant A transfers six points to B.

— As a result of selecting transfer rule 5, we know that the cost of transferring six points is equal to 4.

— The earnings are then 8 (12 − transfer cost) for participant A and 13 (2 + 2 times the transfer − c) for participant B, where $c = 1$.

Transfer rule 5													
Transfer	0	1	2	3	4	5	**6**	7	8	9	10	11	12
Actual cost of the transfer	0	2	3	4	4	4	**4**	5	7	9	11	12	12

Summary of the timing of the experiment. Remember that this experiment consists of the following four stages. At each stage, decisions made by participants will be transmitted using an envelope that will be collected by a monitor in the room.



A.4. Questionnaire Answered by Participants at the End of Each Session

Participant A

Please answer the following questions (you have 15 minutes to complete the questionnaire):

Which criteria did you consider to select a transfer rule in Stage 1?

Which criteria do you think participant B considered to select a transfer rule in Stage 1?

How would you feel if participant B *did not* consult the transfer rule you selected?

How would you feel if participant B *did* consult the transfer rule you selected?

How would you feel if participant B *did not* select the transfer rule you have stated in Stage 1?

How would you feel if participant B *did* select the transfer rule you have stated in Stage 1?

How would you have felt if you had transferred the lowest possible amount to Participant B?

Participant B

Please answer the following questions (you have 15 minutes to complete the questionnaire):

Which criteria did you consider to select a transfer rule in Stage 1?

Which criteria do you think participant A considered to select a transfer rule in Stage 1?

How do you think participant A would feel if you *did not* consult the transfer rule he or she selected?

How do you think participant A would feel if you *did* consult the transfer rule he or she selected?

How would you have felt if participant A had transferred the lowest possible amount?

Why did you (or did not) choose to consult the transfer rule selected by participant A?

Why would you ever choose *not to* implement Participant A's observed transfer rule?

How do you think participant A would feel if you *did* select his or her transfer rule?

How do you think participant A would feel if you *did not* select his or her transfer rule?

Would you have consulted if the cost of consulting had been equal to 0 ($c = 0$)?

References

Allport G (1945) Psychology of participation. *Psych. Rev.* 53:117–132.

Babcock L, Loewenstein G (1997) Explaining bargaining impasse: The role of self-serving Biases. *J. Econom. Perspect.* 11:109–126.

Babcock L, Loewenstein G, Issacharoff S, Camerer C (1995) Biased judgments of fairness in bargaining. *Amer. Econom. Rev.* 85:1337–1443.

Barker L (1971) *Listening Behavior* (Prentice-Hall, Englewood Cliffs, NJ).

Bohnet I, Frey B (1999) The sound of Sliwence in prisoner's dilemma and dictator games. *J. Econom. Behav. Organ.* 38:43–57.

Bolton G, Ockenfels A (2000) A theory of equity, reciprocity, and competition. *Amer. Econom. Rev.* 100:166–193.

Brandts J, Cooper D (2007) It's what you say, not what you pay: An experimental study of manager-employee relationships in overcoming coordination failure. *J. Eur. Econom. Assoc.* 5:1223–1268.

Caillaud B, Tirole J (2007) Consensus building: How to persuade a group. *Amer. Econom. Rev.* 9:1877–1900.

Camerer C, Malmendier U (2007) Behavioral economics of organizations. Diamond P, Vartiainen H, eds. *Behavioral Economics and Its Applications* (Princeton University Press, Princeton, NJ), 235–290.

Charness G, Dufwenberg M (2006) Promises and partnership. *Econometrica* 74:1579–1601.

Charness G, Haruvy E (2000) Self-serving biases: Evidence from a simulated labour relationship. *J. Managerial Psych.* 15:655–667.

Charness G, Kuhn P (2011) Lab labor: What can labor economists learn from the lab? Ashenfelter O, Card D, eds. *Handbook of Labor Economics*, 4th ed., Chap. 3 (North-Holland, Amsterdam), 229–330.

Charness G, Rabin M (2002) Understanding social preferences with simple tests. *Quart. J. Econom.* 117:817–869.

Charness G, Cobo-Reyes R, Jiménez N, Lacomba J, Lagos F (2012) The hidden advantage of delegation: Pareto-improvements in a gift-exchange game. *Amer. Econom. Rev.* 102:2358–2379.

Cialdini R (1993) *Influence: The Psychology of Persuasion* (Harper Collins, New York).

Cotton J, Vollrath D, Froggatt K, Lengnick-Hall M, Jennings K (1988) Employee participation: Diverse forms and different outcomes. *Acad. Management J.* 13:8–22.

Cotton J, Vollrath D, Lengnick-Hall M, Froggatt K (1990) Fact: The form of participation does matter-a rebuttal to leana, locke, and schweiger. *Acad. Management Rev.* 15:37–146.

Dickinson D, Villeval M (2008) Does monitoring decrease work effort? The complementarity between agency and crowding-out theories. *Games Econom. Behav.* 63:56–76.

Dewatripont M, Tirole J (1999) Advocates. *J. Political Econom.* 107:1–39.

Falk A, Fehr E (2003) Why labour market experiments? *Labour Econom.* 10:399–406.

Falk A, Kosfeld M (2006) The hidden costs of control. *Amer. Econom. Rev.* 96:1611–1630.

Falk A, Zimmermann F (2011) Preferences for consistency. IZA Discussion Paper 5840, Institute for the Study of Labor, Bonn, Germany.

Farrell J, Gibbons R (1989) Cheap talk with two audiences. *Amer. Econom. Rev.* 79:1214–1223.

Fehr E, Falk A (2002) Psychological foundations of incentives. *Eur. Econom. Rev.* 46:687–724.

Fehr E, Gächter S (2000) Cooperation and punishment in public goods experiments. *Amer. Econom. Rev.* 90:980–994.

Fehr E, Schmidt K (1999) A theory of fairness, competition and cooperation. *Quart. J. Econom.* 114:817–868.

Fehr E, Gächter S, Kirchsteiger G (1997) Reciprocity as a contract enforcement device: Experimental evidence. *Econometrica* 65:833–860.

Fehr E, Herz H, Wilkening T (2013) The lure of authority: Motivation and incentive effects of power. *Amer. Econom. Rev.* 103:1325–1359.

Fehr E, Kirchsteiger G, Riedl A (1993) Does fairness prevent market clearing? An experimental investigation. *Quart. J. Econom.* 108:437–459.

Fehr E, Klein A, Schmidt K (2007a) Adding a stick to the carrot? The interaction of bonuses and fines. *Amer. Econom. Rev.* 97:177–181.

Fehr E, Klein A, Schmidt K (2007b) Fariness and contract design. *Econometrica* 75:121–154.

Freeman R, Rogers J (1999) *What Workers Want* (ILR Press, Ithaca, NY).

Frey B (1993a) Does monitoring increase work effort? The rivalry with trust and loyalty. *Econom. Inquiry* 31:663–670.

Frey R (1993b) Empowerment or else. *Harvard Bus. Rev.* 71:80–88.

Gächter S, Renner E (2010) The effects of (incentivized) belief elicitation in public good experiments. *Experiment. Econom.* 13:364–377.

Goleman D (1995) Emotional intelligence. Bantam International, New York.

Goleman D (1998) What makes a leader? *Harvard Bus. Rev.* 76: 93–102.

Hoffman E, McCabe K, Smith V (1996) Social distance and other regarding behavior in dictator games. *Amer. Econom. Rev.* 86:653–660.

Konow J (2000) Fair shares: Accountability and cognitive dissonance in allocation decisions. *Amer. Econom. Rev.* 90:1072–1092.

Konow J (2003) Which is the fairest one of all? A positive analysis of justice theories. *J. Econom. Literature* 41:1186–1237.

Korsgaard M, Roberson L (1995) Procedural justice in performance evaluation—The role of instrumental and non-instrumental voice in performance appraisal discussions. *J. Management* 21:657–669.

Lam S, Chen X, Schaubroeck J (2002) Participative decision making and employee performance in different cultures: The moderating effects of allocentrism-idiocentrism and efficacy. *Acad. Management J.* 45:905–914.

Lawler E (1988) Choosing an involvement strategy. *Acad. Management Executive* 11:197–204.

Lawler E (1990) *High-Involvement Management: Participative Strategies for Improving Organizational Performance* (Jossey-Bass Publishers, San Francisco).

Lawler E (1993) Creating the high-involvement organization. Galbraith JR, Lawler EE III, eds. *Organizing for the Future: The New Logic for Managing Complex Organizations* (Jossey-Bass Publishers, San Francisco), 172–193.

Lawler E, Mohrman S, Ledford G Jr (1992) *Employee Involvement and Total Quality Management: Practices and Results in Fortune 1,000 Companies* (Jossey-Bass Publishers, San Francisco).

Lawler E, Mohrman S, Ledford G Jr (1998) *Strategies for High Performance Organizations—The CEO Report: Employee Involvement, TQM, and Reengineering Programs in Fortune 1,000 Corporations* (Jossey-Bass Publishers, San Francisco).

Leana C, Locke E, Schweiger D (1990) Fact and fiction in analyzing research on participative decision making: A Critique of Cotton, Vollrath, Froggatt, Lengnick-Hall, and Jennings. *Acad. Management Rev.* 15:137–146.

Ledford G Jr (1993) Employee involvement: Lessons and predictions. Galbraith JR, Lawler EE III, eds. *Organizing for the Future: The New Logic for Managing Complex Organizations* (Jossey-Bass Publishers, San Francisco), 142–171.

Li H (2001) A theory of conservatism. *J. Political Econom.* 109: 617–636.

Li H, Rosen S, Suen W (2001) Conflicts and common interests in committees. *Amer. Econom. Rev.* 91:1478–1497.

Locke E, Schweiger D (1979) Participation in decision making: One more look. *New Directions Organ. Behav.* 1:265–339.

Locke E, Schweiger D, Latham G (1986) Participation in decision making: When should it be used? *Organ. Dynam.* 14:65–79.

Lowin A (1968) Participative decision making: A model, literature critique, and prescriptions for research. *Organ. Behav. Human Performance* 3:68–106.

Marrow AJ, Bowers DG, Seashore SE (1967) *Management by Participation* (Harper and Row, New York).

McCaffrey D, Faerman S, Hart D (1995) The appeal and difficulties of participative systems. *Organ. Sci.* 6:603–627.

Milgrom P, Roberts J (1986) Relying on the information of interested parties. *RAND J. Econom.* 17:18–32.

Miller K, Monge P (1986) Participation, satisfaction, and productivity: A meta-analytic. *Acad. Management J.* 29:727–753.

Mitchell TR (1973) Motivation and participation: An integration. *Acad. Management J.* 16:670–679.

Roth A (1995) Bargaining experiments. Kagel JH, Roth A, eds. *Handbook of Experimental Economics* (Princeton University Press, Princeton, NJ), 253–348.

Schweiger D, Leana C (1986) Participation in decision making. Locke E, ed. *Generalizing from Laboratory to Field Settings* (Lexington Books 2, Lexington, MA), 242–263.

Sliwka D (2007) Trust as a signal of a social norm and the hidden costs of incentive schemes. *Amer. Econom. Rev.* 97:999–1012.

Wagner J, Gooding R (1987a) Effects of societal trends on participation research. *Admin. Sci. Quart.* 32:241–262.

Wagner J, Gooding R (1987b) Shared influence and organizational behavior: A meta-analysis of situational variables expected to moderate participation-outcome relationships. *Acad. Management J.* 30:524–541.

Wagner J, Leana C, Locke E, Schweiger D (1997) Cognitive and motivational frameworks in U.S. research on participation: A meta-analysis of primary effects. *J. Organ. Behav.* 18:49–65.

Wiley C (1997) What motivates employees according to over 40 years of motivation surveys. *Internat. J. Manpower* 18: 263–280.