When Ignorance is Bliss: Theory and Experiment on Collective Learning*

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March 28, 2017

Abstract

When do groups and societies choose to be uninformed? We study a committee that needs to vote on a reform which will give every member a private state-dependent payoff. The committee can vote to learn the state at no cost. We show that the committee decides not to learn the state if and only if members' preferences are more fractionalised on the state-relevant dimension than on the state-irrelevant dimension. Hence, decisions on divisive issues are likely to be made in haste, and heterogeneous societies tend to seek less information. A simple laboratory experiment confirms key results.

JEL Classification Numbers: *C72, C92, D71, D72, D83.*

Keywords: *voting, collective learning, reform adoption, information acquisition, laboratory experiment*

1 Introduction

The outcomes of reforms and other collective decisions are often uncertain when the decision is being made. For example, trade liberalization can help some industries while

*We are grateful to V Bhaskar for valuable advice, and to Syon Bhanot, Antonio Cabrales, Amanda Friedenberg, Joseph-Simon Görlach, Philippe Jehiel, Christian Krestel, Sheen S. Levine, Roger Myerson, Santiago Oliveros, Nikita Roketskiy, Andres Zambrano and audiences in Barcelona, Bilbao, Bogota, Budapest, Edinburgh, Lindau, Lisbon, London, Madrid, Moscow, Palma de Mallorca, Riga, Santiago, Stony Brook, Toulouse, and Tucson for helpful comments. Amalia Rodríguez and Andrés Cárdenas provided very able research assistance. We thank the financial support from Central Bank of Colombia (grant 3754), Spanish Ministry of the Economy (grant MDM 2014-0431), and Comunidad de Madrid (grant S2015/HUM-3444). We thank Universidad del Rosario for hosting the experiment.

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hurting other – but it is not always evident in advance which industry will gain and which will lose. A reform of higher education can induce prospective students to reallocate between degree programs, but the direction of change may be uncertain. Allocation of research funding, adoption of environmental regulations, investment in infrastructure projects, and academic hiring are some of the other examples of decisions with uncertain consequences.

In many of these scenarios, however, the decision-making body can vote to learn this information collectively. For instance, they can vote to delay the decision on the reform until more information becomes available. They can implement a pilot project before deciding on a full-scale reform. They can vote to make an official request for more information to a relevant agency. But when will the group choose to acquire information, and when will it choose to vote "in ignorance"?

This paper addresses the above question by modeling, and experimentally testing, a committee that needs to vote whether to adopt a reform. If adopted, the reform will give every member a private payoff which depends on a state of the world which can take values X and Y. Individual payoffs in each state are commonly known, but the state is initially unknown. Committee members cannot learn the state privately. However, prior to voting on the reform, the committee can vote to acquire public information about the state, at no cost[1].

Will the committee ever vote against learning? It is easy to see that if committee members have similar preferences, they will weakly prefer to learn the state before making the decision. But when preferences differ, this need not be the case, as the following example shows. Let the committee consist of three members, called Anna, Bob, and Claire. Suppose decisions are made by simple majority voting and the two states are equally likely. If the reform is rejected, each member receives a payoff of zero. If the reform is approved, the payoffs of its members are as follows:

	Payoff in state X	Payoff in state Y
Anna	3	-1
Bob	-1	3
Claire	-3	-3

If the committee votes to learn the state before deciding on the reform, then in every state the majority rejects the reform. Thus, each voter receives a payoff of zero. If the committee votes not to learn the state, then Anna and Bob will support the reform, and in expectation each of them receives a positive payoff. Thus, in expectation, Anna and

[1] Alternatively, we can think of the model as representing a situation in which committee members have acquired private signals about the state, which are incorporated into the common prior. Some uncertainty remains, however, and more information can only be acquired if the committee votes to do so, e.g. by delaying the reform.

Bob each receive a higher payoff if information is not acquired than if it is. Accordingly, they prefer not to learn the state – and since they constitute a majority, their preference becomes the collective decision. We can thus say that the committee has a *collective preference for ignorance.*

The key factor behind this outcome is that with information, the reform is rejected in either state. Ex ante, however, the reform is adopted. Thus, information moves the collective decision away from the one that the majority initially prefers – so the majority votes against acquiring information.

This logic leads to the basic theoretical result of the paper: a simple characterisation of the distributions of voters' preferences under which the committee has a collective preference for ignorance. In a committee of any size, voters' preferences are described by their payoffs from the reform in the two states. Some voters prefer the reform to the status quo in both states. Others, like Claire in the example, prefer the status quo regardless of the state. We can refer to these two groups as *partisans*. On the other had, there are voters whose preference depends on the state. Some, like Anna, prefer the reform in state X but prefer the status quo in state Y. Others, like Bob, prefer the reform in state Y but not in state X. We can call these two groups *independent* voters. The key theoretical result of the paper, summarised in Proposition 1, is that the committee will have a collective preference for ignorance if and only if the difference in size between the two groups of independent voters is smaller than the difference in size between the two groups of partisans. This result holds for a committee of any size, for all distributions of individual payoffs, and for any prior belief about the state[2].

One interpretation for this result is that decisions on divisive issues are likely to be made with less information. For example, suppose that a national legislature is considering a bill that would strengthen border controls. There is uncertainty over the effect this may have on the number of immigrants: on the one hand, the bill will make it harder for immigrants to enter illegally; on the other hand, immigrants who are already inside the country may be unwilling to leave, as they may be unable to return[3]. If members of the legislature largely agree that immigration is desirable, or if they largely agree that it is undesirable, they will seek to learn more about the likely outcome. If, however, immigration is a divisive issue – some members are in favor of immigration, some are against, and the two groups are relatively similar in size – then they are likely to vote on the bill in haste, without seeking information about its effects.

Another way to interpret this result is to refer to the index of social fractionalisation[4],

[2]While the basic model assumes that when the committee votes acquiring information, the state is perfectly revealed, the result also holds under a more general signal structure. This extension is discussed in Appendix A.

[3]See Dustmann and Görlach (2016) for an overview of the literature discussing the ambiguous effect of border enforcement on immigration.

[4]Described in e.g. Montalvo and Reynal-Querol (2005).

widely used in development literature. For a society divided into groups, the index of fractionalisation measures the probability that two randomly selected individuals belong to different groups. If there are only two groups, the index is higher when they are more similar in size. The paper shows that committee will have a collective preference for ignorance if fractionalisation on the state-relevant dimension of preferences is larger than fractionalisation on the state-irrelevant dimension.

In fact, there is substantial research in development economics on the impact of social fractionalisation on economic growth, corruption, quality of governance, public good provision, and risk of civil war[5]. This paper adds to that literature by suggesting another mechanism through which fractionalisation can affect economic and social outcomes. Specifically, fractionalisation affects the degree to which the society chooses to be informed when making decisions. Heterogeneous groups and societies are likely to make decisions in haste, to seek less expert advice, to enact or reject reforms without analysing their potential effects, and to have less public debate on proposed policies. The result also matches some of the existing empirical evidence from political science (Anderson and Paskeviciute, 2006) and organizational psychology (Mannix and Neale, 2005), which suggests that greater heterogeneity is associated with lower engagement in public discussion and lower level of information exchange[6].

From a normative point of view, we examine the effect of a rule that enforces learning regardless of the committee's decision. Proposition 2 suggests such a rule is optimal when there is a minority of voters with a large stake in the collective decision. Hence, commitment to transparency can be a mechanism of protecting minorities.

We test the main theoretical result in a laboratory setting. Subjects are grouped into three-member committees. They are informed that there are two possible states of the world. Each committee is asked to choose between two options. One option gives each committee member a safe payoff, while the other gives each of them a payoff that depends on the state. State-dependent payoffs are assigned randomly, and are known to all committee members. Before voting on the option, the committee votes on whether to learn the state.

In line with theoretical predictions, we find that committees are substantially less likely to acquire information when individual preferences are more fractionalised on the state-relevant dimension than on the state-irrelevant dimension. Specifically, in the former case committees vote to learn the state approximately 30 percentage points less often than in the former case. The result holds under different costs of acquiring information as well as in the setup when acquiring information is costless; it also holds under different priors. The coefficient is robust to controlling for possible learning effects, for labelling of alternatives,

[5]See Mauro (1995), Easterly and Levine (1997), Collier (2001), Alesina et al. (2003), and others.

[6]The usual explanation for this effect is that heterogeneity is associated with a lower level of interpersonal trust. Our paper suggests another potential explanation: a heterogeneous group may collectively decide to have less deliberation in order to avoid acquiring information.

and for demographic composition of committees. Individual voting behaviour also follows theoretical predictions. Furthermore, individuals with more experience in decision-making bodies, or with greater level of strategic competence, are more likely to vote as the model predicts, which presents some evidence for external validity of the model.

The rest of the paper is organised as follows. Section 2 describes the model. Section 3 presents the theoretical results, including the conditions under which the committee votes for ignorance, and the effects of a commitment to learning. Section 4 describes the design of the experiment. The results of the experiment are described in Section 5. Finally, Section 6 concludes.

1.1 Related Literature

Several papers have studied collective decisions to acquire information. Strulovici (2010) examines a dynamic problem of a committee that, in every round, needs to choose between a safe option and a risky option. For member of the committee, the risky option is either good or bad. Members do not initially know their preferences, but they can learn them when the risky option is exercised. The decision to exercise the risky option is reversible. The paper shows that the level of learning generally is inefficiently low. Fernandez and Rodrik (1991) use a similar approach to examine a collective decision to adopt a risky reform. They show that when voters are uncertain about their payoffs from the reform, a welfare-enhancing reform may be reversed[7]. Messner and Polborn (2012) similarly consider a choice between delaying the decision (and thus learning some information) and adopting a proposal early. They show that a supermajority rule can lead to less conservative decisions than a simple majority rule. Godefroy and Perez-Richet (2013) develop a model in which a committee votes whether to place a proposal on the agenda before voting on the proposal itself. The paper shows that a more restrictive agenda selection rule can make voters more conservative, while a more conservative decision rule has the opposite effect.

A key difference between this paper and those described above is that in the latter, voters are ex ante homogeneous in their preferences. Acquiring information then involves the voters learning their preferences. In our paper, on the other hand, voters have ex ante different preferences, which are commonly known at the beginning of the game. The distribution of preferences across voters then determines the key result of the paper, described in Proposition 1 – a characterisation that would have been impossible in a setup in which voters are ex ante identical. Furthermore, in Strulovici as well as Fernandez and Rodrik, learning is the result of exercising a risky option (e.g. adopting the reform), and hence implies a change in expected payoffs. In contrast, in our paper, learning does not involve any direct cost, since it happens when a safe option (delaying the reform) is

[7]Dewatripont and Roland (1995) also look at adoption of reforms with uncertain outcomes.

exercised.

Chan et al. (2016) look at a jury that faces a choice in every round between continuing to gather information and making a decision. They find that greater heterogeneity leads to more information acquisition. Unlike this paper, they restrict attention to a setting in which jury members have preferences that are monotone in the state – everyone prefers to acquit an innocent defendant and to convict a guilty one (although the intensity of preferences may differ). In such a setting, information will always be acquired if there is no cost of doing so; in Chan et al. (2016) the decision to stop gathering information is driven by the fact that it is costly. Unlike Chan et al. (2016), we look at cases in which voters are heterogeneous in the sense that their preferences are not necessarily monotone in the state. It is precisely this heterogeneity that drives the vote against acquiring information even when doing it is costless.

This paper is also related to the literature on collective search (Albrecht et al., 2010; Compte and Jehiel, 2010; Moldovanu and Shi, 2013). In that literature, a committee must decide between adopting the current alternative and continuing to search for more alternatives. Continuing the search makes the committee more informed, but it also means foregoing the payoff from the alternative in the current round. In this paper, on the other hand, deciding to learn the state before voting on the reform does not entail any change in payoffs from the reform. The decision to stay uninformed is driven instead by the effect of information on the collective decision.

A different strand of literature looks at collective decision-making in experimental settings (see Palfrey (2013) for a comprehensive survey). Guarnaschelli et al. (2000) examine an information aggregation problem analogous to the one studied by Feddersen and Pesendorfer (1998). In an experiment where learning is not possible, Cason and Mui (2005) investigate the impact of uncertainty on the benefits of a reform on the likelihood of its adoption. They find that uncertainty reduces the incidence of reform. Plott and Llewellyn (2015) study a committee that deliberates on a decision. Committee members' preferences depend on an unknown state of nature. Two experts, who have opposing preferences regarding the committee's decision, are informed about the state, and can provide recommendations to the committee at the beginning of the deliberation. The paper suggests that, although experts do not generally tell the truth, the committee acts as if knowing what experts know. Exploiting individual preference heterogeneity, Goeree and Yariv (2011) experimentally study the effects of deliberation on collective decisions. Unlike this paper, in their analysis the group does not vote on whether or not to learn the state; instead, group members can communicate. The authors find that communication increases efficiency.

The fact that public information can reduce individual expected payoffs has been noticed by Hirshleifer (1971), who showed that risk-averse individuals may be worse off when information eliminates insurance opportunities. Gersbach (1991) and Gersbach (2000) show a similar effect in a voting framework. Unlike these papers, we focus on a collective decision to acquire information, which can be both positive and negative when acquiring information is socially optimal as well as when it is not.

A number of papers have looked at information aggregation through voting (Austen-Smith and Banks, 1996; Feddersen and Pesendorfer 1997; Goertz and Maniquet, 2011; Bouton and Castanheira, 2012; Bhattacharya, 2013). In that literature, information is dispersed among voters, each of whom has an imperfect signal about the state. Under certain conditions, voting can aggregate information – that is, the outcome of the voting is the same as if all private signals were made public. In contrast, in this paper there is no private information, and acquiring a public signal about the state is a matter of collective choice.

More broadly, this paper is also related to research on acquisition of private information by individual members of committees[8], as well as to studies of information exchange among committee members[9]. Also related is the literature on private information acquisition in coordination games[10]. A number of researchers have also looked at factors that may motivate individuals, as opposed to committees, to avoid payoff-relevant information[11].

2 Model

A committee I comprising an odd number of members needs to decide between two alternatives, called "status quo" and "reform". Each alternative gives every member a payoff that depends on a binary state of the world $\omega \in \{X, Y\}$. For a member $i \in I$, the difference between her utility from the reform and from the status quo is x_i if the state is X and y_i if the state is Y. These utilities can be positive or negative. Let $x \equiv (x_1, x_2, ...)$ and $y \equiv (y_1, y_2, ...)$ denote vectors of individual state-dependent payoff differences. To simplify exposition we will, without loss of generality, normalise each member's payoff from the status quo to zero – thus, x_i and y_i are equal to individual utilities from the reform. The state is initially unknown. Let π be the probability that the state is X. Aside from the state, all aspects of the game (including individual payoffs) are common knowledge.

Before deciding between the reform and the status quo, the committee decides whether to learn the state, at no cost. If it chooses to do so, the state becomes common knowledge, and members then vote on whether to adopt the reform. Otherwise, the committee has to vote on the reform without knowing the state.

All decisions (whether to learn the state, and whether to approve the reform) are

[8] Persico (2004); Gerardi and Yariv (2008); Gershkov and Szentes (2009); Gersbach and Hahn (2012); Oliveros (2013).

[9] Visser and Swank (2007); Gerardi and Yariv (2007).

[10] Dewan and Myatt (2008); Hellwig and Veldkamp (2009); Myatt and Wallace (2012).

[11] Golman et al. (2017) provide an extensive review.

made by majority voting. Member cast their votes simultaneously, and the option with the largest number of votes is selected. To avoid trivial equilibria we will, in line with much of the literature on voting games, only consider equilibria in which weakly dominated strategies are eliminated. Thus, every agent votes sincerely, as if she were pivotal.

3 Results

3.1 Preference for Ignorance

Take a vector z whose length equals the number of members of I. Let $g(z) \in \{0,1\}$ be a function whose value equals 1 if the median of z is positive, and equals 0 otherwise. If the reform is put to vote, and z represents expected payoffs from it, the committee will adopt the reform if and only if $g(z) = 1$. Note that $g(\cdot)$ has the following properties, which will be useful in the subsequent analysis:

1. For any scalar $\lambda > 0$, and any payoff vector $z \in \mathbb{R}^I$, $g(z) = g(\lambda z)$.

2. For any payoff vector $z \in \mathbb{R}^I$ that does not contain zeroes, $g(-z) = 1 - g(z)$.

The first property says that the collective decision is invariant to rescaling of payoffs. The second says that if the reform is adopted under a given vector of expected payoffs, then it is rejected under a vector of opposite expected payoffs.

Suppose the committee votes to learn the state. With probability π the state turns out to be X. If the reform is then adopted, each voter $i \in I$ receives a payoff x_i. Thus the reform is adopted if and only if $g(x) = 1$. Similarly, with probability $1 - \pi$ the state turns out to be Y, and the reform is adopted (giving each voter i a payoff y_i) whenever $g(y) = 1$. Thus, if the collective decision is to learn the state, the expected payoff of agent i equals

$$\pi x_i g(x) + (1 - \pi) y_i g(y)$$

If instead the committee decides not to learn the state, then the reform, if selected, will give each voter an expected payoff of $\pi x_i + [1 - \pi] y_i$. The reform is then approved whenever $g(\pi x + [1 - \pi] y) = 1$. Hence, voter i's expected payoff equals

$$(\pi x_i + [1 - \pi] y_i) g(\pi x + [1 - \pi] y)$$

When deciding whether to vote for learning the state, each voter compares her expected payoffs with and without information. Let v_i be the value of ignorance for voter i – that is, the gain in i's expected payoff from voting on the reform without information instead of learning the state prior to voting. Then v_i equals

$$v_i = (\pi x_i + [1 - \pi] y_i) g(\pi x + [1 - \pi] y) - \pi x_i g(x) - (1 - \pi) y_i g(y)$$

Voter i votes to learn the state if $v_i < 0$, and votes against learning the state if $v_i > 0$. Then the committee collectively chooses to learn the state whenever $g(v) = 0$, where $v \equiv (v_i)_{i \in I}$ is the vector of net gains from ignorance for all agents. When $g(v) = 1$, the committee collectively chooses to vote on the reform without learning the state – in other words, the committee has a collective preference for ignorance.

Note that it is possible for voters to be indifferent between some of thhave a preference for reducing e decisions. In particular, if $g(x) = g(y) = g(\pi x + [1 - \pi] y)$ – i.e. if the committee votes on the reform the same way in either state and also ex ante – then $v_i = 0$ for all $i \in I$. In that case all voters are indifferent between learning and not learning the state. Therefore, the subsequent analysis will distinguish between a weak and a strict collective preference for ignorance. In particular, a weak preference for ignorance is equivalent to assuming that information has a small cost – small in the sense that it is smaller than any payoff difference that enters a voter's utility calculations.

With this distinction in mind, we can, for the case when decisions are made by a simple majority rule, derive a simple necessary and sufficient condition for the committee to decide against learning the state.

Lemma 1. *For any $\pi \in (0, 1)$, the committee has a weak preference for ignorance if and only if $g(x) = g(y)$. Furthermore, the committee has a strict preference for ignorance if and only if $g(x) = g(y) \neq g(\pi x + [1 - \pi] y)$.*

Proof. See Appendix B.

In words, the committee weakly prefers making a decision without information if and only if the collective decision on the reform is the same after either state is revealed. The committee strictly prefers not acquiring information if and only if the collective decision on the reform is the same after either state is revealed, while also being different from the collective decision on the reform made without information[12].

Intuitively, if the decision on the reform is the same after either state is known, two cases are possible. First, that decision can also be the same as the decision on the reform without information – in this case, information has no effect on the outcome, and the committee weakly prefers not to have it. Second, the decisions in both states can be be different from the decision without information. In this case, learning the state moves the collective decision on the reform away from the decision that was optimal ex ante – thus,

[12]An implicit assumption here is that voters are ambiguity-neutral. This is in line with some of the the experimental literature (Halevy, 2007). Considering ambiguity-aversion might be interesting if information acquisition is modeled as a compound two-stage lottery (Segal, 1987). In such a case, individuals would be more likely to vote for information in order to reduce the uncertainty from not knowing the relevant state of the world (Machina and Siniscalchi, 2014) We will return to this discussion in the experimental results section.

the majority will prefer not to learn it. This is what happened in the example mentioned in the Introduction.

Lemma 1 implies the following result:

Corrollary 1. *Under a simple majority rule, whenever there is a strict preference for ignorance, the preferred decision of the median voter in either state will never be implemented.*

Proof. Strict preference for ignorance exists when the median voter's preferred decision in either state is different from the ex ante decision. But under a strict preference for ignorance, the ex ante decision on the reform will be the one that the group will implement∎

This result is, of course, different from what the median voter theorem suggests. When the committee can endogenously determine whether they want to acquire information about the state, and the median voter strictly prefers not to acquire that information, then agents who are median voters in each state will never have their preferred alternative chosen.

3.1.1 Preference Distributions

The analysis above has looked at how decisions in the two states affect the willingness of the committee to learn the state. The primitives of the model, however, are not these decisions, but individual preferences. What kind of distributions of preferences across voters give rise to a collective preference for ignorance?

Recall that preferences of any agent i are described by a pair (x_i, y_i) of i's payoff from the reform in each state. The distribution of preferences of the group is then described by the distribution of voters over the (x, y) space.

Figure 1 illustrates the space of individual payoffs. Letters W, L, I_Y, and I_X indicate the sets of voters whose preference points lie in each of the four quadrants. Thus, W represents the set of "sure winners", who receive a positive payoff from adopting the reform in either state. L represents the set of "sure losers", who prefer the reform to be rejected in both states. We can refer to the sets W and L as the sets of *committed* voters, or *partisans*. I_X and I_Y are the sets of *independent* voters, whose preferred decision changes depending on the state. I_X are independent voters that prefer the reform to be accepted when the state is X, but not when the state is Y. I_Y are independent voters who receive a positive expected utility from the reform in state Y but not in state X.

Assume that the mass of voters for whom $x_i = 0$ or $y_i = 0$ is zero, i.e. that (almost) nobody is indifferent when either state is revealed. For a given set of voters S, let $\#S$ denote the share of voters who belong to that set. Then the following result holds:

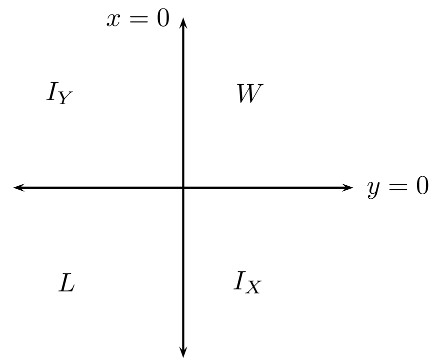


Figure 1: Distribution of preferences. The letters indicate the sets of voters whose payoffs lie in each of the four quadrants.

Proposition 1. *The committee has a weak preference for ignorance if and only if*

$$|\#I_X - \#I_Y| \leq |\#W - \#L|$$

Proof. See Appendix B.

This describes the necessary and sufficient condition for the committee to have a collective preference for ignorance. Information will thus be acquired if and only if the difference between the numbers of independents of the two types is larger than the difference between the number of sure winners and the number of sure losers.

We can interpret this result using the index of social fractionalisation (Montalvo and Reynal-Querol, 2005), which measures the probability that two randomly selected individuals belong to different groups. When there are only two groups, fractionalisation is higher when they are more similar in size. Proposition 1 then says that ignorance will be a collective decision if fractionalisation on the state-relevant dimension of preferences is larger than fractionalisation on the state-irrelevant dimension. Thus, heterogeneous societies are likely to choose to be uniformed.

We can also interpret Proposition 1 as saying that decisions on divisive issues[13] are likely to be made with less information – for example, in haste or without seeking expert advice. On the other hand, when the committee largely agrees that the reform is better in one state than in the other, it will seek information about the state.

Alternatively, consider a situation in which information about the state is dispersed among voters, with each voter receiving a signal about the state. If individual signals

[13]Divisive in the sense that there is no general agreement on which outcome is preferred to the other.

are very imprecise, then all voters have (almost) the same prior belief. By making these signals public, the society as a whole can become more informed about the state. Certain norms and institutions – such as freedom of speech, or a strong tradition of public debate – can facilitate the exchange of individual signals. Proposition 1 suggests that societies that largely agree that some outcomes are better than others are more likely to support the existence of such institutions. On the other hand, societies that are more heterogeneous in terms of their preferences are, ceteris paribus, less likely to collectively support them.

Finally, it is useful to compare the collective preference for ignorance to the question of information aggregation through voting. Suppose again that information is dispersed among committee members. A number of papers (e.g. Feddersen and Pesendorfer, 1997) have shown that voting aggregates information when all voters agree that the reform is better in one state than in the other. But if individual preferences are heterogeneous (in the sense of not being monotone in the state), information is not, in general, aggregated (Bhattacharya, 2013). This paper suggests that when individual preferences are *sufficiently* heterogeneous, the committee also *chooses* not to acquire information when it has an option to do so.

Overall, the committee will have a weak preference for ignorance if and only if individual preferences are more fractionalised on the state-relevant dimension than on the state-irrelevant dimension. In these cases, we can expect the committee to vote against acquiring information when information is costless or carries a price that is low relative to voters' payoffs. This result will be tested experimentally in Section 5.

3.2 Commitment to Learning

This section will look at collective learning from a normative perspective. Specifically, it will examine when it is optimal for the committee to commit to learning the state prior to voting on the reform.

Commitment to learning is often found in various decision rules. For example, the legislative process often requires parliaments to have several readings before a law is passed. A formal constitutional guarantee of transparency or freedom of speech (or an informal tradition of public debate) can also serve as commitment devices imposing a certain amount of information acquisition. When are such commitments optimal?

Consider a social planner that has an option to force the committee to learn the state before voting on the reform. The planner does not know the state, but she knows individual preferences. Suppose that she judges outcomes based on a welfare function $w : \mathbb{R}^I \to \mathbb{R}$ which maps expected payoffs of individuals (given the information available to the planner) to social welfare. Normalise $w(0, 0, ..)$ to zero – thus, a reform that produces a payoff vector z is welfare-improving if and only if $w(z)$ is positive. Let $sign(\cdot)$ be the sign (positive or negative) of a scalar. To simplify notation, denote $d(z) \equiv g(z) - \frac{1}{2}$, so that given a vector of expected payoffs $z \in \mathbb{R}^I$, the reform is adopted if and only if

$d(z)$ is positive.

Proposition 2. *Commitment to learning is weakly optimal if* $sign\left[d\left(\pi x+[1-\pi] y\right)\right] \neq sign\left[w\left(\pi x+[1-\pi] y\right)\right]$*, and is weakly harmful if* $sign\left[d\left(\pi x+[1-\pi] y\right)\right]=sign\left[w\left(\pi x+[1-\pi] y\right)\right].$

Proof. See Appendix B.

Intuitively, this proposition says that commitment to acquiring information is weakly preferable if the decision on the reform that the committee makes without information is "wrong", in the sense that it is different from the welfare-maximising decision. On the other hand, if the decision on the reform made without information is the same as the welfare-maximising decision, a commitment to learning can only reduce welfare.

How can we interpret this result? Consider a utilitarian welfare function, in which $w(z)$ is an average of elements of z. Then a commitment to learning is optimal when the distribution of $\pi x_i+[1-\pi] y_i$ (the ex ante expected payoffs) across voters has a mean and a median that are of different signs. Referring to Figure 1, this can happen when the distribution of payoffs is skewed along the "Southwest-Northeast" axis. This is the case when, for example, the majority of voters benefit from the reform in expectation, but there is a minority of individuals who each lose much if the reform is accepted (or vice versa). Hence, a constitutional guarantee of transparency can serve as a mechanism to protect a minority, and it is optimal when there is minority with a large stake in the reform.

4 Experimental Design and Procedures

We tested the main theoretical result of the paper – the characterisation set out in Proposition 1 – in a controlled laboratory experiment. Experimental sessions were run at the Group and Laboratory for Experimental Economics (GLEE) at Universidad del Rosario between May and September 2016. The subjects were undergraduate students recruited from a GLEE pool across all disciplines. Each subject participated in only one experimental session.

Immediately after entering the laboratory, subjects read the instructions[14]. After 10 minutes, an experimental administrator read them aloud. The instructions contained several frequently asked questions (with answers) to ensure better understanding of the experiment. Two practice rounds were administered at the beginning of each experimental session. The outcomes of these rounds did not count towards the subjects' payoffs, and data from these rounds was not used in the analysis.

[14]Sample instructions, translated into English, are presented in Online Appendix D.

The span of time during which each subject made choices relevant for the experiment was less than 20 minutes (the total length of each experimental session was approximately 80 minutes). The experiment was computerised using z-Tree experimental software (Fischbacher, 2007).

In each session, subjects were asked to participate in the game described in Section 2. There were six sessions in total, each of which included 24 subjects, split into two "pools" of equal size. Each subject faced decisions over 20 rounds. At the beginning of each round, subjects inside each pool were randomly divided into three-member groups, representing committees. At the beginning of every round, subjects in each group were informed that the state of the world was either blue or red[15], with equal probability; the state was drawn independently across rounds. This probability distribution was chosen to reduce the cognitive burden and to prevent subjective overweighting of probabilities[16]. As in the model, the group first had to vote whether to learn the state, at a cost p to each member. The state would be revealed if at least two out of three group members voted in favour of it. After that, the group had to choose (again by majority voting) between two options, called Option A and Option B.[17] After the end of the round, new groups would be formed from same pool, and a new round would begin. Since groups were redrawn every round, it is unlikely that subjects could play tit-for-tat or other history-contingent strategies[18].

Selecting Option A would give each member of the group a payoff of 10 experimental tokens (ET), irrespective of the state. The payoff from Option B depended, as in the model, on the state of the world. In each round, each subject was assigned a pair of integers from the set $\{1, 2, \dots, 19\}$; these numbers were her payoffs from Option B in the two states[19]. In the language of Proposition 1, in each round a subject was allocated to quadrant W, L, I_X or I_Y. Then her payoff from each state was drawn randomly from a discrete uniform distribution over the dashed lines shown in Figure 2. The payoffs of every group member were known to all other members of the group.

In total, there are twenty distinct ways of anonymously allocating three group members into four quadrants. They are presented in Figure 3. Under ten of these distributions, shown in panel (a), the condition $|\#I_X - \#I_Y| \leq |\#W - \#L|$ holds, while in the other

[15] These labels correspond to states X and Y in the model.

[16] However, as a robustness check, we also implemented (on a sample of 48 subjects) a treatment in which the state was blue with probability 0.75. The effects of the treatment remained unchanged and are reported in Section 5.2.

[17] These correspond to, respectively, status quo and reform in the model. We used more neutral labels in the experiment to avoid possible framing effects.

[18] In Section 5 we show that there is indeed no evidence that group or individual behaviour varied across time.

[19] In terms of the model, these numbers corresponded to $x_i + 10$ and $y_i + 10$, where, as in the model, x_i and y_i represent the difference between agent i's payoff from the reform and her payoff from the status quo.

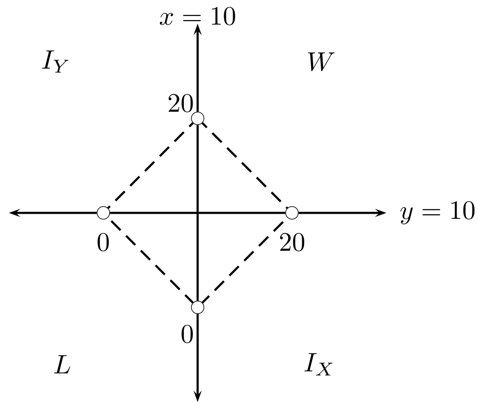


Figure 2: Possible individual payoffs from Option B.

ten, shown in panel (b), it fails to hold. Proposition 1 predicts that the committee should vote against acquiring information in the former case but not in the latter case. The difference between these two cases constitutes the main experimental treatment. We will refer to the the former case as *ignorance treatment.*

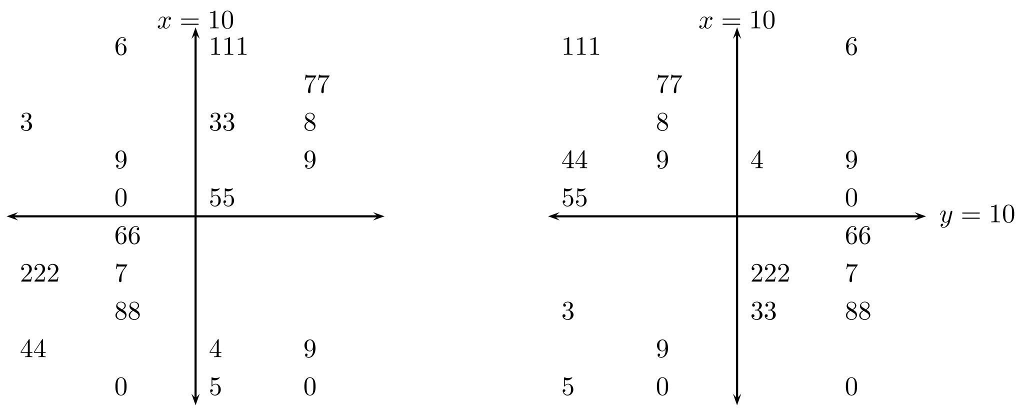
During the twenty rounds, each individual was assigned to each for the twenty possible group configurations shown in Figure 3. Hence, each individual was subjected to ignorance treatment for ten out of twenty rounds. Thus, we implemented a within-subject design[20].

In each round, subjects were informed they had 60 seconds to reach a decision. The average time it took individuals to make each decision varied between 15.56 and 21.77 seconds, with an average of 18.6 seconds.

The theoretical prediction in Proposition 1 refers to a weak preference for ignorance. Thus, it describes the decision of the committee when acquiring information is costless or involves a negligible cost. In the experiment we allowed for either case. In each session, the cost p of acquiring information was set at one of the three levels: null cost ($p = 0$ ET), low cost ($p = 0.1$ ET), and high cost ($p = 0.4$ ET). The cost varied across sessions, but in each session, the same value of p applied in every round. Note that all levels of p are small, in the sense that they are smaller than the possible difference in expected payoffs that may result from acquiring information[21].

[20]To reduce cognitive load on subjects, we kept each subject's state-dependent payoffs (and thus the quadrant to which she was allocated) unchanged for five rounds. Then, the subject was moved anti-clockwise to an adjacent quadrant, and a new pair of state-dependent payoffs was randomly drawn. This procedure was repeated until every subject had visited every quadrant. Although individual valuations were kept constant for a span of 5 rounds, in every round each individual was allocated to a different group. Thus, from the perspective of each subject, payoffs of other group members changed after every round. See Appendix D.3 for more details on how groups were formed.

[21]We also implement this information cost treatment because there is legitimate concern that individ-



(a) Weak preference for ignorance

(b) No weak preference for ignorance

Figure 3: Possible allocations of group members across the four quadrants. Each allocation is marked by a set of three identical digits from 0 to 9. Each digit represents the location of one of the group members. Panel (a) represents allocations in which fractionalisation is larger on the state-relevant dimension, while panel (b) represents allocations in which fractionalisation is larger on the state-irrelevant dimension.

A possible cause for concern is the fact that Option A, being the first of the two options, could serve as a focal point for subjects. Therefore, we controlled for order effects by flipping the labels in half of the sessions, calling the safe alternative "Option B", and the state-dependent alternative "Option A". As shown in Section 5, the results were not affected by this.

Earnings were calculated in terms of ET and exchanged into Colombian pesos at the rate of 1 ET to COP 75, which is equivalent to 40 ET to \$1. The total payment to each subject equaled the sum of her earnings over the twenty rounds (not including the first two practice rounds), plus a show-up fee that was equivalent to \$3.5. The average payment was approximately \$10, equivalent to 23% of the subjects' average weekly expenses (see Table 2 in Appendix C). Payments were privately distributed at the end of the session.

To summarise, we follow a 2×3 design: one dimension represents the variation over whether or not ignorance treatment was applied, while the other represents the three levels of information cost. As mentioned above, we also control for order effects between

uals may be heterogeneous in their degree of ambiguity aversion (Machina and Siniscalchi, 2014). A way to control for this heterogeneity is to change the price individuals have to pay for acquiring information: ambiguity-averse individuals are more likely to keep voting to acquire information when the cost increases. The significance of our ignorance treatment after controlling for varying information costs can be seen as evidence in favour of our theoretical model even accounting for heterogeneity in the degree of ambiguity aversion.

Option A and B. Individuals face a between-subjects information cost treatment and a between-subjects ignorance treatment.

Table 1 summarises the experimental design and the number of observations. In total, we had 144 subjects, each of whom took part in 20 experimental rounds. This amounts to 960 group-level observations and 2880 individual-level observations. Exactly half of the observations faced ignorance treatment[22].

Instructions and experimental screens, translated into English, are shown in Online Appendix D.

Table 1: Number of individual and group observations, based on 144 participating subjects, by treatment.

	Information cost			
Observations	Null cost	Low cost	High cost	**Total**
Individual	960	960	960	2,880
Group	320	320	320	960

5 Experimental Findings

5.1 Main Results

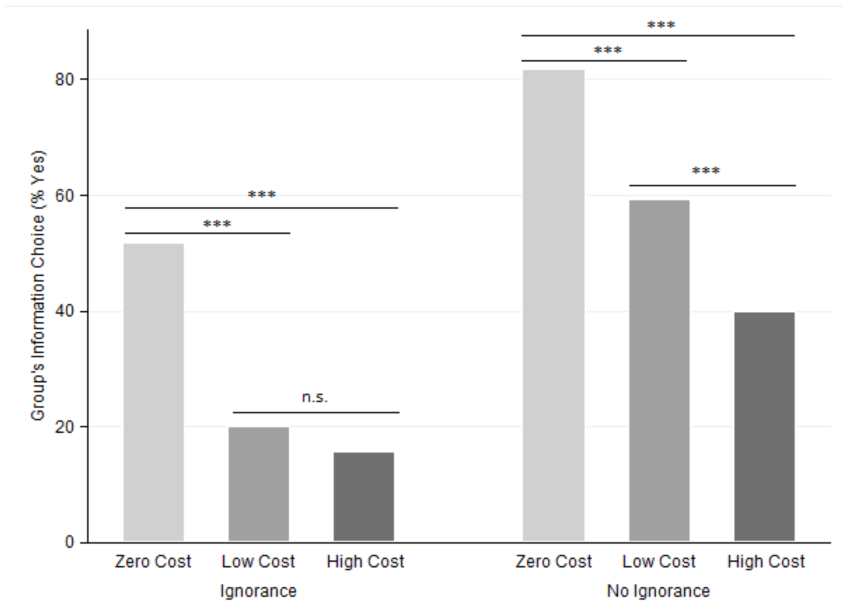
In this section we test the main theoretical result of the paper, summarised in Proposition 1, that groups in which fractionalisation is larger on the state-relevant dimension (that is, groups subjected to ignorance treatment) are less likely to vote to acquire information.

Table 2 in Appendix C describes the characteristics of our subjects. Figure 4 shows the frequency with which groups tend to acquire information under different values of information cost. Even when information was costless, groups did not always vote in favour of acquiring information. Overall, the fraction of instances in which information was acquired ranged from 67% when the cost of information was zero, to 28% when the cost of information was 0.4 ET. Note that while the information cost treatment was between subjects, our sample is balanced across information cost treatments – as columns 8-10 in Table 2 show, the null hypothesis that subjects' characteristics differ across information cost treatments is rejected for nearly all observed sociodemographic variables. Therefore, differences of the frequency with which groups tend to acquire

[22]In the experiment, the average share of groups who voted to acquire information was 30% under the ignorance treatment, and 60% under the no ignorance treatment. The intra pool correlation was0.14. Following List et al. (2011), with this data, our sample size is sufficient to identify a minimum ignorance treatment effect of 0.065 with a power of 0.8 and a significance level of 0.05.

information across information costs are not likely to be caused by differences in sample characteristics.

More importantly, across the three different levels of information cost, groups were substantially more likely to vote for ignorance when the theory predicts them to do so. Specifically, under the ignorance treatment, groups have voted to to acquire information in 29% of of the time; compared to 60% of the time when not under ignorance treatment.



*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$, n.s. $p > 0.1$

Figure 4: Group information acquisition with and without ignorance treatment.

We now look at the effect of the ignorance treatment on the group information acquisition decision. Specifically, we construct a dummy variable that equals one when the group has voted to acquire information. We regress it on a dummy variable that equals one when the condition $|\#I_X - \#I_Y| \leq |\#W - \#L|$ holds for the group – that is, when the group is subjected to the ignorance treatment – as well as on variables representing the cost of information in the particular session, and demographic controls.

Since groups are formed randomly in each round, group observations are independent variables. However, across the 20 rounds, groups are formed from the same pool of 12 subjects[23]. This can, in principle, cause standard errors to be correlated across rounds. To account for the possibility of such dependence, we cluster standard errors at the pool

[23]See Online Appendix D for details on how groups were formed in each round.

level[24]. This is a conservative approach and should bias our results against finding statistical significance.

– Table 3 here –

Regression results are presented in Table 3. Column 1 shows that groups subjected to the ignorance treatment are 31.3 percentage points less likely to vote for acquiring information, compared to groups not facing ignorance treatment. The coefficient is large in magnitude and significant at the 1% level, suggesting a strong effect that is in line with the prediction of the theoretical model.

Column 2 shows that increasing the cost of information to 0.1 and 0.4 ET reduces the frequency of information acquisition by, respectively, 27.2 and 39.1 percentage points, compared to the case when information is costless. However, when ignorance treatment is interacted with information cost dummies (column 3) the resulting coefficient is not statistically significant. This suggests that the cost of information does not affect the theoretical mechanism described in Proposition 1. There is also no evidence that group behaviour in early rounds is different from their behaviour in later rounds, which rules out possible learning channels at the group level. Columns 2 and 3 also control for order effect by including a dummy variable for sessions in which the safe alternative was labeled "Option B" – this does not seem to affect the main results.

Columns 4 and 5 show that the effect of the ignorance treatment is essentially unchanged after controlling for round fixed effects and for group-level control variables, including the percentage of female members, the percentage of students in economics or business programmes, average risk-taking self-assessment levels, and average participation in decision-making bodies[25]. Group-level controls also include a measure of payoff inequality within the group, defined as the Gini coefficient on the individual expected payoffs under Option B.[26] We control for group inequality because there is concern that subjects may have other-regarding preferences (see Cooper and Kagel, 2016), which would induce them to select Option A, as it gives the same payoff to all group members. This would discourage groups from acquiring information. Nevertheless, the significance and magnitude of the ignorance treatment effect is robust to including inequality measures in the regressions[27].

[24] In our data, this procedure is equivalent to clustering on the "chunk" level done in Cooper and Kagel (2005).

[25] Although the associated coefficients are not reported here, they are available upon request.

[26] The significance and magnitude of our treatment effects do not change when the mean absolute deviation or the ratio between the maximum and minimum valuations of Option B are used instead of the Gini coefficient.

[27] While not affecting the treatment effect, the coefficients on group inequality measures are negative and significant at 5% level when controlling for round fixed effects. This provides some evidence in favour of the above intuition.

To summarise, the experimental results provide evidence in favour of Proposition 1: groups that are more fractionalised on the state-relevant dimension than on the state-irrelevant dimension of preferences tend to acquire information substantially less often.

5.2 Robustness and External Validity

5.2.1 Individual behaviour

In the model, voter i supports acquiring information if and only if v_i, the value of ignorance for i, is negative. This requires the voter to be able to predict the votes of other committee members when either state is revealed.

One may reasonably suspect that subject are not as sophisticated as the model expects them to be. It could be possible that they use simpler decision rules. For example, they may be only taking their own payoffs into consideration. In that case, they would be voting to acquire information when they belong to quadrants I_X and I_Y, and voting against it when they belong to sets W and L.

To address this concern, we perform individual-level regressions in which the dependent variable indicates whether the individual voted to acquire information. We regress this variable on a dummy that equals one whenever v_i is negative – i.e. whenever the theoretical mechanism of the model predicts that an individual will vote to acquire information. We also control for the quadrant – I_X, I_Y, W or L – to which the individual belongs, for the cost of information, and for individual characteristics. In all regressions, we compute robust standard errors clustered at the individual level to account for possible dependence between decisions across rounds.

The results are presented in Table 4. Column 1 shows that the theoretical mechanism is a strong predictor of the actual individual vote: an individual is 29.6 percentage points more likely to vote for acquiring information when the theory predicts her to do so. Column 2 suggests that, aside from the theoretical mechanism, individual payoffs (the quadrant to which she belongs) and the cost of information have an effect on individual decisions. Nevertheless, the coefficient on the theoretical mechanism is still highly significant, though smaller in magnitude. At the same time, Column 3 suggests that the information cost does not influence the degree to which that mechanism affects individual decisions, as the coefficients on the interaction terms are not significant.

Subsequent specifications show that the significance of the theoretical prediction is robust even after controlling for individual characteristics[28] (column 4), round fixed effects (column 5), and even for individual unobservable factors (column 6 which includes individual fixed effects, exploiting the within-subject design of the experiment).

[28]Among these individual variables, we find that females and subjects who report higher willingness to take risks are significantly less likely to vote for information acquisition. A high level of group inequality is also associated with a lower likelihood of an individual voting for acquiring information.

Overall, we can conclude that an individual is significantly more likely to vote against acquiring information when the theory predicts him to do so[29].

– Table 4 here –

5.2.2 Evidence of external validity

In this section we show that the model fits the data best when subjects are more similar to members of real-life decision-making bodies.

To do this, we construct a dummy variable that is equal to one whenever the subject has voted in the way theory predicts her to vote. Thus, the dummy equals one if the subject voted to acquire information and her v_i was negative, or if she voted against acquiring information and her v_i was positive; in all other cases, the dummy equals zero. We regress that variable on the information cost dummies, the quadrants to which the subject belonged, and individual demographic characteristics. The results are presented in Table 5.

An important result is the positive and significant coefficient on the number of decision-making bodies (such as high school or university student councils) in which the subject has participated. Thus, individuals with more experience in actual collective decision-making are more likely to act in the way the model predicts them to. At the same time, subjects who assess themselves as more strategic in their behaviour are also more likely to vote according to theory. Additionally, the coefficient on the round (from 1 to 20) is also positive and significant, suggesting that learning is present: subjects become increasingly more likely to act in the way the model predicts them to.

These results suggests that the model is relatively better at predicting behaviour of individuals who participate in collective decision-making, who have greater strategic competence, or who have had more experience from previous rounds of the experiment. In short, the model is more likely to make a correct prediction when subjects resemble members of actual committees. This provides evidence for the model's external validity.

– Table 5 here –

5.2.3 Ambiguity aversion

The model described in Section 2 assumes that individuals maximise expected utility. In reality, individuals may exhibit ambiguity aversion. Then they might be willing to acquire information even when the model predicts they should not. In that case, the experimental

[29]When analysing individual behaviour we also find that 95.8% of subjects under high information cost treatment behaved in accordance with what the theory predicts in at least half of the rounds. For the low and null information cost this rate was 89.6% and 77.1% respectively.

results would be biased in favour of acquiring information more often. Hence, allowing for ambiguity aversion means that our results are a lower bound on the collective preference for ignorance.

5.2.4 Asymmetric prior beliefs

The theoretical model holds for any prior belief about the state. To reduce cognitive burden on subjects, we performed the experiment in a setting when the prior was uniform. In this section, we show that the theoretical channel proposed in Proposition 1 holds under asymmetric prior beliefs.

For this purpose, we ran the experiment under a setup in which the probability that the state was "Blue" equaled 0.75. This was done over two additional sessions, on a sample of 48 subjects (equivalent to 16 groups). In one session, subjects faced null information cost, while in the other they faced the high information cost. In both sessions, the safe option was labeled "Option B".

We pooled this data with the data on the 48 other subjects who faced the same treatment (null and high information cost, and Option B as the safe option) under a symmetric prior. Table 6 presents the regression results for the pooled sample. We can see that groups facing the asymmetric prior treatment ($\pi = 0.75$) exhibit lower rates of information acquisition. Nevertheless, they do not respond to the ignorance treatment differently than the groups facing the symmetric prior treatment. This suggests that Proposition 1 holds not only when the prior belief is symmetric, but also more generally.

– Table 6

6 Conclusions

The aim of this paper was to analyse a committee's choice between learning and not learning the state of the world, prior to voting on a reform that can give every member a private state-dependent payoff. Even when information is costless, the committee can choose ignorance. This happens if and only if the committee members' preferences are more fractionalised on the state-relevant dimension than on the state-irrelevant dimension. Thus, a group will make a decision without seeking information when the decision concerns a divisive issue, or when the group is sufficiently heterogeneous.

These theoretical predictions are supported by experimental evidence. We observe that groups are significantly more likely to vote against acquiring information when the theory predicts them to do so. This happens when information is costless as well as when there is a small or a moderate cost of acquiring it. Varying the prior, and controlling for group composition, for possible learning effects, and for the order in which alternatives are presented does not change the result.

At the individual level, experimental data is in line with theoretical predictions. Subjects with greater experience in decision-making bodies behave closer to theory, providing evidence for external validity of the model.

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Appendix

A Imperfect Signals

The model described in Section 2 gave the committee an opportunity to learn the state of the world with certainty. More generally, we can consider a situation in which the committee can decide whether to acquire an imperfect signal about the state. This appendix will show that the previous results extend to this more general setting.

Suppose that if the committee votes to acquire information, they receive a binary public signal $\sigma \in \{X, Y\}$. Let $\Pr(\sigma = X \mid \omega = X) = p$ and $\Pr(\sigma = X \mid \omega = Y) = q$, where $p \geq q$. Thus, if signal X arrives, the posterior probability that the state is X increases relative to the prior π; and if signal Y arrives, it decreases relative to π.

Suppose the committee has voted to acquire information. If they receive signals X, they will believe that the state is X with probability $\frac{\pi p}{\pi p + (1-\pi) q}$. In this case, voter i's expected payoff if the reform is approved is $\frac{\pi p}{\pi p+(1-\pi)q} x_i + \frac{(1-\pi)q}{\pi p+(1-\pi)q} y_i$. Thus, when signal X is received, the reform will be approved if and only if

$$g\left[\frac{\pi p}{\pi p + (1-\pi) q} x + \frac{(1-\pi) q}{\pi p + (1-\pi) q} y\right] = 1$$

or, equivalently, if and only if $g[\pi p x + (1-\pi) q y] = 1$. Similarly, if they receive signal Y, the posterior probability that the state is X will equal $\frac{\pi(1-p)}{\pi(1-p)+(1-\pi)(1-q)}$. Then voter i's expected payoff from the reform equals $\frac{\pi(1-p)}{\pi(1-p)+(1-\pi)(1-q)} x_i + \frac{(1-\pi)(1-q)}{\pi(1-p)+(1-\pi)(1-q)} y_i$. Hence, the reform is adopted if and only if

$$g\left[\frac{\pi(1-p)}{\pi(1-p) + (1-\pi)(1-q)} x + \frac{(1-\pi)(1-q)}{\pi(1-p) + (1-\pi)(1-q)} y\right] = 1$$

or, equivalently, if and only if $g[\pi(1-p) x + (1-\pi)(1-q) y] = 1$.

Ex ante, if information is not acquired, voter i's expected payoff if the reform is adopted equals $\pi x_i + (1-\pi) y_i$. Hence, without information, the committee adopts the reform whenever $g[\pi x + (1-\pi) y] = 1$.

Then the value of ignorance to voter i equals:

$$\begin{aligned} v_i \quad &= (\pi x_i + [1-\pi] y_i) \, g(\pi x + [1-\pi] y) - \\ &- (\pi p x_i + [1-\pi] q y_i) \, g(\pi p x + [1-\pi] q y) - \\ &- (\pi [1-p] x_i + [1-\pi][1-q] y_i) \, g(\pi [1-p] x + [1-\pi][1-q] y) \end{aligned}$$

Information will be acquired if and only if $g(v) = 0$. Then the following result holds:

Lemma 2. *For any $\pi \in (0,1)$, the committee has a weak preference for ignorance if and only if $g[\pi p x + (1-\pi) q y] = g[\pi(1-p)x + (1-\pi)(1-q)y]$. Furthermore, the committee has a strict preference for ignorance if and only if $g[\pi p x + (1-\pi) q y] = g[\pi(1-p)x + (1-\pi)(1-q)y] \neq g[\pi x + (1-\pi)y]$.*

Proof. See Appendix B.

In words, the committee will weakly prefer not to acquire information if and only if the collective decision upon observing signal X is different from the collective decision upon observing signal Y. Furthermore, the committee will strictly prefer not to acquire information if and only if the collective decisions upon receiving the two signals are the same, and both are different from the collective decision made at the initial belief π. This result is essentially a more general version of the result established in Proposition 1.

We can now divide voters into groups based on their preferred decisions upon receiving either of the signals, as in Section 3.1.1. Let $\hat{I}_X$ and $\hat{I}_Y$ be the sets of voters that, upon receiving a signal, have a positive expected payoff from the reform if and only if the signal is, respectively, X and Y. Let $\hat{W}$ and $\hat{L}$ be the sets of voters that have, respectively, a positive and a negative payoff from the reform after any signal arrives. Then, using the same logic as in Section 3.1.1, we can show that the committee will have a weak preference for ignorance if and only if it is more fractionalised on the signal-relevant dimension than on the signal-irrelevant one:

Proposition 3. *The committee has a weak preference for ignorance if and only if $\left|\#\hat{I}_X - \#\hat{I}_Y\right| \leq \left|\#\hat{W} - \#\hat{L}\right|$.*

Proof. Identical to the proof of Proposition 1, with I_X, I_Y, W and L replaced by $\hat{I}_X$, $\hat{I}_Y$, $\hat{W}$ and $\hat{L}$, respectively.

B Proofs

Proof of Lemma 1

1. If $g(x) = g(y) = g(\pi x + [1-\pi]y)$, then $v_i = 0$, $\forall i \in I$, so all agents are indifferent between learning and not learning.

2. If $g(x) = g(y) = 0$ and $g(\pi x + [1-\pi]y) = 1$, then $v = \pi x + [1-\pi]y$, so $g(v) = g(\pi x + [1-\pi]y) = 1$.

3. If $g(x) = g(y) = 1$ and $g(\pi x + [1-\pi]y) = 0$, then $v = -(\pi x + [1-\pi]y)$, so $g(v) = 1 - g(\pi x + [1-\pi]y) = 1$.

4. If $g(x)=1$ and $g(y)=g(\pi x+[1-\pi]y)=0$, then $v=-\pi x$, so $g(v)=1-g(\pi x)=1-g(x)=0$.

5. In a similar way, it can be shown that $g(y)=1$ and $g(x)=g(\pi x+[1-\pi]y)=0$ imply $g(v)=0$.

6. If $g(x)=0$ and $g(y)=g(\pi x+[1-\pi]y)=1$, then $v=\pi x$, so $g(v)=g(\pi x)=g(x)=0$.

7. In a similar way, it can be shown that $g(y)=0$ and $g(x)=g(\pi x+[1-\pi]y)=1$ imply $g(v)=0$∎

Proof of Proposition 1

Lemma 1 says that the committee has a weak collective preference for ignorance whenever $g(x)=g(y)=0$ or $g(x)=g(y)=1$. The former condition says that

$$\#L+\#I_X\geq\frac{1}{2}\text{ and }\#L+\#I_Y\geq\frac{1}{2}\tag{1}$$

while the latter says that

$$\#W+\#I_X\geq\frac{1}{2}\text{ and }\#W+\#I_Y\geq\frac{1}{2}\tag{2}$$

Inequality (1) is equivalent to the condition $\#L+\min\{\#I_X\,,\,\#I_Y\}\geq\frac{1}{2}$, while (2) is equivalent to the condition $\#W+\min\{\#I_X\,,\,\#I_Y\}\geq\frac{1}{2}$. The committee has a collective preference for ignorance if and only if at least one of these conditions holds. Hence, the committee has a collective preference for ignorance if and only if

$$\max\{\#W\,,\,\#L\}+\min\{\#I_X\,,\,\#I_Y\}\geq\frac{1}{2}$$

which is equivalent to $\max\{\#W\,,\,\#L\}+\min\{\#I_X\,,\,\#I_Y\}\geq\min\{\#W\,,\,\#L\}+\max\{\#I_X\,,\,\#I_Y\}$. Rearranging, we obtain $\max\{\#I_X\,,\,\#I_Y\}-\min\{\#I_X\,,\,\#I_Y\}\leq\max\{\#W\,,\,\#L\}-\min\{\#W\,,\,\#L\}$. This is equivalent to $|\#I_X-\#I_Y|\leq|\#W-\#L|$∎

Proof of Proposition 2

If $g(x)=g(y)=g(\pi x+[1-\pi]y)$, then the decision on the reform is the same with or without information, so a commitment to learning has no effect. If $g(x)\neq g(y)$, the committee chooses to learn the state, so a commitment to learning again has no effect. The only case when it does have an effect is when $g(x)=g(y)\neq g(\pi x+[1-\pi]y)$.

Suppose that $g(x) = g(y) = 1$ and $g(\pi x + [1-\pi] y) = 0$. Then, $d(\pi x + [1-\pi] y) < 0$. Without a commitment to learning, the committee votes not to acquire information and then rejects the reform, giving each member a payoff of zero. With a commitment to learning, the reform is adopted in either state, so the expected payoff of each voter i is $\pi x_i + [1-\pi] y_i$. Commitment to learning is then socially optimal iff $w(\pi x + [1-\pi] y) > 0$. Now suppose that $g(x) = g(y) = 0$ and $g(\pi x + [1-\pi] y) = 1$, hence $d(\pi x + [1-\pi] y) > 0$. Without a commitment to learning, the committee votes not to learn the state and then adopts the reform, giving each voter i an expected payoff of $\pi x_i + [1-\pi] y_i$. With a commitment to learning, the reform is rejected in either state, and the payoff of each voter is 0. Commitment to learning is then socially optimal iff $0 > w(\pi x + [1-\pi] y)$. Hence, whenever $sign[d(\pi x + [1-\pi] y)] \neq sign[w(\pi x + [1-\pi] y)]$, commitment to learning either has no effect, or is socially preferable. But when $sign[d(\pi x + [1-\pi] y)] = sign[w(\pi x + [1-\pi] y)]$, commitment to learning either has no effect, or is socially harmful.

Proof of Lemma 2.

1. If $g(\pi p x + [1-\pi] q y) = g(\pi [1-p] x + [1-\pi][1-q] y) = g(\pi x + [1-\pi] y)$, then $v_i = 0$, $\forall i \in I$, so all agents are indifferent between learning and not learning the state.
2. If $g(\pi p x + [1-\pi] q y) = g(\pi [1-p] x + [1-\pi][1-q] y) = 0$ and $g(\pi x + [1-\pi] y) = 1$, then $v = \pi x + [1-\pi] y$, so $g(v) = g(\pi x + [1-\pi] y) = 1$.
3. If $g(\pi p x + [1-\pi] q y) = g(\pi [1-p] x + [1-\pi][1-q] y) = 1$ and $g(\pi x + [1-\pi] y) = 0$, then $v = -(\pi x + [1-\pi] y)$, so $g(v) = 1 - g(-v) = 1$.
4. If $g(\pi p x + [1-\pi] q y) = 1$ and $g(\pi [1-p] x + [1-\pi][1-q] y) = g(\pi x + [1-\pi] y) = 0$, then $v = -(\pi p x + [1-\pi] q y)$, so $g(v) = 1 - g(-v) = 0$.
5. In a similar way, it can be shown that $g(\pi [1-p] x + [1-\pi][1-q] y) = 1$ and $g(\pi p x + [1-\pi] q y) = g(\pi x + [1-\pi] y) = 0$ imply $g(v) = 0$.
6. If $g(\pi p x + [1-\pi] q y) = 0$ and $g(\pi [1-p] x + [1-\pi][1-q] y) = g(\pi x + [1-\pi] y) = 1$, then $v = \pi p x + [1-\pi] q y$, so $g(v) = g(\pi p x + [1-\pi] q y) = 0$.
7. In a similar way, it can be shown that $g(\pi [1-p] x + [1-\pi][1-q] y) = 0$ and $g(\pi p x + [1-\pi] q y) = g(\pi x + [1-\pi] y) = 1$ imply $g(v) = 0$.

C Descriptive Statistics and Regression Tables

Table 2: Sample descriptive statistics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Mean	**Min**	**Max**	**Sd**	**Mean by info cost**			p-value for H_0 :		
					Zero	**Low**	**High**	**(5)=(6)**	**(6)=(7)**	**(5)=(7)**
Female	0.54	0.00	1.00	0.50	0.48	0.54	0.60	0.545	0.541	0.223
Age	20.56	14.00	36.00	3.12	20.85	19.94	20.88	0.178	0.099	0.975
Socieconomic stratum	3.63	2.00	6.00	0.97	3.63	3.77	3.48	0.440	0.131	0.501
Weekly expenses (USD)	42.9	3.4	622.5	71.7	40.9	55.0	32.7	0.413	0.197	0.263
Academic semester	5.39	1.00	10.00	2.98	5.31	4.96	5.90	0.569	0.132	0.320
Econ/Business undergrad	0.40	0.00	1.00	0.49	0.38	0.48	0.35	0.307	0.218	0.834
Risk taking level	6.53	0.00	10.00	1.75	6.79	6.42	6.40	0.283	0.955	0.270
Information strategy	2.26	1.00	3.00	0.71	2.23	2.33	2.23	0.473	0.453	1.00
Option strategy	2.01	1.00	3.00	0.77	2.44	1.77	1.81	0.000	0.795	0.000
Voting experience:										
High school elections	0.91	0.00	1.00	0.29	0.90	0.92	0.92	0.730	1.00	0.730
College elections	0.67	0.00	1.00	0.47	0.69	0.56	0.75	0.210	0.054	0.501
School or college elections	0.93	0.00	1.00	0.26	0.92	0.92	0.96	1.00	0.404	0.404
Local elections	0.67	0.00	1.00	0.47	0.65	0.60	0.77	0.677	0.080	0.182
Parliamentary elections	0.35	0.00	1.00	0.48	0.25	0.31	0.48	0.501	0.097	0.020
Presidential elections	0.53	0.00	1.00	0.50	0.50	0.48	0.60	0.840	0.223	0.310
Voted at least once	0.70	0.00	1.00	0.46	0.69	0.63	0.79	0.524	0.074	0.250
Decision-making body experience:										
High school board	0.54	0.00	1.00	0.50	0.63	0.52	0.48	0.307	0.687	0.154
College board	0.13	0.00	1.00	0.33	0.15	0.10	0.13	0.542	0.752	0.768
Other board	0.04	0.00	1.00	0.20	0.02	0.04	0.06	0.562	0.650	0.312
At least one	0.63	0.00	1.00	0.49	0.73	0.58	0.56	0.135	0.839	0.090

Note: Socioeconomic stratum is 1 for poorest and 6 for richest households. Academic semester ranges from 1 to 10. Econ/Business related undergrads includes Economics, International Business Administration and Finance and International Trade students. Risk taking level, following Dohmen et al. (2011), ranges from 0 to 10, where 0 represents "not at all willing to take risks" and 10 means "very willing to take risks". Information strategy and Option strategy represent how strategic individuals were when deciding on information acquisition or on options choice (categories for subjects' responses; 1 represents the least strategic behaviour (taking into account his own payoffs only) and 3 represents the most strategic behaviour (taking into account the others' payoffs and their potential choices). Voting experience indicates whether the individual has voted in school, college, local, parliamentary or presidential elections. Decision-making body experience indicates whether an individual has participated in respective bodies.

Table 3: Linear estimation of group information acquisition decision

Dep Var: $\mathbb{1}$[Group voted to acquire information]	(1)	(2)	(3)	(4)	(5)
Ignorance treatment	-0.313***	-0.313***	-0.300***	-0.311***	-0.307***
	(0.0305)	(0.0452)	(0.0649)	(0.0621)	(0.0638)
Low cost of information (0.1)		-0.272***	-0.225**	-0.224***	-0.223***
		(0.0461)	(0.0915)	(0.0618)	(0.0629)
High cost of information (0.4)		-0.391***	-0.419***	-0.400***	-0.398***
		(0.0625)	(0.0772)	(0.0767)	(0.0764)
Ignorance treatment×Low cost of information			-0.0937	-0.0873	-0.0897
			(0.115)	(0.116)	(0.117)
Ignorance treatment×High cost of information			0.0563	0.0655	0.0621
			(0.0783)	(0.0755)	(0.0777)
Order		0.0625	0.0625	0.107	0.104
		(0.0497)	(0.0498)	(0.0663)	(0.0666)
Round		-0.00188	-0.00188	-0.000176	
		(0.00359)	(0.00359)	(0.00359)	
Constant	0.604***	0.817***	0.811***	1.054***	1.091***
	(0.0216)	(0.0465)	(0.0608)	(0.284)	(0.290)
Group controls	No	No	No	Yes	Yes
Round fixed effects	No	No	No	No	Yes
Observations	960	960	960	960	960
R^2	0.099	0.211	0.215	0.248	0.268

Note: Robust standard errors clustered at pool level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Ignorance treatment is a dummy variable that equals one for observations where the theory predicts a collective preference for ignorance. Low cost and high cost are dummy variables indicating that the price of information was 0.1 and 0.4, respectively, compared to the default price of zero. Order is a dummy variable identifying sessions where the state-independent status quo alternative was labeled Option B, instead of Option A. Group controls include a measure of group inequality (Gini coefficient on individual payoffs under the state-dependent alternative), share of female members, share of students in economics- and business- related programmes (including Economics, International Business Administration and Finance and International Trade students), average year of studies, average self-assessment of wilingness to take risks (on a 0 to 10 scale), average number of decision-making bodies in which group members have participated, and average degree of strategic behaviour based on self-asssessment (on a 1 to 3 scale).

Table 4: Linear estimation of individual information acquisition decision

Dep Var: $\mathbb{1}$[Voted to acquire information]	(1)	(2)	(3)	(4)	(5)	(6)
$\mathbb{1}[v_i < 0]$	0.296***	0.142***	0.113***	0.113***	0.101**	0.126***
	(0.0252)	(0.0274)	(0.0402)	(0.0405)	(0.0411)	(0.0277)
Low cost of information (0.1)		-0.203***	-0.243***	-0.242***	-0.243***	
		(0.0400)	(0.0481)	(0.0484)	(0.0484)	
High cost of information (0.4)		-0.296***	-0.289***	-0.287***	-0.288***	
		(0.0411)	(0.0443)	(0.0438)	(0.0444)	
$\mathbb{1}[v_i < 0]\times$Low cost of information			0.102	0.101	0.101*	
			(0.0622)	(0.0617)	(0.0608)	
$\mathbb{1}[v_i < 0]\times$High cost of information			-0.0157	-0.0181	-0.0149	
			(0.0574)	(0.0575)	(0.0574)	
Order		0.0416	0.0418	0.0454	0.0437	
		(0.0322)	(0.0322)	(0.0356)	(0.0356)	
Round		-0.00259	-0.00256	-0.00146		
		(0.00202)	(0.00201)	(0.00205)		
Group inequality				-0.347***	-0.187*	-0.177*
				(0.0860)	(0.106)	(0.0994)
Individual-level variables						
Quadrant = I_Y		0.164***	0.164***	0.180***	0.179***	0.180***
		(0.0353)	(0.0354)	(0.0361)	(0.0360)	(0.0365)
Quadrant = L		-0.168***	-0.166***	-0.136***	-0.151***	-0.153***
		(0.0298)	(0.0298)	(0.0314)	(0.0321)	(0.0322)
Quadrant = I_X		0.186***	0.186***	0.204***	0.202***	0.203***
		(0.0345)	(0.0346)	(0.0353)	(0.0352)	(0.0359)
Constant	0.338***	0.531***	0.541***	0.796***	0.796***	0.162***
	(0.0208)	(0.0487)	(0.0504)	(0.112)	(0.115)	(0.0416)
Individual controls	No	No	No	Yes	Yes	No
Round fixed effects	No	No	No	No	Yes	Yes
Individual fixed effects	No	No	No	No	No	Yes
Observations	2,880	2,880	2,880	2,880	2,880	2,880
R^2	0.084	0.207	0.210	0.223	0.231	0.370

Note: Robust s.e. clustered at individual level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. $\mathbb{1}[v_i < 0]$ is a dummy indicating when theory predicts individuals should vote for acquiring information. Low cost and high cost are dummy variables indicating that the price of information was 0.1 and 0.4, respectively, compared to the default price of zero. Order is a dummy variable identifying sessions where the state-independent status quo alternative was labeled Option B, instead of Option A. Group inequality is the Gini coefficient on individual payoffs under the state-dependent alternative. Individual controls include dummy variables for gender, economics- or business-related degree, year of studies, self-assessment of wilingness to take risks (on a 0 to 10 scale), number of decision-making bodies in which the individual had participated, and degree of strategic behaviour based on self-asssessment (on a 1 to 3 scale).

Table 5: Linear estimation of the consistency of individual votes with theoretical prediction

Dep Var: $\mathbb{1}$[Vote consistent with theory]	(1)	(2)	(3)	(4)
Low cost of information (0.1)	0.0948***	0.0948***	0.0992***	
	(0.0303)	(0.0304)	(0.0288)	
High cost of information (0.4)	0.0521*	0.0521*	0.0698**	
	(0.0276)	(0.0276)	(0.0268)	
Order	-0.00764	-0.00764	0.00730	
	(0.0238)	(0.0239)	(0.0258)	
Quadrant = I_Y		0.0208	0.0276	0.0276
		(0.0361)	(0.0362)	(0.0371)
Quadrant = L		0.154***	0.167***	0.167***
		(0.0290)	(0.0295)	(0.0300)
Quadrant = I_X		0.0347	0.0422	0.0422
		(0.0356)	(0.0353)	(0.0363)
Group inequality			-0.150*	-0.150*
			(0.0794)	(0.0814)
Female			-0.0783***	
			(0.0227)	
Econ/Business programmes			0.0429	
			(0.0267)	
Year of studies			-0.00137	
			(0.00750)	
Risk level			0.00417	
			(0.00634)	
Number of of decision-making bodies			0.0421**	
			(0.0190)	
Strategy			0.0304**	
			(0.0147)	
Round	0.00460**	0.00460***	0.00508***	0.00508***
	(0.00189)	(0.00176)	(0.00180)	(0.00184)
Constant	0.548***	0.496***	0.413***	0.627***
	(0.0334)	(0.0410)	(0.0843)	(0.0377)
Individual fixed effects	No	No	No	Yes
Obs	2,880	2,880	2,880	2,880
R^2	0.010	0.026	0.042	0.116

Robust s.e. clustered at individual level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Low cost and high cost are dummy variables indicating that the price of information was 0.1 and 0.4, respectively, compared to the default price of zero. Order is a dummy variable identifying sessions where the state-independent status quo alternative was labeled Option B, instead of Option A. Group inequality is the Gini coefficient on individual payoffs under the state-dependent alternative. Individual controls include dummy variables for gender, economics- or business-related degree, year of studies, self-assessment of wilingness to take risks (on a 0 to 10 scale), number of decision-making bodies in which the individual had participated, and degree of strategic behaviour based on self-asssessment (on a 1 to 3 scale).

Table 6: Linear estimation of group information acquisition decision under symmetric and asymmetric priors

Dep Var: $\mathbb{1}$[Group voted to acquire information]	(1)	(2)	(3)	(4)	(5)	(6)
Ignorance treatment	-0.244***	-0.244***	-0.225**	-0.236**	-0.229**	-0.254**
	(0.0389)	(0.0390)	(0.0772)	(0.0763)	(0.0810)	(0.0969)
High cost of information (0.4)		-0.450***	-0.469***	-0.410**	-0.405**	-0.429**
		(0.0686)	(0.0680)	(0.134)	(0.133)	(0.134)
Asymmetric prior		-0.0188	0.0187	0.0489	0.0515	0.0267
		(0.0686)	(0.0680)	(0.0502)	(0.0510)	(0.0541)
Ignorance treatment×High cost of information			0.0375	0.0473	0.0410	0.0904
			(0.0714)	(0.0738)	(0.0773)	(0.0975)
Ignorance treatment×Asymmetric prior			-0.0750	-0.0702	-0.0733	-0.0238
			(0.0714)	(0.0708)	(0.0721)	(0.136)
High cost×Asymmetric prior				-0.0603	-0.0566	-0.00708
				(0.165)	(0.165)	(0.177)
Ignorance treatment ×High cost×Asymmetric prior						-0.0990
						(0.142)
Round		-0.00954**	-0.00954**	-0.00839**		
		(0.00338)	(0.00338)	(0.00350)		
Constant	0.622***	0.975***	0.966***	1.304**	1.186**	1.198**
	(0.0950)	(0.0608)	(0.0746)	(0.430)	(0.468)	(0.459)
Group controls	No	No	No	Yes	Yes	Yes
Round fixed effects	No	No	No	No	Yes	Yes
Obs	640	640	640	640	640	640
R^2	0.059	0.274	0.276	0.291	0.308	0.309

Note: Robust standard errors clustered at pool level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample is restricted to sessions where the state-independent status quo alternative was labeled Option B, instead of Option A. Ignorance treatment is a dummy variable that equals one for observations where the theory predicts a collective preference for ignorance. High cost is a dummy variable indicating that the price of information was 0.4, compared to the default price of zero. Asymmetric prior is a dummy variable identifying the sessions where the prior probability of Blue state being zero equalled 0.75, compared to sessions where it equalled 0.5. Group controls include a measure of payoff inequality (Gini coefficient on the individual payoffs under the state-dependent alternative), share of female members, share of students in economics- and business- related programmes (including Economics, International Business Administration and Finance and International Trade students), average year of studies, average self-assessment of wilingness to take risks (on a 0 to 10 scale), average number of decision-making bodies in which group members have participated, and average degree of strategic behaviour based on self-asssessment (on a 1 to 3 scale).

D Online Appendix

D.1 Experimental Instructions

General Instructions

Welcome. We thank you for participating in this experiment of group decisions.

From now on it is forbidden to communicate with the other participants in this room. Please remain silent and turn off your cellphone. **The use of cellphones and calculators is strictly prohibited.**

If you have questions on the experiment raise your hand and one of us will come to your desk to answer it. **Do not ask any questions aloud.**

All the information you provide to us during this experiment will be used for strictly academic purposes and will not be disclosed to anyone. Both your decisions and your payoffs will be confidential. No one will know the actions you took, or how much money you will receive at the end of the session.

For participating until the end of this experiment you will receive 10,000 pesos. In addition, depending on your actions and the actions of other participants, you can earn more money. During this activity we will talk in terms of Experimental Currency Units (ECU) instead of Colombian Pesos. Your payments will be computed in terms of ECU and will then be exchanged to Colombian pesos at the end of the experiment, according to this exchange rate:

1 ECU = 75 Pesos

If you do not wish to participate in the experiment, you may now leave the room. If you wish to participate, please read and sign the sheet that reads **Informed Consent**.

Experiment Instructions

This is an experiment on group decisions in which you must participate throughout 22 rounds (2 practice rounds and 20 rounds that count for your payments). In each round you will be randomly assigned to a group of three (3) participants in this room. Group members are anonymous and will be reassigned to a new group at the end of each round of the experiment.

In each round you must make two decisions that are detailed below. Your payments in this experiment will be defined at the end of the activity based on the aggregated earnings of all rounds. Before we begin, we will have two practice rounds that will not affect your potential payoff.

General Setting

In each round, all members of a group must choose between two **Options**: Option A and Option B. The choice of the group regarding the Options will be defined by the simple majority rule: as groups are made up of three people, if at least two of them choose Option A and the remaining participant chooses Option B, Option A will determine the payments for ALL members of the group. However, if at least two of them choose Option B and the remaining participant chooses Option A, Option B will determine the payments for ALL members of the group.

Your payments in each round, and those of the other members of your group, will depend on the computer choosing one of two **Possible Scenarios**: Blue or Red. In each round the computer will randomly select one of these Scenarios (Blue or Red) with equal probability, that is, equal to 50%, which is equivalent to tossing a coin. The Relevant Scenario for payment will be the same for all the members of your group.

You will know, in each round, how much you can earn if the group chooses Option A or Option B under any of the two Possible Scenarios (Blue or Red). You will also know how much would the other two members of your group earn in each of this cases. NOBODY in this room knows if the Relevant Scenario for payment is the Blue or the Red Scenario.

However, in each round, and before the group decides over the Options A or B, each member can choose if she wants the group to Acquire Information on which is the Relevant Scenario for payment in that round at a price of **0.4 ECU**. The choice of the group regarding Information Acquisition will be defined by the simple majority rule. Hence, if at least two members want the group to acquire information to learn which is the Relevant Scenario, all members of that group must pay a price of 0.4 ECU, and the Relevant Scenario for payments will be known before deciding over Options A or B. But, if at least two of them DO NOT want the group to acquire information to learn which is the Relevant Scenario, the Relevant Scenario will not be known before deciding over Options A or B.

Next we summarize the decisions you must make.

Decisions

1. Information Acquisition:

Your first decision is whether you want the group to acquire information to learn the Relevant Scenario (Blue or Red) in this round, or not. The individual price for learning the Scenario is 0.4 ECU. We expect you to make your decision in less than 60 seconds; a timer on the screen will indicate the time that is running in each round (see Screen 1 in Appendix).

If at least two group participants decide to Acquire Information so as to know which is the Relevant Scenario, all group members must pay **0.4 ECU** and will learn if the Relevant Scenario is Blue or Red. Otherwise, when most of the group decides not to Acquire Information, there will be no charge and no one will have information on the Relevant Scenario. All members of the group will be informed of the group's decision and the payments each would receive after selecting Options A or B described above.

2. Choice of Alternatives:

In accordance with the above decision, each participant must decide next if she wishes the group to select Option A or Option B:

- **Option A:** If the group chooses this option, your payoffs will be of 10 ECU regardless of the Relevant Scenario. That is, whether the Relevant Scenario is Blue or Red, if most members of the group select Option A, each individual's payment, without discounting the Information Acquisition decision, will be of 10 ECU.
- **Option B:** If the group chooses this option, your payments will depend on the Relevant Scenario randomly selected by the computer. This payoff, without discounting the Information Acquisition decision, could be between 1 ECU and 19 ECU.

We expect you to make your decision in less than 50 seconds; a timer on the screen will indicate the time that is running in each round (see Screens 2 and 3 for the cases when information was acquired and when it was not).

Additional details

Recall that both you and the other two participants of your group have the same information regarding the probability of occurrence of each Possible Scenario (Blue and Red Scenarios are equally likely to occur in each round), and on the payments each participant will receive under both Options (A and B), given both Possible Scenarios (Blue and Red). During the rounds that count for final earnings, payments each individual in the room will receive will be the same for five (5) consecutive rounds, but the payments you observe from your colleagues may change, considering that group composition varies in each round. At the end of each round you will receive feedback on your group's decisions and the earnings for each member (see Screen 4)

Payments from the Activity

In addition to the 10,000 pesos for participating in this activity, at the end of the 22 rounds, the computer will add ALL your earnings from each round to determine your payment; this will be computed depending on the Option (A or B) chosen by the group for each round. If during a particular round the group decided to acquire information on the Relevant Scenario, the price for this information will be deducted from your earnings.

D.2 Experimental Screens

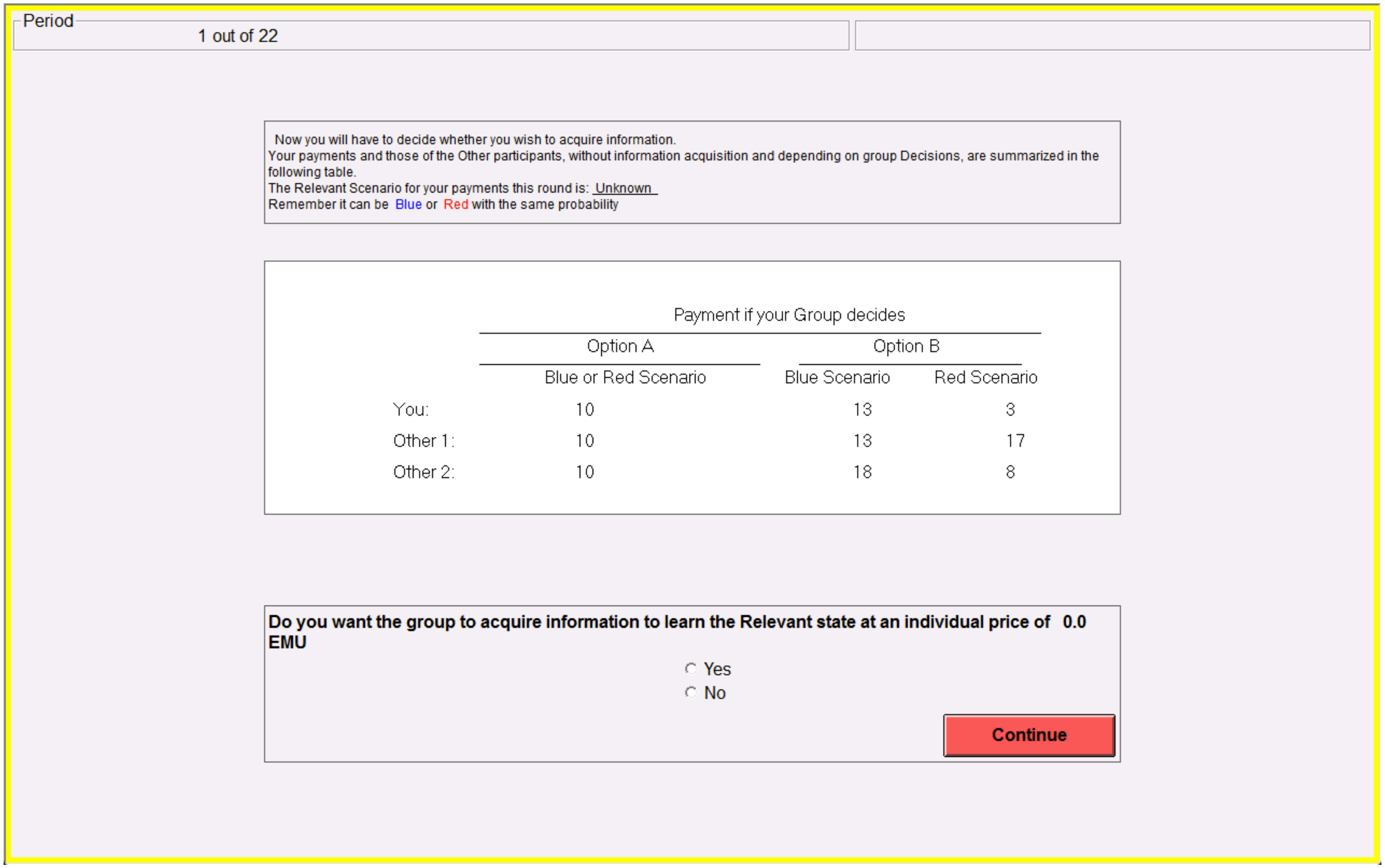

Figure 5: Information acquisition vote screen

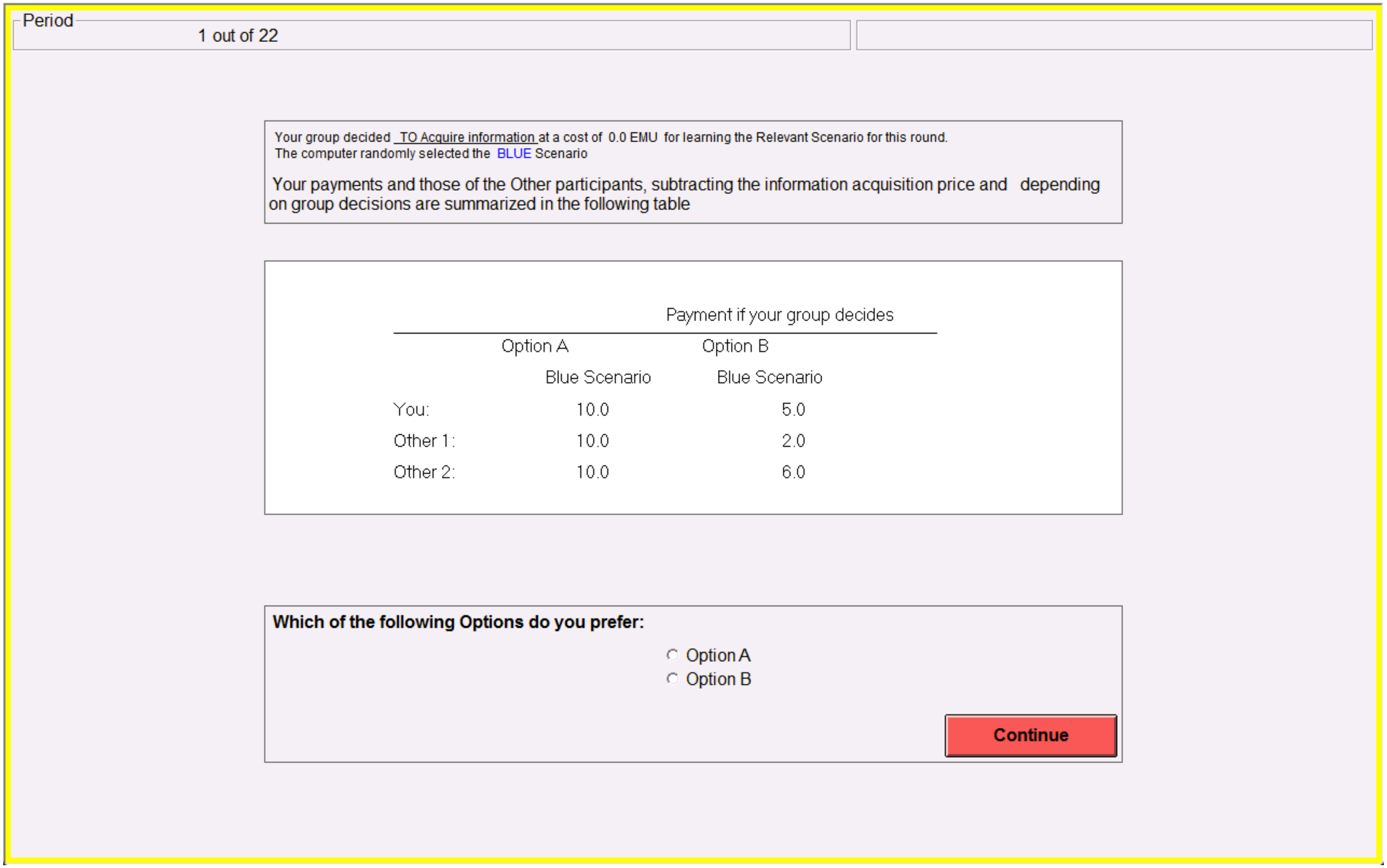

Figure 6: Alternative choice vote screen if group DID acquire information

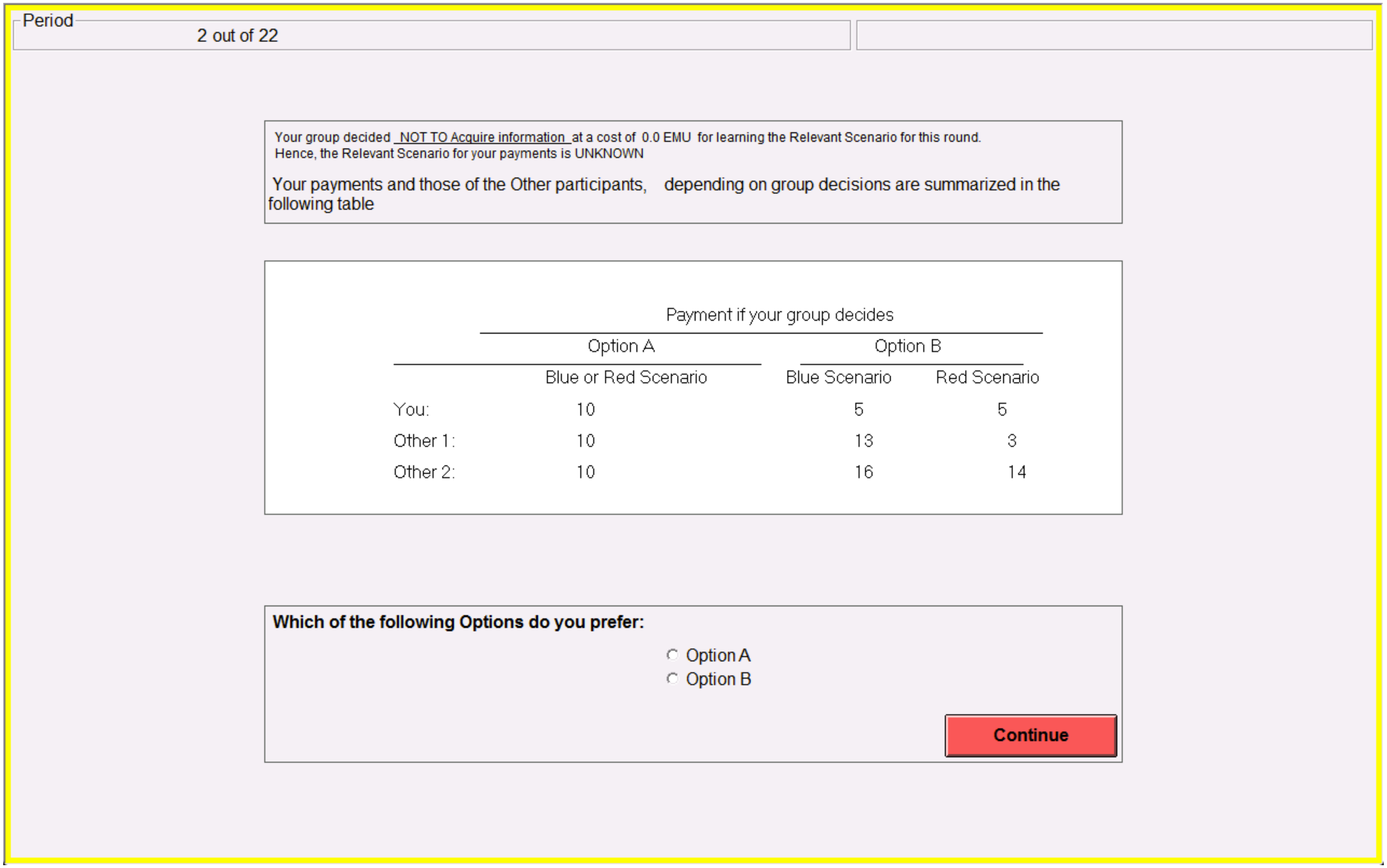

Figure 7: Alternative choice vote screen if group DID NOT acquire information

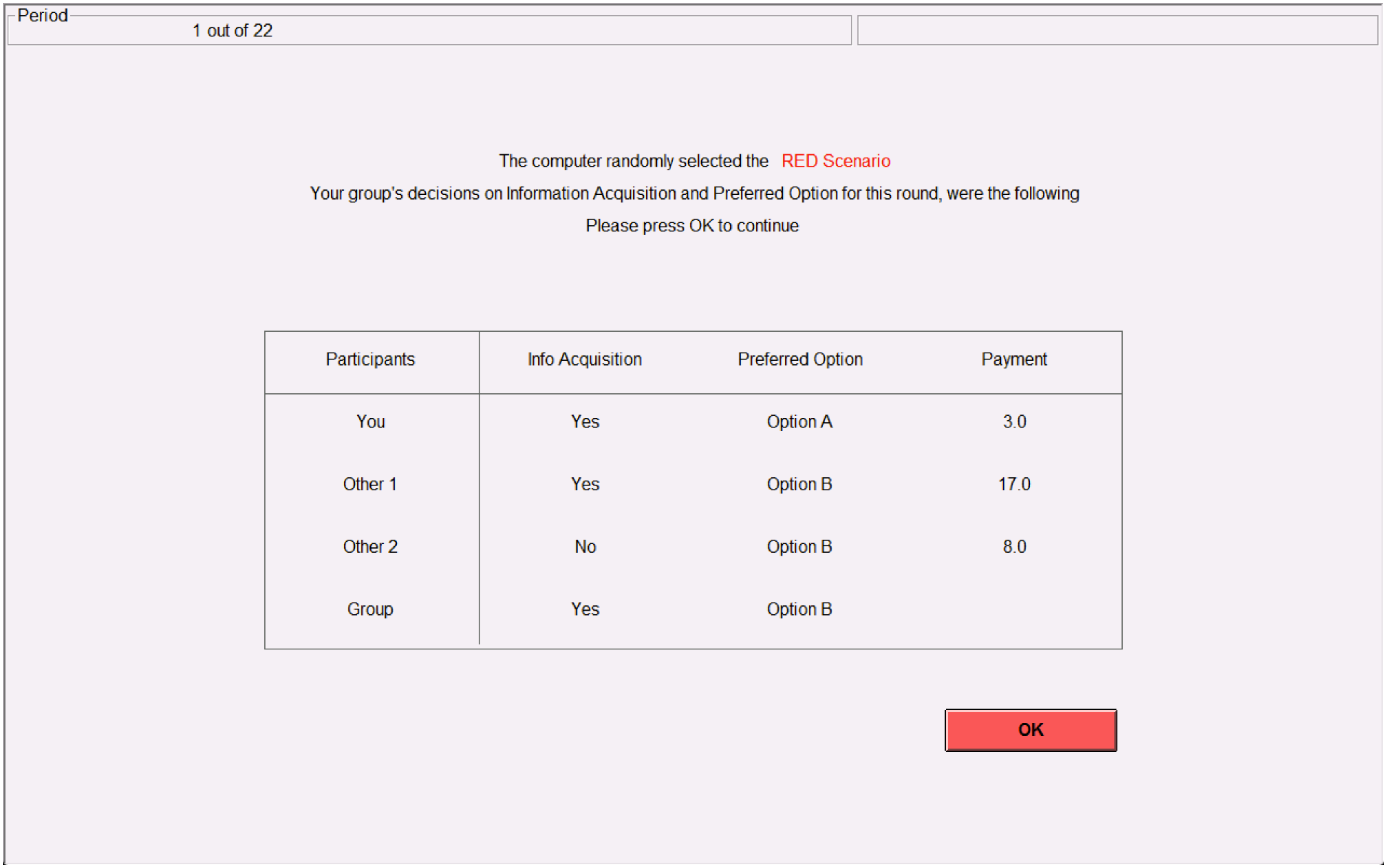

Figure 8: Feedback at the end of each period

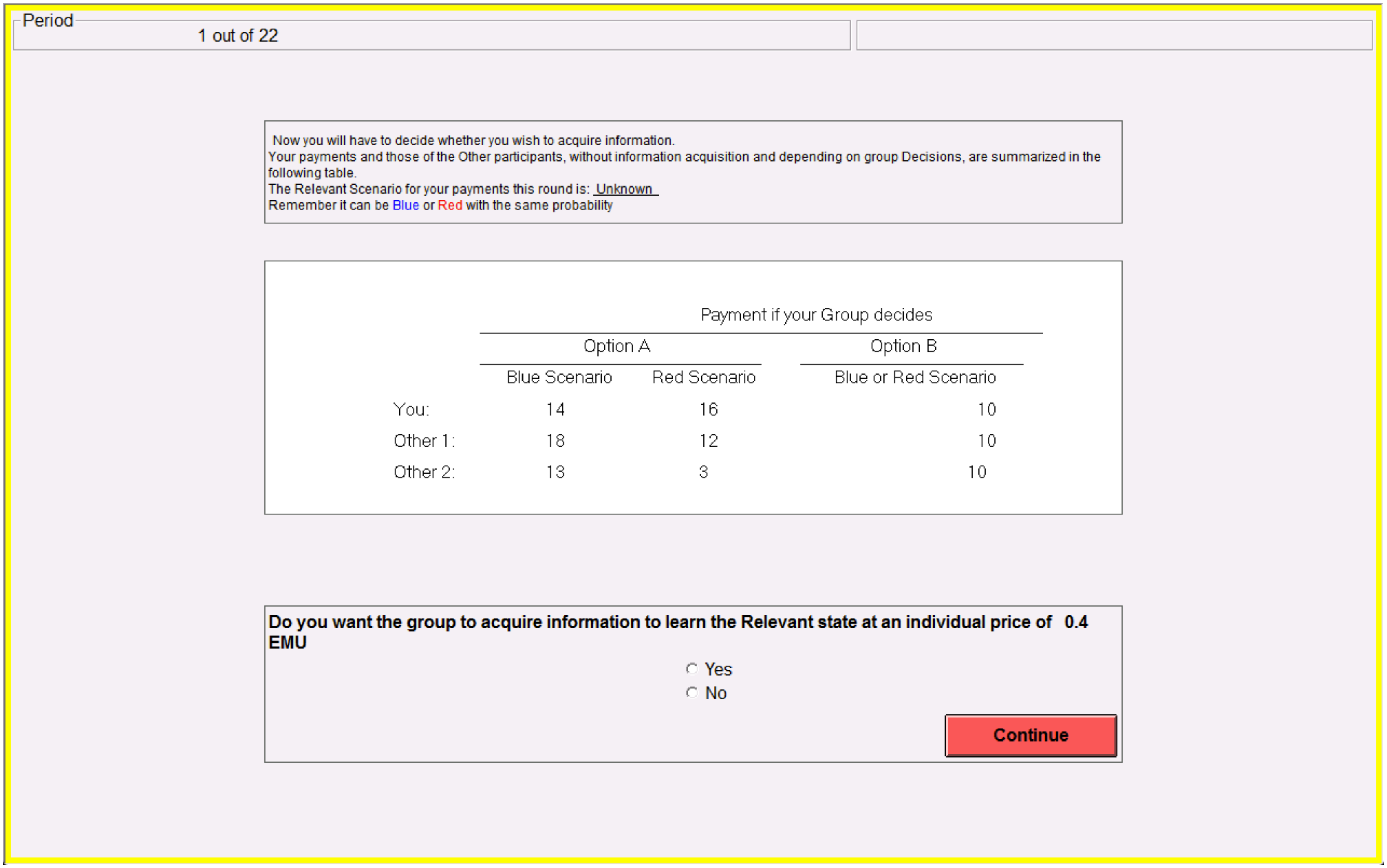

Figure 9: Information acquisition vote screen for Order treatment

D.3 Group Formation in the Experiment

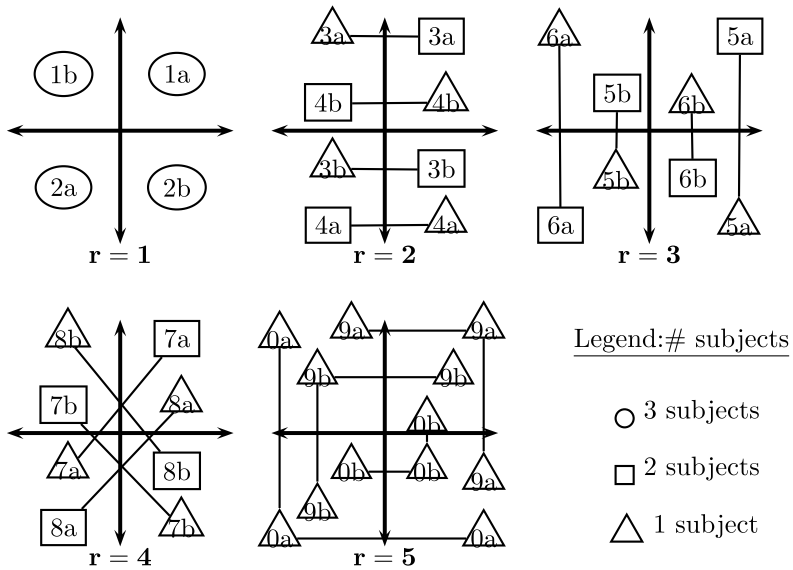

Figure 10: Structure of groups across rounds.

Figure 10 summarises group layouts that individuals faced over 5 consecutive rounds ($r = 1, \dots, 5$) if they belonged to a given quadrant. Each oval, square, and triangle represents a set of, respectively, three, two, and one subject. Shapes connected with a line represent a single three-member experimental group. Groups are labeled with a number and a letter; these labels match those used in Figure 3. For instance, suppose that a subject was allocated to quadrant W in the first round and randomly given state-dependent payoffs from the set depicted in Figure 2. Then in the first round she belonged to group $1a$ (and thus did not face ignorance treatment). In the next round, she kept her state-dependent payoffs, and could be randomly allocated to group $3a$ or group $4b$. Her state-dependent payoffs remained unchanged over five consecutive rounds. In round 6 she was allocated to quadrant I_Y, a new pair of state-dependent payoffs (which she would again retain over five consecutive rounds) was randomly drawn for her, and she was assigned to group $1b$. Over the course of the session, each subject spent five rounds in each of the four quadrants.

From this Figure one can see that over the course of a session, each subject faced each of the 20 possible group configurations shown in Figure 3. Note that half of all subjects faced ignorance treatment and the other half did not. This design also allows to control for order effects or anchoring effects, given that there was always the same proportion of subjects starting in different quadrants. Note also that groups were formed from a pool of 12 subjects. In each session, we had 24 subjects, split into two pools.