When Collective Ignorance is Bliss: Theory and Experiment on Voting for Learning[*]

Boris Ginzburg[†]and José-Alberto Guerra[‡]

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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 votes not to learn the state whenever independent voters are more fractionalised than partisans. We also run a laboratory experiment that confirms this result. This implies that divided societies tend to seek less information, to make decisions in haste, and to show less support for institutions that make the public more informed.

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[†]Department of Economics, Universidad Carlos III de Madrid. Email: boris.ginzburg@uc3m.es.

[‡]Department of Economics, Universidad de los Andes. Email: ja.guerra@uniandes.edu.co.

1 Introduction

The outcomes of reforms and other collective decisions are often uncertain when the decision is being made. For example, trade liberalisation can help some industries while hurting others, but it is not always evident in advance which industries will gain and which will lose[1]. 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 other examples of decisions with uncertain consequences.

In many of these scenarios, however, the decision-making body can vote to learn this information. For instance, they can vote to delay the decision on a 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 information to a relevant agency. But when will the group choose to acquire information, and when will it decide to vote "in ignorance"?

This paper addresses the above question by modelling, and experimentally testing, the problem of a committee that needs to vote on a reform. If adopted, the reform will give every committee member a private payoff which depends on a state of the world. The state can take values X and Y. Individual payoffs in each state are commonly known, but the state is unknown. However, prior to voting on the reform, the committee can vote to acquire public information about the state, at no cost[2].

Will the committee ever vote against learning? If committee members have identical 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. Suppose the committee consists of three members, called Anna, Bob, and Claire. 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 are as follows:

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[1]See e.g. Fernandez and Rodrik (1991).

[2]The implicit assumption here is that committee members cannot learn the state privately – for example, because learning the state requires delaying the vote on the reform. Alternatively, we can think of the model as representing a situation in which all 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.

	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 will reject the reform. Thus, each member will receive a payoff of zero. If the committee votes not to learn the state, then Anna and Bob will support the reform, and the expected payoff of each of them is positive. Thus, in expectation, Anna and 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. Without information, 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 first contribution of the paper: a simple characterisation of the distributions of members' preferences under which the committee has a collective preference for ignorance. In a committee of any size, members' preferences are described by their payoffs from the reform in the two states. Some members prefer the reform to the status quo in both states. Others, like Claire in the example, prefer the status quo in both states. We can refer to these two groups as *partisans*. On the other hand, there are members whose preferred alternative depends on the state. Some, like Anna, prefer the reform in state X only. Others, like Bob, prefer the reform in state Y only. We can call these two groups *independent voters*. The key theoretical result of the paper, summarised in Proposition 1, is that under a simple majority rule, the committee will have a collective preference for ignorance if and only if the two groups of independent voters are closer in size than the two groups of partisans. Furthermore, under a supermajority rule, this condition is sufficient (although not necessary) for the committee to have a collective preference for ignorance. This result holds for a committee of any size, for all

distributions of individual payoffs, and for any prior belief about the state[3].

The result suggests 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 immigration. 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[4]. If members of the legislature largely agree that immigration is desirable, or if they largely agree that it is undesirable, they will vote 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 will choose to vote on the bill without carefully considering its effects.

In fact, there is substantial research on the impact of social heterogeneity[5] on indicators like economic growth, corruption, quality of governance, public good provision, and risk of civil war[6]. Our paper adds to this literature by suggesting that a particular kind of heterogeneity affects the degree to which the society chooses to be informed when making decisions. Groups and societies that are divided (in the sense of not having a general agreement about which outcome of a reform is better than the other) are likely to make decisions in haste, to seek less expert advice, to vote on reforms without analysing their potential effects, and to have less support for institutions that make the public more informed, such as independent media or a tradition of public debate.

At the same time, there are institutional arrangements that may enforce learning regardless of the committee's decision. For example, many legislatures impose a minimum time that needs to be spent on considering a bill, or require a minimum number of readings. We examine the effect of such rules from a normative standpoint. In Proposition 2 we show that such rules are optimal when there is a minority of voters with a large stake in

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[3]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 B.1. Appendix B.2 extends the model to non-binary state spaces.

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

[5]Such as ethnic divisions, or income inequality.

[6]See Mauro (1995), Easterly and Levine (1997), Collier (2001), Alesina et al. (2003), Miguel and Gugerty (2005), Habyarimana et al. (2007), Beach and Jones (2017), and others.

the collective decision.

The second contribution of our paper is an experimental test of theoretical incentives against collective learning. For this purpose, we test the main theoretical result described in Proposition 1 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, when this condition is satisfied, the fraction of instances in which committees vote to learn the state is approximately 30 percentage points smaller than in the opposite case. The result holds when acquiring information is costless as well as when there is a cost of doing so; it also holds under different priors. It is also robust to controlling for possible learning effects, for labelling of alternatives, 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 theoretical results, including conditions under which the committee votes for ignorance, and effects of a commitment to learning. Section 4 describes the design of the experiment. The results of the experiment are presented in Section 5. Finally, Section 6 concludes. All proofs are in Appendix A, while Appendix B discusses several extensions of the theoretical model.

1.1   Related Literature

The theoretical section of our paper is related to several past studies. Strulovici (2010) examines a dynamic problem of a committee that, in every round, needs to choose be-

tween a safe option and a risky option. For each 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.

In these papers, voters are initially uncertain about their preferences. Their preference types are distributed identically and independently across voters[8]. By choosing to acquire information, voters learn about their types. In contrast, in our setup voters choose to learn a common state of the world. Voters' preferences, on the other hand, are known, and follow an arbitrary joint distribution. The focus of our paper is on characterising the joint distributions of preferences that induce a collective preference for ignorance. Such characterisation would be impossible in a setup in which preferences of all voters are distributed identically. 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; while in Messner and Polborn learning involves foregoing a first-period payoff from the project. In contrast, in our paper, learning does not involve any direct cost, since it happens when a safe option (delaying the reform) is exercised. The decision not to learn is then driven purely by the effect that information has on actions of other voters.

Chan et al. (2017) study a dynamic voting model in which a committee faces a choice

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

[8]Strulovici (2010) and Messner and Polborn (2012) consider a case in which voters' types can be correlated, but they are still drawn from the same distribution.

between continuing to gather information and making a decision. In a related setup, Louis (2015) looks at voters' preferences over acquiring a signal about a state of the world. In both papers, voters' preferences over the decision are monotone in the state: each voter wants the chosen alternative to match the state (although the intensity of preferences may differ)[9]. In such a setup, the committee will always vote to acquire information if it is sufficiently precise and there is no cost of doing so. In Chan et al., the decision to stop gathering information is driven by the fact that gathering information is costly (as it reduces future payoffs). In Louis (2015) the choice against information happens because the signal is imperfect[10]. In our paper, on the other hand, voters' preferences are not necessarily monotone in the state: some voters prefer the reform in state X, others – in state Y, etc. This allows us to characterise the distributions of preferences that induce a collective preference for ignorance – a characterisation that would not be feasible in a setup in which voters' preferences are monotone in the state. In particular, our setup makes it possible that the committee votes against acquiring a signal even when it is perfectly informative and comes at no cost.

Gersbach (1991) examines a simple majority voting framework under uncertainty and demonstrates the existence of specific payoff distributions under which a particular number of voters oppose acquiring information. Our paper, however, goes beyond this by examining simple majority and supermajority rules and providing a full characterisation (in the former case) and general sufficient conditions (in the latter case) on individual preferences for the committee to vote for ignorance[11].

A different strand of literature looks at collective decision-making in experimental settings (see Palfrey (2013) for a comprehensive survey). Cason and Mui (2005) test the results of Fernandez and Rodrik (1991) in an experiment where learning is not possible. They find that uncertainty reduces the incidence of reform. Plott and Llewellyn (2015)

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[9]In the language of our Proposition 1, all voters belong to the set I_X.

[10]Another difference is that in Louis, the decision to acquire information is not made by voting – instead, the probability that information is acquired is modelled as an increasing continuous function of the number of voters who prefer to do so.

[11]Under a simple majority rule, the results in Gersbach (1991) correspond to a special case of the characterisation in our Proposition 1. Specifically, they describe a case in which there is a large number of sure winners, and a small number of independent voters of either kind. A further example of a particular payoff distribution under which a number of voters may oppose information is provided in Gersbach (2000), while Hirshleifer (1971) shows that information can hurt risk-averse individuals in a setup unrelated to voting.

look at experts who try to influence a committee by providing recommendations. In Goeree and Yariv (2011), committee members have private information and individually decide whether to share it. Unlike these papers, our experiment focuses not on communication by privately informed individuals, but on a collective decision to acquire public information from an outside source.

Our 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 our paper, on the other hand, the alternatives remain unchanged, and 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 number of papers have looked at information aggregation in collective decisions (Austen-Smith and Banks, 1996; Feddersen and Pesendorfer 1997; Guarnaschelli et al., 2000; Goertz and Maniquet, 2011; Bouton and Castanheira, 2012; Bhattacharya, 2013; Sobel, 2014). In that literature, information is dispersed among voters, each of whom has an imperfect signal about the state. In contrast, in our paper there is no private information, and acquiring a public signal about the state is a collective decision.

More broadly, our paper is also related to research on acquisition of private information by individual members of committees[12], as well as to studies of information exchange among committee members[13]. A number of researchers have also looked at factors that may motivate individuals, as opposed to committees, to avoid payoff-relevant information[14].

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[12]Persico (2004); Gerardi and Yariv (2008); Gershkov and Szentes (2009); Gersbach and Hahn (2012); Oliveros (2013); Zhao (2016). Our paper, in contrast, looks at a *collective* decision to acquire information.

[13]Visser and Swank (2007); Gerardi and Yariv (2007); Iaryczower et al. (2017). In these papers committee members have private information and can privately choose to communicate it, rather than voting to acquire information, as in our paper.

[14]Golman et al. (2017) provide an extensive overview.

2 Model

A committee I comprising 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[15], 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 made by voting. A positive decision (to acquire information, or to adopt the reform) is reached if the fraction of committee members voting in favour of it is at least $\gamma \in \left[\frac{1}{2}, 1\right]$.[16] Members cast their votes simultaneously, and the option with the largest number of votes is selected.

Like most voting games, this game has trivial equilibria – for example, one in which all members vote to adopt the reform, and nobody deviates since none is pivotal. To avoid them, we will only consider equilibria in which weakly dominated strategies are eliminated. Thus, every agent votes sincerely, as if she were pivotal.

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[15]Appendix B.1 shows that the results of the model are unchanged when acquiring information gives the committee an imperfect public signal about the state. Appendix B.2 discusses collective learning under a more generic non-binary state space.

[16]Part of the results will focus on the baseline case of a simple majority rule, in which $\gamma = \frac{1}{2}$. To avoid ties, we will assume that the size of I is such that it is not divisible by γ.

3 Theoretical Results

3.1 Collective 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 fraction of positive elements of z is at least γ. If the reform is put to vote, and z represents expected payoffs from it, the committee will adopt the reform if and only if $g(z) = 1$.

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 member i a payoff y_i) whenever $g(y) = 1$. Thus, if the committee learns the state, the expected payoff of member i equals

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

If the committee does not learn the state, then the reform, if adopted, will give each member an expected payoff of $\pi x_i + [1 - \pi] y_i$. The reform is 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 member compares her expected payoffs with and without information. Let v_i be the value of ignorance for member 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

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

Member i votes to learn the state if $v_i < 0$, and votes against learning the state if $v_i > 0$. Let $v \equiv (v_1, v_2, ...)$ be the vector of net gains from ignorance for all members. Then the committee collectively decides to learn the state when $g(-v) = 1$, and has a collective preference for ignorance when $g(-v) = 0$.

Note that it is possible for voters to be indifferent between learning and not learning

the state. 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 $i \in I$. 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 derive a simple necessary and sufficient condition for the committee to decide against learning the state.

Lemma 1. *For any committee I, and any $\pi \in (0, 1)$, the following holds:*

- *For $\gamma = \frac{1}{2}$, 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 $g(x) = g(y) \neq g(\pi x + [1 - \pi] y)$.*

- *For any $\gamma > \frac{1}{2}$, the committee has a weak preference for ignorance if $g(x) = g(y)$. Furthermore, the committee has a strict preference for ignorance if $g(x) = g(y) \neq g(\pi x + [1 - \pi] y)$.*

In words, the committee weakly prefers making a decision without information when the collective decision on the reform is the same after either state is revealed. The committee strictly prefers not acquiring information when 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[17]. Under a supermajority rule, this condition is sufficient to induce a collective preference for ignorance; under a simple majority rule it is also a necessary condition.

To see the intuition behind this result, consider the case when $\gamma = \frac{1}{2}$. 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

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[17]An implicit assumption here is that members are ambiguity-neutral. This is in line with some of the experimental literature (Halevy, 2007). Considering ambiguity-aversion might be interesting if information acquisition is modelled 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). Experimental results (see Section 5.1) suggest that even if ambiguity aversion is present, it does not affect the explanatory power of the model.

case, information has no effect on the outcome, and the committee weakly prefers not to have it. Second, decisions in both states can 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, the majority prefers not to learn it. This is what happened in the example mentioned in the Introduction.

Note in particular that the proof of Lemma 1 for the case of a weak preference for ignorance does not rely on the voters' attitudes towards risk. Even though voters' payoffs (x_i, y_i) are expressed as Bernoulli utilities, the result for the case of a weak preference for ignorance would still hold if these were monetary payoffs, as long as individual utilities are increasing in them. This means that our subsequent experimental analysis (see Sections 4-5) is not affected by possible risk aversion.

Under a simple majority rule, when the committee has a strict preference for ignorance, Lemma 1 implies that the committee's decision on the reform will be different from the decision that is preferred by the majority in either state. Thus, when the median voter strictly prefers not to acquire information, the decision of the median voter in either state will never be implemented. This is because a strict preference for ignorance occurs when the median voter ex ante prefers a different decision that the median voter ex post in each state.

We can now move to the main theoretical result of the paper, and characterise the distributions of members' preferences that induce a collective preference for ignorance. Preferences of any member i are described by a pair (x_i, y_i) of i's payoff from the reform in each state. The distribution of preferences is then described by the distribution of members over the (x, y) space.

Figure 1 illustrates the space of individual payoffs. Let W, L, I_Y, and I_X indicate the sets of members 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 *partisans*. I_X and I_Y are the sets of *independent* voters – they gain from the reform relative to the status quo if and only if the state is, respectively, X and Y.

Assume that the mass of members for whom $x_i = 0$ or $y_i = 0$ is zero, i.e. that nobody is indifferent when either state is revealed. For a given set of members S, let $\#S$ denote
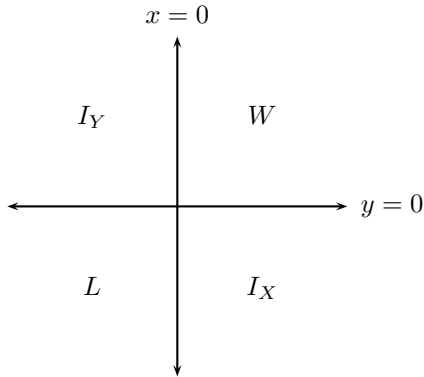
Figure 1: Distribution of preferences. The letters indicate the sets of members whose payoffs lie in each of the four quadrants.

the fraction of voters who belong to that set. Then the following result holds:

Proposition 1. *For any committee I, and any $\pi \in (0,1)$, the following holds:*

- *For $\gamma = \frac{1}{2}$, the committee has a weak preference for ignorance if and only if*

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

- *For any $\gamma > \frac{1}{2}$, the committee has a weak preference for ignorance if*

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

This describes the sufficient (and, under simple majority rule, also the necessary) condition for the committee to have a collective preference for ignorance. The committee will vote not to learn the state when the difference between the numbers of independents of the two types is smaller than the difference between the numbers of partisans. This happens when members are divided, in the sense that some prefer the reform in state X only; others – in state Y only; and their numbers are sufficiently similar.

Another way to interpret this result is to refer to the index of social fractionalisation (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. Proposition 1 then says that ignorance will be a collective decision whenever independents are more fractionalised than partisans. Thus, the committee will have a weak collective preference for ignorance if and only if fractionalisation on the state-relevant dimension of preferences is larger than fractionalisation 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 cost that is low relative to voters' payoffs. This result is tested experimentally in Sections 4-5.

Consider also a variation of the model, in which information about the state is dispersed among a large number of voters, with each voter receiving a noisy signal about the state. If individual signals are very imprecise, then all voters have (almost) the same prior belief. If all signals are made public, the society as a whole becomes more informed about the state. Certain norms and institutions – such as a strong tradition of public debate, or freedom of speech – 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, on various decisions, tend to be more divided on the state-relevant dimension of preferences than on the state-irrelevant dimension are, ceteris paribus, less likely to collectively support them.

It is also 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. It has been shown (see e.g. Feddersen and Pesendorfer, 1997) 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 heterogeneous in the way that is described in Proposition 1, the committee also *chooses* not to acquire information when it has an option to do so.

3.2 Commitment to Learning

Some decision rules can impose learning regardless of the committee's preference. For example, legislatures are often required to have several reading before a law is passed. Consulting external experts is sometimes mandatory. An informal tradition of deliberation or public debate can also serve as a commitment device imposing a certain amount of information acquisition. When are such commitments optimal?

For instance, in the example given in the Introduction, the committee votes against acquiring information, and adopts the reform. The expected sum of individual payoffs is then negative. If there was a commitment to learning, the reform would have been rejected. Thus, under a utilitarian welfare function, a commitment to learning is socially optimal. The reason for this is that Claire, a minority voter, loses from the reform, and her payoffs are large in magnitude – thus, it is welfare-improving to reveal information and move the collective decision away from the one that the majority prefers ex ante. On the other hand, if the magnitude of Claire's losses was smaller (for instance, if her payoff from the reform was -0.1 in either state), then a commitment to learning would harm welfare, as it would cause a welfare-improving reform to be rejected.

This suggests that the question of whether a commitment to learning is optimal depends on the payoffs of voters who, ex ante, are the minority.

Formally, 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 considered 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. Then we have the following result:

Proposition 2. *When $\gamma = \frac{1}{2}$, a commitment to learning is weakly optimal if*

$$sign[d(\pi x + [1 - \pi] y)] \neq sign[w(\pi x + [1 - \pi] y)]$$

and is weakly harmful if

$$sign\left[d\left(\pi x + [1-\pi]\,y\right)\right] = sign\left[w\left(\pi x + [1-\pi]\,y\right)\right].$$

Intuitively, a 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.

To interpret this result, consider a utilitarian welfare function, in which $w\left(z\right)$ is an average of elements of z. Under a simple majority rule, $d\left(z\right)$ is positive whenever the median of z is positive. 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 support the reform in expectation, but there is a minority of voters who, like Claire, stand to 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 decision.

4 Experimental Design and Procedures

We tested the main theoretical result of the paper – the characterisation set out in Proposition 1 for the simple majority voting rule[18] – 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[19]. After 10 minutes, an experimental administrator read them aloud. The instructions contained

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[18]We focus on the simple majority rule because it provides a full characterisation of preference distributions that induce a collective preference for ignorance.

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

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.

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 and used 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 committees. They were then informed that the state of the world was either blue or red[20], 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[21]. As in the model, each committee first had to vote whether to learn the state. The state would be revealed if at least two out of three committee members voted in favour of it. After that, the committee had to choose (again by majority voting) between two options, called Option A and Option B.[22] After the end of the round, new committees would be formed from same pool, and a new round would begin. Since committees were redrawn every round, it is unlikely that subjects could play tit-for-tat or other history-contingent strategies[23].

Selecting Option A would give each member of the committee 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 $\{1, 2, \ldots, 19\}$; these numbers were her payoffs from Option B in

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

[21]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.

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

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

the two states[24]. 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 committee member were known to all other members of the committee.
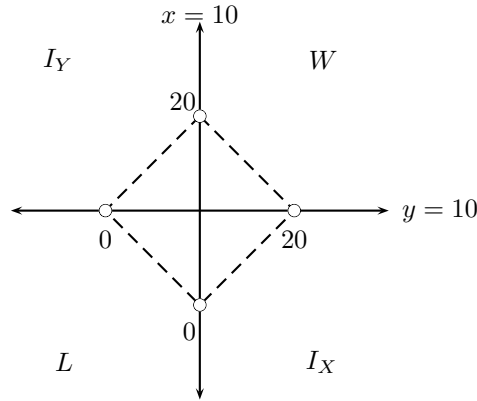

Figure 2: Possible individual payoffs from Option B.

In total, there are twenty distinct ways of anonymously allocating three committee 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 ten, shown in panel (b), it fails to hold. Proposition 1 predicts that a 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* and to the latter case as *no ignorance treatment.*

During the twenty rounds, each individual was assigned to each for the twenty possible committee 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[25].

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[24]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.

[25]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

$x = 10$

6   111   111   6
          77   77
3   33   8   8
     9   9   44   9   4   9
     0   55   55   0
     66   66
222 7   222   7
     88   3   33   88
44   4   9   9
     0   5   0   5   0   0

(a) Weak preference for ignorance   (b) No weak preference for ignorance
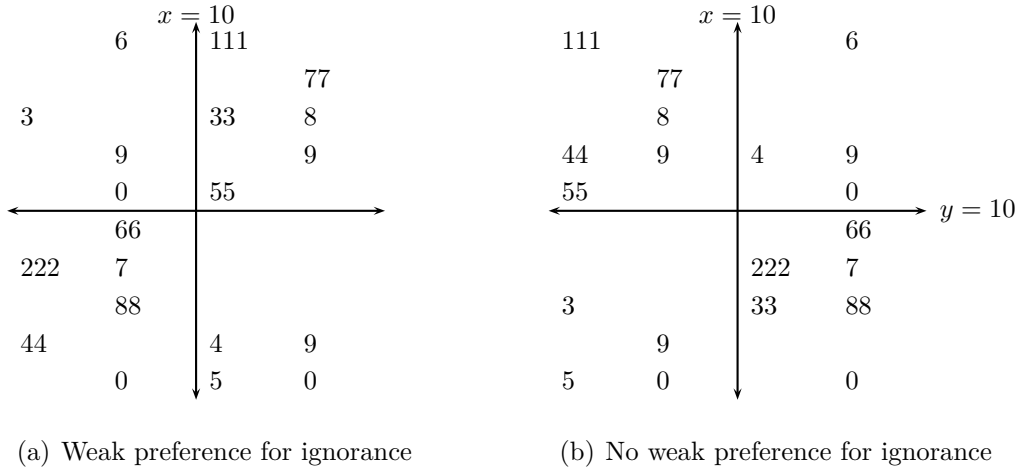
Figure 3: Possible allocations of committee members across the four quadrants. Each allocation is marked by a set of three identical digits from 0 to 9. Each digit represents the location of one of the committee members. For example, allocation 0 in panel (a) consists of one sure loser, and one independent voter of each kind. The theory predicts that under allocations in panel (a) committees will vote for ignorance, while under allocations in panel (b) they will vote for information.

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 either costless or imposes a negligible cost on every member. To distinguish these cases, we imposed a cost p of learning the state, which could take 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 to every member 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.

A possible cause for concern is the fact that Option A, being the first of the two

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 committee. Thus, from the perspective of each subject, payoffs of other committee members changed after every round. See Online Appendix D for more details on how committees were formed.

options, could serve as a focal point for subjects. Therefore, we controlled for order effects by reversing 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 Option A and B. Individuals face a between-subjects information cost treatment and a within-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 committee-level observations and 2880 individual-level observations. Exactly half of the observations faced ignorance treatment[26].

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

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

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

[26]In the experiment, the average share of committees who voted to acquire information was 30% under the ignorance treatment, and 60% under the no ignorance treatment. The intracluster correlation, at pool level, was 0.14. 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.

5 Experimental Findings

5.1 Main Results

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

Table 2 describes the characteristics of our subjects.

– Table 2 here –

Figure 4 shows the frequency with which committees tend to acquire information under different values of information cost. Even when information was costless, committees do not always vote in favour of acquiring information. Overall, the fraction of instances in which information is acquired ranged from 67% when the cost of information is zero, to 28% when the cost of information is 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 on the frequency with which committees tend to acquire 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, committees are substantially more likely to vote for ignorance when the theory predicted them to do so. Specifically, under the ignorance treatment, committees vote to acquire information in 29% of cases; compared to 60% of cases when not under ignorance treatment.

We now look at the effect of ignorance treatment on the committee information acquisition decision. For this, we construct a dummy variable that equals one when the committee votes 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 committee – that is, when the committee is subjected to the ignorance treatment – as well as on dummies representing the cost of information in the particular session, and on demographic controls[27].

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[27]We present results obtained in a linear probability model; however, they also hold under a nonlinear
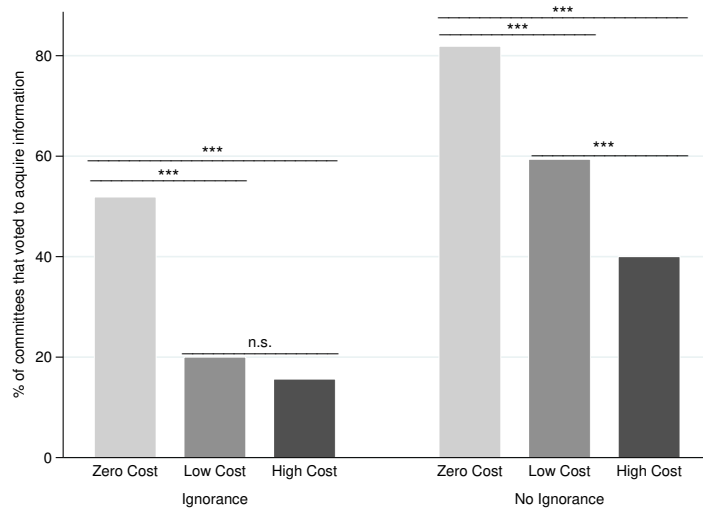
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$, n.s. $p > 0.1$

Figure 4: Committee information acquisition decisions under ignorance and no ignorance treatments.

Since committees were formed randomly in each round, committee observations are independent variables. However, across the 20 rounds, committees were formed from the same pool of 12 subjects[28]. 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 level[29]. 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 committees subjected to ignorance treatment are 31.3 percentage points less likely to vote for acquiring information, compared to committees not facing ignorance treatment. The coefficient is large in magnitude and statistically significant (the t-statistic equals -10.24), suggesting a strong effect that is in line with the prediction of the theoretical model.

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specification. These results are available upon request.

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

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

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 interaction coefficients are not statistically significant. This suggests that the cost of information does not affect the theoretical mechanism described in Proposition 1. Moreover, the fact that the coefficient on ignorance treatment is robust to controlling for the cost of information suggests that possible heterogeneity in the degree of ambiguity aversion across individuals (see Machina and Siniscalchi, 2014) does not affect our results[30].

There is also no evidence that committee behaviour in early rounds is different from their behaviour in later rounds. Columns 2 and 3 also control for order effect by including a dummy variable for sessions in which the safe alternative is labeled "Option B" – this does not seem to affect the main results.

Columns 4 and 5 show that the effect of ignorance treatment is essentially unchanged after controlling for round fixed effects and for committee-level control variables, including the percentage of female members, the percentage of students in economics or business programmes, average self-assessment of risk preferences, average participation in decision-making bodies, and average percentage of utility-maximising decisions when voting between Option A and Option B under certainty[31]. Committee-level controls also include a measure of payoff inequality within the committee, defined as the Gini coefficient on the individual expected payoffs under Option B.[32] We control for inequality because there is concern that subjects may have other-regarding preferences (see Cooper and Kagel, 2013), which would induce them to select Option A, as it gives the same payoff to all committee members. This would discourage committees from acquiring information. Nevertheless, the significance and magnitude of ignorance treatment effect is robust to including inequality or social efficiency measures (in the form of expected payoffs) in

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[30]Changing the cost of acquiring information is a way to control for this heterogeneity: ambiguity-averse individuals are more likely to keep voting to acquire information when the cost increases.

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

[32]The significance and magnitude of our treatment effects do not change when the mean absolute deviation, the ratio between the maximum and minimum valuations of Option B, or the sum of expected payoffs from Option B (which would allow for subjects that maximise social welfare) are used instead of the Gini coefficient.

the regressions[33].

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

5.2 Robustness and External Validity

5.2.1 Individual behaviour

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

One may reasonably suspect that subjects are not as sophisticated as the model expects them to be. It could be possible that they have a lower depth of reasoning, and use simpler decision rules. For example, they may be taking their own payoffs only 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 quadrants W and L.[34]

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 the 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 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 actual individual votes: 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

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[33]While not affecting the treatment effect, the coefficients on 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. Paetzel et al. (2014) show experimental evidence on how social preferences affect voting when outcomes of reforms are uncertain.

[34]In the language of Rubinstein (2016), these would be instinctive, rather than contemplative, players.

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 substantial in magnitude and statistically significant, with a t-statistic of 5.16. At the same time, Column 3 suggests that the cost of information does not influence the degree to which that mechanism affects individual decisions, as coefficients on the interaction terms are not significant.

Subsequent specifications show that the significance of the theoretical prediction is robust to controlling for individual characteristics[35] (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).

Overall, we can conclude that an individual is significantly more likely to vote against acquiring information when the theory predicts him to do so[36].

– Table 4 here –

5.2.2   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 equalled 0.75. This was done over two additional sessions, on a sample of 48 subjects (equivalent to 16 committees). 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 labelled "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 5 presents the regression results for the pooled sample. We can

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[35]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 inequality within the committee is also associated with a lower likelihood of an individual voting to acquire information.

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

25

see that committees facing the asymmetric prior treatment ($\pi = 0.75$) do not exhibit a different rate of information acquisition compared to committees facing the symmetric prior treatment, as the coefficient on the asymmetric prior dummy is not statistically significant. Furthermore, prior belief does not seem to affect the theoretical mechanism of the model, as coefficients on the interaction terms are not significant either. This suggests that Proposition 1 holds not only when the prior belief is symmetric, but also more generally.

– Table 5 here –

5.2.3 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 equals one whenever the subject votes in the way the model predicts her to vote. Thus, the dummy equals one if the subject votes to acquire information and her v_i is negative, or if she votes against acquiring information and her v_i is positive; in all other cases, the dummy equals zero. We regress that variable (see Table 6) on information cost dummies (column 1), the quadrant to which the subject belongs (column 2), and individual demographic characteristics (column 3). We also control for the fraction of instances in which, when the state was known, an individual has made a a utility-maximising decision when choosing between options A and B.

Note the positive and statistically significant coefficient on the number of decision-making bodies (such as high school or university student councils) in which the subject had participated. Thus, individuals with more experience in actual collective decision-making are more likely to act in line with the model. At the same time, subjects who assess themselves as more strategic in their behaviour are also more likely to vote according to theory. Furthermore, the likelihood of making an payoff-maximising vote after the state is known is positively correlated with the likelihood of a theory-consistent vote on the information acquisition decision. 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[37].

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[37]At the same time, as Table 4 shows, subjects do not become either more or less likely to vote for

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, who tend to maximise utility, or who have had more exposure to collective decision-making from previous rounds of the experiment. Thus, 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 6 here –

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 it is sufficiently divided.

These theoretical predictions are supported by experimental evidence. We observe that committees were significantly more likely to vote against acquiring information when the theory predicted 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 behaved closer to theory, providing evidence for external validity of the model.

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acquiring information. This suggests that learning reduces noise in individual decisions, rather than moving the vote in a particular direction.

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Appendix

A   Proofs

Proof of Lemma 1

Note that $g(\cdot)$ has the following properties. First, $g(z) = g(\lambda z)$ for any scalar $\lambda > 0$, and any payoff vector $z \in \mathbb{R}^I$. Second, $g(z) = 1$ implies that $g(-z) = 0$ (but not necessarily

vice versa) for any payoff vector $z \in \mathbb{R}^I$ that does not contain zeroes[38]. Third, if $\gamma = \frac{1}{2}$, then, in addition, $g(z) = 1$ is equivalent to $g(-z) = 0$. Thus, we have the following:

- 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.

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

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

This proves the second part of the lemma. To prove the first part, note that when $\gamma = \frac{1}{2}$ we have, in addition, the following:

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

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

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

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

This completes the proof of the second part of the lemma. $\qquad \square$

Proof of Proposition 1

Consider first the case when $\gamma > \frac{1}{2}$. Lemma 1 says that the committee has a weak collective preference for ignorance if either $g(x) = g(y) = 0$ or if $g(x) = g(y) = 1$. The former condition says that

---

[38]To see why, note that if the fraction of positive elements of z is greater than γ, then the fraction of positive elements of $-z$ is smaller than $1 - \gamma$, which is in turn smaller than γ.

$$\#W + \#I_X \leq \gamma \text{ and } \#W + \#I_Y \leq \gamma \tag{1}$$

while the latter says that

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

Note that 1 can be written as $\#W + \max\{\#I_X, \#I_Y\} \leq \gamma$, which is equivalent to $\#L + \min\{\#I_X, \#I_Y\} \geq 1 - \gamma$. Since $\gamma > 1 - \gamma$, the condition $\#L + \min\{\#I_X, \#I_Y\} \geq \gamma$ is then sufficient for 1 to hold. At the same time, 2 can be written as $\#W + \min\{\#I_X, \#I_Y\} \geq \gamma$. For the committee to have a collective preference for ignorance, it is sufficient for one of these conditions to hold – i.e. it is sufficient to have

$$\max\{\#W, \#L\} + \min\{\#I_X, \#I_Y\} \geq \gamma \tag{3}$$

Note that
$\gamma = \gamma \left(\max\{\#W, \#L\} + \min\{\#W, \#L\} + \max\{\#I_X, \#I_Y\} + \min\{\#I_X, \#I_Y\} \right).$ Substituting this into 3 and rearranging, we obtain

$$(1-\gamma)\max\{\#W, \#L\} + (1-\gamma)\min\{\#I_X, \#I_Y\} \geq \gamma\min\{\#W, \#L\} + \gamma\max\{\#I_X, \#I_Y\}$$

which can be written as

$$\frac{\gamma}{1-\gamma}\max\{\#I_X, \#I_Y\} - \min\{\#I_X, \#I_Y\} \leq \max\{\#W, \#L\} - \frac{\gamma}{1-\gamma}\min\{\#W, \#L\} \tag{4}$$

This is a sufficient condition for the committee to have a collective preference for ignorance. But note that the left-hand side of 4 is larger than
$\frac{\gamma}{1-\gamma}\left(\max\{\#I_X, \#I_Y\} - \min\{\#I_X, \#I_Y\}\right)$, while the right-hand sinde of 4 is smaller than $\frac{\gamma}{1-\gamma}\left(\max\{\#W, \#L\} - \min\{\#W, \#L\}\right)$. Thus, for 4 to hold, it is sufficient to have

$$\frac{\gamma}{1-\gamma}\left(\max\{\#I_X, \#I_Y\} - \min\{\#I_X, \#I_Y\}\right) \leq \frac{\gamma}{1-\gamma}\left(\max\{\#W, \#L\} - \min\{\#W, \#L\}\right)$$

which is equivalent to

$$\max\left\{\#I_X,\,\#I_Y\right\} - \min\left\{\#I_X,\,\#I_Y\right\} \leq \max\left\{\#W,\,\#L\right\} - \min\left\{\#W,\,\#L\right\}$$

This, in turn, is equivalent to the statement in the proposition.

For the case when $\gamma = \frac{1}{2}$, Lemma 1 says that the committee has a weak collective preference for ignorance if and only if either $g\left(x\right) = g\left(y\right) = 0$ or if $g\left(x\right) = g\left(y\right) = 1$, i.e. if one of the following holds

$$\#W + \#I_X \leq \frac{1}{2} \text{ and } \#W + \#I_Y \leq \frac{1}{2} \tag{5}$$

$$\#W + \#I_X \geq \frac{1}{2} \text{ and } \#W + \#I_Y \geq \frac{1}{2} \tag{6}$$

Note that 5 can be written as $\#W + \max\left\{\#I_X,\,\#I_Y\right\} \leq \frac{1}{2}$, which is equivalent to $\#L + \min\left\{\#I_X,\,\#I_Y\right\} \geq \frac{1}{2}$. At the same time, 2 can be written as $\#W + \min\left\{\#I_X,\,\#I_Y\right\} \geq \frac{1}{2}$. The committee has a collective preference for ignorance if and only if one of these conditions holds – i.e. if and only if

$$\max\left\{\#W,\,\#L\right\} + \min\left\{\#I_X,\,\#I_Y\right\} \geq \frac{1}{2} \tag{7}$$

Note that
$\frac{1}{2} = \frac{1}{2}\left(\max\left\{\#W,\,\#L\right\} + \min\left\{\#W,\,\#L\right\} + \max\left\{\#I_X,\,\#I_Y\right\} + \min\left\{\#I_X,\,\#I_Y\right\}\right).$
Substituting this into 7 and rearranging yields

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

which is equivalent to

$\max\left\{\#I_X,\,\#I_Y\right\} - \min\left\{\#I_X,\,\#I_Y\right\} \leq \max\left\{\#W,\,\#L\right\} - \min\left\{\#W,\,\#L\right\}.$ This, in turn, is equivalent to the statement in the proposition, which is thus a necessary and sufficient condition for the committee to have a collective preference for ignorance. $\square$

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. $\qquad\square$

B Extensions

B.1 Imperfect Signals

The model described in Section 2 gave the committee an opportunity to learn the state of the world with certainty. This section will show that the previous results extend to a setup in which the committee decides whether to acquire an imperfect signal about the state.

Suppose the committee needs to vote on whether to acquire 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 signal 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 $g\left[\pi p x + (1-\pi)qy\right] = 1$. 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 $g\left[\pi(1-p)x + (1-\pi)(1-q)y\right] = 1$.

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 $g\left[\pi x + (1-\pi)y\right] = 1$.

Then the value of ignorance to voter i equals:

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

Information will be acquired if and only if $g\,(v) = 0$. Then we have the following result that is analogous to Lemma 1:

Lemma 2. *For any committee I, and any $\pi \in (0,1)$, the following holds:*

- *For any $\gamma > \frac{1}{2}$, the committee has a weak preference for ignorance if $g\left[\pi p x + (1-\pi)qy\right] = g\left[\pi(1-p)x + (1-\pi)(1-q)y\right]$. Furthermore, the committee has a strict preference for ignorance if $g\left[\pi p x + (1-\pi)qy\right] = g\left[\pi(1-p)x + (1-\pi)(1-q)y\right] \neq g\left[\pi x + (1-\pi)y\right]$.*

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

Proof. Similar to the proof of Lemma 1, with $g\left(\pi p x + [1 - \pi] q y\right)$ and $g\left(\pi [1 - p] x + [1 - \pi][1 - q] y\right)$ replacing $g(\pi x)$ and $g([1 - \pi] y)$, respectively. □

In words, the committee will weakly prefer not to acquire information when the collective decision is the same after either of the signals arrives. Furthermore, the committee will strictly prefer not to acquire information when 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.

We can now divide voters into groups based on their preferred decisions upon receiving either of the signals, as in Section 3.1. 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, 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. *For any committee I, and any $\pi \in (0, 1)$, the following holds:*

- *For any $\gamma > \frac{1}{2}$, the committee has a weak preference for ignorance if*

$$\left| \#\hat{I}_X - \#\hat{I}_Y \right| \leq \left| \#\hat{W} - \#\hat{L} \right|$$

- *For $\gamma = \frac{1}{2}$, 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. □

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B.2 Generic Information Structures

The baseline model assumed that the state space is binary. Consider instead a finite set of states Ω. Each state $j \in \Omega$ occurs with a prior probability p^j, which is common knowledge. If the reform is approved, then in state j each voter $i \in I$ receives a payoff x_i^j. Denote by $x^j \equiv \left(x_1^j, x_2^j, ...\right)$ a vector of voters' payoffs if the reform is adopted and the state is j. Let $\mathcal{P}$ be a partition of Ω. Denote by S a generic element of $\mathcal{P}$; we will refer to S as a *message*. Before voting on the reform, the committee decides whether to acquire information. If they do, they learn the message S that contains the true state.

Suppose that decisions are made by simple majority. If the commitee decides against learning, then the decision on the reform is based on the prior. Hence, without information the reform is approved if and only if $g\left[\sum_{j \in \Omega} p^j x^j\right] = 1$. Then if the committee chooses to not to acquire information, voters will, in expectation, receive the payoff vector $\sum_{j \in \Omega} p^j x^j g\left[\sum_{j \in \Omega} p^j x^j\right]$.

Now suppose information is acquired, and the committee receives a message $S \in \mathcal{P}$. Then the posterior probability that the state is j will equal $\frac{p^j}{\Pr(S)}$ if $j \in S$, and zero otherwise, where $\Pr(S) \equiv \sum_{j \in \Omega} p^j$ denotes the prior probability of receiving the message S. Then, upon receiving message S, the committee will vote in favour of the reform if and only if $g\left[\sum_{j \in S} \frac{p^j x^j}{\Pr(S)}\right] = 1$. The ex ante expected payoff vector will then equal

$$\sum_{S \in \mathcal{P}} \left(\Pr(S) g\left[\sum_{j \in S} \frac{p^j x^j}{\Pr(S)}\right] \sum_{j \in S} \frac{p^j x^j}{\Pr(S)}\right) = \sum_{S \in \mathcal{P}} \left(g\left[\sum_{j \in S} p^j x^j\right] \sum_{j \in S} p^j x^j\right)$$

To avoid the trivial case in which every agent is indifferent between acquiring and not acquiring information, we will assume that $\mathcal{P}$ is *non-trivial*. Specifically, assume that there exists an $S \in \mathcal{P}$ such that $g\left[\sum_{j \in S} p^j x^j\right] \neq g\left[\sum_{j \in \Omega} p^j x^j\right]$. In words, there is at least one message that induces a decision different from the one that is made without information. This effectively eliminates the distinction between a strict and a weak preference for ignorance. Then the following result can be derived:

Proposition 4. *Suppose that $\gamma = \frac{1}{2}$. For any committee I, any prior, and any non-trivial $\mathcal{P}$, the committee will have a preference for ignorance if and only if $g\left[\sum_{j \in M} p^j x^j\right] = g\left[\sum_{j \in \Omega} p^j x^j\right]$, where M is the union of all $S \in \mathcal{P}$ for which $g\left[\sum_{j \in S} p^j x^j\right] \neq g\left[\sum_{j \in \Omega} p^j x^j\right]$.*

Proof. The value of ignorance to agent i equals:

$$
\begin{aligned}
v_i &= \sum_{j \in \Omega} p_i^j x_i^j g\left[\sum_{j \in \Omega} p^j x^j\right] - \sum_{S \in \mathcal{P}} \left(\sum_{j \in S} p_i^j x_i^j g\left[\sum_{j \in S} p^j x^j\right]\right) \\
&= \sum_{S \in \mathcal{P}} \sum_{j \in S} \left[p_i^j x_i^j \left(g\left[\sum_{j \in \Omega} p^j x^j\right] - g\left[\sum_{j \in S} p^j x^j\right]\right)\right]
\end{aligned}
$$

By the definition of M, the expression in the round brackets equals 0 for all S that are not part of M. For $S \subseteq M$, the expression in the round brackets equals $p_i^j x_i^j$ if $g\left[\sum_{j \in \Omega} p^j x^j\right] = 1$, and equals $-p_i^j x_i^j$ if $g\left[\sum_{j \in \Omega} p^j x^j\right] = 0$. Thus, if $g\left[\sum_{j \in \Omega} p^j x^j\right] = 1$, then $g(v) = 1$ if and only if $g\left[\sum_{S \subseteq M} \sum_{j \in S} p_i^j x_i^j\right] = g\left[\sum_{j \in M} p_i^j x_i^j\right] = 1$. Similarly, if $g\left[\sum_{j \in \Omega} p^j x^j\right] = 0$, then $g(v) = 1$ if and only if $g\left[-\sum_{S \subseteq M} \sum_{j \in S} p_i^j x_i^j\right] = g\left[-\sum_{j \in M} p_i^j x_i^j\right] = 1$, which happens if and only if $g\left[\sum_{j \in M} p_i^j x_i^j\right] = 0$. Hence, $g(v) = 1$ if and only if $g\left[\sum_{j \in \Omega} p^j x^j\right] = g\left[\sum_{j \in M} p_i^j x_i^j\right]$. $\square$

Proposition 4 says the following. Take all the messages that induce a decision different from the one made without information. Now suppose the committee learns that one of such messages will be received, without knowing which one. If, given this knowledge, the committee also makes the decision different from the one made in ignorance, then the committee will vote to acquire information.

We can compare this result to the case of the binary state. When Ω is binary and $\mathcal{P}$ is non-trivial, M can include either one state, or both states. The former case implies that $g(x) \neq g(y)$, and also that the condition in Proposition 4 is satisfied. Thus, the committee votes to learn the state. The latter case implies that $g(x) = g(y) \neq g(\pi x + [1 - \pi] y)$, and also that the condition in Proposition 4 fails, so the committee votes against learning.

C Tables

Table 2: Sample descriptive statistics

	(1) Mean	(2) Min	(3) Max	(4) Sd	(5) Zero	(6) Low	(7) High	(8) (5)=(6)	(9) (6)=(7)	(10) (5)=(7)
					Mean by info cost			p-value for H_0:		
Female	0.54	0.00	1.00	0.50	0.48	0.54	0.60	0.545	0.540	0.222
Age	20.56	14.00	36.00	3.12	20.85	19.94	20.88	0.176	0.098	0.975
Socieconomic stratum	3.62	2.00	6.00	0.97	3.62	3.77	3.48	0.439	0.129	0.501
Weekly expenses (USD)	42.87	3.35	622.80	71.69	40.90	55.00	32.72	0.412	0.196	0.262
Academic semester	5.39	1.00	10.00	2.98	5.31	4.96	5.90	0.568	0.131	0.319
Econ/Business undergrad	0.44	0.00	1.00	0.50	0.42	0.52	0.40	0.311	0.222	0.837
Risk taking level	6.53	0.00	10.00	1.75	6.79	6.42	6.40	0.282	0.955	0.269
Information strategy	2.26	1.00	3.00	0.71	2.23	2.33	2.23	0.472	0.453	1.000
Option strategy	2.01	1.00	3.00	0.77	2.44	1.77	1.81	0.000	0.795	0.000
Utility-maximising votes	0.93	0.25	1.00	0.12	0.91	0.94	0.93	0.207	0.585	0.620
Voting experience:										
High school elections	0.91	0.00	1.00	0.29	0.90	0.92	0.92	0.729	1.000	0.729
College elections	0.67	0.00	1.00	0.47	0.69	0.56	0.75	0.209	0.053	0.500
School or college elections	0.93	0.00	1.00	0.26	0.92	0.92	0.96	1.000	0.404	0.404
Local elections	0.67	0.00	1.00	0.47	0.65	0.60	0.77	0.677	0.079	0.180
Parliamentary elections	0.35	0.00	1.00	0.48	0.25	0.31	0.48	0.500	0.096	0.019
Presidential elections	0.53	0.00	1.00	0.50	0.50	0.48	0.60	0.840	0.222	0.309
Voted at least once	0.70	0.00	1.00	0.46	0.69	0.62	0.79	0.524	0.073	0.248
Decision-making body experience:										
High school board	0.54	0.00	1.00	0.50	0.62	0.52	0.48	0.306	0.687	0.153
College board	0.12	0.00	1.00	0.33	0.15	0.10	0.12	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	0.311
At least one	0.62	0.00	1.00	0.49	0.73	0.58	0.56	0.134	0.838	0.088

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 -i.e. taking into account his own payoffs only; and 3 represents the most strategic behaviour -i.e. taking into account the others' payoffs and their potential choices). Utility-maximising votes is the fraction of utility-maximising decisions when voting between Option A and Option B. 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 committee information acquisition decision

Dep Var: $\mathbb{1}$[Committee voted to acquire information]	(1)	(2)	(3)	(4)	(5)
Ignorance treatment	-0.313***	-0.313***	-0.300***	-0.311***	-0.307***
	(0.045)	(0.045)	(0.065)	(0.062)	(0.064)
Low cost of information (0.1)		-0.272***	-0.225**	-0.211***	-0.210***
		(0.046)	(0.092)	(0.065)	(0.065)
High cost of information (0.4)		-0.391***	-0.419***	-0.391***	-0.389***
		(0.063)	(0.077)	(0.065)	(0.064)
Ignorance treatment×Low cost of information			-0.094	-0.087	-0.090
			(0.115)	(0.116)	(0.117)
Ignorance treatment×High cost of information			0.056	0.065	0.062
			(0.078)	(0.075)	(0.078)
Order		0.063	0.063		
		(0.050)	(0.050)		
Round		-0.002	-0.002	-0.000	
		(0.004)	(0.004)	(0.004)	
Constant	0.604***	0.817***	0.811***	1.541**	1.578**
	(0.063)	(0.047)	(0.061)	(0.512)	(0.511)
Committee 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	0.253	0.272

Note: Robust standard errors clustered at pool level in parentheses. 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 cost of information was 0.1 and 0.4, respectively, compared to the default cost of zero. Order is a dummy variable identifying sessions where the state-independent status quo alternative was labeled Option B, instead of Option A. Committee controls include a measure of committee 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 committee members have participated, average degree of strategic behaviour based on self-asssessment (on a 1 to 3 scale), and average fraction of utility-maximising decisions when voting between Option A and Option B.

Table 4: Linear estimation of individual information acquisition decision

Dep Var: 1[Individual voted to acquire information]	(1)	(2)	(3)	(4)	(5)	(6)
1[$v_i < 0$]	0.296***	0.142***	0.113***	0.115***	0.103**	0.126***
	(0.025)	(0.027)	(0.040)	(0.041)	(0.041)	(0.028)
Low cost of information (0.1)		-0.203***	-0.243***	-0.238***	-0.239***	
		(0.040)	(0.048)	(0.048)	(0.048)	
High cost of information (0.4)		-0.296***	-0.289***	-0.286***	-0.286***	
		(0.041)	(0.044)	(0.044)	(0.044)	
1[$v_i < 0$]×Low cost of information			0.102	0.099	0.099	
			(0.062)	(0.062)	(0.061)	
1[$v_i < 0$]×High cost of information			-0.016	-0.019	-0.016	
			(0.057)	(0.057)	(0.057)	
Order		0.042	0.042	0.045	0.043	
		(0.032)	(0.032)	(0.035)	(0.035)	
Round		-0.003	-0.003	-0.001		
		(0.002)	(0.002)	(0.002)		
Committee inequality				-0.347***	-0.187*	-0.177*
				(0.086)	(0.106)	(0.099)
Individual-level variables						
Quadrant = I_Y		0.164***	0.164***	0.180***	0.178***	0.180***
		(0.035)	(0.035)	(0.036)	(0.036)	(0.037)
Quadrant = L		-0.168***	-0.166***	-0.136***	-0.151***	-0.153***
		(0.030)	(0.030)	(0.031)	(0.032)	(0.032)
Quadrant = I_X		0.186***	0.186***	0.204***	0.202***	0.203***
		(0.035)	(0.035)	(0.035)	(0.035)	(0.036)
Constant	0.338***	0.531***	0.541***	0.908***	0.907***	0.162***
	(0.021)	(0.049)	(0.050)	(0.191)	(0.195)	(0.042)
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	0.232	0.370

Note: Robust s.e. clustered at individual level in parentheses. 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 cost of information was 0.1 and 0.4, respectively, compared to the default cost 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 willingness to take risks (on a 0 to 10 scale), number of decision-making bodies in which the individual had participated, degree of strategic behaviour based on self-assessment (on a 1 to 3 scale), and fraction of utility-maximising decisions when voting between Option A and Option B.

Table 5: Linear estimation of group information acquisition decision under symmetric and asymmetric priors

Dep Var: 𝟙[Committee voted to acquire information]	(1)	(2)	(3)	(4)	(5)	(6)
Ignorance treatment	-0.244***	-0.244***	-0.225**	-0.236**	-0.229**	-0.254**
	(0.039)	(0.039)	(0.077)	(0.076)	(0.081)	(0.097)
High cost of information (0.4)		-0.450***	-0.469***	-0.417***	-0.412***	-0.437***
		(0.069)	(0.068)	(0.111)	(0.111)	(0.109)
Asymmetric prior		-0.019	0.019	0.052	0.054	0.030
		(0.069)	(0.068)	(0.047)	(0.048)	(0.048)
Ignorance treatment×High cost of information			0.038	0.048	0.041	0.090
			(0.071)	(0.074)	(0.077)	(0.098)
Ignorance treatment×Asymmetric prior			-0.075	-0.070	-0.073	-0.024
			(0.071)	(0.071)	(0.072)	(0.136)
High cost×Asymmetric prior				-0.055	-0.051	-0.002
				(0.154)	(0.155)	(0.165)
Ignorance treatment ×High cost ×Asymmetric prior						-0.099
						(0.142)
Round		-0.010**	-0.010**	-0.008**		
		(0.003)	(0.003)	(0.004)		
Constant	0.622***	0.975***	0.966***	1.877***	1.751*	1.763*
	(0.095)	(0.061)	(0.075)	(0.748)	(0.797)	(0.791)
Committee 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	0.297	0.314	0.314

Note: Robust standard errors clustered at pool level in parentheses. 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 cost of information was 0.4, compared to the default cost 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. Committee 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 committee members have participated, average degree of strategic behaviour based on self-assessment (on a 1 to 3 scale), and the average fraction of utility-maximising decisions when voting between Option A and Option B.

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Table 6: Linear estimation of consistency of individual votes with theoretical prediction

Dep Var: $\mathbb{1}$[Individual vote consistent with theory]				
	(1)	(2)	(3)	(4)
Low cost of information (0.1)	0.095***	0.095***	0.091***	
	(0.030)	(0.030)	(0.027)	
High cost of information (0.4)	0.052*	0.052*	0.066**	
	(0.028)	(0.028)	(0.026)	
Order	-0.008	-0.008	0.009	
	(0.024)	(0.024)	(0.025)	
Quadrant $= I_Y$		0.021	0.028	0.028
		(0.036)	(0.036)	(0.037)
Quadrant $= L$		0.154***	0.167***	0.167***
		(0.029)	(0.029)	(0.030)
Quadrant $= I_X$		0.035	0.042	0.042
		(0.036)	(0.035)	(0.036)
Committee inequality			-0.149*	-0.150*
			(0.079)	(0.081)
Female			-0.066***	
			(0.022)	
Econ/Business programmes			0.025	
			(0.026)	
Year of studies			-0.006	
			(0.008)	
Risk level			0.006	
			(0.006)	
Number of of decision-making bodies			0.041**	
			(0.018)	
Strategy			0.039***	
			(0.015)	
Fraction utility-maximising decisions			0.300***	
			(0.078)	
Round	0.005**	0.005***	0.005***	0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.548***	0.496***	0.122	0.627***
	(0.033)	(0.041)	(0.112)	(0.038)
Individual fixed effects	No	No	No	Yes
Obs	2,880	2,880	2,880	2,880
R^2	0.010	0.026	0.047	0.116

Robust s.e. clustered at individual level in parentheses. Low cost and high cost are dummy variables indicating that the cost of information was 0.1 and 0.4, respectively, compared to the default cost of zero. Order is a dummy variable identifying sessions where the state-independent status quo alternative was labeled Option B, instead of Option A. Committee 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, degree of strategic behaviour based on self-asssessment (on a 1 to 3 scale), and fraction of utility-maximising decisions when voting between Option A and Option B.

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D Supplementary Material for Online Publication

D.1 Experimental Instructions (English Translation)

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 <u>all rounds</u>. 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

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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.

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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 Instructions (Original Spanish)

Instrucciones del experimento

Este es un experimento sobre decisiones grupales en el que deberá participar a lo largo de 22 rondas (2 rondas de práctica y 20 rondas que contarán para sus pagos). En cada ronda usted será asignado aleatoriamente a un grupo de tres (3) participantes presentes en esta sala. Los integrantes del grupo son anónimos y serán reasignados a un nuevo grupo al finalizar cada ronda del experimento.

En cada ronda usted deberá tomar dos decisiones que se detallan más adelante. Sus pagos en este experimento se definirán al final de la actividad con base en sus ganancias agregadas de <u>todas las rondas</u>. Antes de comenzar, tendremos dos rondas de práctica que no afectarán su pago potencial.

Situación General

En cada ronda, todos los integrantes de un grupo deberán elegir entre dos **Opciones** Opción A y Opción B. La elección del grupo en cuanto a las Opciones se definirá con base en la regla de mayoría simple: como los grupos están conformados por tres personas, si al menos dos de ellas escogen la Opción A y la restante la Opción B, la Opción A será la que determine los pagos para TODOS los integrantes del grupo. En cambio, si al menos dos de ellas escogen Opción B y la restante la Opción A, la Opción B será la que determine los pagos para TODOS los integrantes del grupo.

Sus pagos en cada ronda, y los de los otros miembros del grupo, dependerán de que el computador elija uno de dos **Escenarios Posibles**: Azul o Rojo. En cada ronda el computador elegirá uno de estos dos Escenarios (Azul o Rojo) aleatoriamente con igual probabilidad, esto es, igual al 50%, lo que es equivalente a lanzar una moneda. El Escenario Relevante para los pagos será común para todos los miembros de su grupo.

Usted conocerá, en cada ronda, cuánto podría ganar si el Grupo elige la Opción A o la Opción B bajo cualquiera de los dos Escenarios Posibles (Azul o Rojo). También sabrá cuánto ganarían los Otros dos miembros del grupo en cada uno de los casos anteriores. NINGÚN individuo en la sala conoce si el Escenario Relevante para los pagos es el Escenario Azul o Rojo.

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Sin embargo, en cada ronda, y antes de que el grupo decida sobre las Opciones A o B, cada miembro podrá decidir si quiere que el grupo Adquiera Información sobre cuál es el Escenario Relevante para los pagos en esa ronda a un precio de **0.4 UME**. La elección del grupo en cuanto a la Adquisición de Información se definirá con base en la regla de mayoría simple. Por tanto, si al menos dos miembros quieren que el grupo adquiera información para aprender el Escenario Relevante, todos los miembros de ese grupo deberán pagar un precio de 0.4 UME y el Escenario Relevante para sus pagos se conocerá antes de la toma de decisión sobre las Opciones A o B. Si en cambio, al menos dos miembros NO quieren que el grupo adquiera información para aprender el Escenario Relevante, entonces el Escenario Relevante NO se conocerá antes de la toma de decisiones sobre las Opciones A o B.

A continuación resumimos entonces las decisiones que debe tomar.

Decisiones

1. **Adquisición de información:**

   Su primera decisión consistirá en determinar si desea que el grupo adquiera o no información para aprender el Escenario Relevante (Azul o Rojo) en esa ronda. El precio individual de aprender el Escenario es de **0.4 UME**. Esperamos que tome su decisión en menos de 60 segundos; un cronómetro en la pantalla le indicará el tiempo que va corriendo en cada ronda (ver Pantalla 1 en el Apéndice).

   Si al menos dos participantes del grupo deciden adquirir información para saber cuál es el Escenario Relevante, todos los miembros del Grupo deberán pagar **0.4 UME** y aprenderán si el Escenario Relevante es Azul o Rojo. En otro caso, cuando la mayoría del grupo decida no Adquirir Información, no habrá ningún cobro y ninguno tendrá información sobre el Escenario Relevante. Todos los integrantes de su grupo serán informados sobre la decisión del grupo y sobre los pagos que cada uno obtendría de elegir las Opción A o B descritas antes.

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2. **Elección de alternativas:**

De acuerdo con la decisión anterior, cada participante debe decidir a continuación si desea que el grupo elija la Opción A o la Opción B:

- **Opción A:** Si el Grupo elige esta opción, sus pagos dependerán del Escenario Relevante que escoja el computador aleatoriamente. Ese pago, sin descontar la decisión de Adquisición de Información, podrá estar entre 1 UME y 19 UME.

- **Opción B:** Si el Grupo elige esta opción, sus pagos serán de 10 UMEs sin importar el Escenario Relevante. Es decir, independientemente de si el Escenario Relevante es Azul o Rojo, si la mayoría del Grupo elije la Opción B, el pago de cada individuo, sin descontar la decisión de Adquisición de Información, será de 10 UME.

Esperamos que tome su decisión en menos de 50 segundos; un cronómetro en la pantalla le indicará el tiempo que va corriendo en cada ronda. (Ver Pantalla 2 y 3 para casos en que se adquirió información y cuando no)

Detalles adicionales

Recuerde que tanto usted como los demás participantes de su grupo tienen la misma información en relación a la probabilidad con la que ocurre cada Escenario Posible (el Escenario Azul y el Rojo tiene la misma probabilidad de ocurrir en cada ronda) y sobre los pagos que cada participante recibirá en ambas Opciones (A y B), dados los dos Escenarios Posibles (Azul y Rojo). En las rondas que cuentan para las ganancias finales, los pagos que cada uno de los individuos presentes en la sala recibirán en las dos Opciones se repetirán por cinco (5) rondas consecutivas, pero los pagos que observa de sus compañeros pueden cambiar, teniendo en cuenta que la composición de los grupos varía en cada ronda. Al final de cada ronda usted recibirá retroalimentación sobre las decisiones del Grupo y los pagos de cada integrante (ver Pantalla 4).

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Pagos de la Actividad

Además de los 10.000 pesos por participar en la actividad, al final de las rondas el computador sumará TODAS sus ganancias de las rondas para determinar sus pagos, estos se calcularán según la Opción (A o B) que haya elegido el grupo en cada ronda. Si una ronda el grupo decidió adquirir información sobre el Escenario Relevante, el precio de esta información será descontado de sus pagos.

Preguntas

Pregunta 1: ¿Mi pago será definido por la ronda en la que tenga el mejor resultado?

Respuesta: No. El computador agregará todas las ganancias recibidas en las rondas y descontará el precio de la información adquirida en las rondas donde el grupo haya decidido adquirir información. Las dos rondas iniciales de práctica serán excluidas. Este resultado agregado será el que determine cuál será su pago el pesos colombianos al finalizar el experimento.

Pregunta 2: ¿El pago por adquirir información depende únicamente de mi decisión sobre si deseo o no esa información?

Respuesta: Aunque las decisiones en este juego son individuales, las elecciones dependen de lo que la mayoría del grupo elija. Así, aunque usted no desee pagar para que el Escenario Relevante le sea revelado, si los otros dos participantes de su grupo así lo eligen, los tres participantes deberán asumir el costo de acceder a esa información.

De forma similar, la Opción (A o B) elegida en la segunda etapa de decisión será determinada por lo que dicte la mayoría simple de los participantes del grupo.

Pregunta 3: ¿Mi pago será siempre más alto en la Opción A que en la Opción B?

Respuesta: Su pago dependerá de las decisiones de su grupo sobre <u>pagar o no</u> por saber cuál es el Escenario Relevante, de su elección sobre cuál opción (A o B) prefiere y de cuál sea el Escenario Relevante. Según esto, sus pagos en la Opción A pueden ser mayores o menores a los que le ofrece la Opción B (10 UME), así:

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Si sus pagos en la opción A son de 5 si el Escenario Relevante es el Azul, y de 11 si el Escenario Relevante es el Rojo, y el precio de la señal es de 0.4 UME, sus pagos serán:

	NO pago por información		Pago por información	
	Azul	Rojo	Azul	Rojo
Opción A	5	11	4.6 (=5-0.4)	10.6 (=11-0.4)
Opción B	10	10	9.6 (=10-0.4)	9.6 (=10-0.4)

Pregunta 4: ¿Mi grupo y mis pagos se repetirán por 5 rondas consecutivas?

Respuesta: No. Los grupos serán reasignados en cada ronda. Lo que será igual durante cinco rondas consecutivas serán sus pagos en la Opción A y B para ambos Escenarios Posibles.

Así, si sus pagos de la Opción A son de 5 si el Escenario Relevante es el Rojo, y de 11 si el Escenario Relevante es el Azul, estos mismos valores se repetirán por cinco rondas consecutivas.

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D.3 Experimental Screens

Period | 1 out of 22

Now you will have to decide whether you wish to acquire information.
Your payments and those of the Other participants, without information acquisition and depending on group Decisions, are summarized in the following table.
The Relevant Scenario for your payments this round is: Unknown
Remember it can be Blue or Red with the same probability

Payment if your Group decides

	Option A	Option B	
	Blue or Red Scenario	Blue Scenario	Red Scenario
You:	10	13	3
Other 1:	10	13	17
Other 2:	10	18	8

Do you want the group to acquire information to learn the Relevant state at an individual price of 0.0 EMU

- ○ Yes
- ○ No

Continue

Figure 5: Information acquisition vote screen

Your group decided _TO Acquire information_ at a cost of 0.0 EMU for learning the Relevant Scenario for this round.
The computer randomly selected the BLUE Scenario

Your payments and those of the Other participants, subtracting the information acquisition price and depending on group decisions are summarized in the following table

Payment if your group decides

	Option A	Option B
	Blue Scenario	Blue Scenario
You:	10.0	5.0
Other 1:	10.0	2.0
Other 2:	10.0	6.0

Which of the following Options do you prefer:

○ Option A
○ Option B

Continue

Figure 6: Alternative choice vote screen if the committee DID acquire information

Your group decided _NOT TO Acquire information_ at a cost of 0.0 EMU for learning the Relevant Scenario for this round.
Hence, the Relevant Scenario for your payments is UNKNOWN

Your payments and those of the Other participants, depending on group decisions are summarized in the
following table

Payment if your group decides

	Option A	Option B	
	Blue or Red Scenario	Blue Scenario	Red Scenario
You:	10	5	5
Other 1:	10	13	3
Other 2:	10	16	14

Which of the following Options do you prefer:

○ Option A
○ Option B

Continue

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

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The computer randomly selected the RED Scenario

Your group's decisions on Information Acquisition and Preferred Option for this round, were the following

Please press OK to continue

Participants	Info Acquisition	Preferred Option	Payment
You	Yes	Option A	3.0
Other 1	Yes	Option B	17.0
Other 2	No	Option B	8.0
Group	Yes	Option B	

OK

Figure 8: Feedback at the end of each period

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Now you will have to decide whether you wish to acquire information.
Your payments and those of the Other participants, without information acquisition and depending on group Decisions, are summarized in the following table.
The Relevant Scenario for your payments this round is: Unknown
Remember it can be Blue or Red with the same probability

Payment if your Group decides

	Option A		Option B
	Blue Scenario	Red Scenario	Blue or Red Scenario
You:	14	16	10
Other 1:	18	12	10
Other 2:	13	3	10

Do you want the group to acquire information to learn the Relevant state at an individual price of 0.4 EMU

⊂ Yes
⊂ No

Continue

Figure 9: Information acquisition vote screen for Order treatment

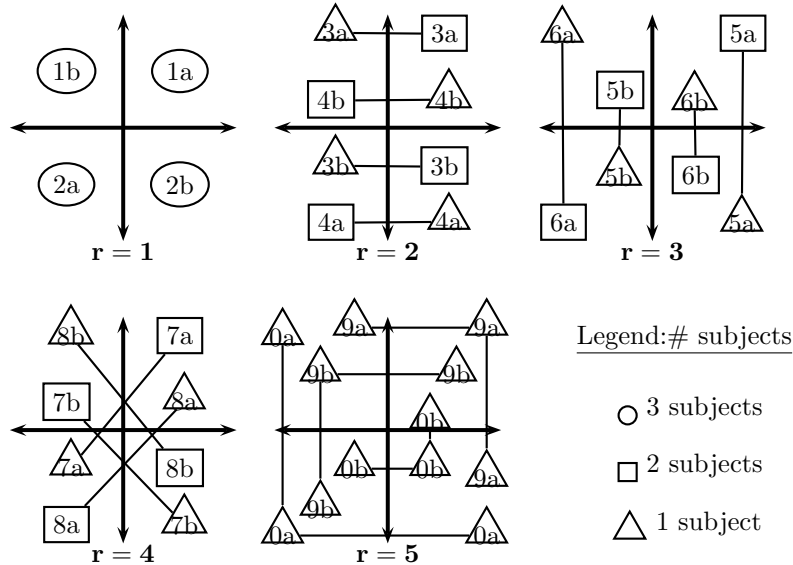## D.4 Committee Formation in the Experiment

Figure 10: Structure of committees across rounds.

Figure 10 shows committee layouts that individuals faced over 5 consecutive rounds ($r = 1, \ldots, 5$) 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 committee. Committees 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 committee $1a$ (and thus did not face ignorance treatment). In the next round, she kept her state-dependent payoffs, and could be randomly allocated to committee $3a$ or committee $4b$. 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 committee $1b$. 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 committee configurations shown in Figure 3. Note that half of all subjects

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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 committees were formed from a pool of 12 subjects. In each session, we had 24 subjects, split into two pools.