Cursing or Bandwagoning?

– Social Information and the Uninformed Voting Behavior –

Draft/Outline

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1 Motivation

Information of one's own political preference is considered to be a critical element of civic competence. Studies suggest that more informed voters are more likely to participate in election (Delli Carpini and Keeter 1996, Lassen 2005, Larcinese 2007, Yamazaki 2008, Gemenis and Rosema 2014) and vote more in line with their preference (Zaller 1992, Bartels 1996). Uninformed voters, those who are uncertain about one's own political preference, are often considered to be politically inactive and random decision makers. Conventional rational choice models of voting participation (i.e., Downs 1957, Riker and Ordeshook 1968, Matsusaka 1995) imply that uninformed voters expect no instrumental benefit from participation. Also, those models provide no systematic explanation of uninformed voting decisions. Those model predictions, however, does not reflect the observation that many voters do participate in elections with very little knowledge of what they are voting for and if participated, vote in seemingly systematic directions. To fill this gap, the current project explores the systematic explanation of uninformed voting behavior by focusing on the role of *social information*: information of others in the society.

Two sets of model provide contrasting explanations to the role of social information in uninformed voting behavior. First focuses on the instrumental incentives. The *Swing Voter's Curse* (SVC) model (Feddersen and Pesendorfer 1996) is one of the first formal model to explain the role information in the *strategic* decision of voting participation. The model implies that *uninformed independent* voters are motivated to delegate the aggregated electoral outcome to the hands of *informed independent* voters. To achieve this goal, uninformed voters strategically turn out in an election to cancel out the expected imbalance in the

electoral outcome. Second emphasizes the role of non-instrumental motivation. The *bandwagoning* (BW) model (Bischoff and Egbert 2013) suggests that voters receive non-instrumental utility from acting in the same way as other voters. Uninformed voters may be incentivized to vote in line with the (expected) majority in the society. Both of the above models suggest that the behavior of uninformed voters are dependent upon the (expected) behavior of other voters in the society. Social information may help uninformed voters to behave systematically.

In light of the above models, I am designing the mock-election experiment to assess the behavioral mechanism of uninformed voters. The previous experimental applications of the SVC model (Battaglini, Morton and Palfrey 2010, 2008) are highly stylized and it is unclear if their findings can be generalized to the real-world mechanisms of voting participation. Also, noe studies to my knowledge have ever tested both the SVC and the BW models in one experiment. In the current study, I intend to design the contextualized version of the SVC experiment that incorporates tests of predictions from both the SVC and the BW models. Another question to be asked in the current project is the cultural differences in the behavioral norm. Specifically, I intend to conduct experiment in two countries, United States and Japan. Findings in cultural psychology suggest collectivist behavioral tendency in Japan and individualistic behavioral tendency in United States (Markus and Kitayama 1991, Hamamura 2012). In the context of uninformed voting behavior, the collectivist tendency may imply the strong tendency to bandwagon.

The result of the experiment will shed new lights on the studies of voting behavior from two perspectives. First, it helps to deepen understanding towards the decision-making process of uninformed voters. Previous studies assume unconditionally inactive and random nature of uninformed voters, offer no systematic explanations of the uninformed behavior. This study will give new insights by allowing uninformed voters to potentially receive benefit from participation, and specify the conditions where they may or may not participate. Second, the experimental result will have important implications to the discussion of civic competence in democracies. If it is the case that uninformed voters do make logical decisions to participate in elections, being uninformed does not necessarily mean they have no ability to represent their opinions in democratic government body (while bandwagoning behavior may have negative consequences). Third, if different tendencies are observed in Japan and United States, the result will have important implications over the relationship between cultural background and bandwagoning behavioral tendency.

The remaining sections will be constructed as follows. Section 2 draws implications from SVC model (Feddersen and Pesendorfer 1996) and BW model (Bischoff and Egbert 2013) to identify general conditions

where uninformed voters may have incentives to participate in election. Then, section 3 proposes the specific design of the mock election experiment, and section 4 introduces hypotheses specific to the proposed experiment. Section 5 discusses the method to analyze the experimental result. Lastly, section 6 discusses the potential implications and significance of the study.

2 Theory

Even when many observational studies find the positive correlation between individual level information level and voting participation, not many studies address the question of exactly *how* information helps people to participate in election. In one of few efforts, Matsusaka (1995) extends the conventional rational choice voting participation model (Downs 1957, Riker and Ordeshook 1968) to incorporate the role of information. Now, in the conventional model (also called the *decision-theoretic* model), potential voters' expected utility from participation is represented as follows:

$$p_i B_i - C_i + D_i$$

Here, the equation is constituted from the expected benefit B_i from one's preferred candidate (or alternative) being elected, probability of the voter being pivotal in deciding the election result p_i, cost of voting C_i and duty or value embedded in just participating the election D_i. Voters are expected to participate and sincerely vote for the preferred candidate if the outcome of the equation is positive value. Now, information can be incorporated as the level of uncertainty in the value of B. Matsusaka (1995) adjust the model such that lower information level leads to higher uncertainty in individual preferences, diminishes the value of B_i. B_i reaches 0 if a voter is completely uninformed and takes maximum value if a voter is fully informed. Therefore, uninformed voters expect *zero* instrumental utility from their vote choice and uninformed participation decisions are solely made by the comparison of C_i and D_i.

This model explains the fact that informed voters are more likely to participate in elections than uninformed voters, but it fails to account for the following two potential behaviors of uninformed voters. First, the model cannot predict non-random vote choice of uninformed voters if participated. Given that their choice-dependent payoff B_i is fixed to 0, the model cannot differentiate the utilities between different vote choices. Second, the model cannot explain the variation in the rate of uninformed participation across different elections. Given that C_i and D_i are fixed at individual-level and are not expected to vary across election

environment, uninformed voters' participation decision calculus should never be influenced by the electoral environment.

To fully understand the role of information in voting behavior, it is essential to understand the behavior in the *absence* of information of personal preference. The conventional model does a poor job of explaining uninformed voting behavior. In the remaining parts in this section, I introduce two models of voting participation which provide clear predictions of *when* and *how* uninformed voters participate in election. Both models focus on the role of *social information*. Even when uninformed voters have no knowledge of their own preferences, they may act systematically based on the expected behavior of other voters in the society.

2.1 The Swing Voter's Curse (SVC) Model

The *Swing Voter's Curse* (SVC) model of voting (Feddersen and Pesendorfer 1996) focuses on the *strategic* instrumental incentive to explain the relationship between information and participation. The model is unique in two perspectives. First, the utility function of voters is dependent upon the behavior of other voters in the population, and thus it provides voters new incentives that are independent of their personal preferences. Second, the model assumes no cost of voting. In contrast to the decision-theoretic model which relies on the value of C_i to predict participation, the SVC model explores the participatory incentives for voters independent of the cost of voting.

Given the above features, the SVC model is designed as follows. First, there are two candidates $\{0,1\}$ and three types of voters $\{I,0,1\}$. Type 0 and type 1 voters are defined as *partisans*, and they always have higher utility when the candidate corresponding to their type is elected. Type I voters are *independents* and they share common latent preference of candidate assigned by the state $z \in \{0,1\}$ (in the state z, all independents prefer candidate z). Second, the total of N voters are randomly drawn from the population by probabilities $\{p_0, p_1, p_I\}$ assigned to respective types. Third, all voters receive the message $m \in \{0, \alpha, 1\}$, defined as the probability of state z being 0. Those who received 0 or 1 are informed, since they know for sure which candidate makes them better off if they are independents. On the other hand, those who receive $\alpha \in (0, 0.5)$ are uninformed, because they are uncertain about the true state z. The probability of being informed is exogenously assigned as $q \in (0,1)$. Lastly, all voters make a decision to voter for 0 or 1 or to abstain (ϕ).

The equilibrium analysis shows that informed independents always vote for the candidate m, and parti-

sans always vote for the candidate corresponds to their type. Uninformed independents, on the other hand, are expected to act so that they can "maximize the probability that the informed independent agents determine the winner" (414). To achieve this purpose, uninformed independents mix abstention and voting in their equilibrium strategy (have a rational incentive to abstain) when $p_i(1-q) \geq |p_0 - p_1|$ (417). This result provides three implications. First, if the proportion of uninformed independents in voters (i.e., $p_i(1-q)$) is smaller than the non-zero partisan bias (i.e., $|p_0 - p_1| > 0$), uninformed independents always turn out to vote to offset the partisan bias so that informed independents can determine the final electoral outcome. Second, if there is no partisan voters or there is no difference between the number of type 0 partisans and type 1 partisans, uninformed independents always abstain. Third, if uninformed independents have incentive to take mixed strategy (i.e., $p_i(1-q) \geq |p_0 - p_1| > 0$), they vote only to offset partisan bias and the probability of turning out increases along with either the increase in partisan bias or the decrease in the proportion of uninformed independents.

There are two important aspects to the result from the SVC model. First, the result implies that the participation decision of uninformed voters are dependent upon the preference distribution and the information distribution among the voter population. Especially, the proportion of uninformed $(1-q)$ and the size of partisan bias $|p_0 - p_1|$ critically influence the decision calculus of uninformed voters. Second, the result shows that uninformed (independent) voters are always better off by making informed (independent) voters to determine the electoral outcome. Therefore, if participated, uninformed voters always vote only to offset the partisan bias in the voter population, so that they can delegate the final electoral outcome to informed (independent) voters.

2.2 The Bandwagoning (BW) Model

Alternative formulation of voting participation models focuses on the non-instrumental incentives. The individually-fixed expressive benefit (i.e., D term in the decision-theoretic model) does not capture the variations in participation behavior across elections. The *bandwagoning* (BW) model solves the above issues by incorporating the social information into the calculus of expressive voting. It states that voters gain positive benefit from voting with the majority of the society (or voting for the winner of the election). While both conformity-based and altruism-based explanations are offered as the motivation, numbers of study find the instances of bandwagoning voting behavior (Morton and Ou 2015, Tyran and Wagner 2016).

In the simple BW model proposed in Bischoff and Egbert (2013), the bandwagoning motivation is formulated as follows. Suppose that there are two candidates $k \in \{0,1\}$ and the ex ante probability that the representative fellow-voter votes for candidate k is $\widehat{a_{-i,k}}$. Then, the *bandwagoning utility* from voting for candidate k is defined as:

$$\beta_{i,k}(\widehat{a_{-i,k}}) \begin{cases} > 0 \text{ if } \widehat{a_{-i,k}} > 0.5 \\ = 0 \text{ if } \widehat{a_{-i,k}} = 0.5 \\ < 0 \text{ if } \widehat{a_{-i,k}} < 0.5 \end{cases}$$

Therefore, an individual voter receives positive bandwagoning utility from voting in line with the majority but receives negative bandwagoning utility from voting in line with the minority. In addition, it is assumed that the absolute bandwagoning utility $|\beta_{i,k}|$ is strictly increasing as $\widehat{a_{-i,k}}$ deviates more from 0.5. Individuals receive higher bandwagoning utility from voting in line with the larger majority.

In response to the social information of preference distribution, the BW model generates the contrasting prediction than the SVC model. It predicts that uninformed voters, if participated, vote for the ex ante advantaged candidate (i.e., supported by the majority) in the district.

3 Experimental Design

3.1 Previous Attempts to Test SVC and BW Models

Not many studies tested the implications from the models in the previous sections. The only direct experimental application of SVC model (Battaglini, Morton and Palfrey 2010, 2008), authors use highly abstract apolitical context to test the expectations from SVC model. Specifically, the experimental procedure is described as follows. First, participants are separated into the group of seven (they are assumed to be all *independents*). Second, in the computer screen, participants see two jars with eight balls in each jar: Jar 1 contains 2 red balls and 6 white balls and jar 2 contains two yellow balls and six white balls (i.e., the probability of being informed q is 0.25). Third, the monitor randomly choose one of jars with the probability π (parallel to α in SVC model) by tossing a die (the result is hidden from participants, but they know $\pi = \{1/2, 5/9\}$). Third, balls are shuffled on the screen with the ball colors hidden, and one ball is assigned to each participant. Participants can then check their ball colors by clicking on it. If the ball color is red or yellow, one is informed, because they know which jar the ball came from; if the ball color is white, one is uninformed. Fourth, participants choose whether to vote for which jar the ball originally came from (the

correct answer is defined the by the state defined in the third stage) or to abstain. Here, just before the selection, participants notice that the computer casts $m \in \{0,2,4\}$ votes to jar 1 (i.e., partisan bias is created). After each run, participants receive 80 cents if majority of votes are casted to correct jar, and 5 cents if not. The whole experiment consists of 3 parts which include 10 rounds of the above procedure in each.

The result shows the tendencies consistent with the implications from Feddersen and Pesendorfer (1996). First, if $\pi = 1/2$, uninformed independents almost always abstain. Second, the presence of partisan bias does encourage uninformed independents to turn out and vote to compensate the bias. Third, the decrease in partisan bias m contributes to the increase in abstention by uninformed voters (consistent with the third implication made by SVC model). For example, when $\pi = 1/2$, the abstention rate of uninformed voters reach 91% if $m = 0$ but it decreases to 19% when $m = 4$. The results clearly illustrate that uninformed independents have a strategic incentive to abstain and delegate their decisions to informed independents.

While many experimental studies of voting behavior concern with the expressive benefits, few explicitly test the BW model. In one of those applications, Bischoff and Egbert (2013) differentiate the bandwagoning utility from other types of expressive benefit. Following the original design of Tyran (2004), they conduct a lab experiment that asks participants to vote yes or no to donate their endowment to "a non-government organization (NGO) serving a certain charitable or common-interest purpose" (276). If the majority votes yes, then all the endowment are actually donated to the NGOs, but if the majority votes no, then participants get to keep the endowment for themselves. Instrumentally, no participant has an incentive to vote yes and potentially lose their endowment. On the other hand, some participants may have expressive incentive to vote for the donation. To capture the bandwagoning incentive, the experiment inform participants the proportion of those who voted yes in randomly selected one of two subsets of the participants in the previous session. The result of the experiment show that the information treatment induces statistically significant bandwagoning effect (i.e., the probability of voting yes increases in response to the higher proportion of voted yes in the information treatment).

3.2 The Design of the Current Experiment

The current project aims to construct the experiment that closely traces the structure of SVC model, but incorporates the tests of the bandwagoning utility. Particularly, the current experimental design focus on three features: contextualization, manipulation of partisan bias and uninformed proportion, and channels of

common knowledge sharing.

First, the current experiment intends to contextualize the mock-voting situation to have the meaning closer to the real-world. In their highly abstract design of election, it is difficult to for the previous experiments to assess the real-world mechanisms of voting participation. Especially in Battaglini, Morton and Palfrey (2008, 2010), it is not clear if "choosing a correct jar" approximates the voting decisions made in the real-world elections. Also, Bischoff and Egbert (2013) eliminate the option of abstention from the experiment, which forces participants to make a vote choice. Even when there is a trade off between contextualization and stylization, participants of experiments should feel real that they are making electoral decisions to ensure the fair level of external validity.

Second, the current experiment intends to manipulate both uninformed proportion $(1-q)$ and partisan bias $|p_0 - p_1|$ to assess the effect of election environment on participation decisions of uninformed voters.Battaglini, Morton and Palfrey (2010, 2008) fixed the assignment of the probability of being informed q and the proportion of independents p_I. This in turns makes their experiment impossible to assess the effect of uninformed proportion $(1-q)$ on the participation decision calculus of uninformed voters. SVC model implies that, decrease in the size of uninformed proportion make it more likely for uninformed independents to turn out in election to offset the existent partisan bias. This implication was never tested in the experiments conducted in (Battaglini, Morton and Palfrey 2010, 2008). The current experiment manipulate both parameters to further understand the decision making mechanism of uninformed voters.

Third, in the previous experiments, it is unclear how the common knowledge (i.e., p_0, p_1, p_I and q) are shared among voters. In the real-world situation, those common knowledge are not just provided out of nowhere. Voters may obtain relevant information through at least two channels. One channel is media *polling*. Here, news reports on the pre-election public opinion polling often include some information about the distribution of partisan preference or other features of aggregated public opinion. Another channel is *social interaction*. Here, voters may speculate the level of relevant parameters based on the information obtained from direct interactions with their community (or group) members.

3.3 Experimental Procedure

Given the above design focus, I designed politically contextualized SVC experiment. To begin with, 160 undergraduate students are recruited into the study of voting in election. Each session involves 16 partic-

ipants and lasts about one hour and students are paid with the participation fee of $5 regardless of their decisions in the experiment. The additional fees are paid according to the outcomes of the mock-elections in the experiment. One session is constructed from three stages, where each stage involves 15 rounds of mock-election. The specific experimental procedure goes as follows.

At each round, there is $\$k$ worth of public goods, and participants are instructed to elect the distributor of public goods (total distributed goods will be exchanged with monetary incentive at the end of the session). There are two candidates, A and B, of public goods distributor. Only one of them is an *equal* distributor with probability $\pi = 0.5$ (π is common knowledge) and another is always an *unequal* distributor. If elected, *equal* distributor evenly splits the public goods to all participants, while *unequal* distributor gives goods only to their corresponding allies.

After the general instruction about the structure of the game, each participant is assigned to one of three types – candidate A's ally (A), candidate B's ally (B), and independent (I) – with corresponding probabilities $\{p_A, p_B, p_I\}$ (these probabilities are not shown to participants). Then, if the voter is independent, one is informed with probability q. Informed participant is provided with the sentence that says "You know *for sure* that candidate X is an *equal* distributor and candidate Y is an *unequal* distributor." (e.g., $X, Y \in \{A, B\}, X \neq Y$). The payoff of each voter's type from each elected distributor can be summarized in Table 1. Here, candidate allies always expect the same or higher payoff if the distributor corresponding to their partisanship is elected (i.e., $u_A(A) \geq u_A(B)$ and $u_B(B) \geq u_B(A)$), while independents always expect higher utility from *equal* distributor to be elected since they receive nothing from *unequal* distributor (i.e., $u_I(equal) > u_I(unequal) = 0$). Therefore, candidate allies should always vote for the distributor corresponding to their partisanship, and independents, if they are informed, should always vote for *equal* distributor. There is no weakly or strictly dominant strategy for uninformed independent.

In the next step of the experiment, participants are provided with complete or incomplete information of the common knowledge (i.e., distribution of voter types and information levels). For those who are receiving complete information, the knowledge is provided through *polling* channel. In this treatment, participants are provided with the short paragraph explaining the distribution of A's allies, B's allies and independents. Also, the polling result reveals the number of informed members in the voter population. For those who are receiving incomplete information, knowledge is provided through *social interaction* channel. In this treatment, each participant is provided with the list of other participants in the same session. Then, the limited number of voter profiles from the list becomes available and participants can open them one by

Table 1: Payoff Correspondence of Voters' Type and Elected Distributor's Type

		Elected Distributor's Type			
		Candidate A		Candidate B	
		Equal	*Unequal*	*Equal*	*Unequal*
Voter's Type	A's Ally	$\frac{k}{16}$	$\frac{k}{16p_A}$	$\frac{k}{16}$	0
	B's Ally	$\frac{k}{16}$	0	$\frac{k}{16}$	$\frac{k}{16p_B}$
	Independent	$\frac{k}{16}$	0	$\frac{k}{16}$	0

one. This setting approximates the impression formed from the direct encounter with community members. Voters have to manually collect information and are never be able to obtain the complete set of common knowledge.

In the last step of the each round of election, participants are simultaneously choose to cast their vote for one of candidates or to abstain. If the voting result comes out to be tie, the final result will be decided by the toss of fair coin. If *equal* distributor is elected, every member in the session receives the payoff of $k/16$. If *unequal* distributor is elected, only the ally of the elected candidate X receives the payoff of $k/p_X 16$. The experiment consists of two stages with each stage involves 15 rounds of mock-election.

The experiment manipulates two parameters: ally (partisan) bias (i.e., $|p_A - p_B|$) and uninformed voters' proportion (i.e., $(1-q)$). p_I is fixed to the same rate (i.e., $\frac{1}{2}$). Ally bias has three levels: *Large* (i.e., $|p_A - p_B| = \frac{1}{4}$), *small* (i.e., $|p_A - p_B| = \frac{1}{8}$), and *none* (i.e., $|p_A - p_B| = 0$). Uninformed voter's proportion has three levels: *More uninformed* (i.e., $(1-q) = \frac{3}{4}$), *even* (i.e., $(1-q) = \frac{1}{2}$), and *less uninformed* (i.e., $(1-q) = \frac{1}{4}$).This parameter treatment is assigned as within-subject treatment, varied across each round of election.

4 Hypotheses

Under all conditions of the experiment, candidate allies are expected to participate and vote for their allied candidate, and informed independents are expected to participate and vote for an equal distributor. The dependent variable of interest in this experiment is the behavior of uninformed independent voters.

If full information of the common knowledge is provided (polling treatment), the SVC model can make

Table 2: The SVC Model Predictions of Uninformed Independents' Behavior under *Polling Result* Channel

	Uninformed Independent Proportion $\frac{1}{2}(1-q)$		
Ally Bias $\lvert p_A - p_B \rvert$	*More Uninformed* $\frac{3}{8}$	*Even* $\frac{2}{8}$	*Less Uninformed* $\frac{1}{8}$
Large (More A) $\frac{2}{8}$	*Mix Voting B and Abst.*	*Vote B*	*Vote B*
Small (More A) $\frac{1}{8}$	*Mix Voting B and Abst.*	*Mix Voting B and Abst.*	*Vote B*
None	*Abstain*	*Abstain*	*Abstain*
Small (More B) $\frac{1}{8}$	*Mix Voting A and Abst.*	*Mix Voting A and Abst.*	*Vote A*
Large (More B) $\frac{2}{8}$	*Mix Voting A and Abst.*	*Vote A*	*Vote A*

precise predictions. The rough set of predictions are provided in Table 2.[1] First, it is expected that uninformed independent voters always abstain if there is no bias in the proportion of candidate allies. Given the purpose of delegating the votes to informed independents, their purpose is already achieved. They *should not* participate and vote randomly to prevent informed voters from determining the electoral outcome. Second, as ally bias gets larger, uninformed independents are more likely to participate in election and vote to *offset* the bias. Third, as uninformed (independent) proportion decreases, voters should be more likely to participate in election and vote to to offset the bias.

In contrast the SVC model, the BW model predicts that voters vote in line with the *expected* majority in the election. While ally bias information cannot give the definitive conclusion on which candidate is winning the election (since $p_I = 1/2$), but it may have an anchoring effect (Furnham and Boo 2011) to influence the expected majority in the voter population. Thus, under the full information, the BW model predicts that a participant will vote for the advantaged candidate based on the ex ante information about the ally bias. Without the ally bias, a participant may abstain from the election due to the fear of making mistakes.

On the other hand, if the information of the common knowledge is incomplete (social interaction channel), the knowledge provided does not necessarily represent th overall picture of voter population. Uninformed independent voters has to make their decisions based only on the given knowledge, and these knowledges are inadequate to make predictions based on SVC model. On the other hand, bandwagoning model still provide the same prediction to follow the majority preference.

Thus, we predict SVC model to have more explanatory power to predict the behavior under polling treatment, and the bandwagoning model to have more power in predicting the behavior under social interaction treatment.

[1] Note that the column represents *uninformed independent proportion* instead of *uninformed proportion* (given $p_I = \frac{1}{2}$) to make interpretations simple.

In addition, if I am able to conduct the experiment in both United States and Japan, I expect to see difference in the behavioral tendencies in Japan and United States. Research in cultural psychology suggests high-level of collectivism in East Asian countries compared to the North American countries (Markus and Kitayama 1991). The collectivist society may heighten the conformity-based motivation to bandwagon, thus may increase the predictive power of the BW model. This tendency may be strengthened under incomplete information (i.e., social interaction channel) compared to complete information (i.e., polling channel).

5 Analytical Strategy

The following methods can be potentially applied to analyze the experimental results:

- Multinomial Logit/Probit
- Panel Fixed/Random Effects (to account for across round, within-subject tendency)
- Quantal Response Equilibrium (Battaglini, Morton and Palfrey 2010, Bassi, Morton and Williams 2011): the method to compare the equilibrium strategy from the model and the empirical observation.

6 Discussion

In sum, the current experiment intends to examine the potential behavior of uninformed voters in election. Given that conventional voting participation model (Downs 1957, Riker and Ordeshook 1968, Matsusaka 1995) does not provide expectations on how they behave after the participation, I utilize *Swing Voter's Curse* (SVC) model and the bandwagoning (BW) model to make those predictions.

In contrast to the previous practices of highly stylized experiment, I designed my experiment to be more meaningful simplification of real-world electoral decisions. I manipulate the important theoretical parameter which was never manipulated in the previous experiments. I also introduce the logic behind potentially important role of common knowledge channels. In addition, if possible, I am interested in conducting the identical experiment in both Japan and United States. Here, The collectivist and individualistic cultural background may lead to the different types of behavior under limited information.

The result will significantly contribute to the understandings toward the mechanisms of the relationship between individual level of information, election environment, voting participation and vote choice. Previous studies rarely provide the logical explanation of the uninformed voting behavior. If uninformed voters

make logical decisions to participate and vote in elections conditional on the surrounding environment, the conventional wisdom of uninformed involved in random behavior is not necessarily true. By providing systematic explanations of uninformed behavior, this experiment would deeper understanding toward the potential competence of voters under democracy.

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