Original Article

## Key behavioral patterns of voters given word-of-mouth and electronic word-of-mouth information on political candidates

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**Abstract**

**Purpose:** When we make various decisions, we tend to be influenced by external information, especially opinions of others. Past studies revealed that WOM (word-of-mouth) and EWOM (electronic word-of-mouth) influences on decision making, among which several WOM factors influence on voting. This study examines how WOM and EWOM information regarding electoral candidates influence voters, when both WOM and EWOM information exist and often conflict with one another.

**Method:** Principal component analysis of participants' gender, age, grade, internet proficiency, and interest in politics, together with positive and negative WOM and EWOM information corresponding to sixteen aspects of electoral candidates, has revealed four unique behavioral patterns of voters.

**Results:** These patterns suggest that voter behavior varies according to whether given information is personality-oriented or not and whether given information is positive-oriented or negative-oriented. Also, there is a difference in susceptibility to WOM and EWOM information, but only with respect to positive information.

**Conclusions:** All three of our hypotheses concerning behavioral patterns of voters have been proven by the results.

**Keywords:** word-of-mouth, electronic word-of-mouth, voting, persona, election, policy, electoral behavior, political marketing, social network

### Introduction

In decision making, we often ask others' opinions before making decisions. In addition, we are not always rationally influenced by external information. Degree of influence can vary, depending on information form or information source. For example, adolescent peer network position influences their purchase activities (Gentina & Bonsu, 2013). People tend to spend more due to higher "hedonic values" when the shopping companion is a friend, compared with the cases when the shopping companion is a family or when shopping alone (Borges, Chebat & Babin, 2010).

Many consumers find word-of-mouth (WOM) as compelling source of information. Although the concept of WOM has been introduced as early as 1898, it has had to wait until early 2000 to reemerge as a popular subject (Graham & Havlena, 2007). Nowadays, many consumers in variety of sectors receive information from different sources, such as physical surroundings, mass media, and other persons. Information from other persons about goods and services may come directly from sales personnel or indirectly from other consumers. In

marketing, WOM is an important strategy and normally refers to advice from other consumers. During process of consumer decision-making, WOM is often a considerable factor; for example, Keaveney (1995) observed that positive WOM has been the main source of information when people find a new service supplier. In consumer choice, WOM is often the dominant factor (East, Hammond and Wright, 2007).

The importance of WOM is also evident in political marketing, where voters are consumers shopping for their best political candidates. Besides direct information from the mass media and campaigns, voters also rely on WOM to get opinions from their inner circles, while political candidates resort to WOM to spread positive images in order to shape voters' behavior. Candidates' image is one of several inseparable parts of contemporary political elections (Nimmo and Savage, 1976), as positive images are effective in voters' decision-making process (Hacker, 2004; Hellweg, Dionisopoulos, and Kugler, 1989; Miller, Wattenberg, and Malanchuk, 1986; Sheafer, 2008) and augment the popularity of candidates (Shanks and Miller, 1990; Stokes, 1966).

In addition to personality-oriented factors, e.g. positive images, non-personality factors are also known to affect voters' decision process. Party affiliations, demographics of candidates, age, gender, ethnicity, and social group affiliations all have message attributes and tell something to voters (Bailenson, Iyengar, Yee and Collins, 2008). In addition to personality patterns, candidates' political parties and his or her history are prominent factors in elections. Moreover, according to Bailenson et al. (2008), voters are drawn to political candidates with something similar or familiar, e.g., party, political issue, gender, and facial appearance. Despite these findings, not many researches have looked into WOM of political candidates'

non-personality traits. Furthermore, Argan & Argan (2012) seems to be a rare case that has attempted to address WOM of both personality-oriented and non-personality-oriented factors affecting voting behavior.

This paper builds on Argan & Argan (2012) in that we have investigated whether there are several behavioral patterns of voters. Whilst past literature concerning WOM has treated voters as a uniform group of consumers in the political market, it is natural to conjecture that there are different types of voters, some of them more susceptible to certain information transited via WOM than others. This means gaining ergonomic perspectives on election strategy building; attaining deeper understanding of voter psychology can be a key factor of success in election. One example would be difference in susceptibility between personality-oriented and non-personality-oriented information concerning political candidates. Another example would be difference in susceptibility between positive and negative information; as Keaveney (1995) suggests, behaviors are sometimes strictly related to positive (and negative) information.

Yet another example would be difference in susceptibility between WOM-transmitted information and EWOM (electronic word-of-mouth) transmitted information concerning political candidates. The emergence of the internet has led to many researches on EWOM's effects on decision making (e.g. Basuroy, Suman, Chatterjee & Ravid, 2003; Chevalier & Mayzlin, 2006; Liu, 2006), including some researches addressing EWOM of political marketing occurring on Twitter, Facebook, and other SNS (Williams & Gulati, 2008; Utz, 2009; Tumasjan et al., 2010; Graham et al., 2013). However, virtually no literature has covered the various factors of political candidates that may affect voting behavior via EWOM; in other words, EWOM counterpart of the research by Argan &

Argan (2012) does not exist. Of course, it is our interest to see whether some types of voters change behavior when facing similar information on both WOM and EWOM. This is important, because WOM contains information-recipients' personal impression of information-providers, and because affinity to the providers might influence WOM-transmitted information's trustworthiness (Eguchi & Yamashita, 2015). Also, looking into effects on voters by various types of EWOM-transmitted information pertaining to political candidates is of great importance in Japan on the backdrop of recent relaxation of bans on internet usage for election campaigns.

## 1. Purpose of this study

Gaining ergonomic perspectives is essential for election strategy building, as attaining deeper understanding of voter psychology can be a key factor of success in election. On such backdrop, it was our purpose to find key behavioral patterns of voters, exhibiting different susceptibility towards certain aspects of WOM and EWOM transmitted information of political candidates. Notably, we were concerned with difference in susceptibility of voter behavioral patterns between 1) personality-oriented and non-personality-oriented information, 2) positive-oriented and negative-oriented information, and 3) EWOM-transmitted and WOM-transmitted information.

## 2. Research hypotheses

Given the above purpose, we constructed the following hypotheses:

H1: There might be behavioral patterns of voters susceptible to either personality-oriented or non-personality-oriented information.

H2: There might be behavioral patterns of voters susceptible to either positive or negative orientation of information.

H3: There might be behavioral patterns of voters susceptible to either EWOM or WOM orientation of information.

## Methodology

We conducted a questionnaire in April 2016, when Japan's mass media had become to focus more on the legal change of 2013 facing the first national election with nationwide cognition of election-related EWOM upcoming in July of the same year.

## 1. Participants

Overall, 79 participants joined the experiment. Participants were undergraduate students from Tokyo Metropolitan University. Among them, 38 participants were female, and 40 participants were male, while 1 participant did not disclose his/her gender. The experiment took about 20 minutes for participants to answer the questionnaire.

## 2. Experimental design and questionnaire

The questionnaire required participants to imagine a situation in the near future where they have to vote for a local election without any prior preference of candidates due to lack of information on characteristics of candidates before gaining information via WOM or EWOM (Appendix 1). We controlled the situation as a local election, because Japanese local election results are more stable compared with national election results, less fluctuated by political trends and scandals of political parties or famous politicians. We also controlled the situation such that participants have no prior candidate preference, because election campaigns using EWOM had only recently started in Japan at the time of experiment. Moreover, we controlled the situation such that participants are only given WOM or EWOM information and only positive or negative information under a set condition (later outlined in Table 2). Moreover, we

avoided using specific party names, candidate names, or pictures so that participants could decide neutrally regardless of political stance or ideology.

The questionnaire encompassed sixteen characteristics of candidates as in Table 1.

**Table 1: Characteristics used in the experiment**

| Characteristics |
| --- |
| 1.   The candidate's enthusiasm |
| 2.   The candidate's honesty |
| 3.   The candidate's amiability |
| 4.   How well-known the candidate is |
| 5.   Evaluation of candidate by his/her                         colleagues/acquaintances |
| 6.   The candidate's relationship with family members |
| 7.   The candidate's professional career |
| 8.   Public opinion on the candidate's party |
| 9.   Reputation of the head of the candidate's party |
| 10.  How influential the candidate's party is |
| 11.  The candidate's political career |
| 12.  The candidate's election platform / political stance |
| 13.  The candidate's policy pledges |
| 14.  The candidate's campaign activity |
| 15.  The candidate's social contributions |
| 16.  News/scandal of the candidate |

These characteristics outlined in Table 1 were based on question items used in Argan & Argan (2012). In Argan & Argan (2012), "Personality of candidate," "Honesty of candidate," "To be loved in society of candidate," "Daily Family experience of candidate," and "Occupation of candidate" were "Personality" factors; "General opinion towards her/his political party," "President of political party," "Power of political party on society," and "Political background of candidate" were "Party Situation" factors; "Election program of candidate," "Projects to be transacted," "Political promotion efforts," "Contribution to society by candidate," and "News about candidate" were "Social Integration" factors; "Ethnic background of candidate" and "Gender

of candidate" were "Demographics" factors.

In our experiment, we made some amendments. As for "Personality" factors, we replaced the vaguely-worded "Personality of candidate" with "The candidate's enthusiasm," "The candidate's amiability," and "How well-known the candidate is"; we kept but relabeled "Honesty of candidate" as "The candidate's honesty"; we found the definition of "society" in "To be loved in society of candidate" to be too general and thereby replaced the item with "Evaluation of candidate by his/her colleagues/acquaintances"; we kept but relabeled "Daily Family experience of candidate" as "The candidate's relationship with family members"; we replaced "Occupation of candidate" with "The candidate's professional career" because many political candidates tend to have experienced multiple occupations. As for "Party Situation" items, we kept but relabeled "General opinion towards her/his political party" as "Public opinion on the candidate's party," "President of political party" as "Reputation of the head of the candidate's party," "Power of political party on society" as "How influential the candidate's party is," and "Political background of candidate" as "The candidate's political career". As for "Social Integration" items, we replaced "Election program of candidate" and "Projects to be transacted" with "The candidate's election platform / political stance" and "The candidate's policy pledges" as the latter two classifications are more distinct from each other; we kept but relabeled "Political promotion efforts" as "The candidate's campaign activity," "Contribution to society by candidate" as "The candidate's campaign activity," and "News about candidate" as "News/scandal of the candidate." We deleted "Ethnic background of candidate" because there had been very few ethnically-non-Japanese candidates in Japanese local election history. We also deleted "Gender of candidate" for this study,

because including gender issue into the experiment would cause the results and implications to be too complicated, as various sexual orientation, gender identity, gender role, and gender bias of participants would have to be taken into account as well.

Given the sixteen characteristics of candidates, we asked participants to answer how much they would refer to each characteristic of

**Table 2: Conditions for asking degree of WOM/EWOM reference**

| Type of Information | Type of Comment |
|---|---|
| EWOM | Positive |
| | Negative |
| WOM | Positive |
| | Negative |

candidates for voting decisions, as in Appendix 1, under set conditions. There were four types of conditions overall, combining two types of information (EWOM or WOM) and two types of comments (positive or negative), as in Table 2.

Two versions of the questionnaire were prepared, comprising two different ordering of the four conditions, to avoid ordering bias. Equal number of copies was printed for each pattern, and the two versions were randomly distributed to the participants. The first version's order of conditions was 1) Positive EWOM, 2) Negative EWOM, 3) Positive WOM, and 4) Negative WOM. The second version's order was 1) Negative WOM, 2) Positive WOM, 3) Negative EWOM, and 4) Positive EWOM.

Under each condition of Table 2, we requested participants to answer how much they would refer to WOM or EWOM (0-10: 0="not at all" to 10="absolutely") for each characteristic of Table 1.

In addition, prior to the main questions, we asked participants their gender.

## Results

We conducted a principal component analysis (PCA) on the sixteen characteristics of candidates using 316 samples (79 respondents x four types of EWOM/WOM, positive-negative conditions) in order to extract key voting behavioral patterns of participants. Kaiser-Meyer-Olkin (KMO) test value was 0.855, and Bartlett's Test of Sphericity (BTS) value was 2735.5080 (p<.001). Judging from the inclines of the scree plot and eigenvalues (those greater than 1.000), we concluded that four principal components would be the most reasonable number of behavioral patterns. The four components represent 68.20% of total variance, each contributing 40.07%, 12.94%, 8.65%, and 6.54% before rotation, and 21.58%, 19.04%, 15.11%, and 12.47% after varimax rotation, respectively. Loadings of principal components after rotation are as in Table 3.

Component 1 (C1) shows high affinity with party-situation-oriented information, Component 2 (C2) with social-integration-oriented information, Component 3 (C3) and Component 4 (C4) with personality-oriented information, respectively.

Bartlett scores for the four components were assigned to each sample, and the components were then put to t-tests. C1 had significant relationship with positive orientation (p=.050). C2 and C4 had gender affinities; C2 with a mild degree to male (p=.066); C4 with a strong degree to female (p=.009). Significant difference was not seen for EWOM/WOM via just the t-test.

Finally, hierarchical cluster analysis was performed using Ward's method and average Euclidean distance, aggregating data according to EWOM/WOM, positive-negative, and gender. As in Figure 1, it was found out that difference in voters' susceptibility to EWOM and WOM information was only evident in positive-oriented information, and EWOM/WOM was not an issue for negative information.

**Table 3: Principal component analysis on the 16 characteristics**

| | | Principal Components | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| 1. | The candidate's enthusiasm | .056 | .236 | .835 | .121 |
| 2. | The candidate's honesty | .277 | .208 | .816 | .010 |
| 3. | The candidate's amiability | .063 | .280 | .718 | .338 |
| 4. | How well-known the candidate is | .348 | .056 | .007 | .650 |
| 5. | Evaluation of candidate by his/her colleagues/acquaintances | .171 | .475 | .183 | .556 |
| 6. | The candidate's relationship with family members | .091 | .092 | .172 | .808 |
| 7. | The candidate's professional career | .626 | .093 | .075 | .471 |
| 8. | Public opinion on the candidate's party | .755 | .239 | .167 | .123 |
| 9. | Reputation of the head of the candidate's party | .842 | .143 | .060 | .100 |
| 10. | How influential the candidate's party is | .863 | .065 | .089 | .133 |
| 11. | The candidate's political career | .660 | .227 | .138 | .239 |
| 12. | The candidate's election platform / political stance | .454 | .467 | .336 | -.178 |
| 13. | The candidate's policy pledges | .312 | .677 | .385 | -.147 |
| 14. | The candidate's campaign activity | .148 | .800 | .258 | .115 |
| 15. | The candidate's social contributions | .096 | .793 | .288 | .238 |
| 16. | News/scandal of the candidate | .157 | .737 | .044 | .189 |

**Figure 1: Dendrogram using ward method**
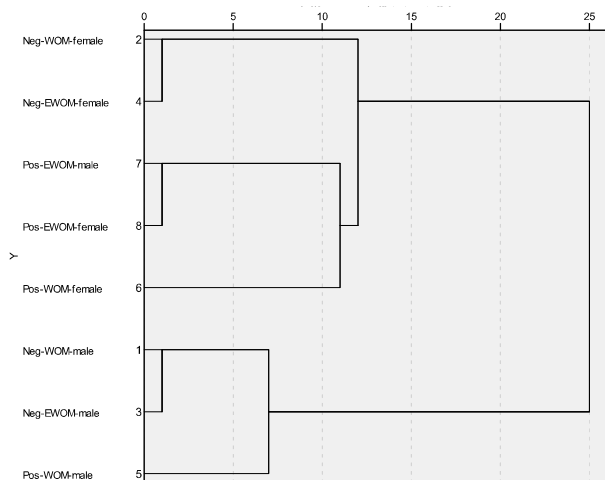


## Discussion

As H1 has predicted, we can distinguish personality-oriented C3 and C4 from non-personality-oriented C1 and C2. C3 focuses on personal trustworthiness on impression-basis; C4 focuses on human relationship to judge trustworthiness more indirectly and profoundly.

As H2 has predicted, we can identify party-situation-oriented C1 as also susceptible to positive-oriented information.

As H3 has predicted, voter behavior does vary according to EWOM and WOM, though limited to positive-oriented information.

Aside from nature of information (characteristic, EWOM/WOM, positive-negative), voter gender also affects voting behavior. Social-integration-oriented C2 is mildly linked with male voters. Human-relationship-oriented C4 is strongly linked with female voters.

There were two limitations to our experiment. The first limitation of our experiment was that we covered only undergraduate students. Further extensive study covering adults is anticipated.

The second limitation was that we did not differentiate between the many sources of WOM and EWOM information. In actuality, degree of reference to both WOM and EWOM should differ according to amount and type of social capital. This aspect will also be covered in future study.

As EWOM information via internet increases in number as well as in impact on electoral behavior, sophisticated political marketing

measures incorporating EWOM information are highly anticipated, and in this aspect, our results hold solid importance. Our results proved that voters are not a homogeneous body but are heterogeneous body consisting of different behavioral patterns in face of a variety of information – personality-oriented and non-personality-oriented, positive and negative, and WOM and EWOM – and this fact directly implies that effective future political marketing measures ought to take ergonomic designs that would address such different behavioral patterns and even possibly take advantage of the differences.

## Acknowledgements

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**Appendix 1**

An example of a situation in the questionnaire

In the municipality you are living, a local election will be held in near future. However, you have had no preferred candidate to vote for or candidate to avoid voting, because you have not been well informed about characteristics of candidates.

One day, you gain specific information about a candidate for your municipality from the internet just by chance.

If gained information is positive and is about the following characteristics, how much will you refer to information on each characteristic when you vote? Please fill in 0-10 (0 = "not at all" to 10 = "absolutely").