

**Re-examining the role of interpersonal communications  
in “time-of-voting decision” studies**

by

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## ABSTRACT

Previous voting studies classified voters into three groups – pre-campaign deciders, campaign deciders, and last-minute deciders – according to their vote decision timing and suggested a linear relationship between time-of-voting decision and political/nonpolitical characteristics, predicting that the earlier voters make their decisions, the more inclined they are to be politically involved, interested and attentive.

This study re-examines the linear relationship suggested by past studies, treating time-of-voting decision as a dependent variable. Furthermore, it explores the roles of interpersonal communications, specifically heterogeneity within interpersonal communication networks, in individuals' voting behaviors with the expectation that heterogeneity is a primary determinant of the time-of-voting decision.

Data for the study came from the 2000 American National Election Studies, and the same variables as previous studies were used in analysis. Results showed there were no significant differences between campaign deciders and last-minute deciders, while pre-campaign deciders significantly differed from the other two groups. Further analysis with non-voters included found that both campaign deciders and last-minute deciders showed significantly higher levels of political participation and interests than non-voters. These results do not support the findings of previous studies.

Heterogeneity was found to be an important predictor for time-of-voting decision. Supporting the “cross-pressure” hypothesis, it was found that as heterogeneity increased, opinion formation was delayed. Also, it was revealed that heterogeneity was negatively correlated with political participation and media use and attention. The results suggest that

heterogeneity should be reconsidered as an important factor to fully understand the process by which electoral preferences are formed and affected by campaign messages.

## CHAPTER 1. INTRODUCTION

Since the pioneering works of Lazarsfeld, Berelson, and their colleagues (Lazarsfeld, et al., 1968; Berelson, et al., 1954), the effects of political campaigns, especially delivered via mass media, have long been considered as a key issue in political communication research. According to early voting studies (e.g., Katz, 1973; Pool, 1963), a majority of voters make up their minds about which candidate or party to support before campaigns have even begun. Therefore, they are not likely to change their attitudes during campaigns, even though they usually pay close attention to and enthusiastically seek out campaign-specific information. In contrast, individuals who are not committed to a choice before the campaigns might be relatively more susceptible to campaign events and messages. However, they tend to be less interested and thus to have less chance to expose themselves to campaign messages. Hence, they are less influenced by the campaign messages, not because of resistance but simply because of lack of exposure (Berelson & Steiner, 1964). In short, the early studies reached the conclusion that campaign messages delivered through mass media have a limited effect on people's opinions and attitudes.

Later, Chaffee and Choe (1980) suggested a more sophisticated model, in which the time-of-voting decision – the time point at which voters report having made up their mind – is considered as a key predisposition that mediates campaign effects. This improves the previous dichotomous model: pre-committed voters vs. the others. Using four-wave panel survey data gathered during the 1976 presidential election, they classified voters into three groups – pre-campaign deciders, campaign deciders, and last-minute deciders (pp. 56-57) – according to when they make their voting decisions. They found significant differences

among the three voter groups in terms of political partisanship, media use and attention, and socioeconomic status. Particularly, the pre-campaign deciders, who make their decisions before the start of campaign, are politically more involved and interested and also pay more attention to campaign-specific information via media than any other voters. Not surprisingly, however, their partisan pre-commitment is strong enough to preclude campaign effects. On the other hand, the last-minute deciders, who make their decision within a few days before the election day, are less interested and less involved. Therefore, they make their decisions only on the basis of weak cues, such as latent party identification. As the in-between group, the campaign deciders are interested and involved enough to pay attention to campaign messages and sufficiently less committed enough to be affected by them.

Chaffee and Choe's study (1980) has been successfully replicated by many follow-up studies (e.g., Whitney & Goldman, 1985; Bowen, 1994; Gopoian & Hadjiharalambous, 1994; Chaffee & Rimal, 1996, etc.). However, there are several problems with these attempts to fully understand the process by which individual voters make their decisions and/or change them, and the function and influence of mass media during that process. First, there is no agreement among the previous studies upon the criteria used for classifying voters. Without any solid criteria for classification, the statistically significant differences found among them cannot be compared. Second, there is little empirical evidence to substantiate the claim that people who decide during campaigns, i.e., campaign deciders, *actually* do respond to campaign events and messages. Even if a voter makes or changes his or her decision during a campaign, this does not necessarily mean that he or she is affected by campaign events or messages. Third, few previous studies have attempted to understand the time-of-voting decision as a dependent variable. They simply described how each voter group can be



characterized or in what way one group is different from other groups, and failed to answer the question of *why* some decide early and others late. Lastly, most of the previous studies ignored or simplified the influences of peer groups or interpersonal communication, which should be regarded as one of the most important factors in forming and changing individuals' opinions.

With these problems in mind, this study will attempt to re-examine the major findings of Chaffee and Choe's study in a different context, using the American National Election Study (or ANES) data collected during the 2000 presidential election. It will incorporate the time-of-voting decision into dynamic models of interpersonal communication networks to explore whether and how the interpersonal communication environment delays or expedites voters' decisions.

## **CHAPTER 2. LITERATURE REVIEW**

### **2.1 Three Voter Groups by Time-of-Voting Decision**

The time-of-voting decision simply refers to the stage in the campaign at which an individual voter reports having decided on his or her electoral preference (Fournier et al., 2004). Typically, the literature identifies three ‘ideal types’ (Chaffee & Choe, 1980; Chaffee & Rimal, 1996): (1) those who always vote for the same parties or make up their mind long before the political campaign begins (‘pre-campaign deciders’); (2) those who decide during the campaign (‘campaign deciders’); and (3) those who decide as late as the final weeks before or on the election day (‘last-minute deciders’).

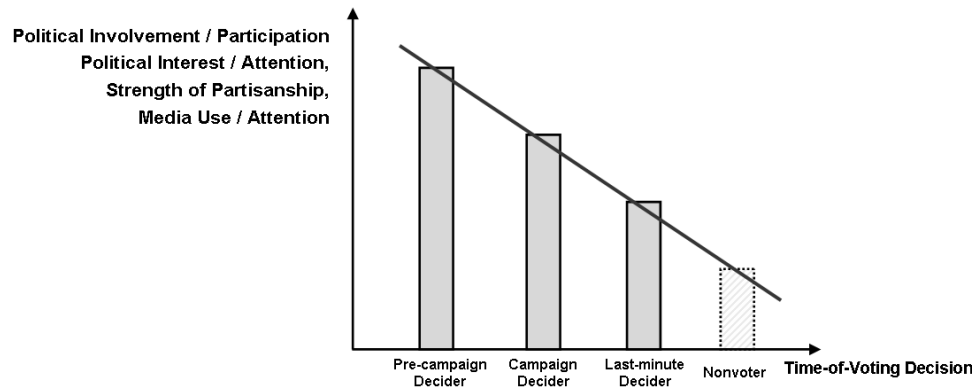
However, there is no agreement in operationally defining the specific time period for each group of voters, even in the studies conducted by the same researcher. For example, in one of his studies (Chaffee & Choe, 1980), Chaffee operationally defined ‘campaign deciders’ as those who decided during the three presidential debates (September 23 through October 22: a one-month period), while in his another study (Chaffee & Rimal, 1996) he defined campaign deciders as those who decided between the first primary election and TV debates (February 18 through October 12: an eight-month period).

Despite these ambiguous and inconsistent criteria for the three voter groups, most empirical studies provided surprisingly consistent results that the three voter groups show distinctive characteristics in many respects. According to them, the pre-campaign deciders tend to show stronger political orientation and party identification than other voters, while campaign deciders and last-minute deciders are less attached to political parties or particular candidates (Chaffee & Choe, 1980). Also, the pre-campaign deciders or early deciders often

express high interest in the campaign, devote high attention to media coverage, and have high levels of political knowledge. In contrast, last-minute deciders are generally uninterested, inattentive, and uninformed (Chaffee & Choe, 1980; Whitney & Goldman, 1985). Nevertheless, the last-minute deciders are relatively involved and attentive when compared to nonvoters (Gopoian & Hadjiharalambous, 1994).

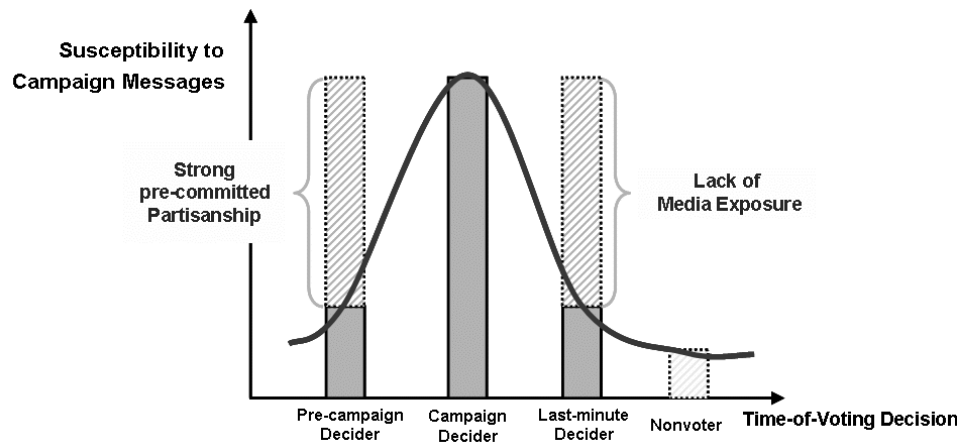
Furthermore, Gopoian and Hadjiharalambous (1994) reported that they found remarkable differences in demographic characteristics among the three voter groups, especially between last-minute deciders and the others. Their analysis of five U.S. presidential elections (1972 through 1988) revealed that younger voters and white voters were more likely than older and nonwhite voters to be last-minute deciders and suggested that a weak link exists between higher social status and late decisions. However, none of the demographic variables examined in their study demonstrated a consistently significant relationship with time-of-voting decision across all five elections.

To summarize, the previous studies on the time-of-voting decision have suggested a linear relationship between the decision timing and various political/nonpolitical variables. As Figure 1 shows, the earlier voters make their decision, the more likely they are to be politically involved and interested, to pay more attention to political events and media coverage on them, and also to have more knowledge. Moreover, it appears that this tendency holds when nonvoters are included (Gopoian & Hadjiharalambous 1994).



**Figure 1. Linear Relationship between Time-of-Voting Decision and Other Variables**

Regarding susceptibility to campaign messages, however, the past studies suggested a completely different model from the previous one: i.e., an inverse U-shaped nonlinear relationship (Figure 2). Even though the pre-campaign deciders are more likely than others to expose themselves to campaign-specific information during campaigns, their strong pre-committed partisanship nullifies campaign effects. On the other hand, the last-minute deciders are hardly affected by the campaign messages, because they have little chance to be exposed to them. Therefore, both pre-campaign deciders and last-minute deciders could be assumed to be hardly affected by campaign messages, especially delivered through mass media. In contrast, the campaign deciders are politically involved and interested enough to expose themselves to campaign messages and also sufficiently less committed to be open to incoming messages. Thus, they are expected to be the most susceptible to campaign messages. These general patterns confirm a long belief that time-of-voting decision is a key mediating variable for campaign effects (Lazarsfeld et al., 1968; Berelson et al., 1954; Box-Steffensmeier & Kimball, 1999).



**Figure 2. Nonlinear Relationship between Time-of-Voting Decision and Susceptibility to Campaign Messages**

However, there is some doubt that the campaign deciders *actually* do respond to campaign messages, because few studies have provided empirical evidence whether they are actually affected by campaign messages or other sources (e.g., Bowen, 1994; Fournier et al., 2004). In other words, there is little evidence showing whether the campaign deciders make their decisions based upon campaign messages. Of course, to be easily influenced by a political message, one should be exposed to it, receive it, and, more importantly, be undecided and uncertain about his or her choice. Nevertheless, being undecided is not a sufficient condition for persuasion or attitude formation to occur. Therefore, without investigating what messages voters expose themselves to and whether their decisions are corresponding to what the messages intended, the presence of campaign effects is still questionable. Moreover, considering many other factors affecting one's attitude or opinion, including interpersonal influences exerted through inter-personal communication networks, media exposure is merely one possible source for voting decision.

## **2.2 Time-of-Voting Decision as a Dependent Variable**

It is reasonable to assume that campaigns do not affect all voters equally. This assumption immediately entails the question of who is more or who is less susceptible to the campaigns. As a single variable, time-of-voting decision explains a considerable proportion of variances in voters' susceptibilities to the campaign effects as well as their political/nonpolitical characteristics. However, a statistically significant association of decision timing with other variables does not necessarily indicate a direct causal relationship among them. Moreover, close examination of the association found between the decision timing and other variables, especially the susceptibility to the campaign messages, reveals that the association is merely a tautological statement.

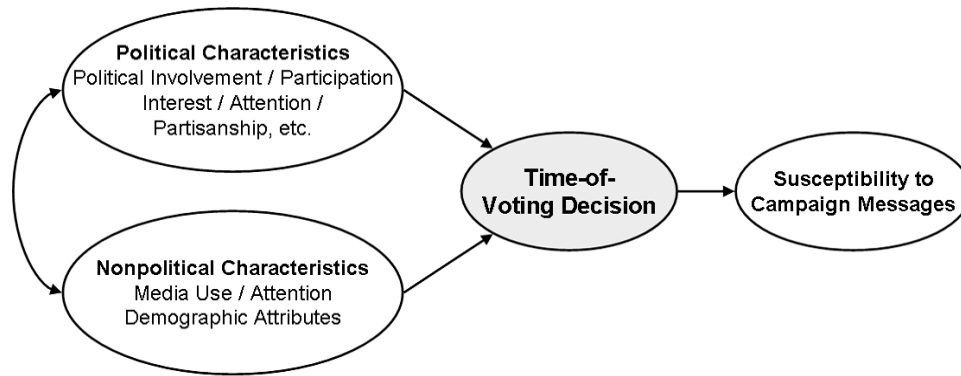
In previous studies, pre-campaign deciders refer to those who make up their minds before campaigns begin. By definition, voters who make up their minds or change their decisions after the campaigns begin can never be classified as 'pre-campaign deciders.' In other words, the definition of 'pre-campaign decider' in itself completely precludes any possibility of being affected by campaign messages. Therefore, the conclusion of the previous studies can be simply rephrased as a tautological statement: "Those who make their decisions before campaigns begin (i.e., pre-campaign deciders) do not make or change their decisions after the campaign begins (i.e., not to be affected by campaigns)." In the same manner, the conclusions for the campaign deciders and the last-minute deciders can be shown to be tautological statements.

This logical reasoning suggests that the time-of-voting decision should be regarded as a dependent variable rather than an independent variable: that is, the decision timing should be considered as determined by some other factors or as an indicator reflecting various 'long-

term' factors such as stability of partisan preferences, demographics, and assessments of a candidate's prior record in office (Box-Steffensmeier & Kimball, 1999). However, few previous studies treated it as a dependent variable and attempted to find its determinants: that is, *what* explains *when* voters make their decisions (e.g., Nir & Druckman, 2008). Most of them usually examined how the three "ideal types" of voters are characterized, mainly focusing on the possibility of being persuaded by campaign messages.

In some sense, some of the distinctive characteristics found among the three voter groups can be seen as the determinants of decision timing. For example, strength of partisanship and preference for particular candidates can be regarded as predictors of the time-of-voting decision, because early deciders tend to show strong partisanship and preference for candidates whom they support. Similarly, the level of political interest or involvement can be regarded as another predictor of the time-of-voting decision: that is, the more interested and involved in political events voters are, the earlier they make their voting decisions.

To summarize, it is reasonable to assume that time-of-voting decision is a dependent variable determined or explained by a variety of political/nonpolitical attributes and long/short-term factors (summarized in Figure 3). Specifically, the distinct characteristics of each voter group, as revealed in past studies, can be seen as predictors of the time-of-voting decision: e.g., political involvement, interest, attention, media use and attention, etc. That is, all the predictors eventually crystallize into the time-of-voting decision as a single variable. In turn, the time-of-voting decision mediates campaign effects by determining voter's susceptibility to them.



**Figure 3. Time-of-Voting Decision as a Dependent Variable**

### 2.3 Interpersonal Communication and Time-of-Voting Decision

Among the various possible determinants of the time-of-voting decision, including the distinct characteristics among the three voter groups, it is helpful to focus on interpersonal influence through face-to-face communication, which has long been emphasized as one of the most important factors in forming and changing one's opinions and attitudes. In fact, many previous studies concerning the time-of-voting decision reported that interpersonal communication variables, usually labeled 'political discussion/talk,' show statistical significance (e.g., Chaffee & Choe, 1980: Tables 1 and 2). Despite the importance attached to it by previous studies, interpersonal communication has not received the level of attention that it deserves in the time-of-voting decision studies. For instance, Chaffee and Choe (1980) seemed to preclude from their analysis the possibility of interpersonal influence on forming opinion by assuming that "vote decisions can be made on the basis of either pre-existing partisan commitments or exposure to the campaign (p. 56)." However, they assess interpersonal campaign discussion and use it in their analysis.



An increasing body of literature suggests that interpersonal heterogeneity within a voter's social networks plays a significant role in delaying his or her decision (Rivers, 1988; Sniderman et al., 1991; Johnston et al., 1996; Mutz, 2002, etc.). This argument that heterogeneity in personal opinion environment hinders preference formation and delays voting decision may date back to the early voting research conducted by Lazarsfeld and his colleagues (1944). Suggesting the new term 'cross-pressure,' they stressed that conflicts and inconsistencies among the factors influencing an individual's voting decision discourage voters from early involvement in the campaign: "Whatever the source of the conflicting pressures, whether from social status or class identification, from voting traditions or the attitudes of associates, the consistent result was to delay the voter's final decision" (p. 60). On the other hand, some scholars have hypothesized that people may be more likely to participate if their social environment is consistent with their own political beliefs (e.g., Leighley, 1990; Noelle-Neumann, 1984), even though they provided little solid evidence. A straightforward application of the early voting studies suggests that the presence of disagreement within one's interpersonal communication network would delay voting decision, while homogeneity within the discussion-network would encourage voters to make their decision early. In short, it can be hypothesized that those who experience more disagreement within their interpersonal communication network will make their final decision relatively late: i.e., last-minute deciders.

If the delayed voting decision is primarily due to 'cross-pressure,' more specifically, disagreement within voters' interpersonal communication networks, last-minute deciders and their voting behaviors should be open to further examination. Recently, a series of empirical studies have shown that interpersonal communication networks with higher heterogeneity

produce a range of positive, civic-minded outcomes: for example, political knowledge and efficacy (Hardy, 2005) and political engagement and participation (McLeod et al., 1999; Scheufele, Nisbet, & Brossard, 2003; Huckfeldt, Johnson, & Sprague, 2004; Huckfeldt, Mendez, & Osborn, 2004, etc.). That is, the delayed decisions can be seen as well-informed and prudent decisions, which necessarily take much longer to carefully consider all the possible choices, rather than simply obligatory or habitual behaviors. In contrast, the early decisions might be nothing more than the hasty choices of narrow-minded people, who are hardly willing to listen to different opinions and enjoy sharing their opinions only with like-minded others.

This alternative interpretation suggests that time-of-voting decision can be seen as a consequence of the homogeneity/heterogeneity within one's opinion environment. This would be empirically and logically compatible with the findings of the previous studies on the three "ideal types" of voters as well as other communication studies. To illustrate, suppose that there is an extensive interpersonal political communication network in which all participants share the same or at least similar opinions and exclude different or opposing viewpoints. As the group polarization theory predicts (Moscovici & Zavalloni, 1969; Myers, 1975; Myers & Kaplan, 1976; Sunstein, 2002), individuals in such an exclusive communication environment would predictably move toward a more extreme position in the direction indicated by the participants' pre-discussion tendencies (i.e., to become more polarized than before). The individuals involved in a highly homogenous communication environment will reinforce their own opinions and encourage each other. Therefore, they are likely to show even more polarized political ideologies, strong party identification, and preferences for particular candidates. Thus, they would be expected to be committed to a

choice long before political campaigns even begin (i.e., early decision). Moreover, the frequent political discussions within the networks will stimulate individuals' interest in or attention to political events (i.e., high levels of political interest and attention). In turn, this will encourage them to expose themselves to campaign-specific information to a great degree (i.e., high levels of media use and attention). However, because they might be selectively exposed only to attitude-congruent messages, their original attitudes will not be shifted (i.e., selective exposure: Klapper, 1960; Blumer & McQuail, 1969). Even when they meet counter-attitudinal messages, they will perceive the messages as biased against their own opinions and simply reject them (i.e., hostile media effects: Vallone et al., 1985; Schmitt et al., 2004; Eveland & Shah, 2003). So they are hardly affected by campaigns (i.e., lack of susceptibility to campaign). This hypothetical scenario needs to be empirically tested.

If the interpersonal communication environment does matter in determining an individual voter's timing of decision, the classification of the four different voter groups, including nonvoters, would have significant implications beyond just susceptibility to campaigns or the openness to persuasion. In particular, so-called 'early deciders' with exclusive communication environments should be critically reassessed. Due to their active participation in political discussion, early deciders would be highly interested and involved in political events and also knowledgeable about public affairs. However, because of a lack of opportunity for a critical review of their own opinions, they merely reinforce and justify their preexisting viewpoints. As a result, they might make poorly informed decisions (Habermas, 2006; Sunstein, 2002; Bohman, 2007).

## 2.4 Research Questions and Hypothesis

The present study aims to re-examine the findings of previous studies concerning the relationship between time-of-voting decision and political/nonpolitical characteristics. Specifically, it will attempt to empirically test the suggested linear relationship between decision timing and other variables using the 2000 ANES survey data. Thus, the first research question is:

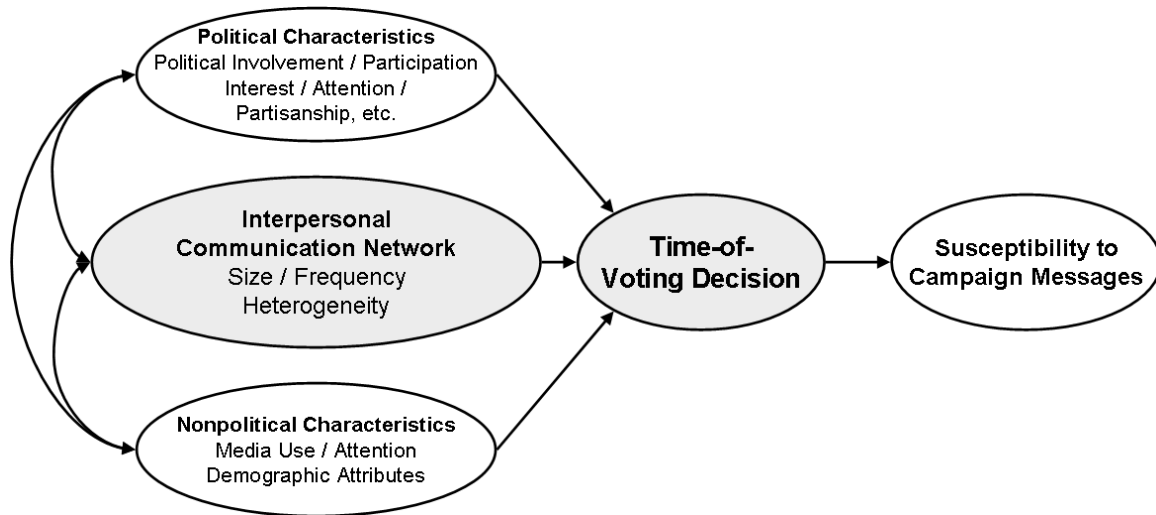
*RQ1: How can the different voter groups be characterized, in terms of political interest/attention, political involvement, media use and attention, and demographic attributes? Are the results consistent with previous studies?*

Next, the current study will treat decision timing as a dependent variable and identify its determinants. In particular, as recent studies have suggested, the study will explore the association of interpersonal communication environments with the time-of-voting decision, with an expectation that it may be a primary determinant. Therefore, the present study establishes a hypothesis as:

*Hypothesis: Heterogeneity within one's interpersonal communication environment will delay his or her voting decision.*

Furthermore, the present study will explore the relationship of heterogeneity within interpersonal communication networks with political and nonpolitical characteristics.

*RQ2: How is the presence/degree of heterogeneity within an interpersonal communication environment related to political interest/attention, political involvement, media use and attention, and demographic attributes?*



**Figure 4. Proposed Model for Predicting Time-of-Vote-Decision**

## **CHAPTER 3. METHODOLOGY**

### **3.1 Data**

The present study attempts to re-examine the major findings of the ‘time-of-voting decision’ studies, specifically the suggested linear relationship between time-of-voting decision and political/nonpolitical characteristics, and further to explore the influences of interpersonal communication environment on voters’ voting behaviors. For these purposes, the study utilizes the 2000 American National Election Study (or ANES) dataset. This dataset is useful to address the current research questions in two ways. First, because almost all previous studies used ANES datasets (e.g., Chaffee & Choe, 1980; Chaffee & Rimal, 1996; Whitney & Goldman, 1985, etc.), it is easy to reevaluate their findings simply by using the same question items or variables. More importantly, the 2000 ANES dataset is useful for examining interpersonal political communication networks because it includes a series of questions in which respondents were asked to identify others with whom they discuss politics, frequency of discussion with each of them, and their voting decisions in the 2000 presidential election. Based on these question items, the characteristics of interpersonal communication networks were operationally defined and measured.

Data collection for the 2000 ANES data was implemented by the Center for Political Studies of the Institute for Social Research. It entailed both a pre-election interview and a post-election re-interview. The pre-election survey was conducted on September 5, nine weeks before the election, and the post-election survey was conducted on November 8, the day after the election. From the national population, 1006 respondents were randomly selected by a multi-stage cluster sampling technique and interviewed prior to the election and

694 were re-interviewed face to face after the election. Using random digit dialing (or RDD), another 862 respondents were interviewed by phone prior to the election and 801 respondents were interviewed by phone after the election. Overall, 1,807 interviews were completed prior to the election and 1,555 interviews were completed after the election with an average response rate of 65%.

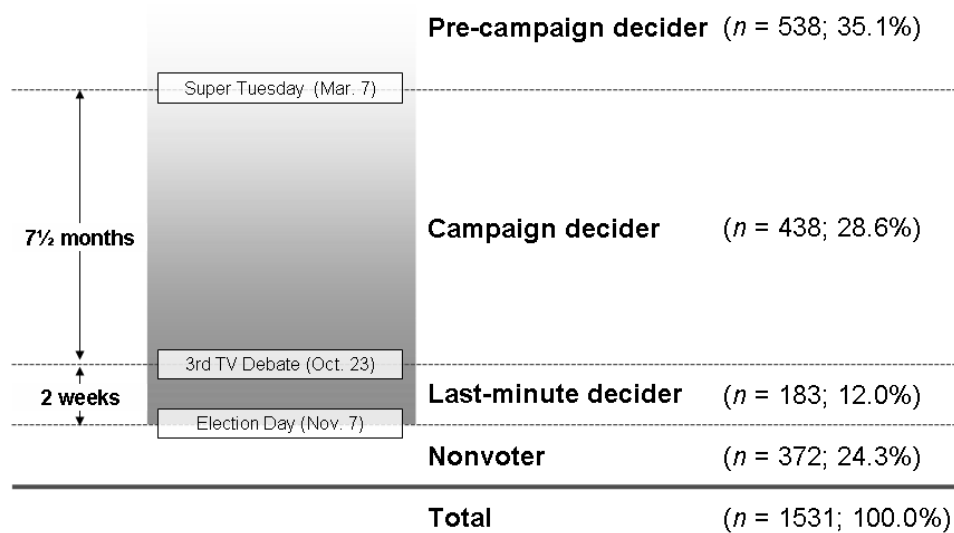
## **3.2 Measures**

### **3.2.1 Time-of-Voting Decision**

In this study, the respondents were classified into four groups – (1) pre-campaign deciders, (2) campaign deciders, (3) last-minute deciders, and (4) nonvoters – according to the time point at which they reported having made up their mind and whether or not they voted in the 2000 election. For this, two question items were used: “How long before the election did you decide that you were going to vote the way you did? (V001251)” and “Which of the following statements best describes you: (1) I did not vote; (2) I thought about voting this time but didn’t; (3) I usually vote, but didn’t this time; or (4) I am sure I voted? (V001241)”

In the 2000 presidential election, the candidates (Gore and Bush) of the two major parties were practically nominated by the results of ‘Super Tuesday.’ Therefore, it is reasonable to assume that the election campaign against opposition parties effectively began after that day (March 7) and that the heaviest campaign-specific information flow occurred during the period. Therefore, those who made their voting decisions prior to ‘Super Tuesday’ can be considered as not dependent on campaigns. Thus, they were classified as “pre-campaign deciders.” On the other hand, those who reported having made up their mind after

the last TV debate (October 23; two weeks before the election) were classified as “last-minute deciders.” The rest of voters were classified as “campaign deciders” (Figure 5). About 35 percent of the respondents were classified as “pre-campaign deciders” ( $n = 538$ ), 29 percent were classified as “campaign deciders” ( $n = 438$ ), and 12 percent were classified as “last-minute deciders” ( $n = 183$ ). One fourth of the respondents were classified as “nonvoters” ( $n = 372$ ).



**Figure 5. Classification of Four Voter Groups**

### 3.2.2 Political Characteristics

Political characteristics of the respondents were measured in three aspects: (1) political involvement/participation, (2) political interest/attention, and (3) strength of partisanship. First, the political involvement/participation was measured by the question items in which the respondents were asked about vote turnout in the 1996 (V000304), vote intent in the 2000 presidential election (V000792), donation to candidates and parties



(V001229 and V001231), and participation in political events (V001227 and V001228).

Second, the political interest/attention was measured by the questions in which the respondents were asked the degree of attention paid to presidential campaigns (V000301), concern about the presidential and House elections (V000302 and V000342), and interest in presidential campaigns (V001201). Finally, the strength of partisanship was measured by the questions in which the respondents were asked their strength of preference/support for candidates (V000796 and V001250). The degree of extremity of self-placement on lib-con scale (V000446: recoded into from strong liberal/conservative through moderate) and party identification (V000523: recoded into from strong Democrat/Republican through independent) were also used to measure the strength of partisanship.

### **3.2.3 Nonpolitical Characteristics**

Media use and attention and demographic attributes were measured as nonpolitical characteristics. In measuring media use and attention, the respondents were asked to report the frequencies of using mass media in general and the degree of attention paid to campaign-specific information delivered via various media (TV: V000330, V001202, V001203, V001644, V001645, V001648, and V001649; newspaper: V000336 and V00337; radio: V001647; internet: V001434). Demographic attributes consisted of age (V000908), gender (V001029), educational level (V000913), income level (V000997), and racial/ethnic group (V001006).

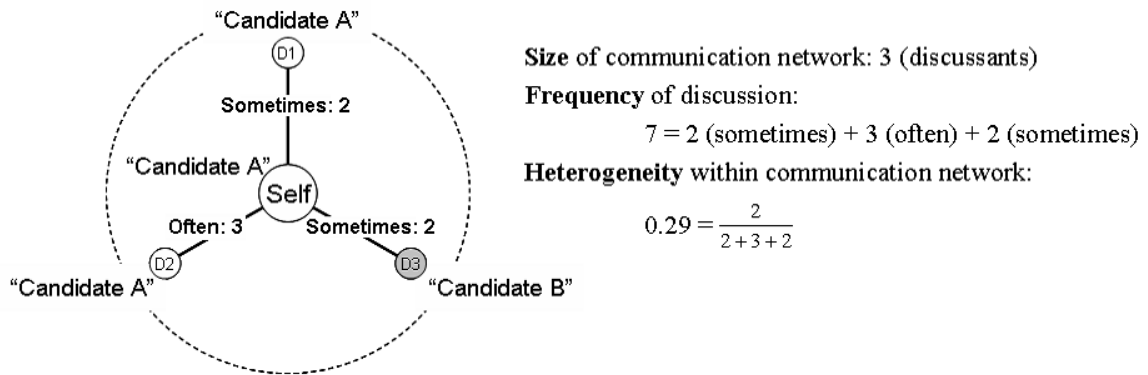
### 3.2.4 Interpersonal Communication Networks

For measures of interpersonal communication networks, a series of question items were used (from V001699 through V001734). In these questions, the respondents were asked to identify others with whom they discuss politics (up to four individuals), the frequency of discussion with each of them (often, sometimes, rarely, or never), the vote choice of each discussant in the 2000 presidential election (Bush, Gore, or other candidates). Based on these questions, three measures were obtained: (1) size of interpersonal communication network, (2) frequency of political discussion, and (3) heterogeneity within interpersonal communication network.

Size of interpersonal communication network was simply defined as the number of discussants. Frequency of discussion was measured by the sum of frequencies of discussion with all the discussants. In this case, ‘often,’ ‘sometimes,’ ‘rarely,’ and ‘never’ were weighted as 3, 2, 1, and 0, respectively. Heterogeneity within interpersonal communication network was measured as the proportion of discussants whose vote choices were different from respondents’ own choices. At this time, the proportion was weighted by the frequency of discussion with each discussant. Also, when a respondent reports having no one to discuss with, he or she is assumed to have no different opinions within his or her interpersonal communication network. The measure of heterogeneity ranges from 0 to 1: when an interpersonal communication network consists all of like-minded discussant, it is equal to 0; when all of discussants have different preferences from the respondent, it is equal to 1.

To demonstrate, suppose that a respondent reports having three individuals with whom he or she discusses politics. Then, the size of interpersonal communication network is measured as 3. When the respondent discusses ‘often’ with the second discussant, and

‘sometimes’ with the first and the third discussants, the frequency of political discussion is measured as 7 ( $= 2 + 3 + 2$ ). If only the third discussant voted for a different candidate for whom the respondent voted, the heterogeneity within his or her communication network is measured as 0.29 ( $= 2 / 7$ ). Figure 6 illustrates this example.



**Figure 6. Measures of Political Communication Networks**

## CHAPTER 4. RESULTS

### 4.1 Re-examining of the Major Findings of Previous Studies

To address the first research question of the present study, a one-way analysis of variance (or ANOVA) was conducted for each variable. Regarding the first group of variables – political characteristics, ANOVA results, summarized in Table 1, showed that there were no significant differences in three variables of political involvement and participation: vote intent in 2000 ( $F_{(2, 1155)} = .66, p = .52$ ), participation in meetings or rallies ( $F_{(2, 1156)} = 1.50, p = .22$ ), and involvement in campaign works ( $F_{(2, 1156)} = .81, p = .45$ ). In other words, no matter how early or late they make their voting decision, voters tend to equally participate in some political events. These results do not support what the previous studies predicted.

Nevertheless, the ANOVA results showed that there were statistically significant differences in many other variables among the three groups. However, this does not necessarily mean that the findings of past studies were successfully replicated, because an ANOVA test merely suggests whether at least one group has a mean value significantly different from those of any other groups. That is, the differences found among the three groups do not necessarily indicate the linear relationships shown in Figure 1. Therefore, a set of *post hoc* tests – pair-wise comparisons among the three groups – were conducted for the variables revealed as showing significant differences. For this, Scheffé *post hoc* tests were conducted with an alpha level of .05.

**Table 1. Differences in Political Characteristics among Three Voter Groups**

| Variables                                    | Pre-campaign<br>Deciders | Campaign<br>Deciders | Last-minute<br>Deciders | Test Statistics         | <i>p</i> |
|--|--------------------------|----------------------|-------------------------|-------------------------|----------|
| <b>Political Involvement / Participation</b> |                          |                      |                         |                         |          |
| Turnout in 1996                              | .92 (.28)                | .82 (.38)            | .83 (.38)               | $F_{(2, 1148)} = 10.42$ | <.001    |
| Vote Intent in 2000                          | .98 (.14)                | .97 (.16)            | .97 (.19)               | $F_{(2, 1155)} = .66$   | .52      |
| Contribution to Candidate                    | .11 (.31)                | .06 (.24)            | .04 (.21)               | $F_{(2, 1154)} = 5.76$  | <.01     |
| Contribution to Party                        | .10 (.30)                | .07 (.26)            | .04 (.19)               | $F_{(2, 1156)} = 3.83$  | <.05     |
| Meetings / Rallies                           | .08 (.27)                | .05 (.22)            | .06 (.24)               | $F_{(2, 1156)} = 1.50$  | .22      |
| Campaign works                               | .04 (.20)                | .03 (.17)            | .03 (.16)               | $F_{(2, 1156)} = .81$   | .45      |
| <b>Political Interest / Attention</b>        |                          |                      |                         |                         |          |
| Attention to Pres. Election                  | 2.35 (.65)               | 2.16 (.65)           | 2.11 (.69)              | $F_{(2, 1156)} = 14.35$ | <.001    |
| Care about Pres. Election                    | .92 (.27)                | .86 (.35)            | .77 (.42)               | $F_{(2, 1150)} = 15.47$ | <.001    |
| Care about House Election                    | 2.14 (.85)               | 2.01 (.85)           | 1.87 (.87)              | $F_{(2, 1152)} = 7.17$  | <.001    |
| Interest in Pres. Campaigns                  | 2.53 (.61)               | 2.34 (.63)           | 2.25 (.64)              | $F_{(2, 1156)} = 18.89$ | <.001    |
| <b>Strength of Partisanship</b>              |                          |                      |                         |                         |          |
| Preference for Candidate                     | .89 (.31)                | .72 (.45)            | .45 (.50)               | $F_{(2, 1095)} = 78.91$ | <.001    |
| Self-placement on lib-con                    | 1.67 (.89)               | 1.47 (.81)           | 1.33 (.70)              | $F_{(2, 1072)} = 12.80$ | <.001    |
| Party ID                                     | 3.26 (.87)               | 2.76 (.98)           | 2.57 (.98)              | $F_{(2, 1147)} = 54.07$ | <.001    |

Note: Table entries are the mean values and standard deviations (in parentheses) of each group

The results of Scheffé multiple comparisons, presented in Table 2, revealed that there were no significant differences between campaign deciders and last-minute deciders, except for in “care about pres. election” and “preference for candidate.” However, the pre-campaign voter group showed significantly different characteristics from the other two groups. Statistically speaking, last-minute deciders are as politically interested and involved as campaign-deciders. These results fail to support the linear relationships suggested by the previous studies.

**Table 2. Scheffé Multiple Comparisons for Political Characteristics**

| Variables                                    | Group (i)             | Group (j)            | Mean Difference (i – j) |
|--|-----------------------|----------------------|-------------------------|
| <b>Political Involvement / Participation</b> |                       |                      |                         |
| Turnout in 1996                              | Pre-campaign Deciders | Campaign Deciders    | .086 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .093 *                  |
|  | Campaign Deciders     | Last-minute Deciders | -.007                   |
| Contribution to Candidate                    | Pre-campaign Deciders | Campaign Deciders    | .048 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .066 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .018                    |
| Contribution to Party                        | Pre-campaign Deciders | Campaign Deciders    | .027                    |
|  | Pre-campaign Deciders | Last-minute Deciders | .062 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .035                    |
| <b>Political Interest / Attention</b>        |                       |                      |                         |
| Attention to Pres. Election                  | Pre-campaign Deciders | Campaign Deciders    | .190 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .240 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .051                    |
| Care about Pres. Election                    | Pre-campaign Deciders | Campaign Deciders    | .064 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .152 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .088 *                  |
| Care about House Election                    | Pre-campaign Deciders | Campaign Deciders    | .129                    |
|  | Pre-campaign Deciders | Last-minute Deciders | .263 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .133                    |
| Interest in Presidential Campaigns           | Pre-campaign Deciders | Campaign Deciders    | .185 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .284 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .099                    |
| <b>Strength of Partisanship</b>              |                       |                      |                         |
| Preference for Candidate                     | Pre-campaign Deciders | Campaign Deciders    | .175 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .443 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .268 *                  |
| Self-placement on lib-con                    | Pre-campaign Deciders | Campaign Deciders    | .195 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .342 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .147                    |
| Party ID                                     | Pre-campaign Deciders | Campaign Deciders    | .503 *                  |
|  | Pre-campaign Deciders | Last-minute Deciders | .689 *                  |
|  | Campaign Deciders     | Last-minute Deciders | .186                    |

\*, The mean difference is significant at the .05 level.

Next, media use and attention of the three voter groups were examined. In the same way as the preceding analysis, a one-way ANOVA was conducted for each variable (Table 3).

The results showed that there were significant differences in watching TV news ( $F_{(2, 1155)} = 4.44, p < .05$ ), campaign-related programs ( $F_{(2, 1155)} = 10.26, p < .001$ ), attention to them ( $F_{(2, 1155)} = 3.12, p < .05$ ;  $F_{(2, 1154)} = 10.23, p < .001$ ), watching TV debate ( $F_{(2, 1154)} = 5.45, p < .01$ ), and information search on the internet ( $F_{(2, 1156)} = 3.51, p < .05$ ). On the other hand, no significant differences were found in reading newspapers ( $F_{(2, 1156)} = .60, p = .54$ ), attention to campaign-related articles ( $F_{(2, 911)} = 2.64, p = .07$ ), and listening to campaign-related radio shows ( $F_{(2, 1154)} = 2.32, p = .10$ ).

**Table 3. Differences in Media Use and Attention among Three Voter Groups**

| Variables                   | Pre-campaign Deciders | Campaign Deciders | Last-minute Deciders | Test Statistics         | <i>p</i> |
|-----------------------------|-----------------------|-------------------|----------------------|-------------------------|----------|
| Watching TV News            | 3.87 (2.75)           | 3.34 (2.77)       | 3.50 (2.77)          | $F_{(2, 1155)} = 4.44$  | <.05     |
| Attention to TV News        | 2.14 (1.32)           | 1.94 (1.38)       | 1.95 (1.39)          | $F_{(2, 1155)} = 3.12$  | <.05     |
| No. of Campaign Pro.        | 1.97 (.94)            | 1.77 (.98)        | 1.65 (.99)           | $F_{(2, 1155)} = 10.26$ | <.001    |
| Attention to Campaign Pro.  | 2.80 (.97)            | 2.57 (.93)        | 2.51 (.94)           | $F_{(2, 1154)} = 10.23$ | <.001    |
| TV debates                  | 1.18 (.75)            | 1.07 (.77)        | .98 (.75)            | $F_{(2, 1154)} = 5.45$  | <.01     |
| Reading Newspaper           | 3.95 (2.91)           | 3.79 (2.87)       | 3.72 (2.93)          | $F_{(2, 1156)} = .60$   | .54      |
| Attention to Camp. Articles | 1.76 (1.40)           | 1.59 (1.38)       | 1.48 (1.34)          | $F_{(2, 911)} = 2.64$   | .07      |
| Listening to Camp. Radio    | .92 (1.13)            | .78 (1.03)        | .81 (.96)            | $F_{(2, 1154)} = 2.32$  | .10      |
| Info Search on the Internet | .38 (.49)             | .30 (.46)         | .35 (.48)            | $F_{(2, 1156)} = 3.51$  | <.05     |

Note: Table entries are the mean values and standard deviations (in parentheses) of each group

To determine whether the results of present analysis support the linear relationship suggested by the previous studies, a Scheffé *post hoc* test was conducted for each variable in which there was significant difference among the three groups with an alpha level of .05 (Table 4). However, the results of Scheffé multiple comparisons revealed that what the previous studies predicted failed to be replicated. In all the cases, no significant differences were found between campaign deciders and last-minute deciders. Only in number of

campaign-related programs watched and attention to them, did pre-campaign deciders differed from the other voter groups.

**Table 4. Scheffé Multiple Comparisons for Media Use and Attention**

| Variables                   | Group (i)             | Group (j)            | Mean Difference (i – j) |
|-----------------------------|-----------------------|----------------------|-------------------------|
| Watching TV News            | Pre-campaign Deciders | Campaign Deciders    | .518 *                  |
|                             | Pre-campaign Deciders | Last-minute Deciders | .369                    |
|                             | Campaign Deciders     | Last-minute Deciders | -.149                   |
| Attention to TV News        | Pre-campaign Deciders | Campaign Deciders    | .203                    |
|                             | Pre-campaign Deciders | Last-minute Deciders | .190                    |
|                             | Campaign Deciders     | Last-minute Deciders | -.012                   |
| No. of Campaign Pro.        | Pre-campaign Deciders | Campaign Deciders    | .210 *                  |
|                             | Pre-campaign Deciders | Last-minute Deciders | .329 *                  |
|                             | Campaign Deciders     | Last-minute Deciders | .119                    |
| Attention to Campaign Pro   | Pre-campaign Deciders | Campaign Deciders    | .230 *                  |
|                             | Pre-campaign Deciders | Last-minute Deciders | .294 *                  |
|                             | Campaign Deciders     | Last-minute Deciders | .063                    |
| TV debates                  | Pre-campaign Deciders | Campaign Deciders    | .112                    |
|                             | Pre-campaign Deciders | Last-minute Deciders | .197 *                  |
|                             | Campaign Deciders     | Last-minute Deciders | .085                    |
| Info Search on the Internet | Pre-campaign Deciders | Campaign Deciders    | .081 *                  |
|                             | Pre-campaign Deciders | Last-minute Deciders | .035                    |
|                             | Campaign Deciders     | Last-minute Deciders | -.046                   |

\*, The mean difference is significant at the .05 level.

There were also significant differences among the three voter groups in age ( $F_{(2, 1152)} = 4.42, p < .05$ ) and race ( $F_{(2, 1149)} = 3.47, p < .05$ ), presented in Table 5. Specifically, older voters were more inclined than younger voters to make their voting decisions early, and nonwhite voters were more likely than whites to be early deciders. These results are partly consistent with the patterns found in the 1972 through 1984 elections (Gopoian & Hadjiharalambous, 1994: Table 7, p. 63). However, there were no significant differences found in any other demographic attributes among the three groups, and moreover, there were



no significant differences between campaign deciders and last-minute deciders in all cases (Table 6).

**Table 5. Differences in Demographic Attributes among Three Voter Groups**

| Variables         | Pre-campaign Deciders | Campaign Deciders | Last-minute Deciders | Test Statistics        | <i>p</i> |
|-------------------|-----------------------|-------------------|----------------------|------------------------|----------|
| Age               | 50.85 (15.8)          | 47.96 (16.9)      | 48.02 (17.0)         | $F_{(2, 1152)} = 4.42$ | <.05     |
| Gender (Male = 1) | .44 (.50)             | .48 (.50)         | .43 (.50)            | $F_{(2, 1156)} = 1.05$ | .35      |
| Race (White = 1)  | .79 (.40)             | .85 (.35)         | .79 (.41)            | $F_{(2, 1149)} = 3.47$ | <.05     |
| Education         | 4.67 (1.62)           | 4.53 (1.58)       | 4.71 (1.54)          | $F_{(2, 1154)} = 1.31$ | .27      |
| Income            | 5.54 (3.68)           | 5.11 (2.68)       | 5.23 (3.31)          | $F_{(2, 1025)} = 1.92$ | .14      |

Note: Table entries are the mean values and standard deviations (in parentheses) of each group

**Table 6. Scheffé Multiple Comparisons for Demographic Attributes**

| Variables        | Voter Group ( <i>i</i> ) | Voter Group ( <i>j</i> ) | Mean Difference ( <i>i</i> – <i>j</i> ) |
|------------------|--------------------------|--------------------------|---|
| Age              | Pre-campaign Deciders    | Campaign Deciders        | 2.892 *                                 |
|                  | Pre-campaign Deciders    | Last-minute Deciders     | 2.829                                   |
|                  | Campaign Deciders        | Last-minute Deciders     | -.063                                   |
| Race (White = 1) | Pre-campaign Deciders    | Campaign Deciders        | -.060                                   |
|                  | Pre-campaign Deciders    | Last-minute Deciders     | .008                                    |
|                  | Campaign Deciders        | Last-minute Deciders     | .068                                    |

\*. The mean difference is significant at the .05 level.

In sum, overall results of the analysis do not support the linear relationship suggested by the previous studies. In many cases, no significant differences among the three voter groups were found. Even when there were significant differences, the pair-wise comparisons revealed that only pre-campaign deciders significantly differed from other groups, while campaign deciders and last-minute deciders showed similar characteristics.

## **4.2 Further Analyses with Nonvoters Included**

The findings of the present study that both campaign deciders and last-minute deciders were equally interested, involved in, and attentive to political events allow two possible interpretations. First, because campaign deciders have been assumed to be involved and attentive in the past studies to some extent, the findings of the present study might be interpreted to mean that last-minute deciders are also sufficiently involved and attentive. On the other hand, because last-minute deciders have been assumed to be uninvolved and inattentive, it is also possible to interpret the current findings to show that the levels of political participation and interest of both campaign deciders and last-minute are equally low.

To examine which of the two possible interpretations is most plausible, further investigation was carried out with nonvoters included. Because nonvoters are expected to be the most apolitical and to have distinct characteristics from the other voters (Gopoian & Hadjiharalambous, 1994), they can be used as a reference group.

First, the differences in political characteristics between each of the voter groups and nonvoters were examined (summarized in Table 7). In this case, the variables that showed no significant differences among the three voter groups were excluded from the analyses. The results revealed that both campaign deciders and last-minute deciders showed higher turnout rates in the 1996 presidential election and were more likely to pay attention to the presidential and House elections and to be more interested in presidential campaigns than nonvoters. Also, they reported stronger attachment to particular parties than nonvoters. Only campaign deciders showed higher scores in contribution to political parties and extremity of self-placement on lib-con scale. In contrast, neither of the groups significantly differed in contributions to a candidate. These results imply that both campaign deciders and last-minute

deciders are more highly attentive to, interested and involved in political events, even though not as much as pre-campaign deciders. However, they are less likely to engage in political activities that require strong partisan commitment, such as donation.

**Table 7. Differences from Nonvoters in Political Characteristics**

| Variables                                    | Pre-campaign<br>Deciders | Campaign<br>Deciders | Last-minute<br>Deciders | Nonvoters        | Test Statistics;<br><i>p</i> -value      |
|--|--------------------------|----------------------|-------------------------|------------------|--|
| [Mean Differences from Nonvoters]            |                          |                      |                         |                  |  |
| <b>Political Involvement / Participation</b> |                          |                      |                         |                  |  |
| Turnout in 1996                              | .92 (.28)<br>[.63*]      | .82 (.38)<br>[.53*]  | .83 (.38)<br>[.54*]     | .29 (.45)<br>-   | $F_{(3, 1514)} = 234.10$ ;<br>$p < .001$ |
| Contribution to Candidate                    | .11 (.31)<br>[.09*]      | .06 (.24)<br>[.04]   | .04 (.21)<br>[.02]      | .02 (.15)<br>-   | $F_{(3, 1525)} = 10.12$ ;<br>$p < .001$  |
| Contribution to Party                        | .10 (.30)<br>[.08*]      | .07 (.26)<br>[.06*]  | .04 (.19)<br>[.02]      | .02 (.13)<br>-   | $F_{(3, 1525)} = 9.64$ ;<br>$p < .001$   |
| <b>Political Interest / Attention</b>        |                          |                      |                         |                  |  |
| Attention to Pres. Election                  | 2.35 (.65)<br>[.72*]     | 2.16 (.65)<br>[.53*] | 2.11 (.69)<br>[.48*]    | 1.63 (.67)<br>-  | $F_{(3, 1527)} = 90.48$ ;<br>$p < .001$  |
| Care about Pres. Election                    | .92 (.27)<br>[.41*]      | .86 (.35)<br>[.35*]  | .77 (.42)<br>[.26*]     | .51 (.50)<br>-   | $F_{(3, 1521)} = 94.95$ ;<br>$p < .001$  |
| Care about House Election                    | 2.14 (.85)<br>[.79*]     | 2.01 (.85)<br>[.66*] | 1.87 (.87)<br>[.52*]    | 1.35 (.95)<br>-  | $F_{(3, 1521)} = 63.55$ ;<br>$p < .001$  |
| Interest in Pres. Campaigns                  | 2.53 (.61)<br>[.72*]     | 2.34 (.63)<br>[.53*] | 2.25 (.64)<br>[.43*]    | 1.81 (.71)<br>-  | $F_{(3, 1527)} = 94.82$ ;<br>$p < .001$  |
| <b>Strength of Partisanship<sup>1</sup></b>  |                          |                      |                         |                  |  |
| Self-placement on lib-con                    | 1.67 (.89)<br>[.40*]     | 1.47 (.81)<br>[.21*] | 1.33 (.70)<br>[.06]     | 1.26 (.72)<br>-  | $F_{(3, 1381)} = 18.55$ ;<br>$p < .001$  |
| Party ID                                     | 3.26 (.87)<br>[.94*]     | 2.76 (.98)<br>[.45*] | 2.57 (.98)<br>[.26*]    | 2.31 (1.12)<br>- | $F_{(3, 1515)} = 17.26$ ;<br>$p < .001$  |

Note 1: Table entries are the mean values and standard deviations (in parentheses) of each group

Note 2: \*. The mean difference is significant at the .05 level.

<sup>1</sup> Strength of preference for candidate was excluded from the analysis, because those who were once classified as nonvoters were not asked this question item.

In sum, while there were no or only small differences in political characteristics between campaign deciders and last-minute deciders, both groups were significantly different from nonvoters. This does not support the prediction of some previous studies that last-minute deciders are politically uninterested and not involved.

Next, the differences in media use and attention between each of the voter groups and nonvoters were examined (summarized in Table 8). In all cases, while there were no differences in media use and attention between campaign deciders and last-minute deciders, both groups significantly differed from nonvoters who hardly exposed themselves to campaign-specific information delivered through media. Although the differences were not significant, last-minute deciders tended to expose themselves to campaign-specific information via mass media even more than campaign deciders. Especially when compared to nonvoters, these results failed to support the previous findings that last-minute deciders are expected to pay little attention to and hardly expose themselves to campaign-specific information.

**Table 8. Differences from Nonvoters in Media Use and Attention**

| Variables                   | Pre-campaign<br>Deciders          | Campaign<br>Deciders  | Last-minute<br>Deciders | Nonvoters        | Test Statistics;<br><i>p</i> -value    |
|-----------------------------|-----------------------------------|-----------------------|-------------------------|------------------|--|
|                             | [Mean Differences from Nonvoters] |                       |                         |                  |  |
| Watching TV News            | 3.87 (2.75)<br>[1.40*]            | 3.34 (2.77)<br>[.88*] | 3.50 (2.77)<br>[1.04*]  | 2.46 (2.76)<br>- | $F_{(3, 1524)} = 19.19;$<br>$p < .001$ |
| Attention to TV News        | 2.14 (1.32)<br>[.90*]             | 1.94 (1.38)<br>[.70*] | 1.95 (1.39)<br>[.71*]   | 1.24 (1.31)<br>- | $F_{(3, 1524)} = 34.89;$<br>$p < .001$ |
| No. of Campaign Pro.        | 1.97 (.94)<br>[.79*]              | 1.77 (.98)<br>[.58*]  | 1.65 (.99)<br>[.47*]    | 1.19 (1.04)<br>- | $F_{(3, 1525)} = 47.84;$<br>$p < .001$ |
| Attention to Campaign Pro.  | 2.80 (.97)<br>[1.03*]             | 2.57 (.93)<br>[.80*]  | 2.51 (.94)<br>[.73*]    | 1.79 (1.03)<br>- | $F_{(3, 1523)} = 85.65;$<br>$p < .001$ |
| TV debates                  | 1.18 (.75)<br>[.58*]              | 1.07 (.77)<br>[.47*]  | .98 (.75)<br>[.38*]     | .60 (.69)<br>-   | $F_{(3, 1522)} = 47.29;$<br>$p < .001$ |
| Info Search on the Internet | .38 (.49)<br>[.23*]               | .30 (.46)<br>[.15*]   | .35 (.48)<br>[.19*]     | .15 (.37)<br>-   | $F_{(3, 1526)} = 19.62;$<br>$p < .001$ |

Note 1: Table entries are the mean values and standard deviations (in parentheses) of each group

Note 2: \*. The mean difference is significant at the .05 level.

### 4.3 Influences of Interpersonal Communications

With an expectation that interpersonal communication environment may be a primary determinant of time-of-voting decision, a one-way ANOVA was conducted for each of the three interpersonal communication measures: (1) network size, (2) frequency of political discussion, and (3) heterogeneity within interpersonal communication network (summarized in Table 9).

The results showed that the early deciders discussed politics with more people ( $F_{(2, 1153)} = 3.40, p < .05$ ), more frequently ( $F_{(2, 1151)} = 6.08, p < .01$ ), and with more like-minded people ( $F_{(2, 935)} = 22.61, p < .001$ ). However, a pair-wise comparison of network size found no significant differences between each pair of the three groups (Table 10). Regarding the

frequency of political discussion, only pre-campaign deciders significantly differed from the other groups, while the differences between campaign deciders and last-minute deciders were not significant. For heterogeneity, on the other hand, there were significant differences among all three groups. These results suggest that the greater proportion of discussion with like-minded people voters have within their communication networks, the earlier they make their voting decisions. This supports the hypothesis of the present study.

**Table 9. Differences in Interpersonal Communication among Three Voter Groups**

| Variables            | Pre-campaign Deciders | Campaign Deciders | Last-minute Deciders | Test Statistics        | <i>p</i> |
|----------------------|-----------------------|-------------------|----------------------|------------------------|----------|
| Network Size         | 2.23 (1.42)           | 2.06 (1.45)       | 1.93 (1.46)          | $F_{(2, 1153)} = 3.40$ | <.05     |
| Political Discussion | 4.67 (3.24)           | 4.12 (3.19)       | 3.85 (3.15)          | $F_{(2, 1151)} = 6.08$ | <.01     |
| Heterogeneity        | .29 (.33)             | .37 (.37)         | .53 (.40)            | $F_{(2, 935)} = 22.61$ | <.001    |

Note: Table entries are the mean values and standard deviations (in parentheses) of each group

**Table 10. Scheffé Multiple Comparisons for Interpersonal Communication**

| Variables            | Voter Group ( <i>i</i> ) | Voter Group ( <i>j</i> ) | Mean Difference ( <i>i</i> – <i>j</i> ) |
|----------------------|--------------------------|--------------------------|---|
| Network Size         | Pre-campaign Deciders    | Campaign Deciders        | .170                                    |
|                      | Pre-campaign Deciders    | Last-minute Deciders     | .293                                    |
|                      | Campaign Deciders        | Last-minute Deciders     | .123                                    |
| Political Discussion | Pre-campaign Deciders    | Campaign Deciders        | .557 *                                  |
|                      | Pre-campaign Deciders    | Last-minute Deciders     | .824 *                                  |
|                      | Campaign Deciders        | Last-minute Deciders     | .267                                    |
| Heterogeneity        | Pre-campaign Deciders    | Campaign Deciders        | -.077 *                                 |
|                      | Pre-campaign Deciders    | Last-minute Deciders     | -.231 *                                 |
|                      | Campaign Deciders        | Last-minute Deciders     | -.154 *                                 |

\*. The mean difference is significant at the .05 level.

#### **4.4 Relationships of Interpersonal Communication with Other Variables**

To explore the relationships of interpersonal communication measures with political and nonpolitical characteristics, zero-order correlation and multiple-correlation analyses were conducted. For political characteristics, the results revealed that both network size and frequency of political discussion were positively correlated with most of variables and the correlation coefficients ranged from .10 to .44 (Table 11). That is, the more people and the more frequently one discusses politics with, the more likely one is to engage in political activities, to be interested in politics, and to show strong partisanship. However, there was no relationship between network size and strength of preference for candidate ( $r = .03, p = .30$ ). In contrast, heterogeneity within interpersonal communication network was negatively correlated with all of the variables with the correlation coefficients ranging from -.06 to -.29. That is to say, the more disagreement one meets within one's interpersonal communication environment, the less likely one is to be politically involved and committed. The results of multiple correlation analyses between three grouped variables – participation, interest/attention, and partisanship – with the network measures suggested the same patterns.

**Table 11. Correlation of Interpersonal Communication with Political Characteristics**

| Variables                                       | Network Size | Freq. of Discussion | Heterogeneity |
|---|--------------|---------------------|---------------|
| <b>Political Participation<sup>A</sup></b>      | .30***       | .35***              | -.26***       |
| Turnout in 1996                                 | .22***       | .25***              | -.20***       |
| Vote Intent in 2000                             | .24***       | .26***              | -.19***       |
| Contribution to Candidate                       | .11***       | .14***              | -.10***       |
| Contribution to Party                           | .10***       | .14***              | -.09**        |
| Meetings / Rallies                              | .15***       | .19***              | -.08**        |
| Campaign Works                                  | .11***       | .14***              | -.06*         |
| <b>Political Interest/Attention<sup>A</sup></b> | .36***       | .44***              | -.29***       |
| Attention to Pres. Election                     | .29***       | .36***              | -.18***       |
| Care about Pres. Election                       | .20***       | .24***              | -.20***       |
| Care about House Election                       | .26***       | .31***              | -.19***       |
| Interest in Pres. Campaigns                     | .32***       | .39***              | -.26***       |
| <b>Strength of Partisanship<sup>A</sup></b>     | .14***       | .18***              | -.24***       |
| Preference for Candidate                        | .03          | .06*                | -.17***       |
| Self-placement in Lib-Con                       | .13***       | .16***              | -.13***       |
| Part ID   | .11***       | .15***              | -.22***       |

Note 1: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Note 2: Table entries are zero-order correlation coefficients.

Note 3: Upper A denotes the multiple-correlation coefficient.

Another set of correlation analyses was carried out to examine the relationships between interpersonal communication measures and media use and attention (Table 12). The results showed that both network size and frequency of political discussion were positively related with media use and attention (multiple  $R = .41$ ,  $p < .001$  and  $R = .51$ ,  $p < .001$ , respectively). However, it was found that heterogeneity was negatively related to media use and attention (multiple  $R = -.23$ ,  $p < .001$ ).



**Table 12. Correlation of Interpersonal Communication with Media Use and Attention**

| Variables                                  | Network Size | Freq. of Discussion | Heterogeneity |
|--|--------------|---------------------|---------------|
| <b>Media Use and Attention<sup>A</sup></b> | .41***       | .51***              | -.23***       |
| Watching TV News                           | .08**        | .13***              | -.06*         |
| Attention to TV News                       | .19***       | .24***              | -.10**        |
| No. of Campaign Pro.                       | .25***       | .31***              | -.17***       |
| Attention to Campaign Pro.                 | .30***       | .39***              | -.21***       |
| TV debates                                 | .24***       | .30***              | -.20***       |
| Reading Newspaper                          | .12***       | .15***              | -.08**        |
| Attention to Camp. Articles                | .24***       | .32***              | -.12***       |
| Listening to Camp. Radio                   | .29***       | .35***              | -.13***       |
| Info Search on the Internet                | .25***       | .28***              | -.08**        |

Note 1: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Note 2: Table entries are zero-order correlation coefficients.

Note 3: Upper A denotes the multiple-correlation coefficient.

Finally, the correlation analyses (Table 13) between demographic attributes and interpersonal communication measures showed that males and whites were more likely than females and nonwhites to have large communication networks ( $r = .09, p < .001$ ;  $r = .10, p < .001$ , respectively) and frequently discuss politics ( $r = .10, p < .001$ ;  $r = .09, p < .001$ , respectively), while gender and race were not significantly correlated with heterogeneity ( $r = -.03, p = .34$ ;  $r = -.04, p = .19$ , respectively).

In addition, it was found that those with higher socio-economic statuses – higher education level and income level – tended to have larger communication networks ( $r = .29, p < .001$ ;  $r = .20, p < .001$ , respectively) and more frequently discuss politics ( $r = .30, p < .001$ ;  $r = .21, p < .001$ , respectively). However, their interpersonal communication networks contained relatively less disagreement ( $r = -.06, p < .001$ ;  $r = -.08, p < .001$ , respectively).

**Table 13. Correlation of Interpersonal Communication with Demographic Attributes**

| Variables         | Network Size | Freq. of Discussion | Heterogeneity |
|-------------------|--------------|---------------------|---------------|
| Age               | -.06         | -.04                | -.04          |
| Gender (Male = 1) | .09***       | .10***              | -.03          |
| Race (White = 1)  | .10***       | .09***              | -.04          |
| Education         | .29***       | .30***              | -.06*         |
| Income            | .20***       | .21***              | -.08**        |

Note 1: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Note 2: Table entries are zero-order correlation coefficients.

Note 3: Upper A denotes the multiple-correlation coefficient.

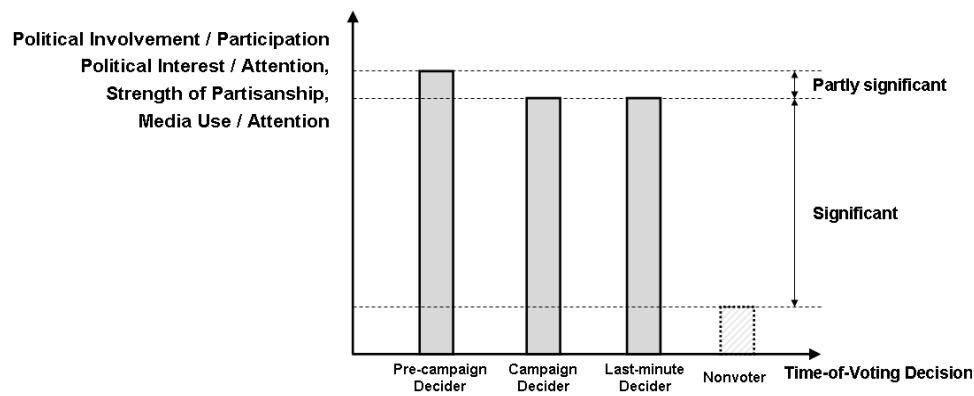
## **CHAPTER 5. DISCUSSION AND CONCLUSIONS**

### **5.1 Failure of Replication of Previous Studies**

The present study attempted to re-examine the findings of the “time-of-voting decision” studies (Chaffee & Choe, 1980, etc.), focusing on the suggested linear relationships between time-of-voting decision and political/nonpolitical characteristics. Question items used in the previous studies were selected from the 2000 ANES dataset, and differences among the three voter groups – pre-campaign deciders, campaign deciders, and last-minute deciders – were examined to see how they agreed or disagreed with the findings of the previous studies.

Through a series of one-way ANOVA tests and pair-wise comparisons, the results of the present study failed to support the suggested linear relationships. In many cases, there were no significant differences among the three voter groups for variables, such as vote intent in 2000, participation in political meetings and rallies, involvement in campaign works, reading newspaper, attention to campaign-related articles, and listening to campaign-related radio shows. Even when the ANOVA tests found overall significant differences among the three groups, the pair-wise comparisons revealed that only pre-campaign deciders differed from two other groups, while there were no significant differences between campaign deciders and last-minute deciders in all the other cases. In only two out of 22 variables – the level of concern about presidential election and strength of preference for candidate – were there significant differences between each pair of the three groups in the way consistent with the findings of the previous studies.

To compare results with the previous studies that have included nonvoters, an analysis was conducted including all four groups (pre-campaign deciders, campaign deciders, last-minute deciders, and nonvoters) for level of political participation, interest, partisanship, and media use and attention. Variables that had shown no significant differences among the first three groups were excluded from the analysis. The results showed that campaign deciders and last-minute deciders differed significantly from nonvoters in all cases except for contributions to political parties and candidates. While these two groups were scored lower than pre-campaign deciders on many variables, they are still significantly more involved and attentive than nonvoters. Thus, it would be wrong to characterize last-minute deciders as inattentive and uninvolved, as previous studies have done. Instead, it can be suggested that they are as involved and attentive as campaign deciders. Figure 7 presents a modified relationship between time-of-voting decision and political/nonpolitical characteristics, based on overall results of the present study.



**Figure 7. Modified Relationships between Time-of-Voting Decision and Other Variables**

Failure of replication can be mainly attributed to using a different analytic technique from the previous studies: whereas multivariate analytic techniques were primarily used in the previous studies, bivariate techniques were used in the present study.

Specifically, Chaffee and his colleagues employed discriminant analysis as the primary analytical tool in their studies (Chaffee & Choe, 1980; Chaffee & Rimal, 1996). Discriminant analysis is designed to determine which independent variables discriminate between two or more groups by finding the optimal combinations of the variables: i.e., discriminant functions (Klecka, 1980). Usually, the significance of the discriminant functions obtained is tested first, and then, the significance of the individual coefficients of the functions is tested. The first step is computationally identical to the procedure of multivariate analysis of variance (or MANOVA). In this case, a multivariate *F*-test is performed in order to determine whether or not there are any significant differences between groups with regard to all variables, simultaneously. If the functions are statistically significant, that is, if there are any significant differences between groups, then an examination is conducted to see which of the independent variables have significantly different means across the groups. In other words, the significance of each coefficient is tested.

According to the computational algorithm of discriminant analysis, results do not provide any information about which group differs from the others, how much it differs, or whether or not the difference is significant. Rather, it merely shows whether or not it is possible to correctly assign subjects by using a set of variables and indicate which variable is relatively more important than others. For this reason, it is highly recommended to carry out mean comparisons for each independent variable by groups after finding significant discriminant functions (Mertler & Vannatta, 2001). However, Chaffee and his colleagues

failed to report the results of the individual tests. This means that they did not provide sufficient evidence to suggest the linear relationships between time-of-voting decision and other variables. Moreover, when considering that results of discriminant analysis are highly sensitive to multicollinearity – a high degree of correlations among independent variables (Mertler & Vannatta, 2001), the significance weighted on individual independent variables is not reliable.

Some other previous studies employed other multivariate analytic techniques. For example, Gopoian and Hadjiharahambous (1994) used logistic regression analysis. Although it is more flexible in its assumptions and types of data that can be analyzed, logistic regression answers fundamentally the same questions as discriminant analysis. Thus, it can be said that other previous studies have similar limitations to those of Chaffee and his colleagues.

## **5.2 Time-of-Voting Decision as a Dependent Variable**

The present study examined statistical relationships between time-of-voting decision and political/nonpolitical characteristics, considering time-of-voting decision as a dependent variable rather than an independent variable. Also, it explored the relationship between time-of-voting decision and interpersonal communication measures, expecting that they may be primary determinants.

As discussed previously, however, there were no significant differences found between each pair of the three voter groups for most variables of the political/nonpolitical characteristics, even though there were overall significant differences among them in many

cases. This implies that time-of-voting decision cannot be easily predicted by a single variable. Instead, it is likely that time-of-voting decision is determined by a mixed combination of political and nonpolitical characteristics.

On the other hand, the hypothesis test of the present study revealed that there were significant differences among the three voter groups for interpersonal communication measures, specifically heterogeneity, showing stepwise differences among them. It was found that as the degree of heterogeneity within the interpersonal communication network increased, time-of-voting decision was delayed. This indicates that heterogeneity within the interpersonal communication environment is a more significant predictor for time-of-voting decision than any other single variable. Nevertheless, the statistically significant association of heterogeneity with time-of-voting decision might not be sufficient to substantiate the argument that heterogeneity *causes* delay in voting decision. To test the causal relationship suggested by the cross-pressure hypothesis (Lazarsfeld, et al., 1944), it is necessary to control other possible factors that might affect decision timing and to examine the relationship with an elaborate time-series data.

In fact, all of the previous studies include variables of interpersonal communication in their analyses. However, interpersonal communication was given relatively less weight than other variables because its statistical significance was not as remarkable as other variables. This is in large part because the interpersonal communication measures in the previous studies were too simple to capture the influence of ‘cross-pressures.’ For example, Chaffee and Choe (1980) measured interpersonal communication simply by the frequency of political discussion, regardless of with whom respondents discuss politics. On the other hand, to measure ‘cross-pressures’ imposed on individual respondents, Gopoian and

Hadjiharalambous (1994) used two measures: individual-level standard deviation in issue consistency and a dichotomous categorization that classifies as cross-pressured any respondents who placed themselves on the most liberal position on one issue but on the most conservative position on other issues at the same time. However, these measures fail to measure the presence or degree of disagreement that the respondents meet within their interpersonal communication networks.

In contrast, the present study used a more straightforward method to measure heterogeneity or cross-pressure: i.e., relative frequency of political discussion with those who hold different political views. This was made possible by the unique question items about respondents' social networks that were included only in the 2000 ANES dataset.

### **5.3 Influences of Interpersonal Communications**

The present study also examined the relationships between interpersonal communication networks and political/nonpolitical characteristics. The findings suggested that the presence of disagreement within interpersonal communication networks tends to prevent early formation of preference or attitude toward a candidate and attachment to political parties. This was supported by the negative correlations found between heterogeneity and the variables of the partisanship strength. Therefore, the results suggest that last-minute deciders do not make their decision as early as others not because they are less interested or involved but because they undergo more 'cross-pressures' and thus form attitudes toward candidates later than any other voters.



Furthermore, the present study found that disagreement within one's interpersonal communication environment is associated with delays in attitude or opinion formation and lower levels of political participation. For example, those who experience more disagreement within their interpersonal communication networks tend to discuss politics with fewer people and less frequently<sup>2</sup> and are less likely to participate in political activities (multiple  $R = -.26$ ,  $p < .00$ ).

The possibility of a negative relationship between heterogeneity and political participation has long been discussed in other studies. For instance, Noelle-Neumann (1984) introduced a notion of “fear of isolation” to explain why those who perceive themselves as the minority are not willing to publicly express their own opinions. Also, since Asch's (1963) classical experiment, social conformity theories have stressed powerful social influences toward consensus within small, cohesive groups. At the intrapersonal level, traditional social psychological theories predict that the psychological discomfort generated by disagreement within social relations will force individuals to reduce dissonance and therefore to attain balance either by changing their own attitudes or by disconnecting the existing relations (Heider, 1946, 1958; Festinger, 1957, Newcomb, 1953, etc.). More recently, attitudinal ambivalence – defined as the simultaneous presence of both positive and negative attitudes toward the same object and caused by cross-pressure – has been pointed out as a primary force discouraging political participation (e.g., Sniderman, 1981; Gue & Meffert, 1998, Green, Visser, & Tetlock, 2000, etc.). In short, it might be plausible that heterogeneity within one's discussion network *causes* low level of political participation.

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<sup>2</sup> Heterogeneity was negatively correlated with both network size and frequency of political discussion ( $r = -.08$ ;  $p < .05$  and  $r = -.13$ ;  $p < .00$ , respectively).

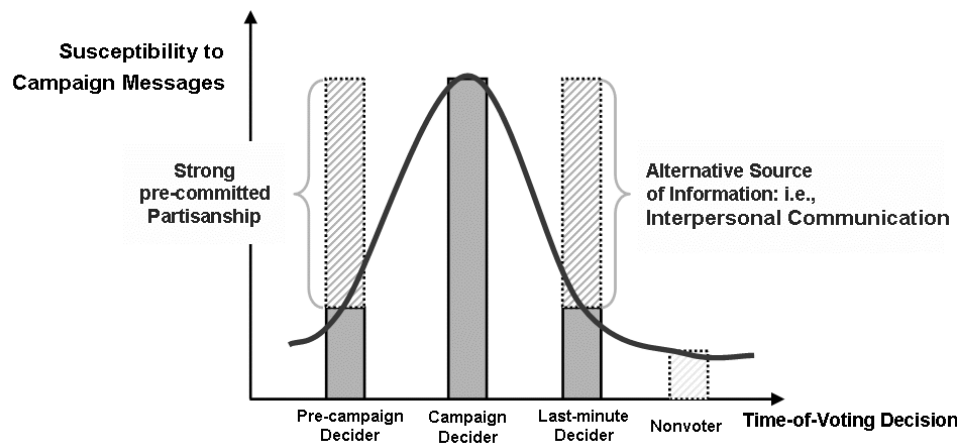
Nonetheless, it is important to acknowledge the possibility that causality might go in the reverse direction: that is, participation in political activities could lead one to associate with a more politically homogeneous group of contacts. Obviously, some kinds of political participation such as working on a campaign will certainly increase the likelihood of personal contacts with like-minded people. Thus, the causal direction between political participation and heterogeneity is still open to further exploration.

### **5.4 Reinterpretation of Campaign Effects**

Although the present study did not examine the campaign effects delivered via mass media, which have been assumed to be mediated by time-of-voting decision, its findings suggest an important implication for understanding the process by which people are affected or persuaded by campaign messages.

Because the findings do not support the suggested linear relationships between time-of-voting decision and other variables, the explanation of the inversed U-shaped relationship between time-of-voting decision and susceptibility to campaign messages should be revised. In other words, last-minute deciders, who had been assumed to be politically uninvolved and thus inattentive to campaign messages, turned out to be as involved and attentive as campaign deciders, who had been assumed to be interested enough to be affected by campaign messages. Nonetheless, if last-minute deciders are less susceptible to campaign messages than campaign deciders, neither lack of interest nor media exposure is a sufficient reason for the lack of susceptibility.

Instead, the availability or diversity of information sources for voting decisions can be considered a reason. When both campaign deciders and last-minute deciders are exposed to equal amount of campaign messages and they are less committed, the only difference is in the diversity of information available within their interpersonal communication networks. That is, last-minute deciders are exposed to more alternative viewpoints, specifically through interpersonal communication channels, than campaign deciders. Therefore, last-minute deciders are expected to depend on interpersonal communication as alternative source of information for their decisions more than media messages, while campaign deciders might tend to rely on media messages relatively more than interpersonal communication. In short, the lack of susceptibility of last-minute deciders can be due to less dependency on campaign messages rather than the lack of interest.



**Figure 8. Alternative Explanation of Relationship between Time-of-Voting Decision and Susceptibility**

## 5.5 Limitations of Present Study

Compared with previous studies and emphasizing the influences of interpersonal communication, the present study suggested alternative explanations regarding voting behaviors, specifically time-of-voting decision. However, it failed to control possible historical and contextual factors in the 2000 presidential election that might affect the results.

In fact, although the turnout rate in the 2000 election (51.3%) itself was lower than those of in the 1970s and 80s (52.9% on average), it had significantly increased since the 1996 election (49.1%), whereas the turnout rate had gradually declined during the 1970s and 80s (55.2% to 50.1%). In addition, as the results of the general election show, the 2000 election was one of the most competitive between the two major parties, and also, media gave far more coverage to the activities of presidential candidates than other election years. Thus, the 2000 presidential election has been seen as a “high-stimulus election” (Flanigan & Zingale, 2006). Besides, the new media environment created by introduction of the internet has changed information-seeking behaviors of voters to a considerable degree. Therefore, the discrepancy found in this study might have resulted from the uniqueness of the 2000 election.

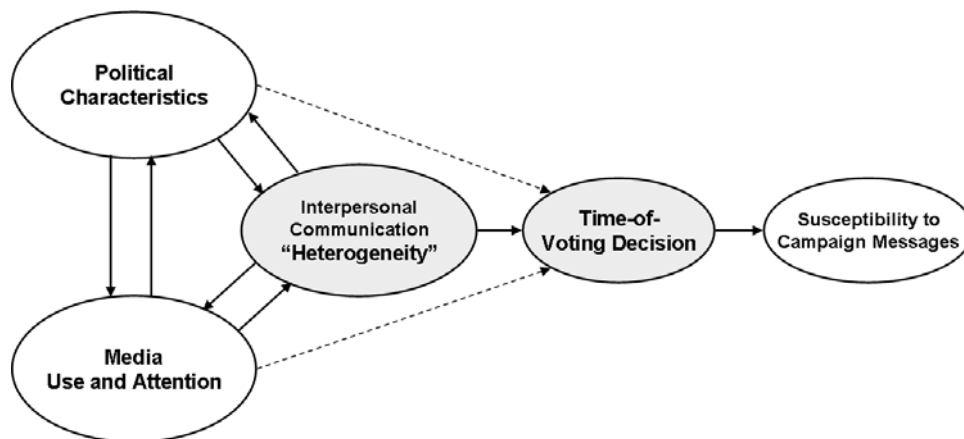
The significance of interpersonal communication found in the present study needs to be replicated in different election years or different countries. Up to now, no ANES datasets other than the 2000 dataset contain the detailed information about respondents’ social networks. Therefore, the findings from the single dataset are hard to generalize.

Although there are comparable datasets with the 2000 ANES dataset, such as the 1992 Cross National Election Project (CNEP) survey and the 1996 Spencer Foundation survey, each dataset differs from others in technical details. For example, in the CNEP survey, respondents were asked to name people with whom they discuss “important matters”

rather than specific political issues. Also, the three studies differ in the maximum number of discussants that can be named: the Spencer survey is limited to three, the ANES is to four, and the CNEP survey allows up to five. Moreover, they differ in some question items asking political behaviors so that it is difficult to standardize the scores on those questions.

## 5.6 Suggestion for Future Studies

To build a more comprehensive model for voting behaviors and campaign effects through media, it is necessary to investigate consecutive chains of causality between variables. Based on the findings of the present study, a causal model can be suggested, in which interpersonal communication variables occupy a central position (Figure 9). This model assumes reciprocal causal relationships among three major components – interpersonal communication, political characteristics, and media use and attention. For example, high level of political participation will increase the level of attention paid to media at one time point, and the close attention to media will, in turn, increase the level of participation. To test this model, a time-series dataset would be necessary.



**Figure 9. Suggested Model for Future Studies**

Regarding campaign effects mediated by time-of-voting decision, the present study suggests that both political characteristics and media use and attention do not have direct effects on time-of-voting decision and further susceptibility to campaign messages. Rather, it strongly suggests their indirect effects through the presence and degree of heterogeneity within interpersonal communication networks (the dashed arrows in Figure 9). Thus, it is necessary to test the the goodness of fit of the model, applying structural equation modeling techniques. In this case, examination of campaign effects should be also conducted to complete the full model.

Finally, to arrive at more robust interpretations and generalizations, the model should be applied to other elections: not only different kinds of elections (e.g., presidential, congressional, and senate) but also different elections across nations with different election systems (e.g., U.S., U.K, and Korea).

## APPENDIX. THE QUESTION ITEMS SELECTED FROM THE 2000

### ANES DATA

| Variable                                     | ID      | Question Script   |
|--|---------|---|
| Time-of-Voting Decision                      | V001251 | How long before the election did you decide that you were going to vote the way you did?  |
| <b>Political Involvement / Participation</b> |         |   |
| Turnout in 1996                              | V000303 | In 1996 Bill Clinton ran on the Democratic ticket against Bob Dole for the Republicans, and Ross Perot as an independent candidate. Do you remember for sure whether or not you voted in that election?   |
| Vote intent in 2000                          | V000792 | So far as you know now, do you expect to vote in the national elections this coming November or not?  |
| Contribution to Candidate                    | V001229 | During an election year people are often asked to make a contribution to support campaigns. Did you give money to an individual candidate?  |
| Contribution to Party                        | V001231 | Did you give money to a political party during this election year?  |
| Meetings / Rallies                           | V001227 | Did you go to any political meetings, rallies, speeches, dinners, or things like that in support of a particular candidate?   |
| Campaign works                               | V001228 | Did you do any (other) work for one of the parties or candidates?   |
| <b>Political Interest / Attention</b>        |         |   |
| Attention to Presidential Election           | V000301 | Some people don't pay much attention to political campaigns. How about you? Would you say that you have been very much interested, somewhat interested or not much interested in the political campaigns so far this year?  |
| Care about Presidential Election             | V000302 | Generally speaking, would you say that you personally care a good deal who wins the presidential election this fall, or that you don't care very much who wins?   |
| Care about House Election                    | V000342 | As you know, representatives to Congress in Washington are being chosen in this election from congressional districts all around the country. How much would you say that you personally care about the way the election to the U.S. House of Representatives comes out: do you care very much, pretty much, not very much or not at all? |
| Interest in Presidential Campaigns           | V001201 | Some people don't pay much attention to political campaigns. How about you? Would you say that you were very much interested, somewhat interested, or not much interested in following the political campaigns this year?   |

| Variable                               | ID        | Question Script   |
|--|-----------|---|
| <b>Strength of Partisanship</b>        |           |   |
| Preference for Cand.                   | V000794   | IF R EXPECTS TO VOTE IN NOVEMBER ELECTION:<br>Would you say that your preference for [GORE/BUSH/BUCHANAN/OTHER] is strong or not strong?  |
|  | V000796   | IF TURNOUT INTENT IS WILL NOT:<br>Would you say that your preference for <CANDIDATE NAMED> is strong or not strong?   |
| Self-placement on Lib-Con Scale        | V000446   | BRANCHING:<br>When it comes to politics, do you usually think of yourself as a liberal, a conservative, a moderate, or haven't you thought much about this?<br>If you had to choose, would you consider yourself a liberal or a conservative?<br>Would you call yourself a strong liberal or a not very strong liberal?<br>Would you call yourself a strong conservative or a not very strong conservative? |
| Party ID                               | V000523   | Generally speaking, do you think of yourself as a Republican, a Democrat, an Independent, or what?<br>BRANCHING:<br>Would you call yourself a strong Democrat/Republican or a not very strong Democrat/ Republican?<br>Do you think of yourself as closer to the Republican Party or to the Democratic party?   |
| <b>Media Use and Attention</b>         |           |   |
| Watching TV News                       | V000329   | How many days in the past week did you watch the national network news on TV?   |
| Attention to TV News                   | V000330   | How much attention do you pay to news on national news shows about the campaign for President: a great deal, quite a bit, some, very little, or none?   |
| Number of Campaign-related Programs    | V001202 / | Did you watch any programs about the campaign on television?  |
|  | V001203   | Would you say you watched a good many, several, or just one or two?   |
| Attention to Campaign-related Programs | V001648   | In general, how much attention did you pay to news about the campaign for President: a great deal, quite a bit, some, very little, or none?   |
| TV debates                             | V001644 / | Did you watch a televised presidential debate between Al Gore and George W. Bush?   |
|  | V001645   | Did you watch an entire debate or just part of it?  |
| Reading Newspaper                      | V000335   | How many days in the past week did you read a daily newspaper?  |
| Attention to Campaign-related Articles | V000336 / | Did you read about the campaign in any newspaper?   |
|  | V000337   | How much attention do you pay to newspaper articles about the campaign for President -- a great deal, quite a bit, some, very little, or none?  |
| Listening to Campaign-related Radio    | V001646 / | Did you listen to any speeches or discussions about the campaign on the radio?  |
|  | V001647   | Would you say you listened to a good many, several, or just one or two?   |
| Information Search on the Internet     | V001434   | Have you seen any information about this election campaign on the (Internet/Web)?   |



| Variable                                   | ID  | Question Script   |
|--|---|---|
| <b>Social Demographic Attributes</b>       |   |   |
| Age  | V000908                                     | What is the month, day and year of your birth?  |
| Gender                                     | V001029                                     | OBSERVED BY INTERVIEWER   |
| Race                                       | V001006                                     | What racial or ethnic group or groups best describes you?   |
| Education                                  | V000913                                     | What is the highest grade of school or year of college you have completed?  |
| Income                                     | V000997                                     | Please tell me which category best describes the income you yourself had in 1999 before taxes. This figure should include salaries wages, pensions, dividends, interest, and all other income. Please stop me when I get to your income category. |
| <b>Interpersonal Communication Network</b> |   |   |
| Number of Discussants                      | V001699                                     | From time to time, people discuss government, elections and politics with other people. I'd like to ask you about the people with whom you discuss these matters. These people might or might not be relatives. Can you think of anyone? <NAME 1> |
|  | V001700                                     | Is there anyone else you talk with about these matters? <NAME 2>  |
|  | V001701                                     | Is there anyone else (you talk with about these matters)? <NAME 3>  |
|  | V001702                                     | Is there anyone else (you talk with about these matters)? <NAME 4>  |
| Frequency of Discussion                    | V001708,<br>V001716,<br>V001724,<br>V001732 | When you talk with <NAME 1, 2, 3, 4>, do you discuss political matters...often, sometimes, rarely, or never?  |
| Vote Choices of Discussants                | V001710,<br>V001718,<br>V001726,<br>V001734 | How do you think <NAME 1, 2, 3, 4> voted in the election? Do you think he/she voted for Al Gore, George Bush, some other candidate, or do you think <NAME 1, 2, 3, 4> didn't vote?  |

## REFERENCES

- Asch, S. (1963). Effects of Group pressure upon the Modification and Distortion of Judgments. In H. Guetzkow. ed., *Groups, Leadership and Men: Research in Human Relations*. NY: Russell and Russell: 177-190.
- Berelson, B. & Steiner, G. (1964). *Human Behavior*. NY: Harcourt Brace and World.
- Berelson, B., Lazarsfeld, P. F., & McPhee, W. (1954). *Voting*. Chicago: University of Chicago Press.
- Blumler, J. & McQuail, D. (1968). *Television in Politics*. IL: University of Chicago Press.
- Bohman, J. (2007). Political Communication and the Epistemic Value of Diversity: Deliberation and Legitimation in Media Societies. *Communication Theory*, 17: 348-355.
- Bowen, L. (1994). Time of voting decision and use of political advertising: The Slade Gorton-Brock Adams senatorial campaign. *Journalism Quarterly*, 71: 665–675.
- Box-Steffensmeier, J. M., & Kimball, D. (1999). The timing of voting decisions in presidential campaigns. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago; Retrieved at <http://polisci.osu.edu/faculty/jbox/Papers/mpsapaper.pdf> on October 13, 2008.
- Chaffee, S. H., & Choe, S. Y. (1980). Time of decision and media use during the Ford-Carter campaign. *Public Opinion Quarterly*, 44: 53–69.
- Chaffee, S. H., & Rimal, R. N. (1996). Time of vote decision and openness to persuasion. In D. C. Mutz, P. M. Sniderman & R. A. Brody (Eds.), *Political persuasion and attitude change* (pp. 267–291). Ann Arbor: University of Michigan Press.

- Eveland, W. P. & Shah., D. V. (2003). The Impact of Individual and Interpersonal Factors on Perceived News Media Bias. *Political Psychology*, 24(1): 101-117.
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Ill: Row Peterson.
- Flanigan, W. H. & Nancy, H. Z. (2006). *Political Behavior of the American Electorate (11th ed.)*. DC: CQ Press.
- Fournier, P., Nadeau, R., Blais, A., Gidengil, E., & Nevitte, N. (2004). Time-of-voting decision and susceptibility to campaign effects. *Electoral Studies*, 23: 661–681.
- Gopoian, D., & Hadjiharalambous, S. (1994). Late deciding voters in presidential elections. *Political Behavior*, 16: 55–78.
- Green, M. C., Visser, P. S., & Tetlock, P. E. (2000). Coping with Accountability Cross-Pressures: Low-Effort Evasive Tactics and High-Effort Quests for Complex Compromises. *Personality and Social Psychology Bulletin*, 26: 1380-1391.
- Guge, M., & Meffert, M. F. (1998). The Political Consequences of Attitudinal Ambivalence. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago (April, 1998).
- Habermas, J. (2006). Political Communication in Media Society: Does Democracy Still Enjoy an Epistemic Dimension? The Impact of Normative Theory on Empirical Research. *Communication Theory*, 16: 411-426.
- Hardy, B. W. (2005). Political discussion and democratic citizenship: Comparing heterogeneous and homogeneous political discussion networks as promoters of active citizenry. Paper presented at the annual convention of the International Communication Association, New York.

- Heider, F. (1946). Attitudes and Cognitive Organization. *Journal of Psychology*, 21(Jan): 107-112.
- Heider, F. (1958). *The Psychology of Interpersonal Relations*. NY: Wiley.
- Huckfeldt, R., Johnson, P. E., & Sprague, J. (2004). *Political disagreement: The survival of diverse opinions within communication networks*. New York: Cambridge.
- Huckfeldt, R., Mendez, J. M., & Osborn, T. (2004). Disagreement, ambivalence, and engagement: The political consequences of heterogeneous networks. *Political Psychology*, 25: 65–95.
- Johnston, R., Blais, A., Gidengil, E., & Nevitte, N. (1996). *The Challenge of Direct Democracy: The 1992 Canadian Referendum*. Montreal: McGill-Queen's University Press.
- Katz, E. (1973). Platforms and Windows: Broadcasting's Role in Election Campaigns. *Journalism Quarterly*, 48: 304-314.
- Klapper, J. (1960). *The Effects of Mass Communications*. NY: Free Press.
- Klecka, W. R. (1980). *Discriminant Analysis*. CA: Sage Publications.
- Lazarsfeld, P. F., Berelson, B., & Gaudet, H. (1968). *The People's Choice* (3<sup>rd</sup> ed.). NY: Columbia University Press.
- Leighley, J. E. (1990). Social Interaction and Contextual Influences on Political Participation. *American Politics Quarterly*, 18 (October): 459-475.
- McLeod, J. M., Scheufele, D. A., Moy, P., Horowitz, E., Holbert, R. L., Zhang, W., Zubric, S., & Zubric, J. (1999). Understanding deliberation: The effects of discussion networks on participation in a public forum. *Communication Research*, 26: 743–774.

- Mertler, C. A. & Vannatta, R. A. (2001). *Advanced and Multivariate Statistical Methods: Practical Application and Interpretation*. CA: Pyrczak Publishing.
- Moscovic, S. & Zavalloni, M. (1969). The Group as a Polarizer of Attitudes. *Journal of Personality and Social Psychology*, 12(2): 125-135.
- Mutz, D. C. (2002). The consequences of cross-cutting networks for political participation. *American Journal of Political Science*, 46: 838–855.
- Myers, D. G. (1975). Discussion-induced attitude polarization. *Human Relations* 28(10): 699–714.
- Myers, D. G. & Kaplan, M. F. (1976). Group-induced polarization in simulated juries. *Personality and Social Psychology Bulletin* 2: 63–66.
- Newcomb, T. M. (1956). The Prediction of Interpersonal Attraction. *American Psychologist*, 11 (Nov.): 575-586.
- Nir, L. & Druckman, F. N. (2008). Campaign mixed-message flows and timing of vote decision. *International Journal of Public Opinion Research*, 20(3): 326-346.
- Noelle-Neumann, E. (1984). *Spiral of Silence*. IL: University of Chicago Press.
- Oliver, J. E. (1999). The Effects of Metropolitan Economic Segregation on Local Civic Participation. *American Journal of Political Science*, 43(1): 186-212.
- Pool, I. (1963). The Effect of Communication on Voting Behavior. In W. Schramm (ed.), *The Science of Human Communication*. NY: Basic Books.
- Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community*. NY: Simon & Schuster.
- Rivers, D. (1988). Heterogeneity in models of electoral choice. *American Journal of Political Science* 32: 737–757.

- Scheufele, D. A., Nisbet, M. C., & Brossard, D. (2003). Pathways to political participation? Religion, communication contexts, and mass media. *International Journal of Public Opinion Research*, 15: 300–323.
- Schmitt, K. M., Gunther, A. C., & Liebhart, J. L. (2004). Why Partisans See Mass Media as Biased. *Communication Research*, 31: 623-641.
- Sinderman, P. M. (1981). *A Question of Loyalty*. CA: University of California Press.
- Sniderman, P.M., Brody, R.A., & Tetlock, P.E. (1991). *Reasoning and Choice: Explorations in Political Psychology*. Cambridge: Cambridge University Press.
- Sunstein, C. (2002). The Law of Group Polarization. *Journal of Political Philosophy*, 10(2): 175-195.
- Vallone, R. P., Ross, L., & Lepper, M. R. (1985). The Hostile Media Phenomenon: Biased Perception and Perceptions of Media Bias in Coverage of the Beirut Massacre. *Journal of Personality and Social Psychology*, 49(3): 577-585.
- Whitney, D. C., & Goldman, S. B. (1985). Media use and time of vote decision: A study of the 1980 presidential election. *Communication Research*, 12: 511–529.