

行政院國家科學委員會補助專題研究計畫成果報告

選民偏好與民意臆測的互動關係探究

- 預防理論在 2000 年台灣總統大選之運用

Exploring the reciprocal relationships between voters'
preferences and their perceptions of public opinion

- The Use of Inoculation in 2000 Presidential Election in Taiwan

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一、中英文摘要

(一) 中文摘要

本研究旨在探究大眾傳播媒體與政治心理學等領域中，長期以來的一項辯論：選民對候選人的態度及其對候選人支持度的洞察之間饒富爭議性的因果關係。要探究上述關係，預防理論（在認知典範中，最新且強而有力的理論之一）可以提供很好的理論架構。預防理論假定，透過認知的過程，採用包含威脅的成分來激發個人產生反論述的預防策略，將會提昇抗拒態度變遷的可能性。激發個人產生反論述，是透過威脅其價值判斷的自由來加以促成的（Pfau, 1997）。不同於一般傳播及社會心理學領域的研究之聚焦於對態度變遷的勸說（Miller & Burgoon, 1973），預防是一種旨在提昇抗拒態度變遷的訊息策略。本研究企圖採用預防理論所指出的策略於臺灣的政治選舉，以檢視預防理論在國際脈絡的效能。此外，也將進一步評估並討論預防理論的細微差異及其運用。

關鍵詞：

洞察、民意、選民偏好、總統選舉、認知、態度變遷、抗拒、預防理論、多變量分析。

(二) Abstract

This study is to uncover the controversial causal relationship between voters' attitudes towards candidates and their perceptions of the candidate support in the long debate in the fields of mass communication and political psychology. To explore the above relationships, one of the most update and robust theories in cognition paradigms—inoculation theory—is considered a good theoretical to be employed. Inoculation theory posits that, through cognitive processing, the likelihood of resistance to attitude change can be enhanced by applying inoculation treatments containing threat components that motivate individuals to generate counter arguments. The motivation for individuals' counter arguing is induced by threats to their freedom of attitudinal discretion (Pfau, 1997). Unlike the majority of research in the field of communication and social psychology, which focuses on persuasion for attitude change (Miller & Burgoon, 1973), inoculation is a message strategy that seeks to promote resistance to attitude change. The present study intends to employ the strategies informed by inoculation theory in Taiwan's political campaign to examine the efficacy of inoculation in an international context. In addition, the nuances of inoculation theory and applications may be further assessed and discussed.

Keywords :

Perceptions, Public Opinion, Voters' Preference, Presidential Election, Cognition, Attitude Change, Resistance, Inoculation Theory, MANCOVA.

二、計畫緣由與目的

The Origination of the Study

The issues about public opinion poll have been utilized in social science research over a long period of time. In practical fields, study of public opinion polls have also been applied in the fields of political agendas, electoral behaviors, image building, marketing, and so on. Along with public opinion polls, however, other kinds of references might be considered when voters make their voting decisions. For instance, the “perceptions” of public opinion and voters’ “cognition” about their support for certain candidates. To discover the subtle relationships described above, one of the most popular theories with robust findings in the fields of political science, social psychology, and mass communication is “inoculation theory.” In addition, with the respect to the applications of inoculation theory in political arena, Taiwan’s 2000 presidential election would be a good context to be observed.

The Goals of the Study

Taiwan’s presidential election in 2000 was an intensive competition. There are five candidates. Among those five candidates, two of them were forerunners before the election day. Although Mr. Chen, Sui-Bien from the Democratic Progressive Party (the former opposition party) is elected, the number of votes for the newly elected president Chen and that for another candidates, Song, Chu-Yu (Independent) are pretty close. The percentage of voting President Chen received was 39.3% whereas Mr. Son received 36.7% (Mr. Lien, Chian from the former ruling party Kuomintang received 23%). The most of Taiwanese people, the leaders of mainland China (the PRC, People’s Republic of China), and the international community have considered Chen as one of the extreme supporters for Taiwan’s independence. For President-elect Chen, the most concerned policy by Taiwanese is his policy toward the relationships between Taiwan and mainland China, which is closely related to the safety and stability across the Taiwan Strait because China has threatened to use military forces if Taiwan seeks independence.

Inoculation theory posits that through cognitive processing, the likelihood of resistance to attitude change can be enhanced by applying inoculation treatments containing threat components that motivate individuals to generate counter arguments. The motivation for individuals’ counter arguing is induced by threats to their freedom of attitudinal discretion (Pfau, 1997). Unlike the majority of research in the field of communication and social psychology which focuses on persuasion for attitude change (Miller & Burgoon, 1973), inoculation is a message strategy that seeks to

promote resistance to attitude change. The classic McGuire model uses the overprotected “cultural truism” as the theoretical boundary and primarily focuses on the health care context in the 1960s. McGuire (1961) discerns two possible ways to analyze the vulnerability of the cultural truism under attacks. One is from the cognitive perspective- people have little or no practice in defending truism. They have not engaged in defenses and often lack informational resources that could enable them to mount a defense. The other is from the motivational perspective—people have not been motivated to undertake the necessary practice because their beliefs have been threatened and therefore seem unassailable (Eagly & Chaiken, 1993).

The present study intends to employ the strategies informed by inoculation theory in Taiwan’s political campaign to examine the efficacy of inoculation in an international context. In addition, the nuances of inoculation theory and applications may be further assessed and discussed.

Hypotheses

Study conducted by Pfau, Tusing, Koerner, Lee, Godbold, Penazola, Yang and Hong (1997) provides a model “process” of inoculation. The key components of this model are threat, counterargument, refutation preemption and involvement during the progression from inoculation treatment implementation to the resulting resistance of attitudes. Unlike the majority of research in the fields of communication and social psychology, which focuses on persuasion for a change in attitude (Miller & Burgoon, 1973). Inoculation is a message strategy that seeks to promote resistance to a change in attitude. The classic McGuire model employs the overprotected “cultural truism” as the theoretical boundary and focuses on the health care context of the 1960s. The model’s hypotheses are informed by the “selective exposure postulates,” which contain two principles: (1). People choose to accept information that is supportive of their beliefs, and (2). People choose to avoid information that is contrary to their beliefs (McGuire 1961). In addition, McGuire has found two ways to analyze the vulnerability of the “cultural truism” under attack. One is from the cognitive perspective that people have very little or no practice at defending truisms. They have not engaged in defenses and often lack the informational resources that could enable them to mount a defense for themselves. The second is from a motivational perspective that people are not motivated to undertake the necessary practice because their beliefs have never been threatened and therefore seem unassailable (Eagly & Chaiken, 1993).

The inoculation paradigm posits that refutational pre-treatments, which introduce potential challenges in the presence of a supporting environment, threaten the receiver. Thus, they often trigger the receivers’ motivation to bolster attitudes, thereby

conferring resistance to subsequent counterarguments (Papageorgis & McGuire, 1961). The pre-treatments contain two integral components: threat and refutational preemption. The threat component is the most central feature of inoculation theory (Pfau, 1997). Threat involves the forewarning of one or more impending challenges to existing attitudes, challenges powerful enough to threaten the receiver's attitudes. Threat serves as a "motivational trigger" in the process of inoculation (Pfau, 1997, p.137). Specifically, "threat motivates the receivers to bolster attitudes, unleashing the internal process"(Pfau, 1997, p.137).

On the other hand, Pfau (1997) states that "refutational preemption involves the process of initially raising and answering, one or more specific challenges to existing attitudes" and that "the two components, threat and refutational preemption, work in tandem; first threat then refutational preemption"(p.137). Thus, preemptive refutation of specific counterarguments is a necessary, but not sufficient, ingredient in inoculation. The process works by "motivating receivers to bolster attitudes and unleashing an internal process," (Pfau, 1997 p.137) and not by simply providing answers to specific counterarguments. More importantly, the inoculation process works through the integral threat component. It is the threat component, which motivates the receiver to defend against any potential attack, rather than rehearsing for specific arguments and rendering themselves defenseless against different arguments that might be encountered (Miller & Burgoon, 1973).

One should not confuse threat informed by inoculation theory with "fear appeals." Threat in inoculation pre-treatments "consists of a perception of vulnerability of one's attitudes to potential counterarguments"(Pfau, 1997, p.139). On the other hand, "fear appeals involve perceived though/cognition about a danger or harms, which is a key variable in the persuasive process"(Witte, 1994, p.119). For example, in smoking prevention, threat in inoculation will focus on nonsmokers, whereas fear appeals focus on smokers.

In addition, inoculation carries tremendous potential because, through threat and refutational preemption, it is able to spread a "blanket of protection" over the receivers against a wide array of potential counterarguments, rather than merely providing limited resistance to specific attack messages (Pfau, 1997; Pfau & Kenski, 1990).

The classic McGuire model reveals different efficacy for various types of inoculation pretreatments. The supportive approach to pretreatments strengthens existing attitudes by providing content that simply bolsters attitudes, whereas the refutation approach seeks to threaten attitudes, warning of possible challenges to attitude integrity, requiring the receiver to defend against potential challenges to attitudes through refutational preemption. Refutational messages can be either

specific to the content of attack (refutational-same) and or generic (dealing with the same subject but not the same content as the counterarguments, so called “refutational different messages”). In general, refutational approaches are superior to supportive pre-treatments (Anderson & McGuire, 1965; McGuire, 1961, McGuire & Papageorgis, 1961), although some evidence has shown the use of both as superior to using either separately (Burgoon & Chase, 1973; McGuire, 1961,1962; Tannenbaum & Norris, 1965).

In terms of refutational-same and -different messages, most of McGuire’s studies indicate that both confer resistance (McGuire 1961,1962,1970). These findings confirm that refutational pretreatments serve to motivate receivers, as oppose to providing specific answers to counterarguments. The threatening pre-treatments trigger an internal process in receivers, motivating them to bolster their attitudes. This process enables receivers to be resistant to attacks that contain content which is either the same or different from the inoculation pretreatments. Other studies also find that higher threat levels generate more resistance (McGuire, 1962; McGuire & Papageorgis, 1962).

Tannenbaum and Norris (1965) offer an alternative approach to the classic inoculation model that produces some other interesting findings. Based on the congruity theory, one of the consistency theories in social psychology, they design different messages, such as refutational defense, supportive defense, denial and source attack. Resulting in different levels of inoculation effectiveness. Their findings further confirm that refutational treatments are more effective in inducing resistance and suggest that the strategy of combining different messages is indeed the best approach. One benefit of their approach is that it enables an inoculation study to “explain” the effectiveness of the combined pre-treatments. Since they maintain that each pretreatment simply boosts the other, thus increasing the inconsistency of subsequent counterarguments by attack (Tannenbaum & Norris, 1965).

Findings by different inoculation researchers have also received robust empirical support. For example, on the topic of prerefutation versus postrefutation, conclude that the refutation-attack sequence is superior to the post-hoc approach (Tannenbaum & Norris 1965; Tannenbaum, Norris & McCauley, 1966). Other studies also indicate that refutational pre-treatments require some time, varying from a few minutes in some cases and or two weeks in others studies, before one can observe the outcome of its effectiveness, a process in which they term “delay” of inoculation treatments. (McGuire;1962,1970; Pryor & Stienfatt, 1978)

A phenomenon of “decay,” the decline of inoculation treatments over time, also occurs. There is therefore a need for the reinforcement of inoculation strategies. Consistent with the findings on people’s information processing by the ELM

(Elaborate Likelihood Model; Petty & Cacioppo, 1984) and the HSM (Heuristic Systematic Model; Chaiken, 1980), some inoculation studies reveal that refutational-different pre-treatments have less decay over time in contrast to refutational-same pre-treatments (McGuire, 1962, 1964; Petty & Cacioppo, 1986). This decay phenomenon is because that the greater perceived threat by refutational-different pre-treatments generates more cognitive efforts by receivers to process the information (via central/systematic routes); thus it persists overtime (Petty & Cacioppo, 1986). The rationale is also consistent with the central roles of inoculation: threat and its consequent motivation. Although, receivers may forget the specific content of a message, the motivational effect lasts because the inoculation process has triggered an internal process in which receivers are motivated to seek additional arguments and information to support their attitudes (Pfau & Kenski, 1990). Therefore, the following hypotheses are advanced:

H1: For people who receive inoculation pretreatments, as compared to those who do not, inoculation messages confer more resistance to attitude change following exposure to a political attack message.

Party identification is one of the most critical variables in influencing people's voting behaviors (Campbell et al., 1960). The findings of Pfau and Burgoon (1988) study reveal that both inoculation-same and -different messages confer resistance to influence of subsequent political attack. The main effects extend to both Democratic and Republican candidates and hold for both issue and character attacks. One of the strongest findings of their study is that the inoculation effect is most pronounced among strong party identifiers, although the effect occurs across every level of party identification.

Some researchers argues that, for the context of Taiwan's elections, it might be necessary to change the research focus from party identification to voters' affiliation with candidates' image and personalities (King, 1997). Lin (2000) conducts a research on the relationships between inoculation and the spiral of silence on the issue of Taiwan's political future. The major findings of Lin's study support potential applications of inoculation strategies to enhance political deliberation over public agendas informed by the spiral of silence. His study indicates that inoculation treatments have a great influence on almost all dependent variables. In Lin's study, party identification has significant impact on people's attitudinal resistance but little influence on other dependent measures by omnibus results, such as attitudinal confidence, willingness to speak out, and fear of isolation (Lin, 2000). Taking Lin's findings together with other scholars' suggestions, it may be plausible to reason that Taiwanese voters consider candidates' image and personalities more important than party identification when they decide who to vote for in the campaigns. Thus, the

following hypothesis is developed:

H2: People who have higher strength of support for certain candidates are more resistant to counterattitudinal attacks attempting to influence their existing attitudes, compared to those who do not receive inoculation pretreatments.

Issue involvement is a key variable in most inoculation studies. Petty and Cacioppo (1986) posit that high involvement increases the likelihood that one will acknowledge the vulnerability of one's attitudes and act to bolster them. Pfau and others (1997) also note that the more involved with an attitude a person is, the more likely it is that he or she would expand the cognitive energy required to bolster it. It is noteworthy, however, inoculation treatments may have limited effects in receivers whose levels of involvement are too high. This is because a ceiling effect occurs in the relationships between issue involvement and perceived threat by inoculation messages (Pfau et al., 1997). Because of the importance of issue involvement in inoculation theory, the following hypothesis is reasoned as follows:

H3: For those who receive inoculation pretreatments, higher involved people are more resistant to counterattitudinal attacks attempting to influence their existing attitudes.

Methodology

The research applied a full-crossed 2×3 factorial analysis of covariance design. The two independent variables being examined by this design were inoculation treatment (experiment and control) and involvement level (low, medium, and high).

A total of 533 residents over 18 years old living in Taipei, Kaohsiung, and other 24 counties and cities throughout Taiwan were interviewed in the wave one of this research. For wave two, 403 respondents continued to stay in the panels and became the valid samples ($N = 403$) for the study's analysis. There were 202 respondents in the experimental group and 201 respondents in the control group for wave two. The panel's response rate from wave one to wave two of the study was fair at 75.6%.

Design

The study employed a 2×3 factorial analysis of covariance design. There were two independent variables investigated in the analysis. First, **inoculation treatment** included experiment and control groups, based on whether subjects had received experimental inoculation treatments or not. Second, **issue involvement** was operationalized as low, medium, and high, toward the issue of Taiwan's political future. Involvement level was trichotomized according to the seven-point scale of the subjects' involvement scores. Subjects whose scores fell between 0 and 2.99 were categorized as less involved. Subjects whose scores fell between 3 and 4.99 were classified as at a medium involvement level. Highly involved persons were those who scored 5 or higher.

Administration

The contextual issue of the present study is Taiwan-PRC relations proposed by the three major candidates in 2000 presidential election in Taiwan. The researchers of this study hired one of the most prestigious independent survey institute, Survey Center of the Central News Agency (CNA), responsible for data collections. After the initial contact to gather basic information of respondents from July 24th to July 25th, there were two waves of interviews administered by the survey center. Wave one was conducted from August 6th to August 8th. Wave two was processed during August 21st and August 26th. There were about two weeks between wave one and two in order to let “delay effects,” informed by the literature of inoculation, take place in the interviewing process. The sampling method employed by the Central News Agency was multistage random digit dialing, which was operated by VTEC CATIS.

Inoculation messages were designed to match three different kinds of supporters (pro-Chen, pro-Song, and pro-Lien). And, there were two different inoculation messages for each of the above three positions: refutational-same and –different. The total number of inoculation messages was six. In addition, there were three different attack messages, which were designed to attack each position (pro-Chen, pro-Song, and pro-Lien). Thus, taking inoculation and attack messages together, there were total nine messages.

The Central News Agency hired a total of 61 interviewers and 11 supervisors to participate the works of data collections. After the initial contact, CNA delivered first wave messages (inoculation messages) and questionnaires to 682 respondents. Then, the CNA survey center called those respondents to survey their attitudes toward the inoculation messages. In wave two, attack messages and the second questionnaires were sent out to 548 respondents who completed wave one. The CNA called again to gather those respondents’ attitudes after reading attack messages. As a results, there were 403 respondents finished both waves of interviews.

Instruments

The two independent variables were: **inoculation condition** (experiment and control) and **issue involvement** (the respondents’ extent of involvement in the issue of Taiwan’s political future). **Inoculation condition** allowed comparisons between treatment and control groups. Participants in the control group did not receive any inoculation treatments. **Issue involvement** represented respondents’ strength of involvement in the issue of Taiwan’s political future. Issue involvement applied the modified Zaichkowsky’s Personal Involvement Inventory (Rubin, Palmgreen, & Sypher, 1994), as used in the study of Pfau and others (1997a). The Personal Involvement Inventory includes 12 scale items: doesn’t/does matter to me, unimportant/important, nonessential/essential, mundane/fascinating, of no concern/of

much concern, means nothing/means a lot, boring/interesting, superfluous/vital, unexacting/expecting, insignificant/significant, trivial/fundamental, and irrelevant/relevant.

In addition, two covariates were measured: **strength of support for candidate** (the degree of respondents' support for their affiliated presidential candidates) and **pre-attitude** (respondents' attitudes in wave one). **Strength of support for candidates** was measured by the question: "Could you please tell me WHO you voted in the 2000 presidential election? [1] Lien Chiang [2] Chen Sui-Bien [3] Song Tsu-Yu [4] Shu Shin-Liang [5] Lee Auo" and the correspondent question: "Using a seven-point scale (1 means just little support whereas 7 means strongly support), could you tell me that you just little support or strongly support for the candidate you voted?"

Pre-attitude was measured in a wave-one interview by a set of questions asking respondents to reveal their own choices of presidential candidates and then measuring their affiliated candidates' stands in the issue of Taiwan-PRC relations in detail through the following six scale items (a seven-scale measurement for each): positive/negative, good/bad, favorable/unfavorable, acceptable/unacceptable, wise/foolish, and right/wrong. This scale was employed previously by Burgoon et al. (1978) and Miller and Burgoon (1979) and revised by Pfau and Burgoon (1988).

There were three dependent variables in the study: **threat**, **post-attitude**, and **overt resistance**. The **threat** generated by inoculation messages was measured with five bipolar adjective pairs employed previously by Pfau and Burgoon (1988) and Pfau et al. (1990). The five 7-interval semantic differential items included: not threatening/threatening, safe/dangerous, unintimidating/intimidating, not harmful/harmful, and not risky/risky. **Post-attitude** of the respondents was measured in a wave-two interview by the same instrument used for pre-attitude in wave-one, which included six 7-scale items: foolish/wise, unfavorable/favorable, unacceptable/acceptable, wrong/right, bad/good, and negative/positive. **Overt Resistance** measure employed three item 0-100 probability scales, patterned after scales, previously used by Pfau et al. (1992) and Pfau & Bockern (1994) in a health context. Participants responded to the following statements: "When friends ask me to change my attitude on this issue (Taiwan-PRC relations), I will say no", "I will try to persuade my friends who hold a different position on this issue from mine", and "I will try to persuade members of my family who hold a different position from me on this issue."

Manipulation check

The manipulation check ensured that inoculation pretreatments would trigger a threat to attitude. The triggered threat by inoculation messages was measured by questions with a 7-scale measurement, employed previously by Pfau and Burgoon (1988) and Lee

(1997): How do you feel about the arguments in the messages you just heard? They make you feel: not threatened/threatened, safe/in danger, and calm/anxious.

三、結果與討論

Data Analysis and Results

The study employs Multivariate Analysis of Covariance (MANCOVA) for the main statistical analysis. For predicted effects, significant omnibuses tests are followed by univariate tests for more than two means. For unpredicted effects, significant omnibus results are followed by tests of simple effects, where appropriate, and then by Scheffee post-hoc tests.

Omnibus Results

Omnibus Multivariate Analysis of Covariate (MANCOVA) tests, using Wilk's lambda, were conducted for major effects. The 2×3 factorial analysis of covariance tests, with two independent variables – experimental condition (inoculation and control) and involvement level (low, medium, and high) -- and two covariates -- strength of support for candidates and pre-attitude -- were examined on the dependent measures of threat, overt resistance, and post-attitude.

In general, the omnibus MANCOVA revealed significant outcomes, involving experimental condition, $F(3, 349) = 2.74, p < .05, R^2 = .08$. To follow up the significant omnibus MANCOVA results, univariate tests were performed. Inoculation condition had significant impact on dependent variable of postattitude, $F(1, 351) = 5.62, p < .05, \eta^2 = .016$

In addition, the omnibus MANCOVA indicated significant results for the covariates of pre-attitude, $F(3, 349) = 33.23, p < .001, R^2 = .08$. Univariate tests for pre-attitude indicated significant outcomes for the dependent measures of post attitude, $F(1, 351) = 100.2, p < .001, \eta^2 = .22$. The omnibus tests also revealed significant results for the other covariate, support for candidates, $F(3, 349) = 14.62, p < .001, R^2 = .08$. Univariate tests indicated significant impacts of support for candidates on dependent measures of overt resistance, $F(1, 351) = .97, p < .01, \eta^2 = .02$, and postattitude, $F(1, 351) = 37.84, p < .001, \eta^2 = .10$.

The omnibus MANCOVA showed no interaction effects of inoculation condition and issue involvement. Table 1 in Appendix indicated the omnibus results of MANCOVA.

The experimental condition (inoculation vs. control) means for all dependent measures were represented in Table 2. Furthermore, summary of all univariate tests are shown in Table 3.

Manipulation Check

For the inoculation theory, threat functions are the trigger for resistance. Because of the essential function of threat, a manipulation check was conducted to examine whether inoculation pretreatments, indeed, elicited threat. Subjects in the

experimental group who received inoculation treatments were expected to report more threat than those in the control group. A 7-interval scale measurement was conducted for threat manipulation—a lower score meant less threat and a higher score indicated more threat, as perceived by the subjects. An independent sample t-test was operated for the manipulation check on threat. Although there was an increase of threat in inoculated group (inoculated mean was 4.95 and control mean was 4.74, see Table 2) in descriptive statistics, the result of t-test revealed no significant threat levels among inoculated subjects than those in the control group. Therefore, threat manipulation by inoculation treatments was not as successful as planned.

Hypotheses

Hypothesis 1 predicted that inoculated people, as compared to those who are not, were more resistant following exposure to a counter attitudinal political attack message. Subjects' resistance was assessed by comparing initial attitudes following exposure to the counterattitudinal messages in the experimental and control groups. Since the omnibus results for experimental condition was significant as described before, univariate tests were further computed. The univariate tests revealed that the inoculation induced greater resistance in that it preserved initial attitudes from change, $F(1, 351) = 5.62, p < .05, \eta^2 = .016$. In addition, as Table 2 indicated, the pattern of means for the inoculation and control groups followed the study's predictions. The attitudinal resistance mean of the inoculation group was 5.20 (SD = 1.15) whereas the mean of the control group was 5.46 (SD = 1.06). Because the instruments for post-attitude were reversed measurement (e.g. 1 meant positive and 7 meant negative toward the issue position), lower numbers revealed higher attitude strength and attitudinal resistance. Thus, Hypothesis 1 was supported by the results.

Hypothesis 2 further posited that inoculation pretreatments induced more resistance to subsequent exposure to attack messages among receivers who felt more affiliated with certain candidates. As mentioned earlier, the univariate tests indicated that strength of support for candidates had significant impacts on attitudinal resistance and overt resistance. Participants' strengthened attitudes in wave two survey showed an enhanced attitudinal resistance. The univariate results indicated statistical significance between strength of support for candidates and attitudinal resistance on the issue of Taiwan-PRC relations, $F(1, 351) = 37.84, p < .001, \eta^2 = .10$. Therefore, Hypothesis 2 was supported.

Hypothesis 3 predicted that higher involved people were more resistant to counterattitudinal attacks attempting to influence their existing attitudes, compared to those who did not receive inoculation pretreatments. Issue involvement, however, failed to show statistical significance by the omnibus results. On the other hand, univariate tests only revealed the impact of issue involvement on dependent variable

of overt resistance, $F(1, 351) = 3.06$, $p < .05$, $\eta^2 = .02$. Therefore, statistical results failed to support hypothesis 3.

Discussion

The present study aimed at the use of inoculation strategies in an international context of political campaigns. The major contributions of the present study were considered to include at least three dimensions as follows. First, followed by abundant researches in the literature of inoculation, this study provided further evidences for the effects of inoculation. Next, since there were little inoculation studies concerning setting in international politics and cultures (Lin, 2000), this study extended inoculation theory and its applications to more diverse domains. Third, the present study found that candidates' personal image and their voters' strength of support toward candidates constituted great impact on people's resistance to counterattitudinal attacks. This great impact might override the effects of people's issue involvement, a traditionally robust finding in the inoculation literature.

The Use of Inoculation in an International context

Hypothesis 1 tested, in the context of the issue of Taiwan-PRC relations, the general effect of inoculation on participants' resistance to attitude change. The results in Hypothesis 1 offered additional support that inoculation treatments confer resistance in attitudes followed by subsequent political attack messages. Use of both refutational-same and -different pretreatments reduced the persuasiveness of following attacks on the issue of Taiwan-PRC relations. The effects of inoculation strategies worked across different supporters for three major candidates in 2000 Taiwan's presidential election. Participants' resistance levels were enhanced by inoculation for each category of the three candidates' supporters. There were little studies conducting inoculation strategies in a context rather than the United States. The study of Lin (2000) explored the potential relationships between the theories of inoculation and the spiral of silence and reported important significant results. Not only have his key findings confirmed the efficacy of inoculation in international settings, but also Lin successfully employed inoculation strategies in the process of the spiral of silence and provided intriguing ideas for a more deliberated public discussions in a democracy. The present study, furthermore, offered evidences for the use of inoculation in an international political campaign.

Moreover, the results of a manipulation check confirmed that individuals were actually threatened by the manipulated inoculation messages. Perceived threat is the motivational trigger of the inoculation process (Pfau, 1997; Pfau, et al. 1997a, 1997b; Pfau & Bockern, 1994; Pfau, Bockern, & Kang, 1992; Pfau & Burgoon, 1988). The results of the present study revealed that participants in the inoculation condition did

perceive more threat than those in the control group who received no inoculation pretreatment.

Issue Involvement and Inoculation Effects

Involvement has been considered one of the key determinants of the magnitude of inoculation effects. As noted before, threat is the motivational trigger of the inoculation process. People's perception of vulnerability or threat by inoculation pretreatments depends, in part, on their level of issue involvement (Phau et al., 1997a). Although this study did not find statistical significance by MANCOVA omnibus tests, it was considered that participants' sense of affiliation to a certain candidate might override the effects of issue involvement on Taiwan-PRC relations.

Strength of Support for Candidates

Party identification is considered by Michigan's socio-psychological paradigm to be one of the most critical factors in influencing citizens' political behaviors (Campbell et al., 1960). Pfau and Burgoon (1988) also found that party identification mediated people's resistance to attitude change when they received political attack messages. Furthermore, the inoculation effect in Pfau and Burgoon's study was most pronounced among subjects with strong party identification, although the effect extended across every level of party identifiers, including weak- and non-identifiers (Pfau & Burgoon, 1988). For the current context of Taiwan's political campaigns, however, people's affiliation with the image and policies of candidates may have more intriguing implications for Taiwanese attitudes toward the issue of Taiwan-PRC relations. From the past studies on Taiwan's political campaigns, researchers suggested that Taiwanese citizens had a tendency of voting behaviors based on candidates' personal images and personalities, rather than their party identification (King, 1997).

The results of the present study revealed significant support for the above observations. Since Hypothesis 3 was supported but Hypothesis 2 was not, it was very possible that voters' affiliations with certain candidates might overshadow the effects of their issue involvement on the issue of Taiwan-PRC relations. This was a novelty to the literature of inoculation and pointed out exploratory direction for future studies.

Table 1**Summary of MANCOVA Omnibus Results**

Effect	Value	F	Hypo. df	Error df	Sig.	Eta ²
Intercept	.86	18.73	3.00	349.0	.00	.14
Strength of Support	.89	14.62	3.00	349.0	.00	.11
Pre-Attitude	.78	33.23	3.00	349.0	.00	.23
Experimntal Condition	.98	2.74	3.00	349.0	.00	.02
Issue Involvement	.74	5.02	6.00	698.0	.35	.01

Note: The above statistics in MANCOVA omnibus results are using Wilks' Lambda and computed using alpha = .05. The statistic is an upper bound on F that yields a lower bound on the significant level. Design of the test: **Intercept + Strength of Support for Candidates + Pre-Attitude + Experimental Condition + Issue Involvement + Experimental Condition * Issue Involvement**

Table 2

**Summary of the Experimental Condition Means for All
Dependent Measures**

	<u>Inoculation Group</u>	<u>Control Group</u>
<u>Dependent Measures</u>		
<u>Threat to Attitude</u>		
<u>Mean</u>	4.95	4.74
<u>SD</u>	(<u>n</u> = 259) 1.74	(<u>n</u> = 274) 1.83
<u>Post Attitude</u>		
<u>Mean</u>	5.20	5.46
<u>SD</u>	(<u>n</u> = 200) 1.15	(<u>n</u> = 86) 1.19
<u>Overt Resistance</u>		
<u>Mean</u>	59.28	56.56
<u>SD</u>	(<u>n</u> = 201) 23.65	(<u>n</u> = 200) 22.18

Note: The ratings of threat to attitude are based on five 7-interval scales. Post-attitude is measured in a wave-two survey with six 7-interval items. Overt resistance is measured by 0-100-probability scale.

For all above measures, higher numbers in cells indicate higher scores for the specific dependent variable, **except for post-attitude measurement in which lower numbers reveal greater strengths of participants' attitudes in wave two survey.**

Table 3

Summary of Univariate Analysis for All Dependent Measures

IV & CV	DV	TSS	Df	MS	F	Sig.	Eta ²
<u>Strensp</u>	Threat	4.14	1	4.14	1.30	.26	.00
	Post-Att	26.02	1	26.02	37.85	.00	.10
	Resist	4246.49	1	4246.49	8.50	.00	.02
<u>Pre-att</u>	Threat	4.75	1	4.75	1.49	.22	.00
	Post-Att	68.89	1	68.89	100.21	.00	.22
	Resist	483.28	1	483.28	1.00	.33	.00
<u>Excon</u>	Threat	2.54	1	2.54	.80	.37	.00
	Post-Att	3.86	1	3.86	5.62	.02	.01
	Resist	381.98	1	381.98	.77	.38	.00
<u>Involve</u>	Threat	.53	2	.27	.08	.92	.00
	Post-Att	.54	2	.27	.39	.68	.00
	Resist	3057.82	2	1528.90	3.06	.05	.02
<u>Excon*</u> <u>Involve</u>	Threat	.92	2	.46	.14	.87	.00
	Post-Att	.34	2	.17	.25	.78	.00
	Resist	334.27	2	167.13	.34	.72	.00
<u>Error</u>	Threat	1118.54	351	3.19			
	Post-Att	241031	351	.69			
	Resist	175329	351	499.51			
<u>Total</u>	Threat	9253.24	359				
	Post-Att	10707	359				
	Resist	1417040	359				

Note:

Abbreviations stand for the following meanings in Summary of Univariate Analysis for All Dependent Measures—

IV: Independent Variable

CV: Covariate

DV: Dependent Variable

TSS: Type III Sum of Squares

Df: Degree of Freedom

MS: Mean Squares

Strensp: Strength of Support for Candidates

Pre-att: Pre-attitude

Excon: Experimental Condition

Involve: Issue Involvement

Threat: Threat to Attitude

Post-att: Post-attitude (Attitudinal Resistance)

Resist: Overt Resistance to Counterattitudinal Attack

四、計畫成果自評

The Limitations of the Present Study and Suggestions for Future Research and Applications

In conducting the present study, there were some weaknesses found in the process. First, the timelines of implementing the data collections were not as precise as we planned. The best timing of those interviews was expected to be the time right after Taiwan's 2000 presidential election so that respondents would have most fresh memory about each candidate's ideas and policies in campaigns. The time of implementing the interviews, however, was about three months after the election day. If the timing was right, the results of the study might have more intriguing findings.

Next, if a sufficient funding was allowed, we should increase the sample size of the study. The total valid sample size of this study was 403. Because this study was a two-wave design, the attrition rate of panels from wave one to wave two would be expected. Therefore, a much larger sample size in wave one was considered necessary in order to gather a better sample result for wave two. For a more elaborated research in the future, we suggest to apply more funds to support studies that are important in explaining the effectiveness of inoculation strategies in political campaigns.

With the respect to the findings of the study, there are some theoretical and methodological issues we have concerned. Although most hypotheses in the present study have been supported by collected data, the authors of the present study are not so naive that we believe one shot of inoculation strategy is capable of answering all possible questions in political campaigns. There are at least three issues that should be addressed in future research. First, the "statistical significance" revealed by our data does not necessarily mean that the study's design would induce the same magnitude of effectiveness in the real world. This methodological clarification is important for the research questions of our study in particular. Because the issues addressed in the present study are real-world matters, statistical significance must be coupled with practical effectiveness in order to achieve the intended goals if one wishes to employ the inoculation strategies in campaigns.

Second, the authors of the present study are aware that achieving long-term effects with inoculation strategies may require a more complex design than the present study. The inoculation effects induced by a single inoculation message tend to decay more easily than those from a multiple-message design. Booster messages in a multiple time frame are considered essential for enhancing inoculation effects in the long run. This strategy is important when inoculation strategies are used in a

context in which campaigns or issues run in a long-term fashion.

Third, as Insko (1967) posited, inoculation may be only a part of a larger and more complicated picture. If that is the case, the present study only explores a small part of the picture. To employ inoculation strategies in political campaigns effectively and sufficiently, more complex theoretical models and practical strategies are considered necessary.

The gap between the proposal and the study

This research aims to explore the relationships between voters' preferences and their perceptions of public opinion. Thanks for the support from NSC and the data collection from CNA, this study has been successfully implemented. However, due to some constraints, this study has been modified in several minor ways:

First, in order to explore the real causal effect, this study utilizes the two-wave field experimental design along with MANCOVA instead of using Linear Structural Equation Modeling. Eventually, this methodology has been more successfully explore the causes and effects among variables.

Second, due to the budget constraints, the interviewers have tried 9576 calls (including households, organizations and companies) through RDD (Random Digital Dialing) by CATI (Computer Assisted Telephone Interviewing) and successfully reached 2114 valid interviewees while 704 accept and 1410 refuse. After the detailed explanations and experimental treatments, both Wave I and Wave II survivals remain 403 cases. The survey plan has been modified due to budget constraints, however, the field experimental design along with the well-designed stimuli enable us to fulfill a better methodology to gather even more detailed information regarding the relationship between attitudes and perceptions.

Third, regarding the scope of the study and the above-mentioned constraints, this study focuses on the relationship between voters' attitude change and the manipulated message treatments rather than on the effects of public opinion poll results. With this context, we have explored greater details about the effects of inoculation messages on voters' perceptions and attitudes toward public opinion in political campaigns.

With the support from the NSC and the data collection from CDA, this study has made some contributions regarding the exploration and explanation to the relationship between message and public opinion. I prepare to submit this study to the AEJ&MC conference before the deadline of April 1, 2001, and to the Journal of Political Communication as well.

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