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AUTHOR Ferguson, M. A.; And Others
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ABSTRACT

Contrasting a party identification model with a rational decision making model, a cognitive model predicts voter intent on two referenda: (1) an amendment to permit a state lottery; and (2) an amendment to permit residents of each county to vote on whether to permit casino gambling Supporters of the lottery amendment attempt to strongly link it to a highly salient social issue, such as the funding of education. Opponents of the casino amendment attempt to link it to the highly salient issue of crime. The party identification model predicts that voters will follow party cues in their support or opposition to each of the amendments. The cognitive linking model predicts that those voters who link the amendments to salient social issues will be more likely to support the lottery amendment and oppose the casino amendment than will those voters who do not make these links. An integrated processing model suggests, in the absence of these links, that the voter is likely to adopt the rational choice perspective and consistently support or oppose both amendments because they are a form of gambling based on the voter's previous rational choices. No support is found for party identification as predicting voter choice. Support is found for the cognitive linking model, and the rational choice model predicts the voting intent of about 79 percent of those who do not make the cognitive links between the referenda and the other salient social issues. (AEM)

A COGNITIVE MODEL OF THE EFFECTS OF LINKING POLITICAL REFERENDA TO SALIENT SOCIAL ISSUES: A LOTTERY WILL FUND EDUCATION, BUT CASINOS WILL CAUSE CRIME?

By

M. A. Ferguson
Associate Professor and Director

K. A. Peterson
Graduate Student

N. W. Pickard
Graduate Student

B. E. Richardson
Graduate Student

and

L. D. Tournade
Graduate Student

Communication Research Center
College of Journalism & Communications
University of Florida
Gainesville, Florida 32611
904-392-6660

Paper presented to International Communication Association, Political Communication Division, May 1987, Montreal.

ABSTRACT

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M.A. Ferguson, K.A. Pe..rson, N.W. Pickard, B.E. Richardson, and L.D. Tournade. Communication Research Center, College of Journalism and Communications, University of Florida. Gainesville, Florida, 32611. Telephone 904-392-6660.

This paper contrasts a party identification model with both a rational decision making model and a cognitive model to predict voter intent on two referenda: an amendment to permit a state lottery and an amendment to permit residents of each county to vote on whether to permit casino gambling. Supporters of the lottery amendment attempted to strongly link it to a highly salient social issue: the funding of education; while opponents of the casino amendment attempted to link it to another highly salient issue: crime.

The party identification model predicts that voters will follow party cues in their support or opposition to each of the amendments. The cognitive linking model predicts that those voters who link the amendments to the salient social issues will be more likely to support the lottery amendment and oppose the casino amendment than will those voters who do not make these links. An integrated processing model suggests, in the absence of these links, the voter is likely to adopt the rational choice perspective and consistently support or oppose both amendments because they are both a form of "gambling" based on the voter's previous rational choices, such as religious beliefs.

No support is found for party identification as predicting voter choice. Support is found for the cognitive linking model; the voters who linked the amendments to other social issues were much more likely to support the amendment positioned as a solution to a social problem (funding education) and oppose an amendment positioned as a cause of a salient social problem (crime). The rational choice model predicts the voting intent of about 79% of those who do not make the cognitive links between the referenda and the other salient social issues. Religious affiliation is presented as one of the variables which explains the voting behaviors of the rational choice voters.

CONTENTS

INTRODUCTION

Two traditional approaches in the study of voter perceptions and decision making are the Michigan voting model (Campbell, Converse, Miller, & Stokes, 1960) and the rational choice model (e.g., Downs, 1957; Fiorina, 1981; Page, 1978). According to the Michigan voting model, developed by a research group located at the University of Michigan Survey Research Center (Kinder & Sears, 1985), party identification is the primary predictor of political behavior and assessment of political issues; voter reaction to party cues influences voting decisions. The rational choice model is based on theories of people as rational, calculating problem solvers. It predicts that voting decisions are based on thoughtful evaluation of how the voting choice relates to other attributes the voter values.

Research has discounted the general utility of both of these models:

> Finally, an analysis of political schemata suggests that party appeals will become decreasingly effective in American politics as time goes on. . . . the youngest cohort does not respond to party cues. A decrease in the importance of party identification has already been noted by several investigators (Markus, 1983; Nie, Verba & Petrocik, 1976; Norpoth & Rusk, 1982) and has been strongly (though not exclusively) linked to age. (Lau, 1986, p. 24)

While the rational choice models, such as expectancy-value theory, postulated a thoughtful, logical individual, current research suggests that this individual does not exist; motivation biases and inaccuracies in cognition lead to unpredictable behaviors (Nisbett & Ross, 1980).

In the last decade, the theory of political behavior has been illuminated by application of the theories and methods of cognitive psychology and social cognition. Recent reviews of research in political cognition (Lau & Sears, 1986) present the cognitive-miser model as rivaling traditional approaches in political behavior research. According to the cognitive-miser model (e.g., Anderson, 1983; Fiske & Taylor, 1984; Simon,

1979; Norman, 1976), the active memory span is small, attention to stimuli is narrowly focused, and information processing is selective. Voters use schemata to process their opinions about candidates and issues. The cognitive-miser model predicts that voter decisions would be based on the processing of selected information as guided by schemata.

Bartlett (1932) originally presented the schema notion that previous knowledge directs the understanding and recall of new information. Theories of how knowledge is structured and used and tests of those theories have been more recent (Abelson, 1981; Alba & Hasher, 1983; Minsky, 1975; Rumelhart, 1980; Schank & Abelson, 1977; Taylor & Crocker, 1981).

The processing of information is thought to be guided by schemata: cognitive structures of stored knowledge which are frameworks for determining what information is relevant, interpreting information, organizing knowledge, perceiving similarities, and making inferences and decisions. Seifert, Abelson, McKoon, and Ratcliff (1986) outline early thinking about schemata,

> Originally, schemata were proposed to represent knowledge of familiar events or relationships among events. The information in a schema is assumed to be organized in a structure, reflecting, for example, temporal contiguity, importance, or more abstract relations such as that between a goal and a plan for its attainment. (p. 220)

Lau (1986) says political schemata are lasting cognitive structures that affect the processing of political information across multiple election years by determining what information is relevant and by guiding recall and interpretation of information in memory.

There are several theories about how information is stored in memory (Hastie, 1986). Many of these stem from an analogy between human and machine information processing (Winograd, 1975). In one version, concepts are thought to be linked to one or two other concepts. Yet another version presents concepts with some nodes superordinate to other nodes and with the meaning of the concepts related to the linkages between the nodes (Conover & Feldman, 1986; Sears, Huddie & Schaffer, 1986; Smith, 1979; Smith & Medin, 1981). A third version postulates an undifferentiated network schema concept without the order suggested by the two other versions (Hamill & Lodge, 1986, Hastie & Kumar, 1979; Lau, 1986; Miller, 1986; Srull, 1981).

There is much disagreement about the precise meaning of the term schema (Hastie, 1986), and usage of the term varies with theoreticians. For reviews of how this term is used to refer to knowledge structures, see Alba and Hasher (1983), Axelrod (1973), Brewer and Nakamura (1984), Hastie (1981), and Taylor and Crocker (1981).

Although information processing is thought to be schema-driven rather than data-driven, schemata are not viewed as static; they change as they develop from repeated exposures with instances (Fiske & Taylor, 1984; Feldman, 1975). Several areas of information processing have been extensively researched. Recall and understanding of ambiguous stories increases when stories are given a title that refers to appropriate background information (Bransford & Johnson, 1972, 1973; Dooling & Lachman, 1971; Dooling & Mullet, 1973). Experts, because they can supply their own background information, are better at recall than nonexperts (Chiesi, Spilich & Voss, 1979). Information related to the schema is more likely to be recalled and recognized when a schema is mentioned at the time the

information is read (Graesser, Woll, Kowalski & Smith, 1980; Pichert & Anderson, 1977; Schallert, 1976). Facts organized by a well-known schema are more tightly connected in memory than facts that are not so organized (McKoon & Ratcliff, 1980).

Studies of issue beliefs and political behaviors include Axelrod (1973, 1976); Fiske and Kinder (1981); Gant and Luttbeg (1983); Kelley (1971); Lau, Coulam, and Sears (1983); Lodge and Hamill (1983); Miller, Wattenberg, and Malanchuk (1982); and Sharp and Lodge (1985). An important application of the schema concept to political behavior is Sears and Citrin's (1985) study of tax revolt in California in the last decade. They found voters possessed symbolic predispositions that seemed to considerably influence the development of an issue public. Graber (1982, 1984) used a small sample to extensively study how people react to a presidential campaign through the media. Issue domains and political ideology have been researched by Conover and Feldman (1984).

Miller and Wattenberg (1984) found strong religious fundamentalists hold distinct attitudes on various issues of public concern, especially those dealing with morality and lifestyle questions. Jackson and Marcus (1975) found self-interest to be the principal determinant in decision making about issues. Billingsley and Ferber (1981) found the liberal-conservative continuum provided the only apparent ideological structure in American politics. On the other hand, Hamill, Lodge, and Blake (1985) found class schemata most helpful for understanding a number of issues by those with low levels of interest, education, media exposure, cognitive ability, income, and conventional political experience.

Other studies indicate that in addition to the influences voters bring to schema formation and issue salience, mass media may play a

limited role. Saltiel and Woelfel (1975) found the stability of an attitude was dependent on the number of messages out of which that attitude was formed; amount of information received was at least as important as its quality. Iyengar (1979) found a modest overlap between TV news coverage and viewer perception of issue salience, but the causal direction was unclear. Choi (1985) found an interaction between image schema and newspaper reading, with newspapers more powerful than TV in voters' image construction. Johnston (1986) found political orientation is pre-existing and the voters' issue or image biases influence the processing of political advertising, rather than vice versa. Millar and Tesser (1986) found that more extreme voter attitudes were associated with simpler cognitive schema for construing an attitude object.

When voters are presented with referenda that appear to be relatively similar, such as two amendments for a school tax bond or other similar topics, it is sometimes difficult to explain why voters support one of the referenda and oppose the other. The research presented here addresses the question of the effects of presenting two related referenda on the same ballot when one of the referenda is positioned by its supporters as a solution to a salient social problem and the other is positioned by its opponents as a cause of a salient social problem.

When two related or similar referenda are presented to the public on the same agenda, schema processing theories suggest that beliefs about one referendum could be affected by voter perceptions of the other. For example, if the two school tax bond referenda on the same ballot become connected to one another in the minds of the voters, voting behavior results from the links voters made between the two referenda rather than solely on the merits of each referendum. This link between the referenda

is established based on perceived similarities or relationships between the referenda. Issue groups may attempt to persuade voters to support or oppose a particular referendum by linking it with other highly salient social issues In our example of the school tax bond referenda, supporters might attempt to link the referenda to quality education, whereas opponents might attempt to link the referenda to higher taxation.

Salience is a potentially important variable in social and political information processing because, although it does not enhance quantity of recall, it has been shown to increase both attention and the organization and consistency of memory in several ways. "The more attention one pays to another person, to an attitude object, or to one's own behavior, the more coherent the impression becomes" (Fiske & Taylor, 1984, p. 189). Fiske and Taylor suggest that salience is dependent upon several variables, including: being novel, being unexpected based on prior knowledge, being perceived as goal relevant; or whether the observer has been instructed to observe the object. Attributing salience to a social issue should lead to a relatively consistent, well-organized schema about that issue and attention to information which is related to that issue.

Becker, McCombs, and McLeod (1974) argue for three types of salience: individual issue salience, perceived issue salience, and community issue salience. Individual issue salience is the importance assigned to an issue based on one's priorities or goals. Perceived issue salience is an individual's perceptions of the importance others assign to an issue. Community issue salience is the actual amount of importance assigned to an issue by the community. Issue salience in this study is the importance an individual assigns to a particular issue.

HYPOTHESES

The reader should keep in mind that the hypotheses developed here are for the very limiting case where two related or similar amendments or referenda are presented on the same ballot. The Michigan voting model, the cognitive-miser model, and the rational choice model predict different hypotheses for voter choices on referenda.

The Michigan Voting Model

H1: Party affiliation will predict support for or opposition to a particular referendum; party members will be likely to respond similarly to a particular referendum and similarly to related amendments.

The Michigan voting model says voters base their decisions on party affiliation rather than on information they obtain for themselves or on the schemata they develop about the referendum. In fact, party membership serves as the schema through which information is filtered. If party members are presented with a referendum, we expect to see them respond to this referendum in line with party direction. This model assumes that cognitive consistency (Sears, 1969) motivates the voting choice; party members find inconsistency between their positions and the party position to be stressful. To reduce this stress, they reduce the inconsistency by revising the belief which is easiest to change, i.e., their positions on the referendum (Festinger, 1957; Heider, 1958).

In the case of our two related referenda, first we expect members of one party to be more likely to be in agreement with one another than with members of another party and second, we expect that members of a particular party to either consistently support or consistently oppose both amendments.

Cognitive-Miser Model

H2: Voters who cognitively link a particular referendum as a solution to a salient social problem will be more likely to support that referendum than will voters who do not make that link.

H3: Voters who cognitively link a particular referendum as a cause of a salient social problem will be more likely to oppose that referendum than will voters who do not make that link.

For the cognitive-miser model, we assume voters make salience attributions to social issues, these salience attributions affect the positions voters take on a referendum they perceive as related to a particular salient social issue, and it is the links the voters make between a referendum and the salient social issue that overrides any connection made between the two salient social issues.

There are several conditional variables that may affect when these hypotheses hold, however. First, whether or not an individual links a salient social issue with a particular referendum may depend on the personal cost or effort for the individual. If the information provided to the voter is easily understood and if the linkage is made clearly and directly, we expect individual effort to be low and linking to be more likely. Second, when alternative solutions to a salient social problem have been widely presented to the voter, the linking of the referendum to that issue may not be easy, particularly if the alternative solution is perceived as more viable than the one presented in the referendum. Third, a direct change in the salience of the social issue would have an effect

on voter reaction; a referendum presented as a solution to a social problem that becomes less salient during the campaign would be less likely to be acted on favorably by the voter.

Rational Choice Model

H4: Voters who do not make cognitive links of a referendum to other salient social issues will be more likely to be consistent in their support or opposition to similar referenda than will voters who link both the referenda to other social issues.

The rational choice model assumes that individuals are rational decision-makers (Edwards, 1954; Feather & Newton, 1982; Ajzen & Fishbein, 1980) and logical in the process that leads to the decisions. Some have labeled this approach utility theory or rational expectations theory (Shoemaker, 1982). Hastie (1986) summarizes utility theory in the following manner: (a) when making decisions, individuals are faced with a set of alternatives which can be related to other future events and outcomes; (b) events are considered in terms of their probabilities of occurrence; (c) outcomes include the costs to the actor for acting, which can be summarized as a "utility;" (d) when the individual evaluates a decision, probabilities and utilities are multiplied for each event-action-outcome combination, and these products are summed for all combinations to create an overall utility for that alternative; and (e) the decision-maker chooses the action that has the maximum utility.

Fiske (1986) calls this approach "piecemeal" processing, i.e., how people process information when they ignore or abandon their schemata. People combine their evaluations to form a summary judgement that follows algebraic rules (Anderson, 1981; Fishbein & Ajzen, 1975):

> In political research, the elemental approach is well illustrated by voting models that follow an algebraic approach. . . . Fishbein, Ajzen, and Hinkle (1980) show that people's vote intentions can be predicted with considerable accuracy from a summation of their beliefs about the outcomes associated with each candidate, multiplied by their evaluations of those outcomes. Economic models of voting also implicitly follow a piecemeal approach (Downs, 1957). Such models have been criticized as cognitively unrealistic; that is, they are not concerned with keeping the voter's limits in mind (Herstein, 1981). Nevertheless, their predictive power is impressive. (Fiske, 1986, p. 43)

Our hypothesis suggests that in the absense of making links between a referendum and a salient social issue, the voter will be more likely to adopt a rational style and consider the logical links between the two related referenda. This rational voter will show consistent support for, or opposition to, both referenda based on whether the referenda are consistent with other rational choices they have made (e.g., religious, economic, and social beliefs). For example, if both the referenda are at odds with the voter's economic philosophy, we expect the individual to oppose both referenda.

This hypothesis stems from Fiske's (1986) integrated model of schema-based and piecemeal processing. We assume, as does she, that each may hold under different circumstances:

> The model is category-based; that is, people are presumed to categorize incoming stimuli whenever possible. If the stimulus possesses many critical features that overlap with the most salient and applicable schema, then categorization will be relatively successful. If the stimulus does not possess critical features that overlap with a salient, applicable schema or the features decidedly contradict the most available schema, the categorization will be relatively unsuccessful, and piecemeal processing will result. (p.44)

METHODOLOGY

Data to test these hypotheses were gathered in a natural setting: the 1986 elections in Florida. The two similar amendments were two gambling-related issues. The first amendment was to legalize a statewide lottery; the second amendment was to give residents in each county the option of approving casino gambling in their county in a subsequent election. Early in the campaign, proponents of the lottery amendment tied the lottery to a salient issue in Florida: the funding of education. The commissioner of education became an early supporter of the lottery as a potential funding source for education. Commissioner Ralph Turlington told the St. Petersburg Times in July, "If the lottery is successful, we're talking about $1 million a day. One million dollars a day can make a great difference in what will happen to the future well-being of this state."

Opponents of the casino amendment began a vigorous campaign to link the casino amendment to another salient issue in Florida: crime. Florida's Republican U.S. Senator, Paula Hawkins, and Democratic Governor, Bob Graham, the challenger for Hawkin's Senate seat, both opposed the casino amendment. Hawkins told the St. Petersburg Times in January:

> "History teaches us that there is a relationship between casino gambling and organized crime, and it is extremely difficult to keep them apart. Casino gambling would be a new opportunity for narcotics traffickers to launder drug money, and I would like to deny them that opportunity."

Data are presented from three separate telephone public opinion polls: May 8 to May 12 (N = 640), August 20 to August 25 (N = 659), and October 15 to October 20 (N = 666). The interviews were conducted with registered voters by graduate and undergraduate students as part of a statewide opinion poll at the University of Florida Communication Research Center, sponsored by the Palm Beach Newspapers, Inc. The surveys consisted of approximately 60 questions involving issues of interest to Floridians, such as the U.S. Senate race, the Florida governor's race, the lottery amendment, the casino amendment, education, and crime.

The margin of error was 4% at the 95% confidence level. A private sampling firm provided the sample of phone numbers. Area codes and prefixes were programmed in proportion to the estimated number of residential telephone numbers in Florida. The last two digits of telephone numbers were randomly generated, and results were checked against a list of business telephone numbers to eliminate nonresidential numbers.

FINDINGS

The findings for all three surveys are presented contiguously as a replication of the study. Survey data were not collapsed across time periods under the assumption that if the hypotheses hold they should hold across all three time periods and any deviation from this would be of interest in itself. Table 1 contains a cross-classification of the distribution of responses to the following questions: "Do you favor a state-run lottery designed to help fund public education?" "Do you favor casino gambling in counties that choose to have it?"

The margins in Table 1 show that the proportion of respondents who favored the lottery amendment is approximately equivalent to the proportion who opposed the casino amendment (an average of 63.6% for all three studies). The proportion of respondents who favored both amendments, favored the lottery amendment and opposed the casino amendment, or opposed both amendments is also approximately equivalent (approximately 30%) across the three time periods. The major changes were a 4.8% decrease in those supporting the lottery amendment from the first survey, in May, to the last one, in October, and a slightly greater increase of 11.3% of those who opposed the casino amendment. So few respondents indicated that they would be likely to vote "yes" on the casino amendment and "no" on the lottery amendment (an average of 1.4% across all three surveys) that these respondents are excluded in analyses in which cross-classification of voting intent for the two amendments is relevant.

TESTS OF HYPOTHESES

Tables 2 through 5 present the hypotheses tested for each of the three survey replications.

The Michigan Voting Model

H1: Party affiliation will predict support for or opposition to a particular referendum; party members will be likely to respond similarly to a particular referendum and similarly to related amendments.

Party affiliation was measured by asking, "Are you registered as a Democrat, a Republican, or an Independent?" The cross-classification of party affiliation by support for the lottery and support for casinos (Table 2) shows no support for the party identification model vis a vis these amendments. Republicans are no likely to support or oppose the amendments than are Democrats. This relationship does not change over the time periods in the study and members of both parties were likely to support the lottery amendment and to oppose the casino amendment.

Cognitive-Miser Model

H2: Voters who cognitively link a particular referendum as a solution to a salient social problem will be more likely to support that referendum than will voters who do not make that link.

H3: Voters who cognitively link a particular referendum as a cause of a salient social problem will be more likely to oppose that referendum than will voters who do not make that link.

A condition for the model presented here is that the referendum has to be linked to a highly salient social issue for that issue to have any effect on decisions related to the amendment. To measure how salient the issues of crime and education were, respondents were asked: "How important to you personally is the funding of education in the state of Florida? Would you say it is very important, somewhat important, somewhat unimportant, or very unimportant?" and "How important is the issue of

crime in Florida to you personally? Would you say it is very important, somewhat important, somewhat unimportant, or very unimportant?" The responses were scaled so that "very important" = 1 and "very unimportant" = 4. The modal response for both questions across all three time points was "very important." For the question of the salience of funding education, the following means and standard deviations were observed: Study 1, mean = 1.2, s.d. = .51; Study 2, mean = 1.3, s.d. = .65; and Study 3, mean = 1.2 and s.d. = .54. The means and standard deviations for the question of the salience of crime were: Study 1, mean = 1.1, s.d. = .33; Study 2, mean = 1.1, s.d. = .48; and Study 3, mean = 1.1 and s.d. = .35. These data support the assertion, without qualification, that these are two highly salient issues to voters in this state.

Another condition for this model to work is that the voter has to link the amendment to the salient social issue. To measure the degree to which registered voters linked the lottery to education and casinos to crime, respondents were asked: "When you think about education and state lotteries, would you say these two issues are very related, somewhat related, not very related, or not at all related?" and "When you think about casinos and crime would you say these issues are very related, somewhat related, not very related, or not at all related?"

Respondents were then classified into two groups for the education-lottery link: those who said the issues were very or somewhat related (an average of 49.2% for all three time periods), and those who said the issues were not very or not at all related (about 50% of the respondents across the studies). The same strategy was used for the crime-casino link. An average of about 82.9% said that casinos and crime were related, while an average of 17.1% said they were unrelated across the three surveys.

To test each hypothesis, registered voters were cross-classified by position on the lottery amendment and whether they related education and a lottery and by their position on the casino amendment and their linking of casinos to crime. Hypothesis 2 leads us to expect that of those who related education to a lottery a significant greater proportion will favor the amendement than of those who do not make this link. For Hypothesis 3, we expect that of those who linked the casinos to crime a significant greater proportion will oppose the casino amendment than those who did not make this link.

As shown in Table 3, we found that across the three surveys, of those who linked a lottery to education an average of 86% favored the lottery amendment, whereas of those who did not make this link 45.6% favored the lottery amendment. For those who made the crime-casino link, we found that an average of 69.7% opposed the casino amendment, whereas of those who did not make the casino-crime link, 27.8% opposed the casino amendment.

Rational Choice Model

H4: Voters who do not cognitively link referenda to other salient social issues will be more likely to be consistent in their support for or opposition to similar referenda than will voters who link both referenda to other social issues.

To operationalize consistency of support or opposition to related referenda, the respondents were cross-classified by voting intent on both amendments. Those who favored or opposed both amendments were classified as "Support Both" or "Oppose Both." Those who favored the lottery amendment but opposed the casino amendment were classified as the "Support Lottery/Oppose Casinos" group. Linkage was measured as for Hypotheses 2 and 3, but respondents were grouped into those who made both links (averaging 39.7% across the three studies), those who linked only one of the amendments (averaging 52.9%), or those who linked neither (averaging 7.5%). It is expected here that voters who linked neither amendment to the social issues will be more likely to support or oppose both amendments than would those who linked both amendments to the social issues.

As shown in Table 4, on the average across all three surveys, we found that of the respondents did not link education with the lottery or crime with casinos and 79.3% consistently either favored both or opposed both of the amendments. On the other hand, for those who did link both education with the lottery and crime with casinos only 45.9% either favored or opposed both amendments.

In an attempt to determine what other variables might be guiding these rational choice voters, the consistency of the referenda position was cross-classified with religious affiliation. The researcher believed that religion might be a variable voters were using to make "rational" decisions about the amendement particularly because several religious groups ion the state had taken a stand on the amendments. Religious affiliation was measured with an open-ended question, "What is your religion?"

As indicated in Table 5, those who designated themselves as Baptists and Catholics were most likely to deviate from expected values. We found that the proportion of Baptists opposing both amendments increased from 35.8% to 50.5% during the study period. In the first survey, in May, 50% of the Catholics favored both amendments and 32.8% favored the lottery amendment but opposed the casino amendment. By the second survey, in October, Catholic support for both amendments had dropped to 38.7%, whereas 47.6% favored the lottery amendment but opposed the casino amendment.

In summary, party identification is not associated with voter choices on these two amendments: Republicans were as likely as Democrates to favor the lottery amendment and oppose the casino amendment. Those voters who connected the lottery amendment to education were much more likely to support the lottery amendment than those voters who did not make this connection (86% to 45.6%). Those voters who connected casios to crime were also much more likely to oppose the casino amendment (69.7% to 27.8%). For those voters who did not make these links, it appears that another type of logical process was operating. These voters either indicated support for both of the amendments or opposition to both of the amendments. One variable that was tested as a correlate of this decision choice; religious affiliation. Here we found change over time with 35.8%

of the Baptists opposing both amendments at the time of the first survey in May. By November this had increased to 50.5% On the other hand 50.0% of the Catholics supported both amendment at the time of the May survey. By November, this had dropped to 38.7% with the largest proportion found in the support lottery, oppose casino category.

DISCUSSION

The Mass Media as Issue Linkers

Agenda-setting models suggest that the media tell us what to think about. Our findings of the linkage of salient social issues to voting intention suggest that voters are not only linking other salient social issues to a referendum but are also indicating intent to behave based upon that linkage. The media may tell us what to think about, but they may be particularly adept at telling us how to think about things, i.e., which schema and which attributes within a schema to link to other schemata or, in simple terms, the relationships between social issues. If the mass media present issues as related or causing one another, it seems reasonable to expect that those who attend to these mass media messages will be more likely to perceive the same linkages and indicate intention to behave based on the perceived linkages.

In the third survey, in October, respondents were asked to name the newspapers, if any, to which they subscribe. Five of the state's newspapers accounted for more than 50% of the respondents' subscriptions: the Miami Herald, 20.2%; the St. Petersburg Times, 10.3%; The Orlando Sentinel, 9.7%; The (Jacksonville) Florida Times-Union, 6.7%; and the Palm Beach Post, 5.0%. Cross-classification of newspaper subscription and voting intent, presented in Table 6, shows the variance of voting intent

for readers of each newspaper, with the greatest variance occurring for the Miami Herald readers. Here we find that 20.1 percent of the sample subscribes to the Miami Herald, but those who support the lottery make up 26.1% of the sample and those who support casinos make up 29.1% of the sample.

Content Analysis

The researchers content analyzed these five newspapers to determine how many of the newspapers' stories linked education to the lottery amendment and crime to the casino amendment. The first condition for establishing that media have a particular effect is to demonstrate that the event has occurred as believed. To determine whether newspapers were making the linkages of these issues, newspapers for the two weeks preceding each of the three surveys and the two weeks preceding the election were analyzed for stories and editorials that contained linking words or de-linking words. Linking words were defined as words that assert or imply a cause-and-effect relationship between education and the lottery amendment or crime and the casino amendment. De-linking words were defined as words that explicitly deny such a relationship. The results of this analysis are presented in Tables 7 and 8.

During the two earliest time periods before the election, the number of stories linking either crime and casinos or education and a lottery was small (for all the newspapers five stories linked a lottery to education and seven stories linked crime to casinos. In the month prior to the election, however, the number of stories linking crime to casinos increased dramatically (some 19 for the Miami Herald, for example). The stories that asserted no link between crime and casinos also picked up dramatically, but the proportion of such stories is small (only 18 percent

of all the casino--crime stories). The Miami Herald, followed closely by the Palm Beach Post printed the greatest proportion of casino causes crime stories, but they also printed the largest number refuting this link.

Comparison of the variance in voting intent for readers of each newspaper and the degree of linking or de-linking presented in each newspaper shows that Miami Herald readers were much more likely than other readers to support both the casino amendment and the lottery amendment. These data on the content analyses suggest either that the large number of crime-casino delinking stories run by the Miami Herald had as much or more impact than did the linking stories or that the stories run by the Miami Herald had little impact in themselves on the linking of crime and casinos. Miami Herald readers were much more likely than readers of other newspapers to support the casino amendment.

However, as is widely understood, correlation does not demonstrate causation. It could be that a voter comes to support or oppose a particular issue for entirely different reasons, but the linking occurs after the intent to behave in some particular way and results from this intent rather than causing it. This may be a justification process the voter uses to explain his or her behavior in a post hoc manner rather than before the decision is made.

Also, other variables not measured in this analysis could explain the relationship. To assert that newspaper readership by itself is an adequate measure to determine whether a reader has been exposed information about the relationships of social issues to one another is simplistic reasoning. There are many other media from which these messages could be received. It is interesting to note the proportion of voters favoring and opposing these amendments generally did not change very much from May

to Nov. 4. This supports the argument that the media had very little effect on the choices voters made. It may be that the media simply were reinforcing strongly held prior beliefs. Other analyses indicate that Orlando Sentinel readers were more likely to oppose a casino amendment than were readers of the St. Petersburg Times, and the Miami Herald. The Orlando Sentinel also had a steadily increasing diet of casino-crime stories beginning very early in the political process and continuing until the election.

CONCLUSIONS

This study provides additional evidence for the widely shared view that party identification is not a highly predictive variable, particularly for positions on issue referenda. The cognitive linking model and evidence presented here suggest that voters who link referenda as solutions to highly salient social problems are much more likely to support these referenda than voters who do not make these links. Likewise, voters who link referenda as causes of highly salient social problems are much more likely to oppose those referenda than voters who do not make those links. The rational choice model presented here is most predictive under the condition where voters have not linked the referenda to other salient social issues.

This is but an early step in the process of understanding how connecting one social issue to another very salient one affects behaviors such as subsequent voting intent for referenda. It seems likely that if the media make a connection between two social issues, that connection will also be made in the minds of many voters, but the process by which that occurs continues to elude us, as does the effect of de-linking or rebuttals asserting that there is no cause-effect relationship between the two social issues. Several questions about cause-effect rebuttals are of interest. Is a rebuttal particularly significant when the voter has other reasons for opposing an issue and less significant in other conditions? Does the linking have its greatest effect when it occurs temporally near the behavior of concern (for example, newspaper stories just prior to an election) or is it more effective when it continues steadily over a longer time period? Is there a different type of effect for linking a social issue to something valued (such as education) as compared to something feared (such as crime), and do rebuttals work differently with feared issues as opposed to valued issues?

Table 1. Cross-Classification of Voting Intent for the Lottery and Casino Amendments

Favor Lottery	Favor Casino Gambling: Yes	No	Undecided	Total
Survey No. 1: May				
Yes	34.1%	29.0%	3.4%	66.4%
No	1.1%	25.4%	1.0%	27.5%
Undecided	0.8%	3.7%	1.6%	6.1%
Total	36.0%	58.1%	5.9%	100.0%
(N = 625)	Chi Square = 160.2, df = 4, P <0.0001			
Survey No. 2: August				
Yes	28.5%	31.9%	6.4%	66.8%
No	1.9%	23.6%	0.8%	26.2%
Undecided	1.6%	3.9%	1.6%	7.0%
Total	31.9%	59.4%	8.7%	100.0%
(N = 645)	Chi Square = 102.2, df = 4, P <0.0001			
Survey No. 3: October				
Yes	26.6%	33.8%	1.2%	61.6%
No	1.3%	34.0%	0.0%	35.4%
Undecided	.5%	1.5%	1.0%	3.0%
Total	28.5%	69.4%	2.2%	100.0%
(N = 594)	Chi Square = 191.8, df = 4, P <0.0001			

Table 2. Party Affiliation by Voting Intent for the Lottery and Casino Amendments

Voting Intent*	Party Affiliation: Democrat	Republican	Independent	Total	N
Lottery Amendment					
Survey No. 1: May					
Yes	70.9	67.5%	83.6%	71.0%	(406)
N =	(302)	(209)	(61)		(572)
Total	52.8%	36.5%	10.7%	100.0%	
		Chi Square = 6.0, df = 2, P = ns			
Survey No. 2: August					
Yes	72.9%	70.1%	72.3%	71.8%	(426)
N =	(314)	(214)	(65)		(593)
Total	53.0%	36.1%	11.0%	100.0%	
		Chi Square = .51, df = 2, P = ns			
Survey No. 3: October					
Yes	62.5%	63.4%	72.9%	63.9%	(370)
N =	(315)	(205)	(59)		(579)
Total	54.4%	35.4%	10.2%	100.0%	
		Chi Square = 2.3, df = 2, P = ns			

*The No response has been omitted from this table as it provides only redundant information which can be determined by subtracting the yes proportion from 100%.

Table 2. Party Affiliation by Voting Intent for the Lottery and Casino Amendments (Continued)

Voting Intent*	Party Affiliation: Democrat	Republican	Independent	Total	N
Casino Amendment					
Survey No. 1: May					
Yes	38.2%	33.0%	55.7%	38.2%	(220)
N =	(309)	(206)	(61)		(576)
Total	53.6%	35.8%	10.6%	100.0%	
	Chi Square = 10.3, df = 2, P <0.0058				
Survey No. 2: August					
Yes	36.2%	31.3%	39.1%	34.8%	(203)
N =	(309)	(211)	(64)		(584)
Total	52.9%	36.1%	11.0%	100.0%	
	Chi Square = 1.9, df = 2, P = ns				
Survey No. 3: October					
Yes	29.7%	26.9%	33.9%	29.2%	(170)
N =	(316)	(208)	(59)		(583)
Total	54.2%	35.7%	10.1%	100.0%	
	Chi Square = 1.2, df = 2, P = ns				

*The No category has been left of this table as it provides only redundant information that can be obtained by subtracting the Yes proportion from 100%.

Table 3. Cross-Classification of Voting Intent with the Education-Lottery Link and the Crime-Casino Link

Voting Intent*	Link Education to Lottery: Yes Related	No Unrelated	Total	N
Lottery Amendment				
Survey No. 1: May				
Yes	88.6%	45.0%	67.1%	(384)
No	8.6%	47.5%	27.8%	(159)
N =	(290)	(282)		(572)
Total	50.7%	49.3%	100.0%	
	Chi Square = 1'4.5, df = 2, P <0.0001			
Survey No. 2: August				
Yes	85.4%	51.1%	67.5%	(398)
No	9.6%	40.1%	25.6%	(151)
N =	(281)	(309)		(590)
Total	47.6%	52.4%	100.0%	
	Chi Square = 82.2, df = 2, P <0.0001			
Survey No. 3: October				
Yes	84.1%	40.7%	62.1%	(349)
No	13.0%	57.5%	35.6%	(200)
N =	(277)	(285)		(562)
Total	49.3%	50.7%	100.0%	
	Chi Square = 121.8, df = 2, P <0.0001			

*The undecided category has been left off this table because it provides redundant information that can be obtained by subtracting the Yes and the No proportion from 100%.

Table 3. Cross-Classification of Voting Intent with the Education-Lottery Link and the Crime-Casino Link (Continued)

Voting Intent*	Link Casinos to Crime: Yes Related	No Unrelated	Total	N
Casino Amendment				
Survey No. 1: May				
Yes	28.8%	67.6%	35.9%	(211)
No	65.2%	26.9%	58.2%	(342)
N =	(480)	(108)		(588)
Total	81.6%	18.4%	100.0%	
	Chi Square = 59.4, df = 2, P <0.0001			
Survey No. 2: August				
Yes	24.4%	65.4%	31.6%	(192)
No	67.1%	24.3%	59.5%	(363)
N =	(501)	(107)		(608)
Total	82.4%	17.6%	100.0%	
	Chi Square = 74.5, df = 2, P <0.0001			
Survey No. 3: October				
Yes	21.7%	66.7%	28.5%	(163)
No	76.9%	32.2%	70.1%	(400)
N =	(484)	(87)		(571)
Total	84.8%	15.2%	100.0%	
	Chi Square = 73.3, df = 2, P <0.0001			

*The undecided category has been left off this table because it provides redundant information that can be obtained by subtracting the Yes and the No proportion from 100%.

Table 4. Consistency of Voting Intent by Consistency of Links to Salient Social Issues

Voting Intent	Links of Referenda to Salient Social Issues: Neither Linked	Only One Linked	Both Linked	Total	N
Survey No. 1: May					
Support Both	44.7%	34.9%	42.6%	38.9%	(194)
Oppose Both	28.9%	44.0%	10.0%	28.7%	(143)
Support Lottery/ Oppose Casinos	26.3%	21.0%	47.4%	32.5%	(162)
N =	(38)	(252)	(209)		(499)
Total	7.6%	50.5%	41.9%	100.0%	
	Chi Square = 73.1, df = 4, P <0.0001				
Survey No. 2: August					
Support Both	76.9%	30.9%	30.0%	34.3%	(166)
Oppose Both	10.3%	41.5%	10.0%	27.3%	(132)
Support Lottery/ Oppose Casinos	12.8%	27.5%	60.0%	38.4%	(186)
N =	(39)	(265)	(180)		(484)
Total	8.1%	54.8%	37.2%	100.0%	
	Chi Square = 102.6, df = 4, P <0.0001				
Survey No. 3: October					
Support Both	48.6%	23.7%	29.8%	27.8%	(145)
Oppose Both	28.6%	52.1%	15.4%	35.9%	(187)
Support Lottery/ Oppose Casinos	22.9%	24.1%	54.8%	36.3%	(189)
N =	(35)	(278)	(208)		(521)
Total	6.7%	53.4%	39.9%	100.0%	
	Chi Square = 85.5, df = 4, P <0.0001				

Table 5. Consistency of Voting Intent by Religious Affiliation

Voting Intent	Religious Affiliation: Baptist	Catholic	Protestant	Other	Total	N
Survey No. 1: May						
Support Both	34.0%	50.0%	31.6%	37.7%	38.2%	(200)
Oppose Both	35.8%	17.2%	31.6%	30.2%	28.7%	(150)
Support Lottery/ Oppose Casinos	30.2%	32.8%	36.8%	32.1%	33.1%	(173)
N =	(106)	(122)	(136)	(173)		(523)
Total	20.3%	23.3%	26.0%	33.1%	100.0%	
	Chi Square = 15.4, df = 6, P <0 .0174					
Survey No. 2: August						
Support Both	29.0%	37.9%	32.0%	33.6%	33.0%	(166)
Oppose Both	45.0%	12.6%	27.0%	33.6%	29.2%	(147)
Support Lottery/ Oppose Casinos	26.0%	49.5%	41.0%	32.8%	37.8%	(190)
N =	(100)	(103)	(178)	(190)		(503)
Total	19.9%	20.5%	35.4%	37.8%	100.0%	
	Chi Square = 29.4, df = 6, P <0.0001					
Survey No. 3: October						
Support Both	23.9%	38.7%	25.8%	24.0%	28.0%	(153)
Oppose Both	50.5%	13.7%	38.8%	42.3%	36.1%	(197)
Support Lottery/ Oppose Casinos	25.7%	47.6%	35.4%	33.7%	35.9%	(196)
N =	(109)	(124)	(209)	(104)		(546)
Total	20.0%	22.7%	38.3%	19.0%	100.0%	
	Chi Square = 39.7, df = 6, P <0.0001					

Table 6. Proportion of Sample Subscribing to Particular Newspapers and Indicating Vote Intentions

Newspaper Subscribed To	Voting Intent* Support Lottery	Support Casinos	Subscribers (% of Sample)
Miami Herald	26.1% (94)	29.1% (46)	20.1% (113)
St. Petersburg Times	9.4% (34)	8.9% (14)	9.8% (55)
Orlando Sentinel	9.4% (34)	5.1% (8)	10.1% (57)
Florida Times-Union	4.2% (15)	5.1% (8)	6.9% (39)
Palm Beach Post	7.2% (26)	3.8% (6)	5.3% (30)
Other Papers or Non-subscribers	43.6% (157)	48.1% (76)	47.7% (268)
Total	(360)	(158)	(562)

*Table excludes undecided voters and voters who oppose the lottery and the casino amendments.

Table 7. Content Analyses of Five Newspapers:
Number of Stories Linking and De-linking Casinos to Crime**

NEWSPAPER	TIME PERIOD 1	2	3	4	TOTAL	PERCENT
Miami Herald	0/0	0/0	5/0	14/7	19/7	(27.9%/46.7%)
St. Petersburg Times	0/0	1/0	8/1	4/0	13/1	(19.1%/ 6.7%)
Orlando Sentinel	1/1	2/1	3/1	5/0	11/3	(16.2%/20.0%)
Florida Times Union	0/0	0/0	3/0	4/1	7/1	(10.3%/ 6.7%)
Palm Beach Post	3/0	0/0	8/3	7/0	18/3	(26.5%/20.0%)
TOTALS	4/1	3/1	27/5	34/8	68/15	(83.8%/16.2%)
	5.9%/ 6.7%	4.4%/ 6.7%	39.7%/ 33.3%	50.0%/ 53.3%	100%/100%	

**The first number is the total number of stories during that time period that had statements linking casinos to crime. The second number following the "/" is the total number of stories during that time period in which it was asserted that casinos would not cause crime. If a story quoted someone making both assertions it is counted twice.

Time Periods: 1 = April 25 through May 8, 1986
2 = August 7 through August 20, 1986
3 = October 2 through October 15, 1986
4 = October 22 through November 4, 1986

Table 8. Content Analyses of Five Newspapers:
Number of Stories Linking and De-linking A Lottery to Education**

	TIME PERIOD					
NEWSPAPER	1	2	3	4	TOTAL	PERCENT
Miami Herald	0/0	0/0	1/0	3/2	4/2	(13.8%/13.3%z)
St. Petersburg Times	0/0	0/0	3/2	3/1	6/3	(20.7%/20.0%)
Orlando Sentinel	0/0	0/0	0/0	3/1	3/1	(10.3%/ 6.7%)
Florida Times Union	0/0	0/0	0/0	4/3	4/3	(13.8%/20.0%)
Palm Beach Post	0/1	5/3	0/0	7/2	12/6	(13.8%/40.0%)
TOTALS	0/1	5/3	4/2	20/9	29/15	(65.9%/34.1%)
	0.0%/ 6.7	17.2%/ 20.0	13.8%/ 13.3	69.0%/ 60.0	100%/100%	

**The first number is the total number of stories during that time period that had statements linking a lottery to education. The second number following the / is the total number of stories during that time period in which it was asserted that a lottery would not fund education. If a story quoted someone making both assertions it is counted twice.

Time Periods: 1 = April 25 through May 8, 1986
2 = August 7 through August 20, 1986
3 = October 2 through October 15, 1986
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