Research Memorandum for the Conference on Issue Voting,
Cognitive Processes and Rationality.

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Students of politics have long been concerned about the role that
issues play in conditioning the political judgments people make and about
the extent of their impact in that regard with respect to such forms of
collective decision-making as occur in elections. The study of "issue
voting" is but one, particular manifestation of that more general concern.
However, in as much as it is a manifestation which has been given consider-
able attention by researchers, it offers a convenient base from which we
might learn about the more general aspects of the psychology of politics
connected with the broader area of concern. Hence, the progress we make in
studying issue voting can be thought to have a special salience and, for
precisely this reason, the suggested conference on "Issue voting, cognitive
processes, and rationality" should probably be so structured in content as
to deal with the narrower matter of issue voting in a manner that embeds its
consideration in a context which serves to address these broader questions
as well. In any event, it is in that spirit that I have set out the content
of this memorandum offering my suggestions as to what sorts of questions we
ought fruitfully consider at such a conference.

What might be taken as the "basic problem" confronted by students
of issue voting can be conveniently broken down into four "sub-problem" areas.
First, there is the task of estimating the extent to which a person's under-
standing of politically relevant issues and his attitudinal reaction to them
conditions his behavioral responses to campaign situations and stimuli and,
in particular, his choices among the specific alternatives voted on in elec-
tions and referenda. Second, there is the question of investigating the
various forms which this conditioning effect may take and the range of res-
ponses associated typically with each form. Next, there is the matter of
determining the mechanisms through which such conditioning effects occur, an
undertaking which, hopefully, would see the specification of these mechanisms
in terms which embed them in a theoretical framework consistent with what is
known more generally about the individual psychology of human behavior. Only
in this manner will we be able to formulate an understanding of the psychology
of issue voting which is firmly grounded. Finally, we need to evaluate the

aggregative impact of issue voting within the operation of the collective decision processes through which social choices are made at a macro-level in politics.

The meta-theoretical framework implicit in this partitioning of what I have called the "basic problem" confronted by students of issue voting provides a means of evaluating where we have progressed in dealing with the several matters connected with this general enterprise. Moreover, it also offers a convenient organizational device for the purposes of specifying a research agenda with regard to future work in the area. In making my remarks in what follows here, inclusive of the specific proposals offered, I have attempted to use the framework in this fashion. Indeed, as an initial proposal, I would suggest that it be considered as an organizing device for categorizing the kinds of questions to be addressed by participants in the January conference. It is my opinion that all of the various topics which were mentioned as potential foci of interest in the memorandum announcing the conference can be conveniently placed in one or the other of the four sub-problem areas detailed above and thereby evaluated in terms of the central concerns definitive of whichever category contains it. Thus, as an organizing device, my framework could prove quite useful.

In overview fashion, one might safely say that the modern study of issue voting began in the mid-1950's, its main research themes having been set by the positions set out in such seminal early works as Voting, The Voter Decides, An Economic Theory of Democracy, and The American Voter. Much of the research in the area conducted since that era has followed in the "traditions" associated with these earlier publications and their authors. I think it is correct to say that each of the books cited here has something to offer on each of the sub-problem areas I have delineated previously. However, it seems to me equally accurate to describe the main emphasis—the "bottom line" interest—in each as falling within the fourth sub-problem area, and understandably so in as much as political choice is a collective enterprise and, hence, has its greatest significance for students of politics in its collective manifestations.

I would like to pursue this last observation somewhat further, for I believe it carries important implications about the way we have approached the study of issue voting—implications I believe to be central to some of the particular methodological problems we should discuss at the January conference.

As I have previously noted, each of the four early major works I have cited contains some discussion of specific matters in each of the three sub-problem areas in my organizing framework. Indeed, Voting and The American Voter offer discussions of these matters which I regard as particularly important and useful in the study of issue voting. Yet, I find it interesting and significant that each discussion of these matters--with the exception of that found in Anthony Downs', An Economic Theory of Democracy--is couched in terms which reflect the authors' more salient interests in the collective response to issues in an electoral situation rather than the range of differences among individual voters' responses in that context. The language used in these discussions emphasizes the average, the modal, or the typical response found in previously specified aggregates of voters. The individuality of response so characteristic of human judgment and perception (see, for example, Tucker, 1964; Gulliksen, 1964; and Churchman and Eisenberg, 1964) as studied elsewhere is little in evidence in these discussions. Yet, we now know from these other areas of research within psychology proper that there exist wide variations in individual psychological responses found in a considerably wide range of experiential contexts. I see no reason why one should not expect similar individual differences in responses to issues taken as situationally located stimuli, differences which occur in such aspects of psychological response as the content, direction, consistency, latency, and amplitude (see Coombs, 1964^c, 1976) of responses of attitudinal, perceptual, or judgmental form. Since I believe the question of individual differences in response to issues has largely been continued in subsequent research on issue voting following on these earlier traditions, I think this question--and the methodological implications which follow from it--should be given serious consideration in setting out the agenda for the January conference. In particular, we need to consider which aspects of individual responses to issues are most important to our concerns and in what manner we can tap them through the kinds of survey research designs that will be used in the national election studies to be conducted.

In making these last proposals, I realize that some--perhaps many--researchers in the field will undoubtedly throw up their hands in mock desperation at the prospect of moving to a truly individual level of analysis which is so heavily couched in psychological terms. To them, I would offer the following counter-argument: If it proves true that the bases of response to a particular

issue, taken as a stimulus, vary widely among individual voters, then whatever measures of typical response we use for describing the behavior of aggregates of voters may be seriously compromised in their meanings. In essence, we may well be faced with the proverbial problem of grouping apples with oranges and drawing broad comparative inferences and conclusions about the result. Our only means of circumventing this problem, short of actually investigating the range of individual differences which may exist, would seem to be that of specifying a particular, circumscribed dimension of response to be used by respondents in reacting to these stimuli. That strategy is, for all practical purposes, what we have conventionally done in practice in designing previous survey studies of issue voting. We have treated issues as though they were unitary phenomena toward which individuals respond in some specified, unidimensional fashion. Thus, we treat an issue like racial segregation, as well as policies devised to deal with the problem at the root of the issue, as though it were not multifaceted in character, offering different features of salience in varying degrees to different people. Here, I am speaking mainly about our operational treatment of such an issue and I want to emphasize that fact, for it seems to me that our theoretical discussions of an issue are often set out in ways that do take into account the multifaceted character it and the policy response to it takes. In that respect, our operational definitions do not in many cases provide a good fit to the conceptual definitions we mean to employ at a theoretical level in explaining the results of our research.

This last point raises a broader question which I feel we should also take up at the conference: the matter of the stimulus complexity of issues and its implications for research design and the design of measurement instruments. In this context, it is interesting that the convenors of the conference have hit upon the theme of emphasizing cognitive processing of information about issues. Most of the research on cognitive processes which takes an information processing approach to the topic either implicitly or explicitly emphasizes the complexity of stimuli and stimulus arrays. For example, a stimulus such as the word "jackpot" in a verbal learning and memory study, or a proposition of reasonably simple sentential form as might be used in a study of psycholinguistic semantics, is conventionally treated as a rather complex stimulus. (see, for example, Bower, 1975; Rappoport and Summers, 1973; Warr and Knapper, 1968.).

If the single word, "jackpot", an example used by Bower (1975) in discussing strategies for encoding information about a stimulus, is a complex stimulus (and also a compound one), how much more so is the event (a "macro-event") "Vietnam War"!! The same might be said of "inflation," "unemployment," "racial discrimination," "big government," and the whole retinue of issues which we have tried to research with respect to their conditioning of a person's voting behavior. In short, if we wish to make serious use of the work on cognitive processes carried out in the information-processing perspective, we need to consider the complexity of issues as stimuli, to think carefully about the range of discriminable facets which may go together in making up the compound form of some issue as a stimulus and about the organizational arrangements and variations in such configurations which might be reflected in the perception of such an issue and the further processing of information encoded in the perceptual stage of processing. We may well find, as has been the case in some psychological research of this kind, that the linear forms of combination so favored in our construction of "indices" (see Nie, Verba and Petrocik, 1976) is less appropriate to this particular perspective on matters. That, of course, is largely still an empirical matter, but if we do not decide to collect data which sample the range of facets potentially connected with a given issue or policy area, we may never have the opportunity of answering questions of this kind.

Since an undertaking of the kind alluded in the last few sentences would require fairly detailed examination of individual responses to any one issue or policy area, there are obvious design limitations on the range of issues or policy areas we might efficiently and economically explore in any given survey. It might be adviseable to look at only two such issues in any one instance and to collect information about the overall salience (in an aggregate sense) of a larger set of issues which we could use to rotate new issues into subsequent surveys in a linked-pair fashion across surveys. In fact, if a panel design were used which incorporated some form of balanced, incomplete block design with regard to the presentation of different linked pairs for different sub-samples of respondents, we might be able to cover a wider range of issues in this detailed examination format. We would probably want to use a similar strategy, employing paired-comparison judgments of the salience of different issues or policy areas covering a fairly large number

of such areas so as to allow a multidimensional analysis of the aggregate issue salience space at any one time point, again interlinking this across panel waves in a systematic fashion so as to allow the location of new or different issues rotated into the set by reference to those retained over two or more waves. The aggregate, or group, space would provide a "frame" within which we might explore individual differences in response to salience of these issues through use of such multidimensional scaling techniques as the Carroll-Chang method (see Carroll and Chang, 1970; Carroll, 1972). Balanced, incomplete block designs and the linked-pair versions of such designs in paired-comparison methodology are described in David (1963) and in any number of experimental design texts. In setting out such a strategy, I would expect we would want to coordinate the particular linked pairs of issues for detailed examination on any one instance with the particular block of (or subset of) issues a particular group sub-sample was to judge in regard to relative salience. It might even be the case that an innovative sample design could even incorporate such contextual effects as are associated with regional or with urban-rural differences in residence among the respondents. It seems clear, however, that any such strategy as I have outlined here would require a quite complicated sampling design and the implications of that fact would also be important matters to be considered in deciding about its feasibility.

There are three collateral points I would want to make next in connection with matters raised in the previous paragraph. First, it seems very important to me that we need to consider the "salience" question as an important part of whatever further analysis we do with regard to the impact of issues and their conditioning effects on voting behavior. Almost all serious information-processing based discussions of cognition that have been put forward in recent years have given considerable emphasis to attentional mechanisms of the kind involved in the salience question. Moreover, it seems clear to me that this is a matter of notable importance to researchers who have engaged in the continuing debates about the significance of issue voting. In this regard, we need to recognize that judgments of this kind (and, indeed, perhaps of all kinds) are relative, often require information integration, and reflect the kind of perceptual processing of environmental cues described by Brunswick in his "probabilistic functionalism" approach to perception (see Birnbaum, 1975). Thus, we need not only to look at sets of issues but to do so in terms of asking

for reasonably simple kinds of comparative judgment tasks, such as are used in paired-comparisons methods. This, then, is my second collateral point: that we need to recognize these features of judgmental responses and design our measurement methodology to accomodate them. An immediate implication of this point may be that our conventional kinds of survey items which usually call for absolute judgments of a single stimulus type are not likely to be of much use in an information-processing approach to the cognition of issues unless we employ them is ways which allow the derivation of stimulus-comparison kinds of data at some later stage of analysis. Indeed, Parducci (1968, 1974) and Birnbaum (1975) have argued that such absolute judgments are actually relative in character, depending on or being judged relative to the context or the stimulus array involved. In as much as we fail to specify much in the way of context in our survey items of this kind, we open the possibility of the respondent supplying his own contextual basis in reaction to the ambiguity or vagueness of that presented him. Clearly, the meaning of such judgments in terms of the individual's response is effectively hidden from the researcher in such circumstances. However, from an information processing approach to the cognition of issues, such meanings are exactly the kind of information we would find of interest in studying issue voting.

My third, and final, collateral point is one which, though collateral, is in my mind one of tremendous importance. It is simply that, on my observation, the kinds of substantive matters we are now interested in studying with reference to the issue voting problem (and other areas of voting behavior) have reached a level of complexity such that we require data of a form not likely to be forthcoming in a satisfactory manner from conventional kinds of survey designs. Consequently, we need to explore methodological innovations in the area of survey design which might succeed in meeting these needs. It is my own view that we should seriously explore the possibilities of incorporating features of experimental design in setting out our survey designs. Indeed, my suggestions about the possible use of balanced, incomplete block design features in collecting data on individual perceptual and judgmental responses to issues are a reflection of this view. I think the conference would benefit from a discussion of such matters.

My comments thus far have focussed on the individual differences prob lem and the stimulus complexity problem in dealing with the perception of an

issue or a set of issues and the higher-order processing of information encoded
at the perceptual stage of cognitive processing. I have tried to point out the
very complicated, almost molecular models of information-processing that are,
in my experience, characteristic of this approach to the study of cognition in
psychological theory and research. This characteristic is illustrated in the
following diagram, taken from Bower (1975), which specifies the memory storage
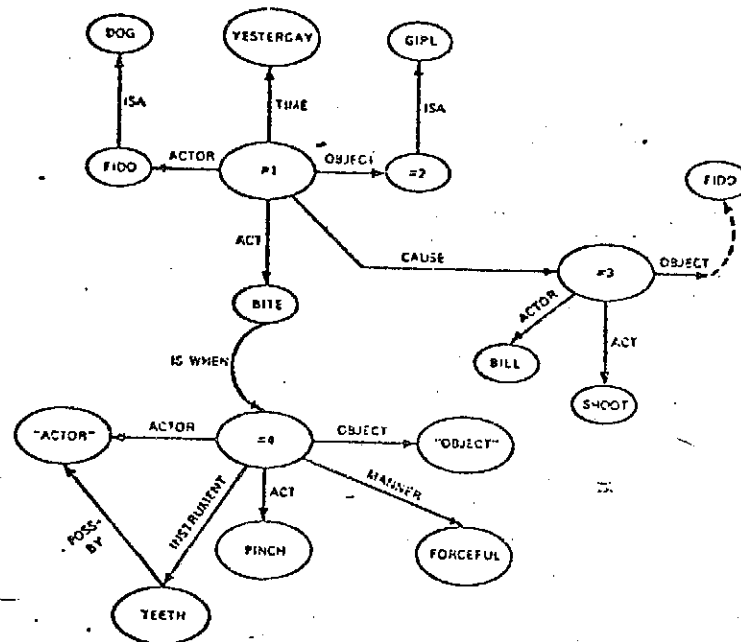of a simple statement in terms of an implied conceptual structure.

FIGURE 7 Diagram of the associative structure set up in memory to encode the
conceptual content of "Fido bit a girl yesterday, so Bill shot him." The arrows are
labeled associations (relations). The definition of *bite* is also shown. Definitions and
knowledge about each concept is not shown to reduce clutter.

We need to give careful attention to assessing whether we wish to engage in a
research enterprise of the complexity and probable expense that would be assoc-
iated with a reasonably full exploitation of such a theoretical paradigm. I
believe that we must ultimately explore issue voting in these terms, but I am
not as certain that the series of national election studies under consideration
is the context for that effort. It might be possible to look at particular,
circumscribed aspects of the approach in a relatively limited fashion, say,
with respect to one or two central issues. The salience issue is certainly
one that is more tractable and probably could be managed in the studies being
planned. The other matters, or forms of cognitive processing, such as concept

formation, conceptual structure, memory storage and retrieval, and problem-
solving operations connected with issue voting, present very difficult metho-
dological problems given our traditional means of studying voting behavior.
If an attempt is made to study these aspects, it would likely be more prudent
to do so in carefully selected contexts, possibly state-level elections, and
a limited selection of issues which might be dealt with in some depth. An
on-going series of limited, small-scale pilot studies of a panel design form
might serve such purposes if it could be done as a spin-off of the larger,
national election studies.

     While I have focussed my general and specific comments on the area
of the perception of issues and of conceptual structure aspects of storage of
information encoded from perception, I should point out that most, if not all
of my comments carry over to a treatment of rational judgment which could be
given firm grounding in the information-processing approach to cognitive oper-
ations. There are a number of implications which seem to me to follow from
this observation which are pertinent to the rational choice models of issue
voting, particularly those couched in terms of spatial analysis. I believe
these to be similarly pertinent matters in connection with the conference in
as much as its theme stresses both the information-processing approach and
the rational judgment question. In what follows here, I comment on these im-
plications.

     First, I would like to say that I regard the rational choice approach,
as coupled with spatial analysis, to have been one of the most helpful heuris-
tic innovations in the study of issue voting. Nonetheless, its value lies, in
my view, again with the area of predicting collective choices in the aggregate
case. I find this situation ironic, since the rational choice model is speci-
fically addressed to individual-level analysis: that is, it is a model of the
individual's choice behavior. Yet, applications of the model have not really
paid much attention to modelling the psychological task confronting an indivi-
dual in responding to issues as cues pertinent to the voting choices he might
later make. Hence, an understanding of the joint individual-task model of
performance in this regard in not available. That is, we need to recognize
that, as Dawes has claimed (1975), there is a model involved here that treats
the requirements of successful task performance and the specification of indi-
vidual response jointly. In essence, we are modelling the task presented to

the individual while we are at the same time modelling the set of psychological processes which underlie his response. These two efforts are linked together as a kind of "behaver-task" system through the response-evoking context. They seem to operate as a kind of symbiotically organized system. Thus, if properly designed and executed, modelling the task appropriately will provide information about the model of psychological processes underlying the behavior.

If we look at the way in which the "task" is modelled in applications of the rational choice/spatial analysis approach, we see that it actually provides us little information about the other kind of model. Indeed, it seems that the underlying behavior processes model is presumed at the outset in a number of applications. For example, the spatial approach implies that some form of comparative judgment is made among the issue positions taken by candidates and that preferred by the voter in regard to some policy matter. But, we hardly ever present the task to the our respondents in that fashion. We usually attempt to have the respondent rate each candidate separately with respect to how "close" his position on a policy matter is to that taken by the respondent. We then treat these judgments as though they involved a comparison between two or more candidates with respect to the respondent's position. Even though we make that comparison for him in our analysis of the data, we have no evidence that he actually did so, or even that he was capable of doing so. In essence, we have presumed that these judgments involve such a comparison.

Similarly, we treat the task of using cues about issues to inform one's self about what would be an appropriate voting response as though voters did it in separate fashion, perhaps even in seriatim fashion, for each of a number of separate issues. The "issue space" is concerned with a single issue in each instance and, usually, is unidimensional in form. Hence, we are saying, at least implicitly, that each voter responds to each issue or policy area only in terms of gradations of response to one aspect of that issue; moreover, we also imply that the same aspect is singled out by all voters in the aggregates over which we make our predictions. In short, we have ignored both the matter of stimulus complexity and relativity of judgmental response and the matter of individual differences in attentional salience and perceived character of the issue or issues involved.

An issue domain like "Vietnam war" and the related policy questions associated with it is obviously multifaceted and capable of evoking conceptualizations of these matters which have quite high dimensionality. We do not know

what the character and number of such dimensions is for any given individual's conceptualization of that issue, nor do we know what weighting each of these dimensions might have with regard to its response-producing or response-selection capacity. It is possible that we <u>could</u> <u>not</u> know this kind of information about his conceptualization of that issue and its relation to his capacity to make rational judgments predicated on what he thinks to be the case there. Yet, we have not even tried to find out whether we could achieve such information because we have not tried to model the task presented to the respondent with sufficient complexity and detail to determine that answer.

I should add that all of the foregoing comments carry over, as well, to the matter of a <u>set</u> of issues to which a voter is exposed in a campaign and the relative importance of each in conditioning his voting responses. Once again we are faced with the need to recognize that the task which confronts a voter in the issue voting problem is one of comparative judgments to be made among rather large-scale, highly complex stimuli. It is most likely that he uses certain cognitive "strategies" to simplify this task to a degree consistent with the limited momentary capacity for short-term cognitive processing of information relevant to the task. But we will hardly be able to explore the use of such strategies until we organize our conceptual understanding of the task naturally present in a campaign to the point where we can design instruments for data collection which yield information on these matters.

I have one final point to make about the question of rational judgment approaches to issue voting. It has to do with the fact that such efforts typically treat the motivational incentive as one of maximizing benefits by some hedonistic criterion of interests. This is seen as partially a matter of minimizing information costs, as well. Yet, if individuals have reasonably complex conceptualizations of particular issues and of the range of issues in the campaign as a whole, then it is likely that maximizing along one dimension of those conceptualizations may conflict with doing so along some other dimension. While there are a variety of ways of coping with such internal, cognitive "cross-pressures" through perceptual and conceptual distortion or through forms of rationalization, I would like to suggest that the basic matter of treating the goal as one of maximization is a mistaken specification in such a context. I think a better specification would be one based on reaching an <u>optimum</u> decision (and response) given the constraints embedded in the context

The optimality decision made in such a context will likely be one made on subjective rather than objective grounds (see Shepard, 1964). Hence, the matter of individual differences enters the question once again. Moreover, it would seem that attempts to judge the rational quality of such decisions (and the voting behavior linked to them) in terms of some objective criterion grounded in the collective outcome, unmediated by individual differences in percpetion, is a mistaken effort. It simply fails to appreciate that the task behavior has not been appropriately modelled in so far as it avoids confronting the problem of individual differences in subjectively-determined responses. Thus, while it may predict and explain election results in the aggregate, it lacks any basis for that explanation which could be couched in terms of the individual psychology of issue voting.

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My comments in this memorandum have been directed toward the discussion of what I take to be salient matters connected with adopting some kind of treatment of the psychology of issue voting which is grounded in an information-processing approach to cognition and which would speak to the question of determining the rational quality of issue voting and the place of issues in conditioning voting behavior generally. I have tried to emphasize that I think it very important that we ultimately formulate such a treatment. Yet, I have also tried to emphasize that a worthwhile exploitation of such an approach raises a variety of questions which may not be ones that can be adequately or appropriately researched in the context of a mass election survey. If we are serious about our use of this approach, we must tackle those questions ultimately. It may be possible to deal with some of them in a piece-meal fashion within our survey format, but even these will require that we explore the perceived character of issues in much greater detail and sophistication that we have heretofore done. Moreover, such efforts will require innovative elaboration of the conventional forms of survey design. If there is one issue which the participants of the conference should surely consider, it is whether or not it is feasible or profitable to develop such an approach through the medium of the projected series of national election studies.

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Note: I have not cited specific references connected with the study of issue voting in as much as I would expect the persons connected with a conference of this kind to be already familiar with the "standard" literature, past and present, on that topic. Given that assumption and the informal character of this memorandum, I have proceeded as though such citations were unnecessary.